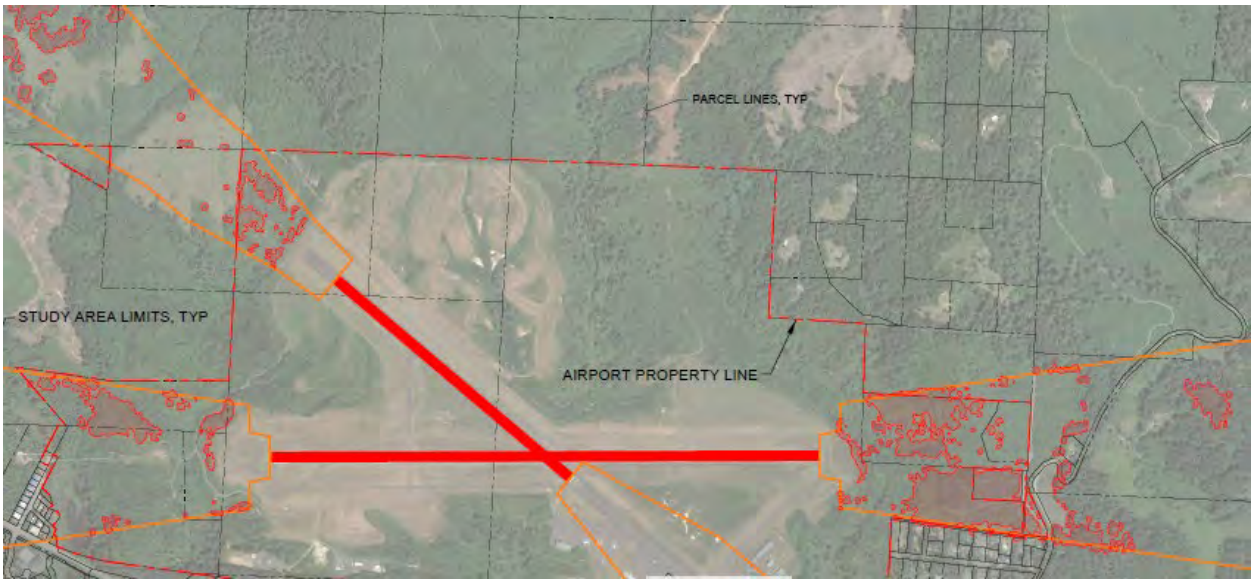
ENVIRONMENTAL ASSESSMENT

Newport Municipal Airport Obstruction Removal

City of Newport, Oregon



June 2022

Newport Municipal Airport Obstruction Removal

City of Newport, Oregon

Environmental Assessment

This Environmental Assessment becomes a Federal document when evaluated, signed and dated by the responsible FAA official.

ILON LOGAN

Digitally signed by ILON LOGAN
DN: c=US, o=U.S. Government, ou=Department of Transportation, ou=583942, cn=ILON LOGAN
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June 1, 2022

