

## Appendix B – Biological Evaluation Memorandum

## Technical Memorandum

**To:** David Ryan, Airport Director, City of Arlington  
Arlington Municipal Airport (KAWO), Arlington, Washington

**From:** Kara Randall, WHPacific

**Date:** November 21, 2016

**Re:** Arlington Municipal Airport Business Park and Road Project Biological Evaluation Memorandum

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### Project Description

This Biological Evaluation (BE) Memorandum assesses the potential effects of a proposed road, multi-use trail and Airport Business Park development on biological resources listed under the Federal Endangered Species Act (ESA) (16 U.S.C. 1531-1544) and Washington State ESA. The project area is located on approximately 43 acres of City of Arlington-owned land west of 51<sup>st</sup> Ave (Airport Blvd) and north of 172<sup>nd</sup> St NE (SR 531). Approximately 15 acres of the project area contains existing development including a road, school and athletic club. The project area with proposed road and multi-use trail are shown on Exhibit A. A conceptual development scenario for the Airport Business Park facilities is shown on Exhibit B.

The project consists of the following components.

- Construct Airport Business Park facilities including retail, light industrial/technical and commercial/office space;
- Construct a 1/2-mile long urban collector road (173<sup>rd</sup> St) through the proposed Airport Business Park to connect 51<sup>st</sup> Ave to 43<sup>rd</sup> Ave;
- Construct 12-foot wide multi-use trail connection to Arlington's existing trail system;
- Install electrical and communication utilities; and
- Construct stormwater drainage structures.

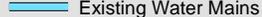
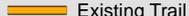
Timing for construction of the road, trail, stormwater structures and electrical and communication utilities is dependent upon funding, but is estimated to commence in 2017 or 2018. Construction will take approximately 1-year to complete. Construction of facilities within the Business Park is estimated to begin in 2017.

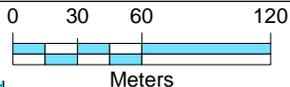
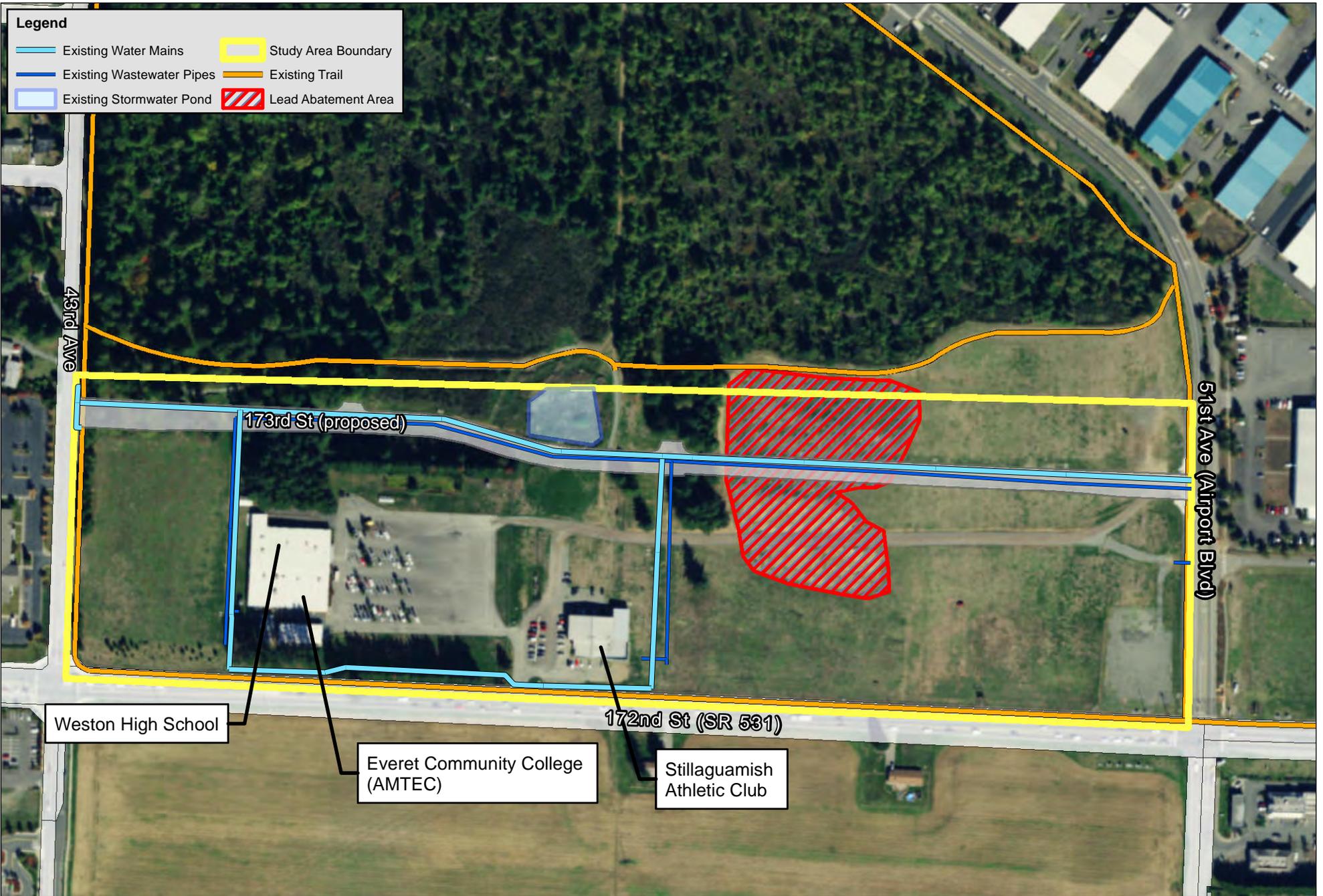
The Arlington Municipal Airport (Airport) is a publically-owned, general aviation airport located within the boundaries of the City of Arlington in Snohomish County, Washington, in Section 21, Township 31 North, Range 5 East. The project area is located on a relatively flat terrace at the north end of Water Resource Inventory Area (WRIA) 07 (Snohomish River), and in the Hydrologic Unit Code (HUC) 171100110204 sub-basin in the Snohomish River Watershed. Land use in the project area consists primarily of commercial and residential to the west, Airport/airpark to the north and east, and agricultural to the south (Snohomish County 2016).

