

# Appendix 2

## **Environmental Screening Report**

---

Draft

# AURORA STATE AIRPORT MASTER PLAN UPDATE

## Environmental Overview

Prepared for  
Century West Engineering

December 2021





Draft

# AURORA STATE AIRPORT MASTER PLAN UPDATE

## Environmental Overview

Prepared for  
Century West Engineering

December 2021

819 SE Morrison Street  
Suite 310  
Portland, OR 97214  
503.274.2010  
esassoc.com



<b>Bend</b>	<b>Orlando</b>	<b>San Jose</b>
<b>Camarillo</b>	<b>Pasadena</b>	<b>Santa Monica</b>
<b>Delray Beach</b>	<b>Petaluma</b>	<b>Sarasota</b>
<b>Destin</b>	<b>Portland</b>	<b>Seattle</b>
<b>Irvine</b>	<b>Sacramento</b>	<b>Tampa</b>
<b>Los Angeles</b>	<b>San Diego</b>	
<b>Oakland</b>	<b>San Francisco</b>	

D201600745.05

**OUR COMMITMENT TO SUSTAINABILITY** | ESA helps a variety of public and private sector clients plan and prepare for climate change and emerging regulations that limit GHG emissions. ESA is a registered assessor with the California Climate Action Registry, a Climate Leader, and founding reporter for the Climate Registry. ESA is also a corporate member of the U.S. Green Building Council and the Business Council on Climate Change (BC3). Internally, ESA has adopted a Sustainability Vision and Policy Statement and a plan to reduce waste and energy within our operations. This document was produced using recycled paper.

---



# TABLE OF CONTENTS

---

## Aurora State Airport Master Plan Update: Environmental Overview

	<u>Page</u>
<b>AIR QUALITY</b> .....	<b>1</b>
<b>BIOLOGICAL RESOURCES</b> .....	<b>2</b>
General Biological Resources .....	2
Endangered Species Act .....	3
Migratory Bird Treaty Act.....	4
Bald and Golden Eagle Protection Act.....	4
Environmentally Sensitive and Critical Habitats .....	7
<b>DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(f)</b> .....	<b>7</b>
<b>HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION</b> .....	<b>8</b>
<b>NATURAL RESOURCES AND ENERGY SUPPLY</b> .....	<b>9</b>
<b>NATURAL RESOURCES AND ENERGY SUPPLY</b> .....	<b>9</b>
<b>VISUAL EFFECTS</b> .....	<b>9</b>
<b>WATER RESOURCES</b> .....	<b>10</b>
Wetlands .....	10
Floodplains .....	12
Surface Waters.....	12
Water Quality .....	13
Stormwater .....	14
Groundwater .....	14
National Wild and Scenic Rivers .....	15
<b>REFERENCES</b> .....	<b>16</b>

### Appendices

- A. USFWS Official Species List
- B. Wetlands Delineated by WHPacific (2003)
- C. Wetlands Delineated by ESA (2018)

**List of Figures**

Figure 1 Wetlands, Water Resources, Sub-watershed Boundaries, Overflow  
Culverts, and Swales (Delineated and Non-Delineated) ..... 16

**List of Tables**

Table 1 Federal or State Protected Fish and Wildlife Species that May Occur in the  
Vicinity of the Airport ..... 6

Table 2 Federal or State Protected Plant Species that May Occur in the Vicinity of  
the Airport ..... 6

## Acronyms and Abbreviations

Airport	Aurora State Airport
CO	Carbon Monoxide
DEQ	State of Oregon Department of Environmental Quality
DOT	Department of Transportation
EFH	Essential Fish Habitat
EJSCREEN	Environmental Justice Screening and Mapping Tool
EPA	U.S. Environmental Protection Agency
ESA	Environmental Science Associates
ESU	Evolutionarily Significant Unit
F	degrees Fahrenheit
FAA	Federal Aviation Administration
FBO	Fixed Based Operator
FEMA	Federal Emergency Management Agency
HUC	Hydrologic Unit Code
IPaC	Information for Planning and Consulting
LIDAR	Light Detection and Ranging
MBTA	Migratory Bird Treaty Act
MIRL	medium intensity runway light
MOW	More Oregon Wetlands
MSA	Magnuson-Stevens Act
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHD	National Hydrography Dataset
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOx	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NWI	National Wetlands Inventory
O <sub>3</sub>	Ozone
ODAL	omni-directional approach light
ODFW	Oregon Department of Fish and Wildlife
ORBIC	Oregon Biodiversity Information Center
PAHs	polycyclic aromatic hydrocarbons
Pb	Lead
PCBs	polychlorinated biphenyls
PCE	tetrachloroethene
PM <sub>10</sub> and PM <sub>2.5</sub>	particulate matter
RCRA	Resource Conservation and Recovery Act
SO <sub>2</sub>	Sulfur Dioxide
TCE	trichloroethene
TMDL	Total Maximum Daily Load
TSDf	treatment, storage, and disposal facility
USFWS	U.S. Fish and Wildlife Service
VASI	visual approach slope indicator



# AURORA STATE AIRPORT MASTER PLAN UPDATE

---

## Environmental Overview

Building off of previous environmental work completed for the Aurora State Airport (Airport), Environmental Science Associates (ESA) has prepared this Environmental Overview for the Master Plan Update. 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.

Utilizing available data and information, the contents and organization of this Environmental Overview are based on the National Environmental Policy Act (NEPA) Environmental Impact Categories outlined in Federal Aviation Administration (FAA) Order 1050.1F Environmental Impacts: Policies and Procedures. ESA performed a desktop analysis for the following environmental impact categories described in the FAA Order 1050.1F:

- 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).

In addition to completing a desktop analysis of these environmental impact categories, ESA conducted a reconnaissance-level field visit of the Airport on November 12, 2021, with Oregon Department of Aviation staff to assess existing conditions.

## AIR QUALITY

Local air quality is generally described by the concentration of various pollutants in the atmosphere. The significance of a pollution concentration is determined by comparing it to state and federal air quality standards. In 1971, the U.S. Environmental Protection Agency (EPA) established standards that specify the maximum permissible short-term and long-term concentrations of various air contaminants. The National Ambient Air Quality Standards (NAAQS) consist of primary and secondary standards for six criteria pollutants: Ozone (O<sub>3</sub>),

Carbon Monoxide (CO), Sulfur Dioxide (SO<sub>2</sub>), Nitrogen Oxide (NO<sub>x</sub>), Particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and Lead (Pb).

Based on both federal and state air quality standards, a specific geographic area can be classified as either an “attainment,” “maintenance,” or “non-attainment” area for each pollutant. The threshold for non-attainment designation varies by pollutant. The Aurora State Airport is in a portion of Marion County, Oregon, that attains all NAAQS (EPA 2021c, 2021d). Marion County currently complies with federal NAAQS.