Responsible FAA Official

Date

Contents

CHAPTER 1

Purpose and Need

1.1 Introduction

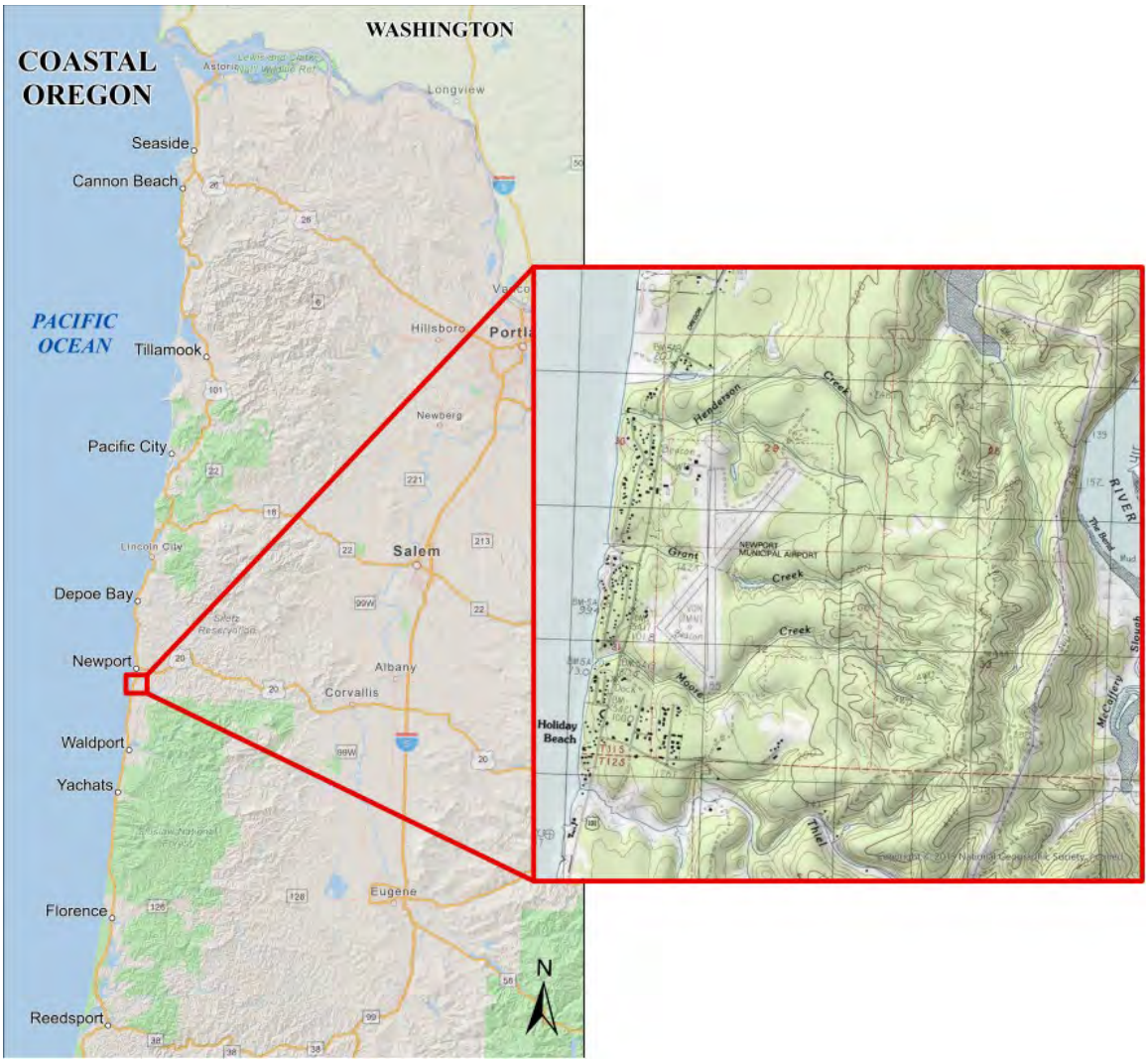
The Federal Aviation Administration (FAA) requested that an Environmental Assessment (EA) be prepared to evaluate the potential impacts of the proposed airport improvements for the Newport Municipal Airport (Airport). The City of Newport (City), owner and operator of the Airport, proposes to remove approximately 60 acres of vegetation and trees that are obstructions to the approach of Runways 16, 20, and 34. Removing these trees and vegetation will allow for a clear approach surface that is described as a slope for a certain distance. For example, a 20:1 slope rises one unit vertically for every 20 units horizontally. The project would provide a clear 50:1 approach surface for Runway 16 for the first 10,000 feet (40:1 for an additional 40,000 feet), 34:1 approach surface for Runway 34, and 20:1 approach surface for Runway 20. The approach surface is critical in allowing aircraft to execute landings in a manner that is safe to the aircraft, nearby environmental resources, residences, and the general public.

This EA was prepared to identify the potential environmental effects associated with the Proposed Action, as well as how any identified impacts can be avoided, minimized, or mitigated. The EA was prepared pursuant to Section 102(2)(c) of the National Environmental Policy Act (NEPA) and the President's Council on Environmental Quality (CEQ) Regulations Title 40 Code of Federal Regulations (CFR) §§ 1500–1508, the implementing regulations for NEPA, as well as in accordance with FAA Order 1050.1F *Environmental Impacts: Policies and Procedures* (FAA 2015) and FAA Order 5050.4B *National Environmental Policy Act Implementing Instructions for Airport Actions* (FAA 2006). This EA is an informational document intended for use by decision-makers and the public. As such, it represents a disclosure of relevant environmental information regarding the Proposed Action for the Newport Municipal Airport Obstruction Removal Project.

The Airport is classified as a General Aviation facility in the National Plan of Integrated Airport Systems (NPIAS) defined by FAA. Since the Airport is part of the NPIAS, the Airport is eligible to receive federal grants under the Airport Improvement Program (AIP). As a condition of receiving AIP grants, the City must accept all conditions and obligations stipulated under the FAA grant assurances.