### Methods

To support the BE, WHPacific staff completed a review of biological resources listed under the Federal ESA and Washington State ESA for the 43-acre Airport Business Park project area, adjacent surrounding area, and Snohomish County using the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) Trust Resources Report (USFWS 2016a), National Marine Fisheries Service

**Legend**

-  Existing Water Mains
-  Study Area Boundary
-  Existing Wastewater Pipes
-  Existing Trail
-  Existing Stormwater Pond
-  Lead Abatement Area



**WHPacific**

**DRAWING INFO**

Job # : 16128

Author: B Moreira

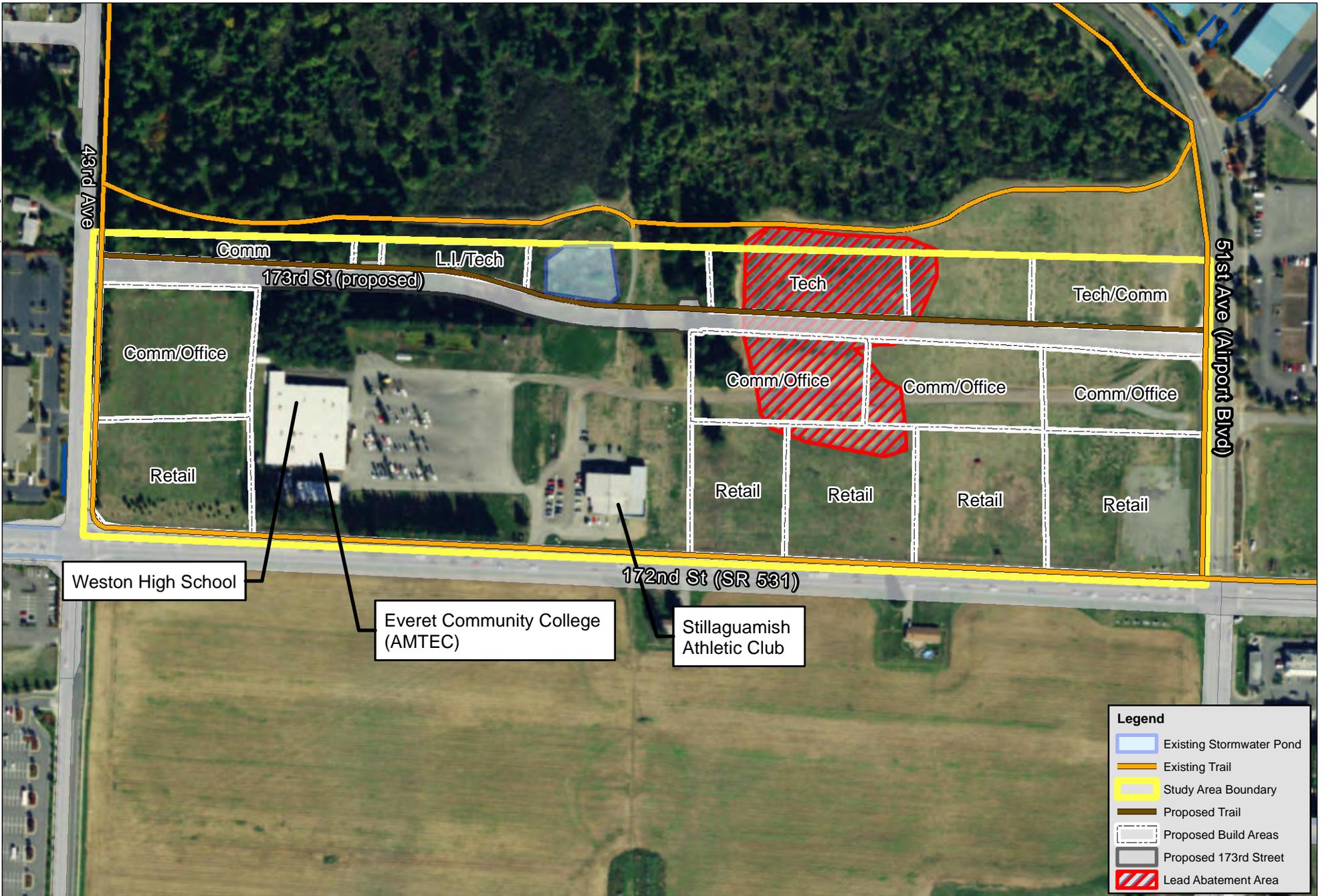
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**EXHIBIT A  
ARLINGTON AIRPORT BUSINESS PARK**

