FRIENDS OF FRENCH PRAIRIE

Aurora Airport Master Plan Engineering Review

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CERTIFICATION

CERTIFICATE OF THE ENGINEER

Title: FRIENDS OF FRENCH PRAIRIE

Project: Aurora Airport Master Plan Engineering Review

This Technical Information Report (TIR) has been prepared under my supervision and meets the standard of care for similar documents. The TIR includes the review of information per the references below.

Windsor Engineers LLC



Expires 12/31/2026

Reviewed By: Travis Tormanen, PE

Developed By: Charles McDonald PE

REFERENCES

Oregon Statewide Land Use Planning Goals

Draft Final Airport Master Plan, Century West Engineering, August 29, 2025

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Oregon Aviation Aurora State Airport, W&H Pacific,

Drinking Water – Arsenic Levels letter, Aron Faegre & Associates, January 14, 2014

Marion County BOC letter from Aurora Airport Water Control District, November 1, 2013

OAR Chapter 660, Division 13 Airport Planning

OAR Chapter 738 – ODAV

ORS 197 & 197A – Comprehensive Land Use Planning

ORS 836 - Airports

Clean Water Act. (n.d.). Retrieved from https://www.epa.gov/laws-regulations/summary-clean-water-act

National Pollutant Discharge Elimination System (NPDES). (n.d.). Retrieved from https://www.epa.gov/npdes

Marion County Code - Airport Overlay

Aurora City Code - Airport Overlay-Title 16

1.0 EXECUTIVE SUMMARY

The Aurora State Airport is owned and managed by the Oregon Department of Aviation (ODAV). The mission of the ODAV is to *…enable and advocate for a safe and efficient aviation system ….* The ODAV is developing a Master plan update for the airport. However, the update has focused primarily on efficiency and economic growth, with limited attention to safety and engineering improvements, which should be a focal area.

The Aurora airport has been designated (2019) as a Category II – General Aviation Airport. This airport designation applies to jet aircraft. It appears that the airport master plan focuses only on aircraft type, primarily jets rather than other components that should be in a planning document. Interestingly, other site improvements are necessary to support jet aircraft, and yet the recommended improvements are not included in the final recommendations.

The overall finding is that the Aurora Airport Draft Master Plan (2025) does not meet the criteria for Oregon's Land Use Planning documents. It neglects to adequately identify, evaluate or improve on:

- Overall planning requirements
- Water use and needs
- Wastewater (septic) use and needs
- Transportation – outside the fence – upgrades and impacts
- Stormwater and drainage impacts
- Community safety impacts

The Master Plan is required by ORS 197.180(1) to meet the same requirements as any developer or development would.

2.0 MASTER PLANNING

The U.S. Federal Aviation Administration (FAA) requires master planning documents and reviews/updates every 10-20 years. While master planning documents are voluminous, there are different document requirements for meeting specific agency requirements (e.g., land use vs. airport upgrades) than for other master planning documents. While airport master plans differ significantly from land use master plans, there are still specific components that are required by the overall approving agency (State of Oregon), that apply to this document and are a requirement for improvements.

The Airport Master Plan (AMP) document was prepared in accordance with Advisory Circular (AC) 150/5070-6B of the FAA. The FAA advisory circular provides extensive flexibility in preparation; however, "The scope of each master plan must be tailored to the individual airport under evaluation." The Aurora draft AMP states, "The study will also address elements of local planning (land use, transportation, environmental, economic development, etc.)" on the first page in the Purpose and Need section. This information is minimal at best and largely missing from the AMP document, and should affect the planning, development, and operation of the Airport moving forward. While the Aurora AMP is an airport planning document rather than an engineering document, planning should be conducted for both the airport properties and the overall impact on adjacent neighbors. In addition, as a federally funded (FAA) document, it should include compliance with planning requirements for affected local governments, including Marion and Clackamas Counties and the Cities of Aurora and Wilsonville under Grant Assurance No. 6. In review of the Aurora AMP, the majority of these requirements are not discussed, and improvements and betterments that would impact the surrounding community are left undefined and unaddressed.

Draft Master Plan Document

The Aurora AMP states (in the **Introduction**, Goals 4 and 5) that the Plan will evaluate facilities and conformance with applicable local, state, and FAA standards and identify *facility improvements*. This identification is minimal, and the evaluation is missing, and upgrades are not included within the document.

FAA Planning Requirements (AC 150/5075-6B)

The FAA AC 150/5070-6B), the planning circular for creating a Master Plan, specifically states that the Plan should include the following objectives (***Section 104 – Function***):

4) Establish a realistic schedule for the implementation of the development proposed in the plan, particularly the short-term capital improvement program.