1.2 Location and Setting

The Airport is located within the Newport city limits, in the South Beach Urban Renewal District, Lincoln County, Oregon. The Airport is bounded by the SW Coast Highway (U.S. Highway 101) on the west, and by undeveloped lands on the north, south, and east. A location and vicinity map for the Airport is provided in **Figure 1**.



Newport Municipal Airport Obstruction Removal

FIGURE 1
VICINITY MAP

The EA study area includes areas where trees are proposed to be removed. This includes trees in the approach areas of Runway 16 and 20 located north of the Airport and the approach area of Runway 34 located south of the Airport.

Henderson Creek flows east to west through the approach areas of both Runway 16 and 20 north of Airport. Tree removal areas are either owned by the City or one private property owner. Access to the area is limited and controlled for airport operations and topography obstructs views of these areas from properties owned by others.

South of Runway 34 is the steeply banked Moore Creek valley that separates the active Airport property from the residential and forested parcels to the south. The topography south of Moore Creek and north of

S.E. 98th Street is predominantly flat. The Pruner subdivision is south of Moore Creek and west of the city owned parcel 11-11-32-00-00200. Thiel Creek parallels S.E.98th Street on the south side of the road. The area south of S.E. 98th Street and east of the City-owned property is either zoned by the County as Timber Conservation or owned by timber companies, and logging the properties is an economic source of revenue. Therefore, the proposed tree removal is not a contrast with the existing land use and associated visual resources or visual character in the surrounding area.

1.3 Airport Existing Conditions and Facilities

The Airport is at an elevation of 160 feet above mean sea level and approximately 700 acres in size. The Airport has an Airport Reference Code of B-II, Runway Design Code (RDC) of B-II, and a critical design aircraft of the Cessna Citation Ultra (CU560) (WHPacific 2018, Airport Layout Plan Datasheet). There are two paved runways at the Airport: Runway 16-34 and Runway 2-20. For Runway 16-34, the RDC has a Runway Visual Range of 4,000 feet to reflect the Instrument Landing System approach with visibility minimums greater than ¾ statute mile. Runway 34 has a non-precision approach with a visibility minimum of greater than 1 statute mile. Runway 2 and 20 have a visual approach. FAA Runway Protection Design Standards for RDC B-II are shown in **Table 1.**

Figure 2 provides an overview of the Airport facilities. Runway 16-34 has a north-south alignment and is 5,398 feet long by 100 feet wide. It supports general aviation aircraft, which includes private and business operators as well as U.S. Coast Guard (USCG) aircraft. It is marked for precision instrument approach, and both runway ends (16 and 34) have four-light Precision Approach Path Indicator lighting. The entire runway is equipped with high-intensity runway edge lighting. Runway 34 has Runway End Identifier Lights. Runway 16 has a Precision Instrument Landing System with a Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights, a localizer, and a glide slope antenna with visibility minimums for approach procedures as low as ¾ statute mile.

TABLE 1
FAA RUNWAY PROTECTION DESIGN STANDARDS (RDC B-II)

	Standards		Existing Conditions [a]	
	Visual Approach	**Not Lower than ¾ mile**	**Runway 2-20**	**Runway 16-34**
Runway Safety Area				
Length beyond departure end	300 ft	300 ft	300 ft	300 ft
Length prior to threshold	300 ft	300 ft		
Width	150 ft	150 ft	150 ft	150 ft
Runway Object Free Area				
Length beyond runway end	300 ft	300 ft	300 ft	300 ft
Length prior to threshold	300 ft	300 ft		
Width	500 ft	500 ft	500 ft	800 ft
Runway Obstacle Free Zone				
Length	-	-	200 ft	200 ft
Width	-	-	250 ft	250 ft
Approach Runway Protection Zone				
Length	1,000 ft	1,700 ft	1,000 ft	1,000 ft
Inner width	500 ft	1,000 ft	500 ft	1,510 ft
Outer width	700 ft	1,510 ft	700 ft	1,700 ft
Acres	13.770	48.978	-	-
Departure Runway Protection Zone				
Length	1,000 ft	1,000 ft	1,000 ft	1,000 ft
Inner width	500 ft	500 ft	500 ft	500 ft
Outer width	700 ft	700 ft	700 ft	700 ft

NOTES:
[a] Airport Layout Plan Datasheet (WHPacific 2018)

SOURCE: FAA Advisory Circular (AC) 150/5300-13A *Airport Design* (FAA 2014)