According to the EPA’s Environmental Justice Screening and Mapping Tool (EJSCREEN), a tool created to highlight locations that may be candidates for further environmental review, the Aurora State Airport property falls within a census block where all air quality-related environmental hazard indexes are between the 24<sup>th</sup> and 73<sup>rd</sup> percentile nationwide. The Airport property scores within the 51<sup>st</sup> percentile for diesel particulate matter, the 73<sup>rd</sup> percentile for PM<sub>2.5</sub> levels, the 24<sup>th</sup> percentile for ozone summer seasonal average of daily maximum 8-hour concentrations in the air, the 51<sup>st</sup> percentile for cancer risk from the inhalation of air toxics, and the 69<sup>th</sup> percentile nationwide for other respiratory hazards exposure (EPA 2020).

The climate in Marion County includes warm, dry, short summers with mostly clear skies and cold, wet, overcast winters. National Oceanic and Atmospheric Administration (NOAA) data from 1981 to 2010 indicates that the annual average temperatures at the Aurora State Airport have a high of 68.3 degrees Fahrenheit (F) and a low of 40.3 degrees F. The lowest temperatures are in December when the average daily low is 34.6 degrees F and the average daily high is 46.0 degrees F (NOAA 2021). The highest temperatures are in August when the average daily high is 81.8 degrees F and the average daily low is 54.7 degrees F (NOAA 2021). The average annual precipitation is 41.87 inches, with the wettest month typically being November with an average of 6.63 inches and the driest month being August with an average of 0.66 inch (NOAA 2021).

## **BIOLOGICAL RESOURCES**

Biological resources are valued for their intrinsic aesthetic, economic, and recreational qualities and include fish, wildlife, plants, and their respective habitats. Categories of biological resources evaluated in this document include:

- General terrestrial and aquatic plant and animal species (non-listed)
- State or federally listed threatened or endangered species
- Species proposed for listing and candidates for listing
- Migratory birds
- Environmentally sensitive and critical habitats

### ***General Biological Resources***

Groundcover types on the Airport property include: mowed infields, vegetated stormwater swales, cleared soil surfaces, gravel, landscaped areas around buildings, pavement, and Airport structures. These groundcover types are described in more detail as follows:

- The infields consist of mowed grass and weedy herbs including tall fescue (*Schedonorus arundinaceus*), white clover (*Trifolium repens*), English plantain (*Plantago lanceolata*), annual bluegrass (*Poa annua*), English daisy (*Bellis perennis*), oxeye daisy (*Leucanthemum vulgare*), Queen Anne’s lace (*Daucus carota*), American vetch (*Vicia americana*), dove’s foot geranium (*Geranium mole*), curly dock (*Rumex crispus*), and hairy cat’s ear (*Hypochaeris radicata*) (ESA 2019b). These areas provide burrowing and foraging habitat for small rodents as well as foraging habitat for raptors, songbirds, other avian species, and other small to medium sized wildlife including raccoons (*Procyon lotor*) and coyotes (*Canis latrans*).
- Vegetated stormwater swales consist of grasses, rushes, and forbs including: annual bluegrass, reed canarygrass (*Phalaris arundinacea*), common rush (*Juncus effusus*), common velvetgrass (*Holcus lanatus*), and meadow foxtail (*Alopecurus pratensis*) (ESA 2019b). Flowing water through these swales during the winter months could attract small to medium size mammals that are able to make their way through the perimeter fence.
- Landscaped areas around buildings included non-native manicured shrubs, forbs, and trees. These areas may provide limited habitat for avian nesting and foraging.
- Gravel, paved, and cleared areas of the Airport do not support vegetation and do not provide quality habitat.
- Airport structures include hangars, the air traffic control tower, maintenance buildings, and the pilot’s lounge. These areas may provide nesting habitat for birds or roosting habitat for bats.

In 1999, a new security fence was installed around the entire perimeter of the Airport property with automatic, sliding security gates (Oregon.gov 2021). This system improved safety at the Aurora State Airport by reducing wildlife on Airport property as well as reducing the illegal operations of motor vehicles on Airport property (Oregon.gov 2021). Since the new fence has been installed, not many issues related to animals on Airport property have been reported, but coyotes occasionally go through the security fence to hunt rodents on Airport property; however, no coyotes or large animals have collided with aircraft at the Airport. This is supported by the FAA Wildlife Strike Database, which only has historical records of avian strikes at the Aurora State Airport (FAA 2021).

### ***Endangered Species Act***

U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) are charged with overseeing the requirements of the *Endangered Species Act*, specifically Section 7, which sets forth requirements for consultation to determine if a proposed action “may affect” a federally endangered or threatened species. If an agency determines that an action “may affect” a federally protected species, then Section 7(a)(2) requires the agency to consult with the agencies to ensure that any action the agency authorizes, funds, or carries out is not likely to jeopardize the

continued existence of any federally-listed endangered or threatened species, or result in the destruction or adverse modification of critical habitat. If a species has been listed as a candidate species, Section 7(a)(4) states that each agency must confer with USFWS or NMFS. However, airports partake in measures to discourage wildlife on airport property for safety reasons. Therefore, when threatened or endangered species are identified at an airport, airport operations must collaborate with environmental regulatory agencies to balance the need to protect these species with the needs for maintaining airport safety as well as meeting the region's long-term aviation needs (TRB 2014). **Table 1** lists the fish and wildlife species protected under the Endangered Species Act that potentially occur in the vicinity of the Airport, while **Table 2** lists the protected plants with potential to occur. **Appendix A** includes the official federal species list from the USFWS, provided by the Information for Planning and Consultation (IPaC) system.

No records of state, federally listed, or candidates for listing occur for the Airport (PSU 2021). The Molalla River (3 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 (*Oncorhynchus tshawytscha*) (federally threatened; state classified sensitive critical), Pacific lamprey (*Entosphenus tridentatus*) (federal species of concern; state classified sensitive vulnerable), and steelhead (*Oncorhynchus mykiss*) (federally threatened; state classified sensitive vulnerable) based on records of historic sightings (PSU 2021).

### ***Migratory Bird Treaty Act***

The Migratory Bird Treaty Act (MBTA) prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the USFWS (USFWS 2020a). Protected MBTA resources generally include native birds and their active nests and young. Under the requirements of the MBTA, all project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project.

### ***Bald and Golden Eagle Protection Act***

Bald eagles and golden eagles are protected under the Bald and Golden Eagle Protection Act of 1940. The act's primary purpose is the protection of nesting sites. Bald eagles generally construct nests in large trees, and golden eagles nest in cliff habitats. Neither of these habitats occur at the Airport.