**CITY OF ARLINGTON, WASHINGTON  
ARLINGTON MUNICIPAL AIRPORT**

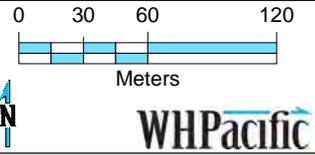
Date: November, 2016

**Exhibit A**



**Legend**

- Existing Stormwater Pond
- Existing Trail
- Study Area Boundary
- Proposed Trail
- Proposed Build Areas
- Proposed 173rd Street
- Lead Abatement Area



<b>DRAWING INFO</b>	
Job # :	16128
Author:	B Moreira
Scale:	1:3,500

**EXHIBIT B - CONCEPTUAL FUTURE LAND BUILD-OUT SCENARIO**  
**ARLINGTON AIRPORT BUSINESS PARK**

**CITY OF ARLINGTON, WASHINGTON**  
**ARLINGTON MUNICIPAL AIRPORT**

Date: November, 2016

**Exhibit B**

(NMFS) Maps & Data - Western Region Endangered Species Act Critical Habitat (NMFS 2016a), Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) (WDFW 2016a), WDFW SalmonScape (WDFW 2016b), and Washington Natural Heritage Program (WNHP) Rare Plant List for Snohomish County (WNHP 2016a) websites. Also reviewed were a Biological Assessment completed by Terra Associates, Inc. (2000) and USFWS informal consultation with the FAA (USFWS 2003) for a proposed 285-acre development which included the current project area.

## Results

The Airport Business Park project area lies in the Snohomish River Watershed, south of the historic Stillaguamish River floodplain, near the western foothills of the North Cascade Mountains. Based upon site photos, Google Earth imagery and previous reports, vegetation in the project area includes mostly regularly-mowed grasslands on the southern half of the project area and a mix of shrub-scrub, and forest land on the northern half the project area. Common forest and scrub shrub plant species present include Douglas fir, western red cedar, red alder, and Scotch broom. The forest area has been repeatedly logged.

A wetland study was completed for the project area (Categorical Exclusion, Appendix A). No wetlands were identified.

Previous hydrologic studies show there is a shallow water table in the project area with groundwater about 3 to 4 feet below the ground surface in the winter (Terra Associates, Inc. 2000). Currently, stormwater from the existing road, school and athletic club flows into an onsite, man-made stormwater detention pond where it infiltrates into the ground (Exhibit A).

The following sections include the results of the evaluation for the potential presence, habitat requirements, critical habitat, and habitat suitability in the study area for ESA-listed species. The review of federal and state biological resources found the species described in the following sections as potentially occurring in the Arlington Airport area. Appendix A contains a list of all federal and state-listed species for Snohomish County.

## Salmonids

Populations of Puget Sound Chinook (*Oncorhynchus tshawytscha*), Puget Sound steelhead (*Oncorhynchus mykiss*) and bull trout/Dolly Varden (*Salvelinus confluentus/Salvelinus malma*) (federal threatened, Washington State candidate species) are found in nearby rivers, creeks, and channels outside the project area (NMFS 2016 a, WDFW 2016 b). Critical habitat for these species is also designated in many of the surrounding creeks and rivers (NMFS 2016a, NMFS 2016b, NMFS 2005, and USFWS 2010). No rivers or streams are present on or adjacent to the project area. Listed Puget Sound Chinook, Puget Sound steelhead, and bull trout/Dolly Varden are found in the Middle Fork of Quilceda Creek and three of its tributaries located south of the project area (Table 1) (WDFW 2016 a, WDFW 2016 b). Middle Fork Quilceda Creek is located south of 172<sup>nd</sup> Street NE and approximately 1.8 miles from the project area at its closest point. It flows south into Quilceda Creek and ultimately to Ebey Slough and into Puget Sound. The three Middle Fork Quilceda Creek tributaries include an unnamed channel flowing from a wetland 0.3 miles southwest of the project area, the unnamed channelized headwaters of Westphal Creek 0.4 miles to the south, and the mostly channelized headwaters of the Middle Fork Quilceda Creek 0.6 miles southeast of the project area. There are no culverts or other outfalls connecting the project area to these streams (WDFW 2016b, DOE 2016).