Building and Facilities Data Table	
FEDEX	1
Terminal Building/FBO Hangar	2
Aircraft Tiedowns	3
Auto Parking	4
Box Hangars	5
Coast Guard Facility	6
T-Hangars and Executive Hangars	7
Aircraft Rescue and Fire Facility	8
AVGAS/Jet-A Fuel Storage	9
Airport Maintenance Facilities	10
Large Aircraft and Jet Parking	11
Cargo Area	12

SOURCE: WHPACIFIC 2018

Newport Municipal Airport Obstruction Removal

FIGURE 2
AIRPORT FACILITIES

Runway 2-20 has a northeast-southwest alignment and is 3,001 feet long by 75 feet wide. It is equipped with medium intensity runway edge lighting. Both Runways 2 and 20 are marked for visual approach.

There are five taxiways at the Airport:

- **Taxiway A** provides access to Runway 16, Taxiway B, Taxiway C, and Taxiway D; and runs parallel to Runway 16-34 from Runway 16 to the intersection of the runways and is located on the west side of Runway 16-34.
- **Taxiway B** provides access to Runway 16-34 and Taxiway A, and it intersects Runway 16-34 approximately 500 feet from the Runway 16 threshold.
- **Taxiway C** provides access between Runway 2-20 and Taxiway A, and to the aircraft tie-down areas.
- **Taxiway D** provides access from the apron/tie-down area and Fixed Base Operator to Taxiway A.
- **Taxiway E** provides access to Runway 2 and Runway 34, as well as the USCG building and hangar/tie-down areas.

The Airport also includes an aircraft apron area with 13 tie-downs, several hangars, an Automated Weather Observing System (AWOS), office buildings, Fixed Base Operator, Aircraft Rescue and Fire Facility, and buildings and hangar/tie-down areas for the USCG.

1.4 Airspace

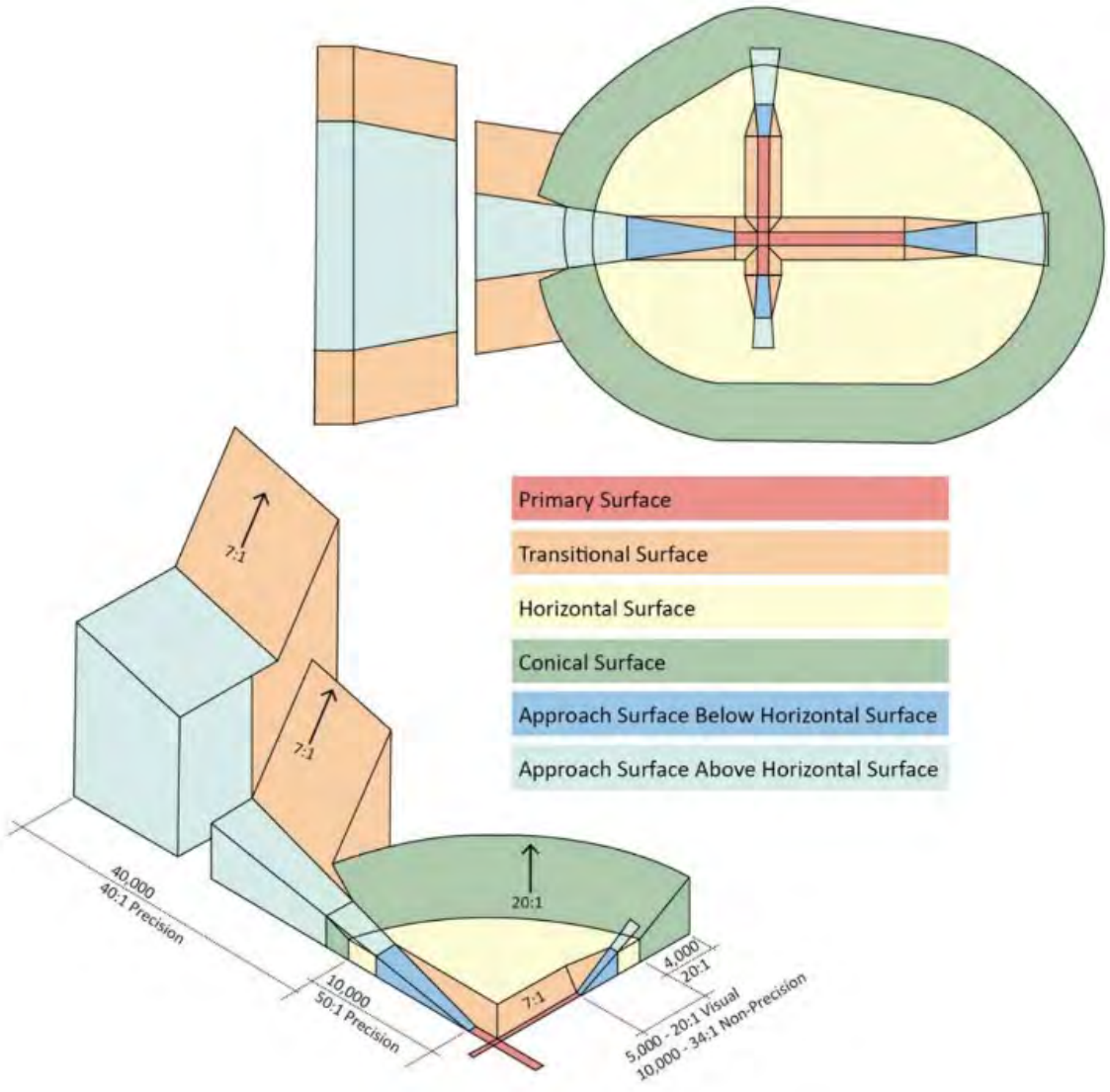
An Airport Geographic Information System (AGIS) survey was conducted as part of the Airport Master Plan Update in 2018 (WHPacific 2018), and the data were used to identify obstructions in the protected airspace around the Airport. A subsequent Light Detection and Ranging (LiDAR) survey confirmed numerous obstructions (trees) penetrating into the protected airspace (Quantum Spatial, Inc. 2019). The obstruction analysis used criteria defined in 14 CFR Part 77 *Safe, Efficient Use, and Preservation of the Navigable Airspace* to identify obstructions.