5) Propose an achievable financial plan to support the implementation schedule.

6) Provide sufficient project definition and detail for subsequent environmental evaluations that may be required before the project is approved.

7) Present a plan that adequately addresses the issues and satisfies local, state, and Federal regulations.

The underlined items (6 and 7) appear to be minimally discussed and unplanned for in this document.

Oregon Land Use Planning requirements

While the State identifies that the AMP is not a 'county land use plan or a transportation plan', it nevertheless is a "facility" plan subject to ORS 197.180(1) and Goal 11.

The following Oregon Administrative Rules (OAR) and Oregon Revised Statutes (ORS) are requirements for planning documents, and consequently, discussion is expected to be included in this document:

OAR 125-110 Land Use Coordination Rules

OAR 660-031 Land Conservation and Development-State Permit Compliance

ORS 197.180 Comprehensive Land Use Planning-State agency planning responsibilities

OAR 125-110 Land Use Coordination, discusses statewide coordination rules. Section 0001 describes requirements for project approval. Subsection 1(e) specifically states that *approval of projects is required related to land use criteria.*

Subsection (2) states:

In order to approve or undertake a project under a program listed in subsections (1)(a)–(e) of this rule, the Department shall find that the project complies with the Statewide Planning Goals and is compatible with acknowledged city and county comprehensive plans and land use regulations. To make its goal compliance and plan compatibility findings, the Department shall comply with sections (2)–(6) of this rule and shall also adhere to the procedures in the Department's state agency coordination program which is hereby adopted by reference.

Nothing in the AMP indicates any coordination with these land-use coordination rules or compliance with land-use requirements.

OAR 660-031 discusses compliance with local government plans.

The purpose of this rule is to clarify state agency responsibilities to apply the Statewide Planning Goals and acknowledged Comprehensive Plans during permit reviews (ORS 197.180(1) through (7)). The rule

establishes procedures and standards which require consideration of Goals and Acknowledged Plans prior to approval of state permits. The rule establishes a process for state agencies to rely on a local determination of compliance with the State Planning Goals and the Acknowledged Comprehensive Plan when issuing certain permits. The rule also requires that affected state agencies develop and submit to LCDC procedures for consistency review.

There is no discussion or evidence within the Aurora AMP that any review or compliance with local government plans has occurred. As part of the Class B airport permit process (OAR 660-031-0010), assurances of compliance with Statewide Planning Goals and compatibility are required; again, there is no discussion of compliance.

ORS 197.173 and .180 discuss responsibilities and coordination with agencies. There is no discussion or evidence that this has been performed in the creation of this document.

OAR 660-015 – Statewide Goals and Guidelines

Goal 2 - Land Use planning mandates that local government coordinate and achieve statewide goals. It also discusses the need for coordination with agency plans. There is no discussion of planning goals in the Aurora AMP document, and Marion County may need to update its existing plan to comply with state requirements for agency coordination.

Goal 6 - This goal requires local comprehensive plans and the implementation of measures to be consistent with state and federal regulations on matters such as groundwater pollution. This should be discussed within the septic (sewer) and stormwater sections; there is no discussion of potential pollution or steps to protect the area.

Goal 11, Public Facilities and Services, addresses civil engineering requirements for land-use planning.

Goal 11 states - "*To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development. Urban and rural development shall be guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable, and rural areas to be served.* Public facilities and services for rural areas should be provided at levels appropriate for rural use only and should not support urban uses."

There is no discussion related to urban services. The airport is an urban land use that lacks the customary urban public facilities and services such as sanitary sewer, storm sewer, and potable water.

Local Jurisdictions

Marion County zones the airport and adjacent private airport-related properties as Public (P). Surrounding properties to the east and south of the airport are zoned Exclusive Farm Use (EFU). Properties to the west of the airport, across Hwy 551, are zoned exclusive EFU and Acreage Residential (AR). The Airport is located outside of the Aurora Urban Growth Boundary (UGB). Land use actions

related to the airport property and its immediate surroundings are under the jurisdiction of Marion County.

The Master Plan and Airport Layout Plan show expansion of the airport into the EFU and AR zones. Public airports are not listed as permitted uses or conditional uses in those zones.

2.1 Airport Specific items/Impacts

Century West Engineering (Bend, Oregon) provided the recent draft AMP document (2025) for the State in conjunction with the FAA requirements. However, there appears to be minimal review and issue addressing relative to the adequate public facilities and services required by Goal 11.