The project is within the Snohomish River Hydrological Unit (HUC 17110011) which contains Chinook, coho salmon, and Puget Sound pink salmon Essential Fish Habitat (EFH) (Stadler et al. 2011, NMFS 2016c).

**Table 1: Status, habitat use, and critical habitat designation for listed fish species of the Middle Fork Quilceda Creek drainage.**

Species ESU <sup>1</sup> /DPS <sup>2</sup>	Federal ESA Status	WA State ESA Status	WDFW Salmon Scape/PHS info for Middle Fork Quilceda Creek	Critical Habitat in Quilceda Creek?
Chinook Puget Sound ESU	Threatened	Candidate	Documented Spawning Occurrence – Migration	Yes (NMFS 2005)
Steelhead Puget Sound DPS	Threatened	Candidate	Presumed Present Occurrence – Migration	Yes (NMFS 2016b)
Bull Trout/Dolly Varden	Threatened	Candidate	Presumed Present Occurrence – Migration	No (USFWS 2010)

<sup>1</sup> ESU = evolutionarily significant unit

<sup>2</sup> DPS = distinct population segment

### Oregon Spotted Frog

Oregon spotted frogs (*Rana pretiosa*) (federal threatened, Washington State endangered) are most often associated with large wetland complexes greater than 10 acres in size with extensive emergent wetlands (Hallock 2013). In Washington State, extant populations occur in palustrine wetlands connected to riverine systems which provides connectivity between breeding, summer, and winter habitats (Hallock 2013). No current or historic Oregon spotted frog populations are known to occur in the Arlington area (Hallock 2013), and no critical habitat is designated in Snohomish County (USFWS 2016b). Because the site of the proposed development is in uplands with predominately sandy well-drained soils, the project would have no effect on Oregon spotted frogs.

### Streaked Horned Lark

Streaked horned larks (*Eremophila alpestris strigata*) (federal and Washington State threatened) are a subspecies of lark endemic to the Pacific Northwest. Streaked horned lark breeding habitat includes relatively sparsely vegetated grasslands, beaches, agricultural fields and airports, and the species prefers bare ground to vegetation more than several inches high (Stinson 2015, Anderson and Pearson 2015, Pearson and Altman 2005). Wintering areas are usually mostly large, bare, treeless and shrub-less expanses (Stinson 2015).

There is no designated streaked horned lark critical habitat in Snohomish County (USFWS 2013a), and the nearest historical nesting records or possible nesting sites are located 30 miles to the north near Samish Bay, and 40 miles to the south near Seattle. The closest current known nesting sites for streaked horned larks are over 50 miles south of the Airport (WDFW 2012). The FAA and the USFWS agree there are no known populations of streaked horned lark present on Arlington Municipal Airport. The project would not affect streaked horned larks.

### Marbled Murrelet

Marbled murrelets (*Brachyramphus marmoratus*) (federal threatened, Washington State threatened) inhabit shallow coastal marine areas where they primarily feed on near shore forage fish and travel inland to nest in mature and old growth forest. Nests are usually built on large branches or other

suitable platforms in large trees (WDFW 2013). Closest designated critical habitat is approximately 10 miles east of the project area at Naval Radio Station Jim Creek in the Cascade foothills (USFWS 1996). The project area and surrounding landscape contain a mix of mowed grasslands, younger forest stands, Airport, residential, commercial, and agricultural developments which are not suitable marbled murrelet nesting or foraging habitat. Therefore, the project would have no effect on marbled murrelets.

#### Yellow-billed Cuckoo (Western Distinct Population Segment)

Yellow-billed cuckoos (*Coccyzus americanus*) (federal threatened, Washington State species of concern) prefer open lowland deciduous woodlands with clearings and shrubby vegetation. In western North America, they show a strong preference for large continuous riparian zones with cottonwoods and willows. There is no designated yellow-billed cuckoo critical habitat in Washington State (USFWS 2014). The species is rarely observed in Western Washington State, having only been sighted 4 times between 1950 and 2000 (WDFW 2013). Habitat for this species is not present within the project area. Therefore, the project would have no effect on yellow-billed cuckoo.

#### Northern American Wolverine

The North American wolverine (*Gulo gulo luscus*) (federal proposed threatened, Washington State endangered) prefers remote high elevation alpine habitats in the North Cascades (USFWS 2013b). The USFWS reopened the proposal to list the North American wolverine as threatened within the contiguous U.S. in October, 2016 (USFWS 2016c, USFWS 2013b). No critical habitat is currently being proposed (USFWS 2013b). The project area is in a developed, low elevation area that does not contain suitable wolverine habitat. Therefore, the project would have no effect on North American wolverines.