**TABLE 1  
FEDERAL OR STATE PROTECTED FISH AND WILDLIFE SPECIES THAT MAY OCCUR IN THE VICINITY OF THE AIRPORT**

<b>Species</b>	<b>Status<sup>2</sup></b>	<b>Habitat Requirements</b>	<b>Occurrence in Vicinity of Airport</b>
<b>Birds</b>			
Northern spotted owl ( <i>Strix occidentalis caurina</i> )	FT, ST	Mid and late seral coniferous forests with high canopy closure, complex canopy structure, large snags, and high volumes of downed wood. (55 Federal Register 26114)	<b>Not present due to lack of suitable habitat</b> (ESA 2019a).
Streaked horned lark ( <i>Eremophila alpestris strigata</i> )	FT	Airports (flat, sparsely vegetated areas with few to no shrubs and trees), grasslands, remnant prairies, and beaches on the coasts of Oregon and Washington. (78 Federal Register 61451)	<b>Unlikely to occur on Airport property due to lack of suitable habitat.</b> No streaked horned larks were detected at the Airport during 2018 protocol surveys (ESA 2018b). Based on the survey results, FAA and the USFWS have determined that the Airport is unoccupied, and surveys are not needed again until 2022 (USFWS 2020b).
<b>Fish<sup>1</sup></b>			
Chinook salmon (Upper Willamette River ESU) ( <i>Oncorhynchus tshawytscha</i> )	FT	Chinook salmon are anadromous and typically spawn in the mainstems of large rivers where water flow is high. Fry remain in streams for approximately three months to one year before swimming to the ocean. (70 Federal Register 37160)	<b>Not present due to lack of suitable habitat.</b> Fall Chinook use part of the Pudding River near the confluence with the Molalla River for rearing and migration and the Molalla River for spawning and rearing (StreamNet 2021). Spring Chinook use Mill Creek, the Pudding River, and the Molalla River for rearing and migration (StreamNet 2021).
Steelhead (Upper Willamette River ESU) ( <i>Oncorhynchus mykiss</i> )	FT	Steelhead are anadromous and have a summer and winter run, which is determined by the travel distance to their spawning grounds from the ocean. They prefer fast-flowing water in small to large mainstem rivers and medium to large tributaries. (71 Federal Register 834)	<b>Not present due to lack of suitable habitat.</b> Winter steelhead use the Willamette River, Mill Creek, the Pudding River, and the Molalla River for rearing and migration. Summer steelhead use the Willamette River and the Molalla River for migration only (StreamNet 2021).
<b>Insects</b>			
Fender's blue butterfly ( <i>Icaricia icariodes fenderi</i> )	FE	Found only in upland prairies of the Willamette Valley where the most frequently used larval host species, Kincaid's lupine, is also present. (65 Federal Register 3875)	<b>Not present due to lack of suitable habitat</b> (ESA 2019a).
Monarch butterfly ( <i>Danaus plexippus</i> )	FC	Migratory species with a summer range along the west coast of the U.S. and Canada. Typical habitat includes herbaceous and scrub-shrub wetlands, woodlands, savannas, forests, and dunes where milkweed plants occur. (85 Federal Register 81813)	<b>Unlikely to occur on Airport property due to lack of suitable habitat.</b> No milkweed was observed during the field reconnaissance.

SOURCE: USFWS (n.d., 2021c); StreamNet (2021); ODFW (2021a, 2021b, 2021c); NOAA Fisheries (2019).

<sup>1</sup> ESU = Evolutionarily Significant Unit.

<sup>2</sup> Endangered Species Act listing status: FC = Federal Candidate; FT = Federally Threatened; FE = Federally Endangered; ST = State Threatened.

**TABLE 2  
FEDERAL OR STATE PROTECTED PLANT SPECIES THAT MAY OCCUR IN THE VICINITY OF THE AIRPORT**

Species	Status <sup>1</sup>	Habitat Requirements	Occurrence in Vicinity of Airport
<b>Plants</b>			
Bradshaw's desert parsley ( <i>Lomatium bradshawii</i> )	SE	Occurs on seasonally saturated or flooded prairies adjacent to creeks and small rivers in the southern Willamette Valley with dense, heavy clay soils.	<b>Unlikely to occur on Airport property</b> as soils on the site are not heavy in clay, and the property is not directly adjacent to any creeks or small rivers.
Golden paintbrush ( <i>Castilleja levisecta</i> )	FT, SE	Occurs in upland prairies on flat to mounded grasslands. Thickets of low deciduous shrubs are commonly present; in areas where there has been an absence of fire, sites may be colonized by trees and shrubs. (62 Federal Register 31740)	<b>Not present due to lack of suitable habitat</b> (ESA 2019a). The species is presumed extirpated in the Willamette Valley, and quality habitat is not present on Airport property.
Kincaid's lupine ( <i>Lupinus sulphureus</i> ssp. <i>kincaidii</i> )	FT, ST	Typically found within the Willamette Valley in native grassland and native upland prairie habitats. (65 Federal Register 3875)	<b>Not present due to lack of suitable habitat</b> (ESA 2019a). No native upland prairie is present as quality habitat.
Nelson's checker-mallow ( <i>Sidalcea nelsoniana</i> )	FT, ST	Within the Willamette Valley, this species is most commonly associated with Oregon ash ( <i>Fraxinus latifolia</i> ) swales and meadows with wet depressions. This species also occurs along streams, sloughs, ditches, fence rows, drainage swales, fallow fields, and along roadsides at stream crossings, and within remnant prairie grasslands. (58 Federal Register 8235)	<b>Possible to occur on Airport property.</b> Although there are no recorded occurrences of this species in the nearby vicinity of the Airport, drainage swales and wet depressions on Airport property may provide potential habitat for this species.
Peacock larkspur ( <i>Delphinium parvonaceum</i> )	SE	Grows in low, flat areas in moist, silty soils of the Willamette River floodplain at elevations ranging from 150–400 feet above sea level. Occurs in native, wet prairies on the edges of ash and oak woodlands and along roadsides and fence rows.	<b>Unlikely to occur on Airport property due to lack of suitable habitat.</b> The Airport property is above the 500-year floodplain and native wet prairie habitat conditions are not present.
Water howellia ( <i>Howellia aquatilis</i> )	ST	Habitat is restricted to small, vernal, freshwater wetlands, glacial pothole ponds, former river oxbows that have an annual cycle of filling with water seasonally, ponds in woods, and stagnant ponds in timber.	<b>Unlikely to occur on Airport property due to lack of suitable habitat.</b> Quality habitat is not present at the Airport, with the only potential habitat restricted to the drainage swales on site.
White rock larkspur ( <i>Delphinium leuciphaeum</i> )	SE	Found on the edges of oak woodlands, in dry roadside ditches, on basalt cliffs, on riverbanks and bluffs, on moist rocky slopes, and in moist lowland meadows in shallow, loose soils with high organic matter and sand relative to the soils in which other delphiniums occur.	<b>Unlikely to occur on Airport property.</b> Could have the potential to grow in existing swales at the Airport but unlikely to occur due to lack of quality habitat.
White-topped aster ( <i>Sericocarpus rigidus</i> )	ST	Habitat includes open, grassy, seasonally moist prairie and savannah habitats at elevations ranging from about 90 to 1,250 feet above sea level. In Oregon, this species prefers deep, poorly drained, clayey soils. Occasionally found in partially shaded areas under Oregon oak ( <i>Quercus garryana</i> ) and Pacific madrone ( <i>Arbutus menziesii</i> ).	<b>Unlikely to occur on Airport property due to lack of suitable habitat.</b> Soils mapped at the Airport are silt loam in texture, and the development of the land has degraded any prairie or savannah habitat that may have once been present.
Willamette daisy ( <i>Erigeron decumbens</i> var. <i>decumbens</i> )	FE, SE	Species is endemic to the Willamette Valley and occurs on alluvial soils. Typically grows in seasonally flooded bottomlands, but one population is found in a well-drained upland prairie remnant. (65 Federal Register 3875)	<b>Not present due to lack of suitable habitat</b> (ESA 2019a). The Airport property is above the 500-year floodplain, and no quality upland prairie remnant habitat is present.