Appendix 9 discusses Noise contours. The Aurora city code establishes day-night average sound levels with LDN values at 55. The FAA considers levels of 65 A-weighted decibels (dBa) or higher unsuitable for residential housing. It is unclear whether this level (55) is reachable, but there is limited discussion in the AMP addressing this requirement. The noise level contours towards Aurora are expected to expand (Appendix 9-Figure 5), resulting in possible violation of the city code. The figures and tables (Appendix 9) do not even address the 55 LDN level. This factor should be further evaluated and addressed in this document. The Marion County Comprehensive Plan mentions noise concerns at the Aurora airport, including "*In addition, special regulations in the Zoning Ordinances require that noise impacts be considered before approving new uses within the 1995 NEF 30 area shown on the Aurora Airport Master Plan*." There is no evidence that the State has incorporated any data regarding this county plan.

2.2 Farmlands

The Farmland Protection Policy Act (FPPA) was enacted under the Agriculture and Food Act of 1981 to minimize the impact of federal programs on the unnecessary and irreversible conversion of farmland to nonagricultural uses. According to the FPPA, farmland is classified as either "prime farmland, unique farmland, or farmland of statewide or local importance." There are no farmlands located on ODAV-owned Airport property; however, some of the private lands adjacent to the Airport are zoned EFU, as are Residential, Commercial, and publicly owned rights-of-way.

Goal 3 of the Oregon Statewide Planning Goals requires the counties to 'preserve and maintain' farmlands; there is no discussion related to any effort to address this, except to have zoning changed.

According to Chapter 5 (of the AMP), the south Runway Extension Option has been eliminated; however, the Master Plan still shows expansion onto EFU land for expansion of the Runway Safety Area. The Master Plan also shows expansion onto EFU land east and south of the existing airport for landside activities, described as Aviation Reserve. The Master Plan also shows the Hwy 551 right-of-way moving west onto EFU land. All of these "improvements" result in "damages" to the local prime farmland. This impact should be coordinated with the appropriate public agencies for the change of use.

2.3 Recommendations

The airport is in a rural area. The Master Plan does not address the requirements of Goals 2 and 11 that public facilities and services, including potable water, firefighting water, sanitary sewer, stormwater, and surface transportation, be appropriate for rural uses only. Yet the airport is clearly an urban-density land use, as evidenced by approximately 1 million square feet of hangar space.

Table 1: Zoning Items of Concern - Recommendations

Description	Status	Recommendation
Land-use master planning: comparison and inclusion.	No description of Goal 2 in the AMP	The AMP needs to address
Noise levels created by airport use.	No Discussion	Develop a plan to evaluate current levels and establish future land-use levels; address noise violations caused by aircraft outside designated flight paths and training impacts.
Farmland impacts	AMP shows expansion onto approximately 62 acres of EFU land, not in conformance with Goal 3.	The 2012 Master Plan stated that such expansion onto EFU land may not be feasible and would require a Goal 3 exception. This AMP should address that topic.
Land use master planning – groundwater impacts	No identification or discussion of Goal 6 in the AMP	Discuss regulations on groundwater pollution.
Land use master planning-public utility discussion	No description of Goal 11 in the AMP	The AMP should address Goal 11 requirements and each specific public utility and/or service required for an urban airport.
Maintaining a 200’ ODOT right-of-way (ROW) width for Hubbard Highway.	Plan to maintain a 200’ corridor.	Reduce corridor to 100’ with additional right of way if needed at projected major intersections.
Noise impact potential	Unaddressed	Further discussion of levels and how they will be addressed with future expansion.

3.0 WATER – DRINKING, FIRE SUPPRESSION, STORAGE

3.1 AMP Summary – Water Utility

Water at airports is not a primary need but is nevertheless critical for normal operations, fire suppression, and support of standard business operations. It seems odd that utility information and details concerning water (water, stormwater-surface water – water quality) and wastewater needs are relegated to the appendices rather than included within the document. This focus minimizes discussion in Chapter 2 – Existing Conditions (limited to a single page) of the AMP and seems to conveniently circumvent state planning regulations.

In 2002, with assistance from Marion County, the Aurora Airport Water Control District was formed to provide non-potable water for fire protection for the Airport and adjacent privately owned lands near ODAV property. The District installed a 247,800-gallon fire suppression water storage system to support the Aurora Fire District. The system includes two wells on Airport property, a pump house, underground storage tanks, underground distribution piping, fire hydrants, and multiple fire-sprinkler connections serving on-airport facilities.

The overall plan lacks clarity on the provision of potable water uses within the airport. There is no discussion at all about potable water to the site. This needs to be evaluated, including signage for all non-potable uses for personnel safety.