#### Effects Analysis

There is no designated critical habitat or essential fish habitat (EFH) present in the study area. The review found no records of ESA-listed terrestrial plant or animal species occurring in or near the project area. Listed terrestrial species are unlikely to occur in the project area based upon available habitat and no known occurrence of the species on the Airport or project area. The proposed project would have no effect on federal- or state-listed terrestrial species.

#### Salmonids

There are no rivers or streams on or adjacent to the project area. The nearest streams to the project area are 0.3 miles away and south of 172<sup>nd</sup> Street NE. The project area has a shallow water table with groundwater three to four feet below the surface during winter months (Terra Associates, Inc. 2000). The 2003 USFWS informal consultation letter to the FAA, for a previously proposed development of 285-acres which included the project area, addressed the shallow groundwater table. The letter made specific recommendations based on the Department of Ecology's (DOE) 2001 Stormwater Management Manual (SWMM) for Western Washington for the design, monitoring, and maintenance of stormwater management systems to limit impacts and ensure 100 percent stormwater infiltration (USFWS 2003).

The current project will follow these same recommendations updated to reflect changes made in the current SWMM (DOE 2014), including:

- Provide erosion control, source control and on-site stormwater management.

- Employ stormwater management best management practices (BMPs) to infiltrate, disperse and retain stormwater runoff onsite to the extent feasible without causing flooding and erosion impacts.
- Prepare stormwater plans that include construction Stormwater Pollution Prevention Plans (SWPPP) and Permanent Stormwater Control Plans (PSCP).

All stormwater generated by the proposed project will be infiltrated into the ground and stormwater facilities will be designed to meet DOE stormwater management regulations. Therefore, the project would not impact listed fish species or EFH in the surrounding area.

## References

Anderson, H.E. and S.F. Pearson. 2015. Streaked horned lark habitat characteristics. Unpublished paper. Available at: [http://cascadiaprairieoak.org/wp-content/uploads/2015/04/Streaked-horned-lark-habitat-characteristics\\_April-2015.pdf](http://cascadiaprairieoak.org/wp-content/uploads/2015/04/Streaked-horned-lark-habitat-characteristics_April-2015.pdf)

Department of Ecology (DOE). 2014. 2012 Stormwater Management Manual for Western Washington, as Amended in December 2014 (The 2014 SWMMWW). Available at: <http://www.ecy.wa.gov/programs/wq/stormwater/manual/2014SWMMWWinteractive/2014%20SWMMWW.htm#Topics/TitlePage2014.htm>. Accessed November 15, 2016

DOE 2016. Water Quality Atlas. On-line mapping tool available at: <https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx> (last viewed 11/16/16)

Hallock, Lisa. 2013. Draft State of Washington Oregon Spotted Frog Recovery Plan. Washington Department of Fish and Wildlife, Olympia. 93 +v pp. Available at: <http://wdfw.wa.gov/publications/01505/wdfw01505.pdf>

Hallock, L. A., A. McMillan and G.J. Wiles. 2016. Draft Periodic Status Review for the Western Pond Turtle in Washington. Washington Department of Fish and Wildlife, Olympia, Washington. 18 pp. Available at: <http://wdfw.wa.gov/publications/01853/>

NMFS. 2005. Designation of Critical Habitat for 12 Evolutionarily Significant Units of West Coast Salmon and Steelhead in Washington, Oregon, and Idaho. Final Rule. Federal Register 70 (52630 – 52858). Available at: <http://www.nmfs.noaa.gov/pr/pdfs/fr/fr70-52630.pdf>

National Marine Fisheries Service (NMFS). 2016a. Maps & Data, Endangered Species Act Critical Habitat. Available at: [http://www.westcoast.fisheries.noaa.gov/maps\\_data/endangered\\_species\\_act\\_critical\\_habitat.html](http://www.westcoast.fisheries.noaa.gov/maps_data/endangered_species_act_critical_habitat.html) (last viewed 11/16/16).