SOURCE: USFWS (n.d., 2021c); ODA (2018); ODFW (2021a, 2021b, 2021c); Oregon.gov (2014).

<sup>1</sup> Endangered Species Act listing status: FE= Federally Endangered; ST= State Threatened; SE= State Endangered.

### ***Environmentally Sensitive and Critical Habitats***

There is no designated critical habitat on the Airport property (USFWS 2021, NOAA Fisheries 2019). The nearest designated critical habitats are as follows:

- Upper Willamette River Chinook salmon critical habitat in the Pudding River, the Molalla River, and the Willamette River, starting less than 1 mile east of the Airport property (NOAA Fisheries 2019).
- Upper Willamette River steelhead critical habitat in the Pudding River, the Molalla River, and the Willamette River, starting less than 1 mile east of the Airport property (NOAA Fisheries 2019).
- Kincaid’s lupine (*Lupinus sulphureus* ssp. *kincaidii*) critical habitat, approximately 27 miles west of the Airport near Yamhill, Oregon (USFWS 2021).
- Fender’s blue butterfly (*Icaricia icariodes fenderi*) critical habitat, approximately 28 miles southwest of the Airport near Salem, Oregon (USFWS 2021).
- Northern spotted owl (*Strix occidentalis caurina*) critical habitat, approximately 27 miles northeast of the Airport near Mount Hood (USFWS 2021).

In addition to the critical habitat for the fish listed above, the sub-watersheds surrounding the Airport are considered Essential Fish Habitat (EFH) for Chinook and coho salmon (NOAA Fisheries 2021). EFH areas are identified under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) by NOAA Fisheries and the Pacific Fishery Management Council. Federal agencies are required to consult with 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. 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.

## **DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(f)**

Section 4(f) of the Department of Transportation (DOT) Act provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a historic site, public park, recreation area, or waterfowl and wildlife refuge of national, state, regional, or local importance unless there is no feasible and prudent alternative to the use of such land, and the project includes all possible planning to minimize harm resulting from the use. The following list summarizes the nearest properties of each type that may be protected under Section 4(f) of the DOT Act.

- Properties Listed on the National Register of Historic Places:
  - The Aurora Colony Historic District is located approximately 0.30 mile east of the southeastern-most portion of the Airport property (NPS 2021).

- The Frederick Bents House is located approximately 1.8 miles west of the Airport property (NPS 2021).
- The William Barlow House is located approximately 2.5 miles east of the Airport property (NPS 2021).
- Recreation Areas:
  - Wilsonville Pond is the nearest publicly owned recreation area. It is owned by the Oregon Department of Fish and Wildlife (ODFW) and located approximately 0.75 mile to the northwest of the Airport property.
  - Molalla River State Park is located 2 miles northeast of the Airport property.
- Wildlife Refuge:
  - The Tualatin River National Wildlife Refuge is approximately 8.5 miles north of the Airport.
- Locally Owned Park:
  - Aurora City Park is located approximately 1.1 miles southeast of the Airport.

No Section 4(f) resources are located within the immediate vicinity of the Airport. The closest Section 4(f) resource is the Aurora Colony Historic District.

## **HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION**

Federal, state, and local laws regulate the use, storage, transport, and disposal of hazardous materials. According to the EPA’s EJSCREEN, the closest Superfund site is located approximately 15 miles northeast of the Aurora State Airport property. The site is located at Northwest Pipe and Casing/Hall Process Company in Clackamas, Oregon (EPA 2020). The closest brownfield site is located at the former Canby landfill, approximately 3 miles east of the Airport (EPA 2020).

According to the EPA’s TRI Search Plus Tool, between the years of 2009-2020, there were five facilities within a 3-mile radius of the Airport reporting releases of toxic chemicals into the air, water, or land. These five facilities included Milwaukee Electronics, Cemex, Sr. Smith LLC, Potters Industries LLC, and Clarios LLC (EPA 2021b). These companies span the sectors of plastics and rubber, electrical equipment, nonmetallic mineral products, and computers and electronic products (EPA 2021b). Over the course of the 12-year reporting period, in total, these facilities accounted for 102,066 lbs. of releases of eight kinds of chemicals into the surrounding air, land, and off-site waters (EPA 2021b). The eight chemicals released into the environment include: styrene, lead, lead compounds, antimony, antimony compounds, chromium, nickel, and manganese (EPA 2021b).

EJSCREEN also reports one EPA hazardous waste treatment, storage, and disposal facility (TSDF) at Columbia Helicopters Inc., adjacent to the Airport 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 (EPA 2020) and is identified by the EPA Cleanups in My Community Map as having been a Resource Conservation and Recovery Act (RCRA) corrective action site (EPA 2021a). Aurora State Airport also holds an NPDES permit (also referred to in Oregon as a 1200-Z Stormwater Discharge General Permit), as do an additional 12 other properties within a 3-mile radius of the Airport (EPA 2020).

There is one aboveground storage tank fueling facility and one recently decommissioned fueling facility with underground storage tanks that are planned to be removed. There are also other privately owned Fixed Based Operator (FBO) facilities surrounding the Airport property that have their own fueling facilities.

## **NATURAL RESOURCES AND ENERGY SUPPLY**

Utilities at the Aurora State Airport include water, sewer, telephone, and electric. Water services on the Airport property and surrounded business areas are provided by on-site well systems. The Airport and surrounding area are not connected to City of Aurora water and sanitary sewer services. Sewer is addressed through septic tank systems or holding tanks. Electricity is provided by Portland General Electric, and the telephone service is provided by a local franchise company.

In 2001, the Marion County Board of Commissioners formed a Water Control District at the Airport to provide water for fire protection for properties at the Airport (Marion County Public Works 2014). 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.

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 (Aron Faegre and Associates 2014). At the time of testing, pump and filtration systems were recommended to be implemented to provide adequate flow and water quality. The region of Oregon that the Aurora State Airport is located on is known for having arsenic in the water, and the nearby City of Aurora also has water decontamination infrastructure to remove arsenic from their well water (Aron Faegre and Associates 2014).

## **VISUAL EFFECTS**

Aurora State Airport is located approximately 0.31 mile northeast of the city limits of Aurora and approximately one mile east of Interstate 5. Surrounding the Aurora State Airport are other privately owned aviation-focused businesses and aviation hangars. Zoning around the Airport is zoned by Marion and Clackamas counties mostly as exclusive farm use, with small areas of acreage residential, public, and public-limited use (Marion County 2021, Clackamas County n.d.).