Emergency response is provided by the Marion County Sheriff's Department and the Aurora Fire District (fire suppression, rescue, emergency medical service, and hazardous materials response). The nearest fire station is located in the City of Aurora, less than two miles from the Airport. Based on typical fire apparatus pumping rates of 1,000–1,500 gallons per minute (gpm), a full 247,800-gallon storage tank could support pumping for approximately three to four hours (order-of-magnitude estimate).

Several environmental and water-quality considerations warrant further documentation in the AMP. Previous water testing has identified arsenic above EPA maximum contaminant levels in wells on and surrounding the Airport property. Earlier planning efforts (2014, Aron Faegre & Associates) reportedly found three of six wells exceeding recommended arsenic levels. They recommended connecting to the City of Aurora water system (which has arsenic treatment in place). The Water Control District also requested Marion County's support (2013) regarding arsenic impacts and firefighting supply volumes; these items are not clearly addressed in the AMP. While the AMP references recommended pump and filtration mitigation, it does not clearly state whether these measures are proposed or how they would be implemented. Conveniently, there is no current water testing data to review regarding arsenic or overall water quality.

The AMP's Environmental Science Associates (ESA) Environmental Overview (2021) identifies adjacent regulatory and environmental considerations (including nearby RCRA/hazardous waste facilities and National Pollutant Discharge Elimination System (NPDES)-related stormwater monitoring) but does not

clearly address potential onsite sources of hazardous or deleterious materials relevant to water and firefighting operations, including per and poly-fluoroalkyl substances (PFAS)/foam (FFF/F3 transition) and arsenic. In addition, the National Wetlands Inventory maps a wetland adjacent to the Airport's northeastern corner; this feature is described as a concrete water retention pool maintained by Columbia Helicopters and has been discussed as a possible backup firefighting water source, but its role and availability remain unconfirmed.

Overall, while the AMP acknowledges the existence of the water/fire protection system and identifies arsenic exceedance with a general mitigation concept, the AMP does not clearly document: (a) system condition and capacity, (b) current status and quality of existing water supply, (c) commitments and implementation steps for arsenic mitigation (or alternative supply options), or (d) fire suppression storage/flow adequacy and operating assumptions.

3.2 FAA Master Plan Requirements – Water Utility

FAA AC 150/5070-6B (Airport Master Plans) indicates the master plan should include utilities in the inventory and planning effort, including:

- A utilities inventory that includes the "major elements" serving airport demand for water (and sanitary sewer) and also includes stormwater drainage.
- Where necessary, historical consumption data to help quantify and project future utility loads.
- Evaluation of future utility needs, and verification that existing utility system capacity is adequate at the airport boundary (i.e., not just a narrative description, but an evaluated/verified system).
- Consideration of backup water for emergencies as part of the utility planning discussion.

(Note: FAA AC 150/5070-6B is master planning guidance; Part 139 ARFF requirements apply only where the airport is certificated under Part 139.)

3.3 Recommendations – Water Utility

The following recommendations are suggested to bring the water utility section of the Aurora Master Plan into compliance with FAA standards.

- Part 139 safety benchmark: FAA discusses safety/rescue/firefighting for Part 139 airports. While Aurora is not a Part 139 airport, Windsor recommends that water measures to comply with Part 139 be evaluated.
- Arsenic: Water testing revealed arsenic above EPA maximum contaminant levels (MCLs) on and surrounding airport property. Windsor notes that arsenic discussion is minimal in the AMP, and while pump/filtration mitigation was recommended, there is no clear discussion that these

measures are proposed in the AMP. In addition, there are no current records or discussions of the current condition.

- Operational/resilience planning: Windsor notes the need to evaluate supply and volume (including coordination/contracting with local agencies such as the City of Aurora) and to verify adequacy for both drinking water and fire suppression storage/flow.
- With no real breakdown on uses within the airport facility, it is difficult to evaluate flow needs. Well capacities should be tabulated, system capacity should be tabulated, and water quality should be evaluated.

Table 2: Water Items of Concern - Recommendations

Description	Status	Recommendation
Water need, quality, and capacity are not addressed; there is no discussion of the condition of the system	Undescribed	• Further review and description of the existing system. Provide an overview map. • Provide evaluation of need and contract with local agency for supply and volume or backup supply. • Provide a projection of future water use within the service area • Determine adequacy of emergency backup water • Testing of current wells and determination of current arsenic levels. • Elaborate on the provision of potable water supply to the airport site.
Firefighting (water supply interface)	Aurora Airport Water Control District	• Add additional information; show evidence or a memo of understanding or contract with the City of Aurora. • Compute storage, piping, hydrant, and pumping sizing and determine if existing volumes and flow are adequate. • Describe the number and location of hydrants.