NMFS. 2016b. Designation of Critical Habitat for Lower Columbia River Coho Salmon and Puget Sound Steelhead. Final Rule. Federal Register 81 (9252 – 9325). Available at: <https://www.gpo.gov/fdsys/pkg/FR-2016-02-24/pdf/2016-03409.pdf>

NMFS. 2016c. Essential Fish Habitat Mapper v3.0 website: <http://www.habitat.noaa.gov/protection/efh/habitatmapper.html> Accessed November 15, 2016

Nature Serve Explorer. 2016. Info for whitebark pine. Available at:  
<http://explorer.natureserve.org/servlet/NatureServe?searchName=Pinus+albicaulis>

Stadler, J., K. Griffin, E. Chavez, B. Spence, P. Roni, C. Gavette, B. Seekins, and A. Obaza. 2011. Pacific Coast Salmon 5-Year Review of Essential Fish Habitat. Final Report to the Pacific Fishery Management Council. 2011. Available at: [http://www.pcouncil.org/wp-content/uploads/G5b\\_ATT1\\_SAL5YEAR\\_APR2011BB.pdf](http://www.pcouncil.org/wp-content/uploads/G5b_ATT1_SAL5YEAR_APR2011BB.pdf)

Stinson, D. W. 2015. Draft periodic status review for the Streaked Horned Lark in Washington. Washington Department of Fish and Wildlife, Olympia, Washington. 18 + iii pp. Available at: <http://wdfw.wa.gov/publications/01774/>

Terra Associates, Inc. 2000. Biological Assessment. Arlington Airport Business Park. Arlington, Washington. Prepared for the Arlington Municipal Airport. March 17, 2000.

USFWS. 1996. Final Designation of Critical Habitat for the Marbled Murrelet. Federal Register 61 (26256 – 26320). Available at: [http://ecos.fws.gov/docs/federal\\_register/fr2961.pdf](http://ecos.fws.gov/docs/federal_register/fr2961.pdf)

USFWS. 2003. Informal consultation letter from USFWS to Cayla Morgan of the FAA on proposed 285 acre Arlington Airport Business Park. November 28, 2003

USFWS. 2010. Revised Designation of Critical Habitat for Bull Trout in the coterminous United States. Final Rule. Federal Register 75 (63898 – 64070). Available at: <https://www.gpo.gov/fdsys/pkg/FR-2010-10-18/pdf/2010-25028.pdf>

USFWS. 2013a. Designation of Critical Habitat for Taylor’s Checkerspot Butterfly and streaked Horned Lark. Final Rule. Federal Register 78 61506 – 61589. Available at: <https://www.fws.gov/policy/library/2013/2013-23552.pdf>

USFWS. 2013b. Threatened Status for the Distinct Population Segment of the North American Wolverine Occurring in the Contiguous United States. Proposed rule. Federal Register 78 (7864 – 7890). Available at: <https://www.gpo.gov/fdsys/pkg/FR-2013-02-04/pdf/2013-01478.pdf>

USFWS. 2014. Designation of critical habitat for the western distinct population segment of the yellow-billed cuckoo. Proposed Rule. Federal Register 79 (48548 – 48652). Available at: <https://www.gpo.gov/fdsys/pkg/FR-2014-08-15/pdf/2014-19178.pdf>

U.S. Fish and Wildlife Service (USFWS). 2016a. IPaC website: <https://ecos.fws.gov/ipac/> (last viewed 11/4/2016)

USFWS. 2016b. Designation of Critical Habitat for the Oregon Spotted Frog. Final Rule. Federal Register 81 (29336 – 29396). Available at: [https://ecos.fws.gov/docs/five\\_year\\_review/doc4759.PDF](https://ecos.fws.gov/docs/five_year_review/doc4759.PDF)

USFWS. 2016c. Proposed Rule for the North American Wolverine. Reopening of comment period. Federal Register 81 (71670 – 71671). Available at: <https://www.gpo.gov/fdsys/pkg/FR-2016-10-18/pdf/2016-24929.pdf>

USFWS. 2016d. Species Profile for Northern spotted owls. Available at: <https://ecos.fws.gov/ecp0/profile/speciesProfile?sld=1123>

Washington Department of Fish and Wildlife (WDFW). 2012. Annual Report, Streaked Horned Lark. Accessed at: [http://wdfw.wa.gov/conservation/endangered/species/streaked\\_horned\\_lark.pdf](http://wdfw.wa.gov/conservation/endangered/species/streaked_horned_lark.pdf)

WDFW. 2013. Threatened and Endangered Wildlife in Washington: 2012 Annual Report. Listing and Recovery Section, Wildlife Program, Washington Department of Fish and Wildlife, Olympia. 251 pp. Available at: <http://wdfw.wa.gov/publications/01542/wdfw01542.pdf>

WDFW. 2016a. Priority Habitats and Species (PHS) on the Web – interactive mapping website: <http://wdfw.wa.gov/mapping/phs/> (last viewed 11/16/16)

WDFW. 2016b. SalmonScape Website: <http://apps.wdfw.wa.gov/salmonscape/> (last viewed 11/16/16)

Washington Natural Heritage Program (WNHP) 2016a. Rare Plant List by County. List for Snohomish County with links to individual species information. Available at: <http://www1.dnr.wa.gov/nhp/refdesk/lists/plantsxco/snohomish.html>

WNHP. 2016b. *Castilleja levisecta* species information page. Available at: <http://www1.dnr.wa.gov/nhp/refdesk/fguide/pdf/cale27.pdf>