Federal Air Regulation (FAR) Part 77 defines a complex structure of airport imaginary surfaces, which are established to protect the airspace immediately surrounding airports, associated runways, and designated helicopter landing areas (FAA 2010). The imaginary surfaces are geometric shapes that surround the runways and vary in size and slope depending on the category of the runway. The airspace and ground areas within these imaginary surfaces should be free of obstructions (i.e., structures, parked aircraft, trees, etc.) to the greatest extent possible to provide a safe operating environment for aircraft.

There are five imaginary surfaces: primary, approach, horizontal, conical, and transitional, as graphically depicted in **Figure 3.** Any object that penetrates these surfaces is considered an obstruction and a potential hazard to navigable airspace. A summary of the FAR Part 77 airspace surfaces relevant to this project and the surrounding Newport Municipal Airport (i.e., primary, transitional, and approach surfaces) is described in the following sections.

1.4.1 Primary Surface

The primary surface is a rectangular, flat plane of airspace longitudinally centered on the runway, with the same elevation as the nearest point on the runway centerline. The primary surface at the Airport for Runway 16-34 is 1,000 feet wide and extends 200 feet beyond each runway end, where it connects to the inner portion of the runway approach surfaces. The primary surface for Runway 2-20 is 250 feet wide and extends 200 feet beyond each runway end. The primary surface should be free of any penetrations, except items with locations fixed by function, in which case they shall be mounted on frangible couplings. Based on the AGIS survey data, the primary surfaces for both runways are clear of obstructions; therefore, the Airport currently meets the requirements of FAR Part 77.



SOURCE: WHPacific 2018

Newport Municipal Airport Obstruction Removal

FIGURE 3
FAR PART 77 IMAGINARY SURFACES

1.4.2 Transitional Surface

The transitional surface is located at the outer edge of the primary surface and is represented by a plane rising perpendicularly at a slope of 7:1 to an elevation 150 feet above the airport elevation. The transitional surface connects to the sides of the runway approach surfaces at common elevations. For Runway 16-34, the transitional surface begins 500 feet from the runway centerline, in both directions. For Runway 2-20, the transitional surface begins 125 feet from the runway centerline, in both directions. Based on the AGIS survey data, the transitional surfaces for both runways are clear of obstructions; therefore, the Airport currently meets the requirements of FAR Part 77.

1.4.3 Approach Surface

Approach surfaces are designed to protect the use of the runway in both visual and instrument meteorological conditions near the airport. The approach surface typically has a trapezoidal shape that extends away from the runway along the centerline at a specific slope, expressed in horizontal feet by vertical feet, with a starting point at the runway threshold elevation. The specific size, slope, and starting point of the trapezoid depend on the visibility minimums and the type of procedure associated with the runway end.