Current operations that add to light emissions and visual presence of the Airport include flight activity relating to business jets, training activities, and air ambulance activity (WHPacific 2012).

Currently, the Aurora State Airport is equipped with the following safety lighting, equipment, and services that contribute to light emissions and visual presence in the immediate vicinity of the Airport property:

- Medium intensity runway lights (MIRL)
- Visual approach slope indicators (VASI)
- Omni-directional approach lights (ODAL)
- An air traffic control tower
- A rotating beacon
- A lighted wind indicator

## WATER RESOURCES

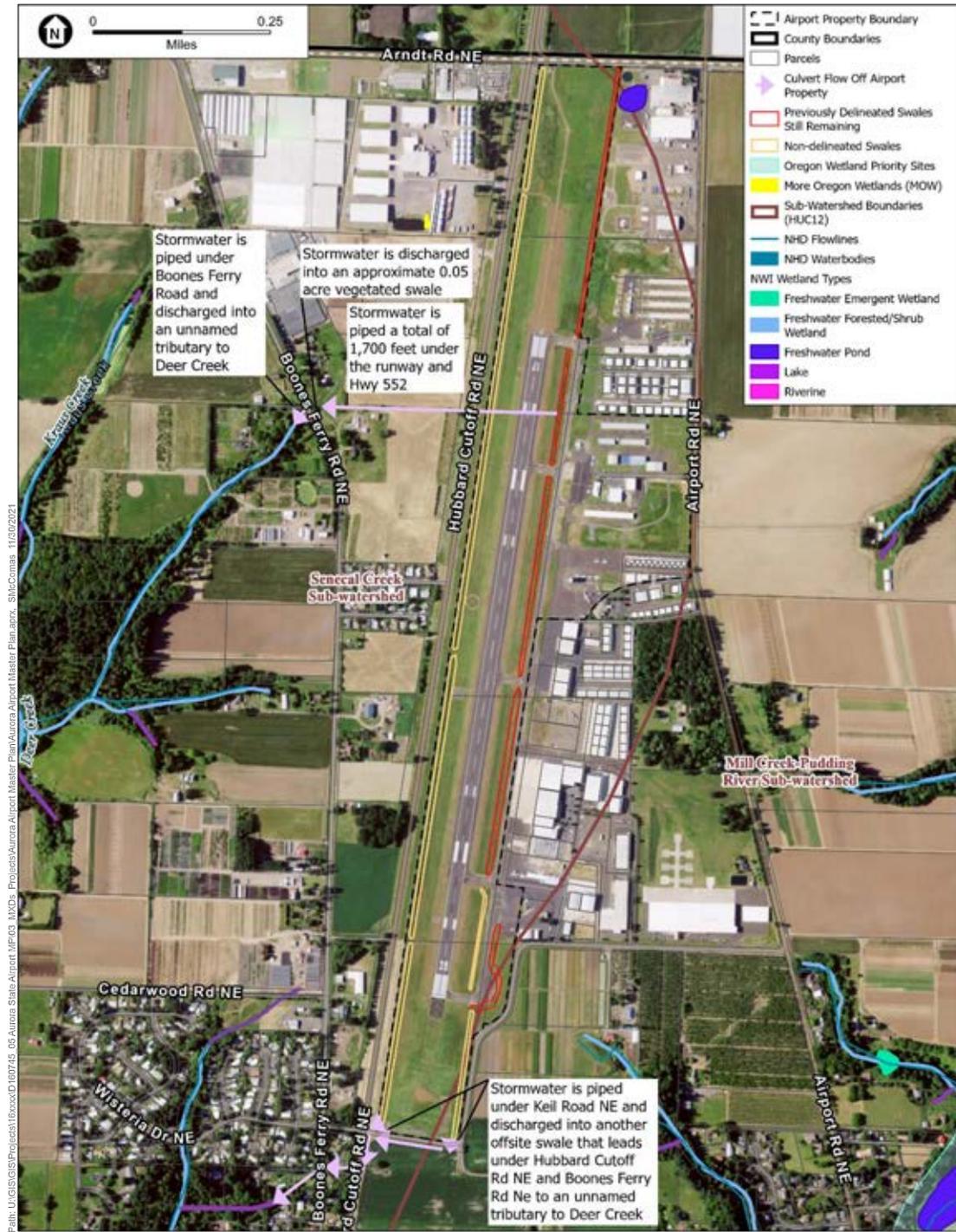
### **Wetlands**

The U.S. Army Corps of Engineers regulates the discharge of dredged and/or fill material into waters of the United States, including adjacent wetlands, under Section 404 of the Clean Water Act. Wetlands are defined in Executive Order 11990, Protection of Wetlands, as *“those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetation or aquatic life that requires saturated or seasonably saturated soil conditions for growth and reproduction.”*

National Wetlands Inventory (NWI) mapping within the vicinity of the Airport is shown on **Figure 1**. The only NWI-identified wetland directly adjacent to Airport property is a freshwater pond bounding the northeastern corner of the Airport on property owned by Columbia Helicopters Inc. This mapped wetland is actually a concrete water retention pool maintained by Columbia Helicopters Inc. for fire suppression safety requirements. Riverine, freshwater forested/shrub wetlands, and freshwater emergent wetlands are mapped in many drainages and around streams and rivers outside of the immediate vicinity of the Airport (USFWS 2021d).

No Local Wetland Inventory (LWI) is available for the immediate vicinity of the Airport; however, wetland data are available from Oregon Wetlands Explorer. Oregon Wetlands Explorer provides data for wetland priority sites for the Willamette Valley Basin and identifies areas with concentrations of important wetland habitats and opportunities for successful wetland restoration (Oregon Spatial Data Library 2019). A wetland priority site is located approximately 0.5 mile east and 1-mile south of the Airport property along the Pudding River as well as following Mill and Senecal creeks (**Figure 1**) (Oregon Spatial Data Library 2019). ORBIC provides wetland data referred to as More Oregon Wetlands (MOW). MOW contains wetland location data derived from federal, state, academic, and non-profit sources other than those used to create LWI or NWI data (Oregon Spatial Data Library 2019). The nearest MOW identified wetland is located 0.1 mile west of the northern portion of the Airport property boundary (**Figure 1**) (Oregon Spatial Data Library 2019).

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



SOURCE: 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**

(WHPacific 2003)(**Appendix B**). In addition, ESA completed a delineation of non-jurisdictional wetlands in 2018 (ESA 2018a)(**Appendix C**).

The delineated non-jurisdictional wetlands on Airport property were 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. These delineated non-jurisdictional wetlands all occurred within drainage swales on the eastern side of the runway. Since the wetland delineation conducted by WHPacific, the location of the paved taxiways has changed, and swales that were delineated in that report have since changed locations.

The remaining existing swales identified by the two previous delineations were observed during the field reconnaissance and were functioning as water retention facilities, with three culverts leading off of 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 have the possibility to be non-jurisdictional wetlands as well. **Figure 1** shows the areas of delineated swales that still remain after the movement of the paved taxiway.