**Appendix A**

**USFWS<sup>1</sup>, NMFS<sup>2</sup>, WDFW<sup>3</sup>, and WNHP<sup>4</sup> Listed and Proposed Listed Species for Snohomish County, WA**

Common name	Scientific Name	Federal Status	State Status	Known or Potential Presence In or Near Project Area
<b>Birds</b>				
Bald eagle	<i>Haliaeetus leucocephalus</i>	Species of Concern & protected by the Bald and Golden Eagle Protection Act	Sensitive	Nearest nest site 1.4 miles SE of the project area near a fresh water wetland near 67th Ave NE (WDFW 2016a). Airport manager reported that there are no bald eagle nest in the project area. The project area does not have suitable bald eagle nesting habitat.
Marbled murrelet*	<i>Brachyramphus marmoratus</i>	Threatened	Threatened	WDFW 2016a, shows no occurrences in the project area. Nearest critical habitat approximately 10 miles E of the project area. No suitable habitat in or near the project area. – see text for more information.
Northern spotted owl	<i>Strix occidentalis caurina</i>	Threatened	Endangered	WDFW 2016a, shows no occurrences in the project area. Nearest critical habitat over 10 miles E of project area (USFWS 2016d). No suitable habitat in or near the project area.
Streaked horned lark*	<i>Eremophila alpestris strigata</i>	Threatened	Endangered	WDFW 2016a, shows no occurrences in the project area. No critical habitat in Snohomish County. No suitable habitat in or near the project area. – see text for more information.
Yellow-billed Cuckoo*	<i>Coccyzus americanus</i>	Threatened	Species of Concern	WDFW 2016a, shows no occurrences in the project area. No critical habitat in WA State. No suitable habitat in or near the project area. – see text for more information.
<b>Amphibians and Reptiles</b>				
Oregon spotted frog*	<i>Rana pretiosa</i>	Threatened	Endangered	WDFW 2016a, shows no occurrences in the project area. No critical habitat in Snohomish County. No suitable habitat in or near the project area. – see text for more information.
Western pond turtle	<i>Actinemys marmorata</i>	Species of Concern	Endangered	WDFW 2016a, shows no occurrences in the project area. Species and the recent draft

Common name	Scientific Name	Federal Status	State Status	Known or Potential Presence In or Near Project Area
				status review show no population in Snohomish Co. (Hallock et al. 2016). Habitat includes areas with a mosaic of aquatic and upland habitats (Hallock et al. 2016). No suitable habitat in or near the project area.
<b>Mammals</b>				
Fisher	<i>Martes pennanti</i>	Candidate	Endangered	WDFW 2016a, shows no occurrences in the project area. No suitable habitat in the project area.
Gray wolf	<i>Canis lupus</i>	Endangered	Endangered	WDFW 2016a, shows no occurrences in the project area. No suitable habitat in the project area.
Grizzly bear	<i>Ursus arctos horribilis</i>	Threatened	Endangered	WDFW 2016a, shows no occurrences in the project area. No suitable habitat in the project area.
Canada Lynx	<i>Lynx canadensis</i>	Threatened	Threatened	WDFW 2016a, shows no occurrences in the project area. No suitable habitat in the project area.
Killer whale (Orca)	<i>Orcinus orca</i>	Endangered	Endangered	Marine species. Nearest critical habitat 8.5 miles SW of project area in Puget Sound (NMFS 2016a) Suitable habitat not available in project area. Stormwater management plan will follow BMPs to prevent downstream effects.
North American Wolverine*	<i>Gulo luscus</i>	Proposed Threatened	Endangered	WDFW 2016a, shows no occurrences in the project area. Nearest critical habitat proposed. No suitable habitat in or near the project area. – see text for more information.
<b>Fish</b>				
Bull Trout/Dolly Varden *	<i>Salvelinus confluentus</i> <i>/Salvelinus malma</i>	Threatened	Candidate	Nearest critical habitat approximately 2.3 miles north of the project area in the Stillaguamish River (USFWS 2010). Populations listed as presumed or modeled present in Middle Fork Quilceda Creek and its tributaries, the closest being a canal 0.3 miles SW of the project