Description	Status	Recommendation
		• Provide contact information for fire protection service, repairs, and the owner.
Fluorine Free Foam firefighting (water quality/environmental interface)	Unknown	• Determine and discuss the use of an F3 system and the resulting impact on water needs.
Deleterious materials (PFAS, arsenic) (water quality / compliance interface)	Undescribed	• Provide description and compliance with State requirements for PFAS and arsenic.
Capital Improvement Plan	Undescribed	• Provide suggested CIP projects as related to the water system. Not required per FAA, but highly recommended by Windsor

4.0 SEPTIC SYSTEMS – WASTEWATER MANAGEMENT

The existing airport is 'served' by multiple septic tanks and drainfields. It seems odd that utility information and details concerning water (water, stormwater-surface water – water quality) and wastewater needs are relegated to the appendices rather than included within the document. This focus minimizes discussion in Chapter 2 – Existing Conditions (limited to a single page) of the AMP and seems to conveniently circumvent state planning regulations. Septic service does not equal sanitary sewer service, and there are ongoing issues with the septic drainfield's capacity.

It is our understanding that Marion County has denied past requests for upgrades to the current drainfields (2014, 2019). In addition, it is noted that the airport is pumping and hauling septage from many of the existing tanks indicating at best a system (or systems) that is under designed and at worst a system (or systems) that has failed.

Sanitary sewer 'service' is provided by individual and shared drain field/septic tank systems. There are reported to be six individual drain fields located on ODAV-owned property, with three proposed for the south end of the runway safety area (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. Existing drainfields are discussed for removal due to their proximity to the airfield and concerns about loading. Interestingly, there is no discussion of upgrading the installations for adequate treatment capability or capacity.

4.1 Existing Site

Chapter 5 states - *Septic drain fields located inside the existing and future RSA will be improved to meet FAA surface gradient and load-bearing standards, or removed if they cannot meet those standards. There are multiple drainfields called out as non-standard conditions and according to Chapter 5 (Page 5-19) are not acceptable in their current location.*

Two existing septic drain fields located in the existing and future Runway Object Free Area (ROFAs) are to either be improved to meet FAA surface gradient and weight-bearing standards or removed. These installations should be evaluated for effectiveness and treatment, and removed/relocated if necessary. The AMP discusses location within the ROFA; it contains no discussion of relocation or even land suitability for this treatment methodology. Consequently, there is no clear discussion about how existing drainfields will be located, designed and function, especially when the existing drainfields operate in a failure mode.

4.2 Soils

The soil is mapped as "Am" – Amity silt loam - with 0-3% slopes by the USDA Natural Resources Conservation Service (NRCS). This soil type is described as hydric and considered 'somewhat poorly drained' with a depth to water table of only 6-18 inches. Past inspections show 'distinct redoximorphic

features within 8 inches of the ground surface, indicating high groundwater and saturation likely from a high seasonal water table. The report prepared by the Environmental Science Associates (ESA) states that onsite wastewater treatment (septic systems) is not feasible on this site. In addition, there is concern that the existing septic tanks and systems are not functioning properly, necessitating regular pumping of the onsite tanks.

Goal 6 of the Oregon Statewide Planning Goals addresses pollution. This goal requires local comprehensive plans and implementing measures to be consistent with state and federal regulations on matters such as groundwater pollution.

Table 3: Wastewater and Septic System Items of Concern - Recommendations

Description	Status	Recommendation
The current system seems to be in a failure condition.	Generally described as pumping.	Further review and description of the existing system.
Site conditions are unfavorable for septic systems.	Described in the AMP Appendix 3	Further describe the existing system, including ground–soil conditions. Provide evaluation of need and contract with the local agency (City of Aurora) for discharge and transfer to a sewer system.
Legal ability to serve with the sanitary sewer.	Undescribed	Work with the County (and City) to update the airport overlay code to allow for tightline sanitary sewer service outside of urban areas.
Aurora Airport Water Control District's role	Undescribed	Describe the District's role, responsibility, etc.

5.0 ACCESSIBILITY - ROADWAYS

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 access to airport businesses from Highway 551 and Airport Road. State Highway 99E, accessible via Ehlen Road off Highway 551 and Airport Road, provides access to the nearby communities of Canby and Oregon City.

5.1 External Accessibility

While Aurora State Airport is not located within the Aurora UGB, its proximity to the City of Aurora but its impact on residents warranted its inclusion in the plan. The following excerpt from the City's plan outlines recommendations regarding 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."*

Marion County has jurisdiction over the non-state roads in the area. The overall external roadway appears to lack any review or discussion of improvements.