### ***Floodplains***

Executive Order 11988, Floodplain Management, directs federal agencies to take action to reduce the risk of flood loss; minimize the impact of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by the floodplains. Based on a review of Federal Emergency Management Agency (FEMA) maps, there are no areas of 100-year floodplains on Airport property.

The Airport property lies in a FEMA Zone X, which is considered an area of minimal flood hazard (FEMA 2019). The Zone X area in which the Airport is located is considered to be outside of the 500-year floodplain (FEMA 2019). The closest 100-year floodplain is located approximately 0.55 mile east of the Airport and is associated with the Pudding River.

### ***Surface Waters***

The Airport property is in the Willamette drainage basin defined by the 6-digit Hydrologic Unit Code (HUC6) 170900, and the Airport property is almost entirely located within the Senecal Creek sub-watershed (HUC12 170900090501), except for the northeastern and southeastern corners of the property, which are located within the Mill Creek-Pudding River sub-watershed (HUC12 170900090502). There are currently no National Hydrography Dataset (NHD) surface waters mapped on Airport property (see **Figure 1**). However, multiple surface waters are mapped in the vicinity surrounding the Airport:

- West of the Airport property, Deer Creek and its tributaries flow south to merge with Senecal Creek.
- South of the Airport, Senecal Creek and its related tributaries flow into Mill Creek, which flows northward to the east of the Airport property into the Mill Creek-Pudding River sub-watershed.

- East of the Airport, Mill Creek merges into the Pudding River and flows north until it merges into the Molalla River.
- North of the Airport, the Molalla River flows into the Willamette River, which flows west to east, approximately 2.2 miles north of the northern boundary of the Airport property.

All surface waters within the vicinity of the Airport eventually flow into the Willamette River, which confluences with the Columbia River north of Portland, Oregon. From this confluence, the Columbia River flows west to the Pacific Ocean.

### **Water Quality**

Many of the surface waters in the vicinity of the Aurora State Airport property are contaminated and listed on the 303(d) list (DEQ 2021). Contaminated surface waters in the vicinity of the Airport include:

- The 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 (1<sup>st</sup>-4<sup>th</sup> 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.
- The 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.

A Total Maximum Daily Load (TMDL) describes the maximum amount of a pollutant allowed in a water body and serves as the starting point or planning tool for restoring water quality. Several TMDLs actively apply to the 303(d) impaired waters listed above:

- There is a TMDL for water temperatures for all 303(d) temperature-impaired listed waters of the mainstem Willamette River (DEQ 2006).
- For the Molalla-Pudding Subbasin, TMDLs for temperature also apply to all 303(d) temperature listings within the subbasin (DEQ 2008).

Additional TMDLs that apply to other types of impaired water resources in the area can be referenced in the following State of Oregon Department of Environmental Quality (DEQ) reports: the "Pudding River Water Quality Report Total Maximum Daily Load Program" document (DEQ 1993), the "Willamette Basin Total Maximum Daily Load" document (DEQ 2006), and the "Molalla-Pudding Subbasin TMDL and WQMP" document (DEQ 2008).

The 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.

### **Stormwater**

The Airport currently holds an NPDES permit (1200-Z Stormwater Discharge General Permit) that regulates the stormwater discharge from the Airport property. Stormwater from the Airport is directed away from the runway and surrounding infrastructure via a system of constructed swales that wrap around both sides of the runway. The locations of these swales are show in **Figure 1** and were mapped using a combination of Light Detection and Ranging (LiDAR) elevation mapping and satellite imagery (DOGAMI n.d.).

The swales on Airport property function as stormwater retention devices that have shallow, vegetated sloped sides designed to capture, treat, and infiltrate stormwater runoff as it moves downstream. Stormwater flows in these swales from north to south, and the swales continue south past the Airport boundary. Where the swales meet a taxiway entrance to the runway or other drivable maintenance access area, they are connected by culverts.

Three culverts on Airport property conduct water off of 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 confluent with Mill Creek, which flows into the Pudding River that then confluent 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.

### **Groundwater**

The general aquifer type in the vicinity of the Airport is Willamette Lowland basin-fill aquifers composed of unconsolidated sand and gravel aquifers (USGS n.d.). These types of aquifers are used extensively for groundwater supplies (USGS n.d.). There are no sole source aquifers in the vicinity of Marion County (EPA n.d.). Well water derived from on-site wells is the source of all water services provided at the Aurora State Airport and surrounding properties.

### ***National Wild and Scenic Rivers***

The closest designated segment of a Wild and Scenic River is a portion of the Molalla River, approximately 18 miles southeast of the Airport (USFWS 2016).

## REFERENCES

- Aron Faegre and Associates. 2014. Aurora Airport Water Control District: Arsenic Levels in Airport Drinking Water. City of Aurora. Accessed: October 2021. Available: [https://www.ci.aurora.or.us/sites/default/files/fileattachments/planning\\_commission/page/125/04\\_aurora-airport-water-quality-information.pdf](https://www.ci.aurora.or.us/sites/default/files/fileattachments/planning_commission/page/125/04_aurora-airport-water-quality-information.pdf).
- Clackamas County. n.d. GIS Data Portal: Zoning. Accessed: October 2021. Available: <http://www.clackamas.us/gis/data-portal>.
- Environmental Science Associates (ESA). 2018a. Aurora State Airport Improvements; Water Resource Delineation Report. Prepared for Century West Engineering.
- \_\_\_\_\_. 2018b. Memo to Century West Engineering on the subject of: Aurora State Airport Streaked Horned Lark Presence/Absence Survey. Sent: 20 August 2018.
- \_\_\_\_\_. 2019a. Memo to Century West Engineering on the subject of: Aurora State Airport Environmental Inventory and No Effect Letter. Sent: 23 April 2019.
- \_\_\_\_\_. 2019b. Aurora State Airport Run-Up Apron Biological Assessment. Prepared for CenturyWest Engineering.
- Esri. 2018. "NAIP Imagery Hybrid" [basemap]. Accessed: October 2021. Available: <https://naip.maptiles.arcgis.com/arcgis/rest/services/NAIP/MapServer>
- Federal Aviation Administration (FAA). 2006. 5050.4B – National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions. . Accessed: October 2021. Available: [https://www.faa.gov/regulations\\_policies/orders\\_notices/index.cfm/go/document.information/documentid/14836](https://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.information/documentid/14836).
- \_\_\_\_\_. 2015. 1050.1F – Environmental Impacts: Policies and Procedures. Accessed: November 2021. Available: [https://www.faa.gov/regulations\\_policies/orders\\_notices/index.cfm/go/document.current/documentnumber/1050.1](https://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.current/documentnumber/1050.1).
- \_\_\_\_\_. 2021. FAA Wildlife Strike Database. Accessed: November 2021. Available: <https://wildlife.faa.gov/search>.
- Federal Emergency Management Act (FEMA). 2019. FEMA Flood Map Service Center: Search All Products. Search Results for Marion County Unincorporated Areas: NFHL Data-County (Product ID NFHL\_41047C). Accessed: October 2021. Available: <https://msc.fema.gov/portal/availabilitySearch?addcommunity=410154&communityName=MARION%20COUNTY%20UNINCORPORATED%20AREAS#searchresultsanchor>.
- Marion County. 2021. Marion County GIS Data. Accessed October 2021. Available: <https://gis.co.marion.or.us/GISDownload/gisdownload.aspx>.