Common name	Scientific Name	Federal Status	State Status	Known or Potential Presence In or Near Project Area
				area (WDFW 2016b)– see text for more information.
Bocaccio rockfish Puget Sound/Strait of Georgia Basin DPS	<i>Sebastes paucispinis</i>	Endangered	Candidate	Marine species. Nearest critical habitat 8.5 miles SW of project area in Puget Sound (NMFS 2016a). Suitable habitat not available in project area. Stormwater management plan will follow BMPs to prevent downstream effects.
Canary rockfish Puget Sound/Strait of Georgia Basin DPS	<i>Sebastes pinniger</i>	Threatened	Candidate	Marine species. Nearest critical habitat 8.5 miles SW of project area in Puget Sound (NMFS 2016a). Suitable habitat not available in project area. Stormwater management plan will follow BMPs to prevent downstream effects.
Chinook salmon Puget Sound ESU	<i>Oncorhynchus tshawytscha</i>	Threatened	Candidate	Critical habitat in Middle Fork Quilceda Creek beginning approximately 1.5 miles south of project area (NMFS 2005). Populations listed as presumed or modeled present in Middle Fork Quilceda Creek and its tributaries, the closest being a canal 0.3 miles SW of the project area (WDFW 2016b)– see text for more information.
Steelhead trout Puget Sound ESU	<i>Oncorhynchus mykiss</i>	Threatened	Candidate	Critical habitat in Middle Fork Quilceda Creek beginning approximately 1.5 miles south of project area (NMFS 2016b). Populations listed as presumed or modeled present in Middle Fork Quilceda Creek and its tributaries, the closest being a canal 0.3 miles SW of the project area (WDFW 2016b)– see text for more information.
Yelloweye rockfish Puget Sound/Strait of Georgia Basin DPS	<i>Sebastes ruberrimus</i>	Threatened	Candidate	Marine species. Nearest critical habitat 8.5 miles SW of project area in Puget Sound (NMFS 2016a). Suitable habitat not available in project area. Stormwater management plan will follow BMPs to prevent downstream effects.
Vascular and Non-Vascular Plants				

Common name	Scientific Name	Federal Status	State Status	Known or Potential Presence In or Near Project Area
Choris' bog-orchid	<i>Platanthera chorisiana</i>	US Forest Service (USFS) sensitive	Threatened	Grows on moss-covered rocks in sphagnum bogs, along streams, seeps, wet meadows, gravel outwashes, and moist areas with fine soils. (WNHP 2016a). Suitable habitat not available in project area.
False apple moss	<i>Bartramiopsis lescurii</i>	USFS sensitive	Endangered	Grows on humus soil over rock, usually found on vertical surfaces usually in humid canyons and stream terraces (WNHP2016a). Suitable habitat not available in project area.
Golden paintbrush	<i>Castilleja levisecta</i>	Threatened	Endangered	No critical habitat designated. WNHP does not show any records for the species occurring in Snohomish Co.; species grows in open grasslands, generally on glacial outwash or depositional material in the Puget Trough Lowlands (WNHP2016b). Suitable habitat not available in project area.
Western moonwort	<i>Botrychium hesperium</i>	USFS sensitive	Threatened	Grows in sagebrush shrubland, meadows, and forest edges in eastern Snohomish County (WNHP 2016a). Suitable habitat not available in project area.
Small pine-foot	<i>Pityopus californicus</i>	USFS strategic	Threatened	Known to occur at 2 sites in WA, one in southern Snohomish Co. Grows in mixed coniferous forest including second growth with significant moss groundcover (WNHP 2016a). No suitable habitat in project area.
Smoky Mountain sedge	<i>Carex proposita</i>	USFS sensitive	Threatened	Grows on dry rocky slopes and ridges and dry meadows, often on talus or granite near or above timberline in E Snohomish Co. (WNHP 2016a). Suitable habitat not available in project area.
Water lobelia	<i>Lobelia dortmanna</i>	USFS strategic	Threatened	Aquatic species that usually grows at the shallow margins of lakes and ponds (WNHP 2016a). Suitable habitat not available in project area.
Whitebark pine	<i>Pinus albicaulis</i>	Candidate Species	None	Grows within montane forest and on thin, rocky, cold soils at or near timberline (Nature Serve

Common name	Scientific Name	Federal Status	State Status	Known or Potential Presence In or Near Project Area
				Explorer 2016). Does not occur in the project area.

\* USFWS IPaC report for the project area has species listed as may be occurring or potentially being affected by activities in the project area. More information on these species is presented in the text of this memorandum.

<sup>1</sup>USFWS Species by County Report for Snohomish County, Washington. Available at: <https://ecos.fws.gov/ecp0/reports/species-by-current-range-county?fips=53061> (last viewed 11/16/2016)

<sup>2</sup>NMFS. West Coast Region. Maps and GIS Data. Endangered Species Act Critical Habitat. Available at: [http://www.westcoast.fisheries.noaa.gov/maps\\_data/endangered\\_species\\_act\\_critical\\_habitat.html](http://www.westcoast.fisheries.noaa.gov/maps_data/endangered_species_act_critical_habitat.html) (last viewed 11/16/16)

<sup>3</sup>WDFW Priority Habitat and Species List for Snohomish County, Washington. Available at: <http://wdfw.wa.gov/conservation/phs/list/> (last viewed 11/16/16)

<sup>4</sup>Washington Natural Heritage Program (WNHP) Reference Desk. Species list for Snohomish County, Washington with links to individual species information. Available at: <http://www1.dnr.wa.gov/nhp/refdesk/lists/plantsxco/snohomish.html> (last viewed 11/16/16)