The approach surface for Runway 16 is a precision instrument approach surface that rises at a slope of 50:1 for the initial 10,000 feet, then 40:1 for an additional 40,000 feet. The approach surface width begins at 1,000 feet and flares to a width of 16,000 feet at a distance of 50,000 feet. The approach surface for Runway 34 is a non-precision instrument approach surface that rises at a slope of 34:1 and is 1,000 feet wide at the beginning and flares to a width of 3,500 feet at a distance of 10,000 feet. The approach surfaces of both Runways 2 and 20 are visual approach surfaces that rise at a slope of 20:1, are 250 feet wide at the beginning and flares to a width of 1,250 feet at a distance of 5,000 feet. As identified by the AGIS survey data, the approach surfaces of Runways 16, 20, and 34 above have obstructions (trees). These obstructions are proposed to be removed as part of the Newport Municipal Airport Obstruction Removal Project.

The approach surfaces for the Airport are summarized in **Table 2** and shown in **Figure 4.**

TABLE 2
FAR PART 77 APPROACH SURFACES FOR NEWPORT MUNICIPAL AIRPORT

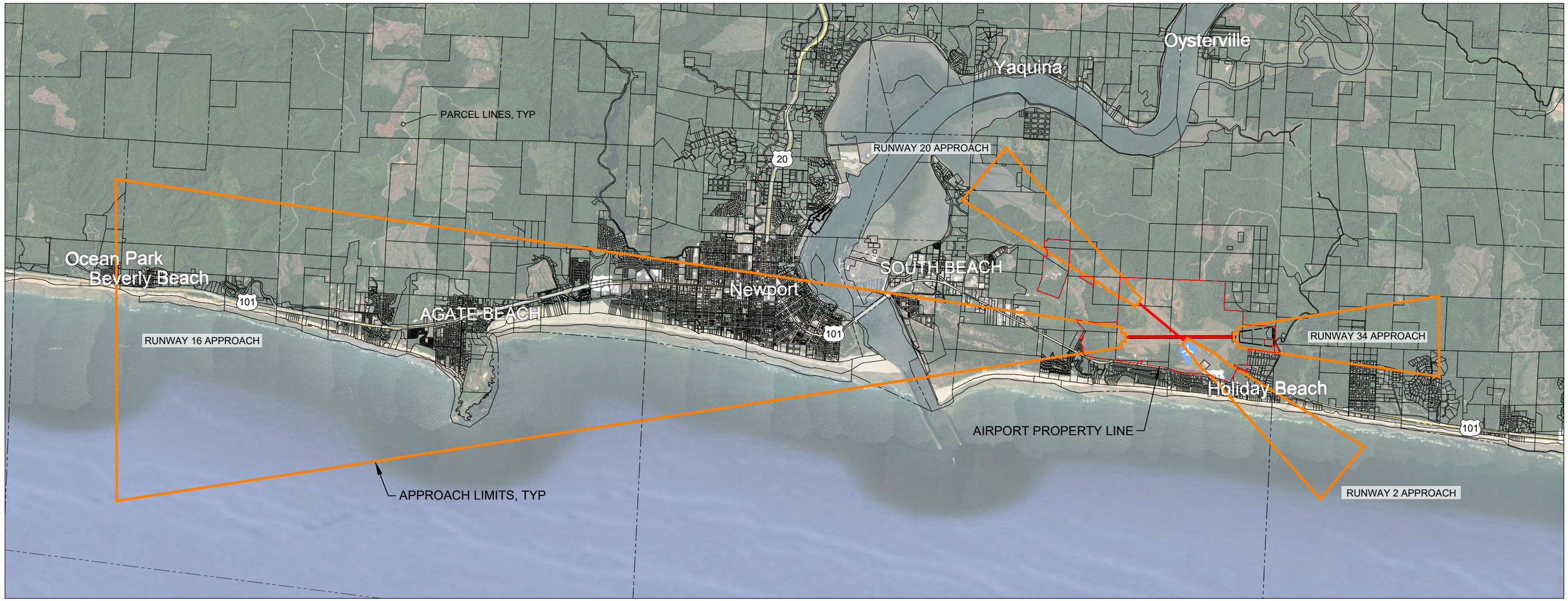
Runway End	Approach Surface Area and Distance
Runway 2 and 20 (visual)	20:1 slope starts 250 feet wide, flares out to 1,250 feet wide at a distance of 5,000 feet.
Runway 34 (non-precision instrument)	34:1 slope starts 1,000 feet wide, flares out to 3,500 feet at a distance of 10,000 feet.
Runway 16 (precision instrument)	50:1 slope for first 10,000 feet then 40:1 for an additional 40,000 feet. Starts 1,000 feet wide, flares to 16,000 feet wide at a distance of 50,000 feet.