Most of the highways are two-lane, with minimal shoulders (2'-4' wide) and scratch (1'-2' deep) ditches. Left-turn lanes are in place, but minimal widening is available, even though the flat topography would otherwise allow for more. Arndt Road and Keil Road are extremely narrow. Some of the roadways have a level of service D (Arndt Road), with an intersection rating below D.

Highway 551, while an improved arterial, has a narrow shoulder and has experienced several documented accidents.

5.2 Internal accessibility

There is currently no dedicated vehicle service road within the airport. Access for support and delivery vehicles is largely via taxiways. Because of the lack of service roads within the airport, there is a high rate of vehicle-pedestrian deviations (V/PDs). The taxiway is on the east side of the single runway.

According to Chapter 5, a vehicle service road will be established; However, this has been removed from the preferred alternative with continued review and development moving forward. Given the frequency of V/PDs, removing this appears to be shortsighted.

5.3 Other

There is a discussion about using Aurora Airport as an emergency medical flight facility. This could result in additional impact on adjacent highways. Review of this should be performed with the County, State, and City.

Table 4: Transportation Items of Concern - Recommendations

Description	Status	Recommendation
Address road designations	Undescribed	Establish roadway designations with Marion County to determine ROW widths – Marion County reduced some classifications in the past.
Reinstate on-site vehicle service road.	Removed	Add a dedicated vehicle service road on site for safety.
Hubbard Road ROW	Undescribed	Work with ODOT to reduce ROW width for less impact on adjacent properties.

6.0 STORMWATER, RUNOFF

Stormwater is minimally discussed and realistically not included in the AMP. It seems odd that utility information and details concerning water (water, stormwater-surface water – water quality) and wastewater needs are relegated to the appendices rather than included within the document. This focus minimizes discussion in Chapter 2 – Existing Conditions (limited to a single page) of the AMP and seems to conveniently circumvent state planning regulations.

The current site is largely flat. It is located adjacent to runoff tributary areas, primarily the Pudding River to the east. Current conditions are the use of "roadway" ditches to send runoff to area culverts. The overall area is bounded by the Pudding River (~0.85 miles east), the Molalla River (~3 miles northeast), and Mill Creek (~0.75 miles southeast). All of these watercourses are downstream of the airport's stormwater discharge and are classified as sensitive habitat for salmonids.

The AMP includes an Environmental Overview performed by ESA in 2021 (Appendix 3). The document states that:

"*The purpose of this Environmental Overview is to describe the environmental conditions of the Airport and identify any known or potential environmental conditions or issues that could be affected by proposed development at the Airport."* It further states that a desktop analysis was performed of the following:

- 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.
- Water Resources (including wetlands, floodplains, surface waters, water quality, stormwater, groundwater, and wild and scenic rivers).

The review only addresses 'inside the fence' issues and does not address any of the larger environmental issues or impacts of the area. They clearly state: "*Stormwater runoff from the Airport property flows into the Chinook and steelhead critical habitat areas as well as the Chinook and coho Effective Fish Habitat (EFH) areas. From the Airport property, overflow culverts direct stormwater to unnamed tributaries to Deer Creek. From Deer Creek, stormwater runoff flows to Senecal Creek, to Mill Creek, to the Pudding River, the Molalla River, and the Willamette River, where critical habitat is designated."*

6.1 Current uses and flow

The Airport's stormwater system is made up of a network of edge drains, culverts, and surface drainage features that 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.

Two wetland delineations have been completed on portions of the Aurora State Airport Property. In 2003, WHPacific delineated several non-jurisdictional wetlands on the Airport property (2003). The delineated non-jurisdictional wetlands on Airport property are man-made drainage swales located in historic uplands with non-hydric soils. According to Oregon Department of State Lands (ODSL) 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 stormwater detention and/or treatment. These delineated non-jurisdictional wetlands all occurred within drainage swales on the eastern side of the runway. Since the original wetland delineation conducted by WHPacific, the locations of the paved taxiways and the swales delineated in that report have changed. The remaining swales identified in the two previous delineations were observed during the field reconnaissance. They were functioning as water retention facilities, with three culverts leading off Airport property to drain excess water during high-water events. In addition to the swales delineated on the east side of the runway, swales on the west side of the runway were also observed functioning as water retention facilities and may be non-jurisdictional wetlands. The delineated swales remain after the movement of the paved taxiway.

The National Wetlands Inventory maps a wetland adjacent to the Airport's northeastern corner; this feature is described as a concrete water retention pool maintained by Columbia Helicopters and has been discussed as a possible backup firefighting water source, but its role and availability remain unconfirmed.