- Marion County Public Works. 2014. Memorandum: Amendments to the Marion County Comprehensive Plan – Aurora Airport Water Extension (Legislative Amendment 13-1). City of Aurora. Accessed: October 2021. Available: [https://www.ci.aurora.or.us/sites/default/files/fileattachments/planning\\_commission/page/125/03\\_aurora-airport-water-extension-staff-report.pdf](https://www.ci.aurora.or.us/sites/default/files/fileattachments/planning_commission/page/125/03_aurora-airport-water-extension-staff-report.pdf).
- National Oceanic and Atmospheric Administration (NOAA). 2021. Climate Data Online: Aurora State Airport Summary of Monthly Normals 1981-2010. Accessed: October 2021. Available: <https://www.ncdc.noaa.gov/cdo-web/search>. National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries). 2019. NOAA Fisheries West Coast Region: Endangered Species Act Critical Habitat. Accessed: November 2021. Available: [https://archive.fisheries.noaa.gov/wcr/maps\\_data/endangered\\_species\\_act\\_critical\\_habitat.html](https://archive.fisheries.noaa.gov/wcr/maps_data/endangered_species_act_critical_habitat.html).
- \_\_\_\_\_. 2021. Essential Fish Habitat – Groundfish and Salmon: Maps and GIS data. Accessed: November 2021. Available: <https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-groundfish-and-salmon>.
- National Park Service (NPS). 2021. National Register of Historic Places. Accessed: October 2021. Available: <https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466>.
- Oregon Department of Agriculture (ODA). 2018. Oregon Listed and Candidate Plants-Complete List. Accessed: November 2021. Available: <https://data.oregon.gov/Natural-Resources/Oregon-listed-and-candidate-plants-complete-list/8s3k-ygh2>.
- Oregon Department of Fish and Wildlife (ODFW). 2021a. Federally Listed, Proposed, Candidate, Delisted and Species of Concern Under the Jurisdiction of the Fish and Wildlife Service Which May Occur Within Oregon. Accessed November 2021. Available: <https://www.fws.gov/oregonfwo/Documents/OregonSpeciesStateList.pdf>.
- \_\_\_\_\_. 2021b. Native Fish Conservation – Conservation and Recovery Plans. Accessed: November 2021. Available: [https://www.dfw.state.or.us/fish/crp/conservation\\_recovery\\_plans.asp](https://www.dfw.state.or.us/fish/crp/conservation_recovery_plans.asp).
- \_\_\_\_\_. 2021c. Threatened, Endangered, and Candidate Fish and Wildlife Species. Accessed: November 2021. Available: [https://www.dfw.state.or.us/wildlife/diversity/species/threatened\\_endangered\\_candidate\\_list.asp](https://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_candidate_list.asp).
- Oregon Department of Environmental Quality (DEQ). 1993. Pudding River Water Quality Report Total Maximum Daily Load Program. Accessed: November 2021. Available: <https://www.oregon.gov/deq/FilterDocs/PuddingTMDL.pdf>.
- \_\_\_\_\_. 2006. Willamette Basin Total Maximum Daily Load (TMDL). Accessed: November 2021. Available: <https://www.oregon.gov/deq/wq/tmdls/Pages/TMDLs-Willamette-Basin.aspx>.

- \_\_\_\_\_. 2008. Molalla-Pudding Subbasin TMDL & WQMP. Accessed: November 2021. Available: <https://www.oregon.gov/deq/wq/tmdls/Pages/TMDLs-Willamette-Basin.aspx>.
- \_\_\_\_\_. 2021. 2018/2020 Integrated Report – EPA Approved: Interactive Web Map Application. Accessed November 2021. Available: <https://geo.maps.arcgis.com/apps/MapJournal/index.html?appid=f2e8fd446c404661ae6a435a9b7a19a9>.
- Oregon.gov. 2014. Oregon Listed Plants by County. Accessed: November 2021. Available: <https://data.oregon.gov/dataset/Oregon-listed-plants-by-county-complete-list-for-m/er5e-y4zf/data>.
- \_\_\_\_\_. 2021. Working Session: Ensuring Aurora State Airport for the next decade of ORS 836.642 operations. Accessed: November 2021. Available: [https://www.oregon.gov/aviation/AVB/Documents/2021/10\\_06/Aurora%20State%20Airport%20Review%20Oct%201.pdf](https://www.oregon.gov/aviation/AVB/Documents/2021/10_06/Aurora%20State%20Airport%20Review%20Oct%201.pdf).
- Oregon Spatial Data Library. 2019. Oregon Wetlands Database – 2019. Oregon Biodiversity Information Center: Oregon Wetlands Database. Accessed: October 2021. Available: <https://spatialdata.oregonexplorer.info/geoportal/details?id=51b33a5392404b8f83be5a36b5d25e72>.
- Portland State University (PSU). 2021. Institute for Natural Resources: Oregon Biodiversity Information Center GIS Data Request. Accessed: February 2018.
- State of Oregon Department of Geology and Mineral Industries (DOGAMI). n.d. DOGAMI Lidar Viewer. Accessed: October 2021. Available: <https://gis.dogami.oregon.gov/maps/lidarviewer/>.
- StreamNet. 2021. Fish Data for the Northwest, StreamNet Mapper. Accessed: October 2021. Available: <https://psmfc.maps.arcgis.com/apps/webappviewer/index.html?id=3be91b0a32a9488a901c3885bbfc2b0b>.
- Transportation Research Board (TRB). 2014. ACRP 11-02/Task 21 [Final]: Innovative Airport Responses to Threatened/Endangered Species. The National Academies of Sciences, Engineering, and Medicine. Accessed: November 2021. Available: <https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3266>.
- U.S. Department of Agriculture (USDA). 2019. Web Soil Survey. Accessed: November 2021. Available: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- U.S. Environmental Protection Agency (EPA). n.d. Sole Source Aquifers. Accessed: October 2021. Available: <https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>.
- \_\_\_\_\_. 2020. EJSCREEN: EPA’s Environmental Justice Screening and Mapping Tool (Version 2020). Accessed: October 2021. Available: <https://ejscreen.epa.gov/mapper/>.