SOURCE: FAA AC 150/5300-13A *Airport Design (FAA 2014)*

NORTH

0 2500 5000

SCALE IN FEET



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NEWPORT MUNICIPAL AIRPORT
OBSTRUCTION REMOVAL

APPROACH AREAS

Figure 4 MARCH 2022

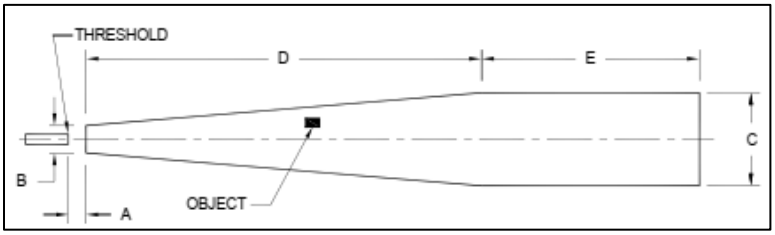
1.5 Threshold Siting Surfaces

Runway thresholds are the markings across the runway that denote the beginning of the runway available for landing. The threshold siting surface defines the approach visibility slope minimums for the runway. A range of threshold siting surfaces have been defined that vary in size and slope depending on the type of instrument approach, approach minimums, and the size of the critical aircraft defined in FAA AC 150/5300-13A *Airport Design* (FAA 2014). These threshold siting surfaces need to be maintained clear of obstructions or the runway threshold may have to be displaced (moved).

The following are the threshold siting surfaces for the runways at Newport Municipal Airport (see **Table 3**):

- Runway 34 – types 3, 5, 6, and 8.
- Runway 16 – types 3, 5, 7 and 8.
- Runway 20 – type 3.

TABLE 3
APPROACH/DEPARTURE STANDARDS TABLE



Runway Type		Dimensional Standards[a] (feet)					Slope/ Obstacle Clearance Surface
		A	B	C	D	E	
3	Approach end of runways expected to serve small airplanes with approach speeds of 50 knots or more. Visual runways only, day/night.	0	400	1,000	1,500	8,500	20:1
5	Approach end of runways expected to support instrument night operations serving greater than approach Category B aircraft.[b]	200	800	3,800	10,000[c]	0	20:1
6	Approach end of runway expected to accommodate instrument approaches having visibility minimums ≥ ¾ but < 1 statute mile, day or night.	200	800	3,800	10,000[c]	0	20:1
7	Approach end of runways expected to accommodate instrument approaches having visibility minimums < ¾ statute mile.	200	800	3,800	10,000[c]	0	34:1

NOTES:

[a] The letters are keyed to those shown in drawing above.

[b] Marking and lighting of obstacle penetrations to this surface or the use of a Visual Guidance Slope Indicator may avoid displacing the threshold.

[c] The actual length of these areas is dependent on the visual descent point position for 20:1 and 34:1 slopes, and Decision Altitude point for the 30:1 slope.

SOURCE: FAA AC 150/5300-13A *Airport Design* (FAA 2014)