Three culverts on Airport property conduct water off the Aurora State Airport boundaries. One culvert is near the northern extent of the runway, and two culverts are located at the southern boundary of the Airport property.

- The northern culvert connects the swales on both sides of the runway and is piped approximately 1,700 feet under the runway and Hwy 551 (also called Hubbard Cutoff Road NE) (see Figure 1). From there, water is discharged into an approximate 0.05-acre vegetated swale from which it then is piped under Boones Ferry Road and discharges into an unnamed tributary to Deer Creek. Deer Creek flows into Senecal Creek, which confluences with Mill Creek, which flows into the Pudding River that then confluences with the Molalla River before it is discharged into the Willamette River.

- The two southern culverts connect the southernmost swale on Airport property to a swale that continues south and west of Airport property. Satellite imagery and LiDAR data indicate that the off-site swale wraps around the northern and eastern edges of the agricultural field south of the Airport until it reaches a culvert that passes under Hubbard Cutoff Road NE and Boones Ferry Road NE, and through a residential area until it is discharged into an unnamed tributary to Deer Creek approximately one-mile south of where the northern culvert discharges to.

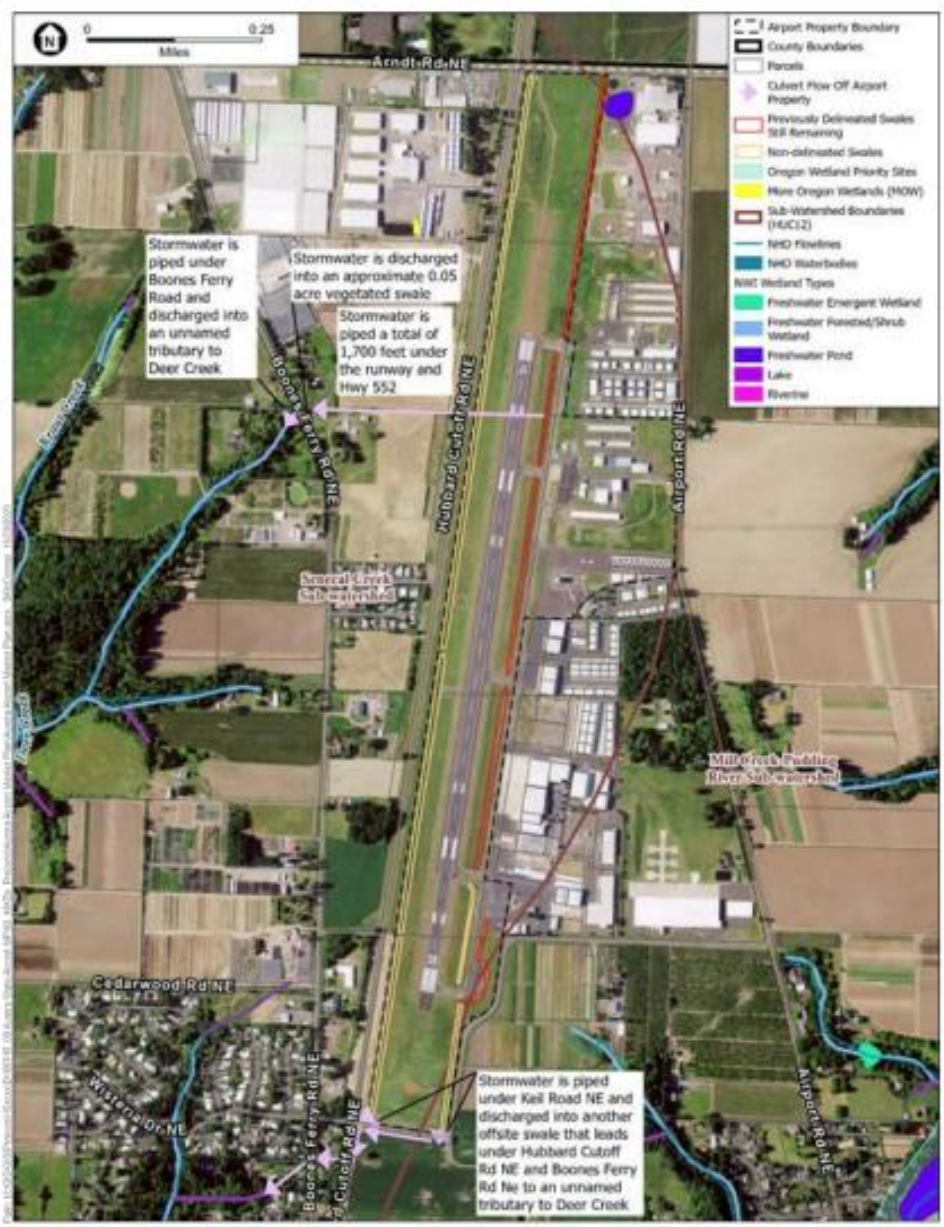


Figure 1: Airport Site

SOURCE: Century West Engineers Aurora State Airport Master Plan, Appendix 2 – Figure 1 - Basemap: (ESRI 2018); NWI: (USFWS 2021d); NHD: (USGS 2021); Oregon Wetland Priority Sites: (Oregon Spatial Data Library 2019); MOW: (Oregon Spatial Data Library 2019); Swales: Environmental Science Associates D201600745.05 Figure 1 Water Resources

The existing soils, as discussed in the septic section (Section 6), are largely hydric and poorly drained. This is why the existing swales and ditches are acting more like detention facilities than as treatment and discharge facilities.

The AMP describes the area waterways as contaminated (AMP Chapter 2) but provides no discussion for airport responsibility or efforts for onsite treatment or control. The airport is immediately adjacent to the Pudding River tributary area – basin (AMP Figure 2-8) and a 303(d) listed sub-watershed. It would be negligent for development in this area not to address the downstream impacts.

6.2 Other

With the potential use of deicing chemicals, fueling, and uncontained fuel storage, there is concern that runoff could be untreated.

The AMP includes (in Appendix 3) an Environmental Overview performed by ESA in 2021. Related concerns include the RCRA, the EPA hazardous waste treatment, storage, and disposal facility (adjacent), and the current status of the NPDES permits for site stormwater monitoring and discharge in the surrounding areas (1200Z stormwater permit). These items are discussed, but no description of concern or substantive action is included in the plan. No data is provided regarding compliance with or noncompliance with state discharge requirements.

Table 5: Stormwater Items of Concern - Recommendations

Description	Status	Recommendation