- \_\_\_\_\_. 2021a. Cleanups In My Community Map. Accessed: November 2021. Available: <https://cimc.epa.gov/ords/cimc/f?p=cimc:map:::71>.
- \_\_\_\_\_. 2021b. Toxics Release Inventory (TRI) Search Plus. Accessed: November 2021. Available: <https://edap.epa.gov/public/extensions/TRISearchPlus/TRISearchPlus.html>.
- \_\_\_\_\_. 2021c. Oregon Nonattainment/Maintenance Status for Each County by Year for all Criteria Pollutants. Accessed: October 2021. Available: [https://www3.epa.gov/airquality/greenbook/anayo\\_or.html](https://www3.epa.gov/airquality/greenbook/anayo_or.html).
- \_\_\_\_\_. 2021d. Oregon Whole or Part County Nonattainment Status by Year Since 1992 for all Criteria Pollutants. Accessed: September 3, 2021. Available: [https://www3.epa.gov/airquality/greenbook/phistory\\_or.html](https://www3.epa.gov/airquality/greenbook/phistory_or.html).
- U.S. Fish and Wildlife Service (USFWS). n.d. Oregon Fish and Wildlife Office: Oregon’s Endangered Species. Accessed: October 2021. Available: <https://www.fws.gov/oregonfwo/promo.cfm?id=177175701>.
- \_\_\_\_\_. 2016. National Wild and Scenic Rivers System Map. Accessed: October 2021. Available: <https://www.rivers.gov/documents/nwsrs-map.pdf>.
- \_\_\_\_\_. 2020a. Migratory Bird Treaty Act. Accessed: November 2021. Available: <https://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php>.
- \_\_\_\_\_. 2020b. Programmatic Biological Opinion on Routine Oregon Airport Projects located in Benton, Clackamas, Clatsop, Columbia, Marion, Multnomah, Lane, Linn, Polk, Washington, and Yamhill Counties, Oregon. Reference: 01EOFW00-2021-F-0129. Federal Action Agency: Federal Aviation Administration.
- \_\_\_\_\_. 2021. Critical Habitat for Threatened and Endangered Species. Accessed: September 14, 2021. Available: <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>.
- \_\_\_\_\_. 2021c. Information for Planning and Consultation (IPaC). Accessed: October 2021. Available: <https://ecos.fws.gov/ipac/>.
- \_\_\_\_\_. 2021d. National Wetlands Inventory: Surface Waters and Wetlands. Accessed: November 2021. Available: <https://www.fws.gov/wetlands/data/mapper.html>.
- U.S. Geological Survey (USGS). n.d. List of Unconsolidated Sand and Gravel Aquifers. Accessed: October 2021. Available: [https://www.usgs.gov/mission-areas/water-resources/science/list-unconsolidated-sand-and-gravel-aquifers?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/mission-areas/water-resources/science/list-unconsolidated-sand-and-gravel-aquifers?qt-science_center_objects=0#qt-science_center_objects).

\_\_\_\_\_. 2021. TNM Download (v2.0): USGS National Hydrography Dataset Best Resolution (NHD) for Hydrologic Unit (HU) 4 - 1709 (published 20211102). Accessed: November, 2021. Available: <https://apps.nationalmap.gov/downloader/#/>.

WHPacific, Inc. 2003. Determination and Delineation of Wetlands and Other Waters of the United States for: Proposed Improvements to Aurora State Airport. Prepared for Oregon Department of Aviation (ODA).

\_\_\_\_\_. 2012. Aurora State Airport: Airport Master Plan Update. Oregon Department of Aviation. Accessed: October 2021. Available: <https://www.oregon.gov/aviation/Airports/Documents/UAO/Master%20Plan/1.%20Cover%20Sheet%20and%20Acknowledgements.pdf>.

# Appendix A

## **USFWS Official Species List**





## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Oregon Fish And Wildlife Office  
 2600 Southeast 98th Avenue, Suite 100  
 Portland, OR 97266-1398  
 Phone: (503) 231-6179 Fax: (503) 231-6195

<https://www.fws.gov/oregonfwo/articles.cfm?id=149489416>



In Reply Refer To:

October 27, 2021

Consultation Code: 01EOFW00-2022-SLI-0051

Event Code: 01EOFW00-2022-E-00145

Project Name: Aurora Airport

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

10/27/2021

Event Code: 01EOFW00-2022-E-00145

2

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to investigate opportunities for incorporating conservation of threatened and endangered species into project planning processes as a means of complying with the Act. If you have questions regarding your responsibilities under the Act, please contact the Endangered Species Division at the Service's Oregon Fish and Wildlife Office at (503) 231-6179. For information regarding listed marine and anadromous species under the jurisdiction of NOAA Fisheries Service, please see their website ([http://www.nwr.noaa.gov/habitat/habitat\\_conservation\\_in\\_the\\_nw/habitat\\_conservation\\_in\\_the\\_nw.html](http://www.nwr.noaa.gov/habitat/habitat_conservation_in_the_nw/habitat_conservation_in_the_nw.html)).

Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

10/27/2021

Event Code: 01EOFW00-2022-E-00145

1

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Oregon Fish And Wildlife Office**  
2600 Southeast 98th Avenue, Suite 100  
Portland, OR 97266-1398  
(503) 231-6179

10/27/2021

Event Code: 01EOFW00-2022-E-00145

2

## Project Summary

Consultation Code: 01EOFW00-2022-SLI-0051

Event Code: Some(01EOFW00-2022-E-00145)

Project Name: Aurora Airport

Project Type: \*\* OTHER \*\*

Project Description: Environmental Overview of Aurora Airport

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@45.248400000000004,-122.76904610155853,14z>



Counties: Marion County, Oregon

10/27/2021

Event Code: 01EOPW00-2022-E-00145

3

## Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### Birds

NAME	STATUS
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/1123">https://ecos.fws.gov/ecp/species/1123</a>	Threatened
Streaked Horned Lark <i>Eremophila alpestris strigata</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/7268">https://ecos.fws.gov/ecp/species/7268</a>	Threatened

### Insects

NAME	STATUS
Fender's Blue Butterfly <i>Icaricia icarioides fenderi</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/6659">https://ecos.fws.gov/ecp/species/6659</a>	Endangered
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

10/27/2021

Event Code: 01EOFW00-2022-E-00145

4

## Flowering Plants

NAME	STATUS
<b>Kincaid's Lupine</b> <i>Lupinus sulphureus ssp. kincaidii</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/3747">https://ecos.fws.gov/ecp/species/3747</a>	<b>Threatened</b>
<b>Nelson's Checker-mallow</b> <i>Sidalcea nelsoniana</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7340">https://ecos.fws.gov/ecp/species/7340</a>	<b>Threatened</b>
<b>Willamette Daisy</b> <i>Erigeron decumbens</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/6270">https://ecos.fws.gov/ecp/species/6270</a>	<b>Endangered</b>

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



**Appendix B**  
**Non-Jurisdictional Wetlands**  
**Delineated by WHPacific (2003)**





# Appendix C

## **Non-Jurisdictional Wetlands Delineated by ESA (2018)**





SOURCE: ESA 2018; DigitalGlobe, 2017; Open Street Map, 2016; Marion Co, 2017

D160745. Aurora State Airport Wetland Delineation

**Figure 5**  
Wetland Delineation Map  
Aurora, OR