Water runoff is not discussed; there is no spill control plan described	Undescribed	Further review and description of the existing system, downstream impact, and sizing are necessary.
Chemicals	Undescribed	Provide a discussion of spill controls, runoff, and treatment onsite.
Deleterious materials	Undescribed	Provide a description and compliance with State requirements for PFAS and arsenic. Tie in discussion with potential septic system overflows.
Treatment facilities	Undescribed	Development a plan for treatment, control and discharge of runoff.
Overall stormwater plan	Undescribed	Develop an overall plan to identify and direct runoff, provide treatment and controls.
Fluorine Free Foam firefighting (water quality / environmental interface)	Unknown	Determine and discuss the use of an F3 system and the resulting impact on water need.

7.0 OTHER - GENERAL

7.1 Safety

The safety of the general public and the community seems largely absent from this document. This seems odd and quite concerning. It would seem that safety would be paramount and addressed by the state as a high priority. While safety is not listed as one of Oregon's Planning Goals, it would seem to be part of each AMP, as well as the overall development goal requirements, and should be thoroughly and thoughtfully included in any planning updates. Although Aurora is not a Part 139 airport, which relieves it of some aviation safety requirements, it seems that the State, as the licensed owner–operator, is remiss in failing to address or minimize safety measures at this facility.

The FAA discusses safety, rescue, and firefighting requirements for Part 139 airports. While Aurora is not classified as a Part 139 airport, fire protection and life-safety measures should be evaluated against Part 139 benchmarks to confirm adequacy for current and planned airport development. In addition, FAA guidance and related safety circulars (including the 150/5200 series) address firefighting considerations, and the FAA has required a transition to fluorine-free foam (F3) beginning in 2024, which is intended to reduce or eliminate PFAS in the environment. Again, Aurora is not a Part 139 airport, but Oregon water-quality requirements should take precedence over the convenience of noncompliance with state and federal guidelines. Oregon is implementing Federal EPA MCLs for five specific PFAS compounds and a hazard index for others. Public water systems were required to participate in the Fifth Unregulated Contaminant Monitoring Rule (UCMR5) between 2023 and 2025. In addition, Senate Bill 91 (2025) prohibits the use of PFAS-containing foam for training and for fire suppression.

With fueling services including 30,000 gallons of storage (12,000 gallons of aviation gas and 20,000 gallons of jet A) and annual fuel 'flowage' of over 1 million gallons/year, it seems like fire suppression should be a higher priority than the airport or AMP discusses. It appears that there are no containment structures in place at the current storage tanks.

Table 6: Safety Items of Concern - Recommendations

Description	Status	Recommendation
Fire Protection	Undescribed	• Further review and description of the existing program; required or responsible improvements. • Provide evaluation of need and contract with local agencies for backup support.