1.6 Description of Proposed Action

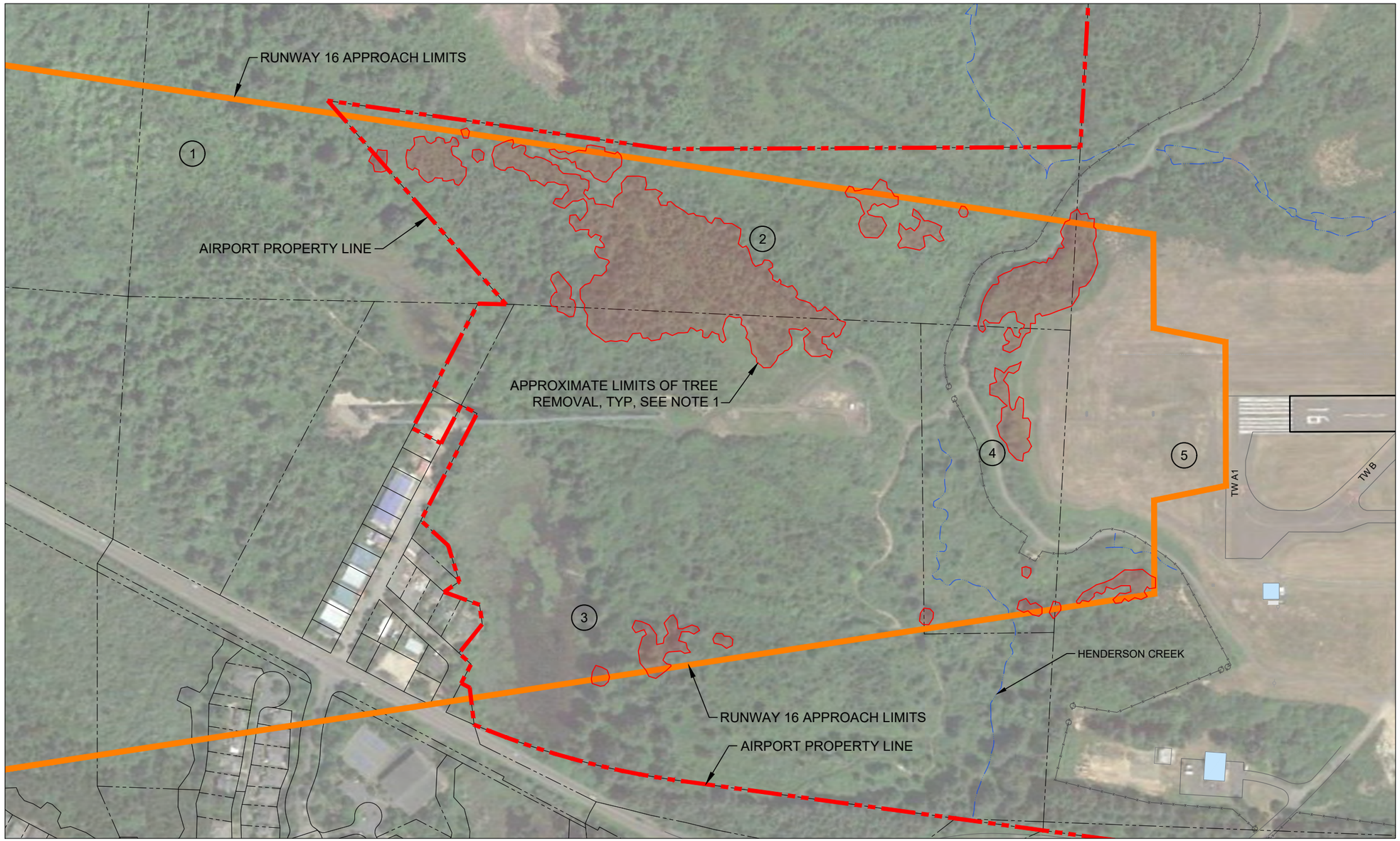
The City of Newport, the owner and operator of the Airport, proposes to remove obstructions (trees) for three runways with varying approach surfaces:

- Visual approach of Runway 20.
- Non-precision instrument approach and threshold siting surfaces of Runway 34.
- Precision instrument approach and threshold siting surfaces of Runway 16.

Areas of trees identified as penetrating the approach and threshold siting surfaces and proposed to be removed are shown on **Figures 5** through **8**.

1.7 Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is to maintain a safe operating environment for current and future users of the Airport by removing existing approach surface obstructions (trees), thereby improving the safety of aircraft operations, and bringing the Airport into compliance with FAR Part 77 requirements. The Proposed Action is needed because an obstruction analysis produced from the AGIS survey identified multiple airspace penetrations in varying approach surfaces at the Airport. To maintain its status as General Aviation facility in the NPIAS, the Airport needs to meet all conditions and obligations stipulated under the FAA grant assurances. In general, such assurances require the City to operate and maintain the Airport in a safe and serviceable condition, including mitigating hazards to airspace.



NORTH

0 150 300

SCALE IN FEET

TAG	PARCEL ID	OWNER	TREE REMOVAL
1	11-11-29-00-00300-00	LANDWAVES INC	0.04 AC
2	11-11-29-00-00400-00	CITY OF NEWPORT	5.81 AC
3	11-11-29-00-01402-00	CITY OF NEWPORT	1.70 AC
4	11-11-29-00-01401-00	CITY OF NEWPORT	0.50 AC
5	11-11-29-00-01100-00	CITY OF NEWPORT	0.45 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.

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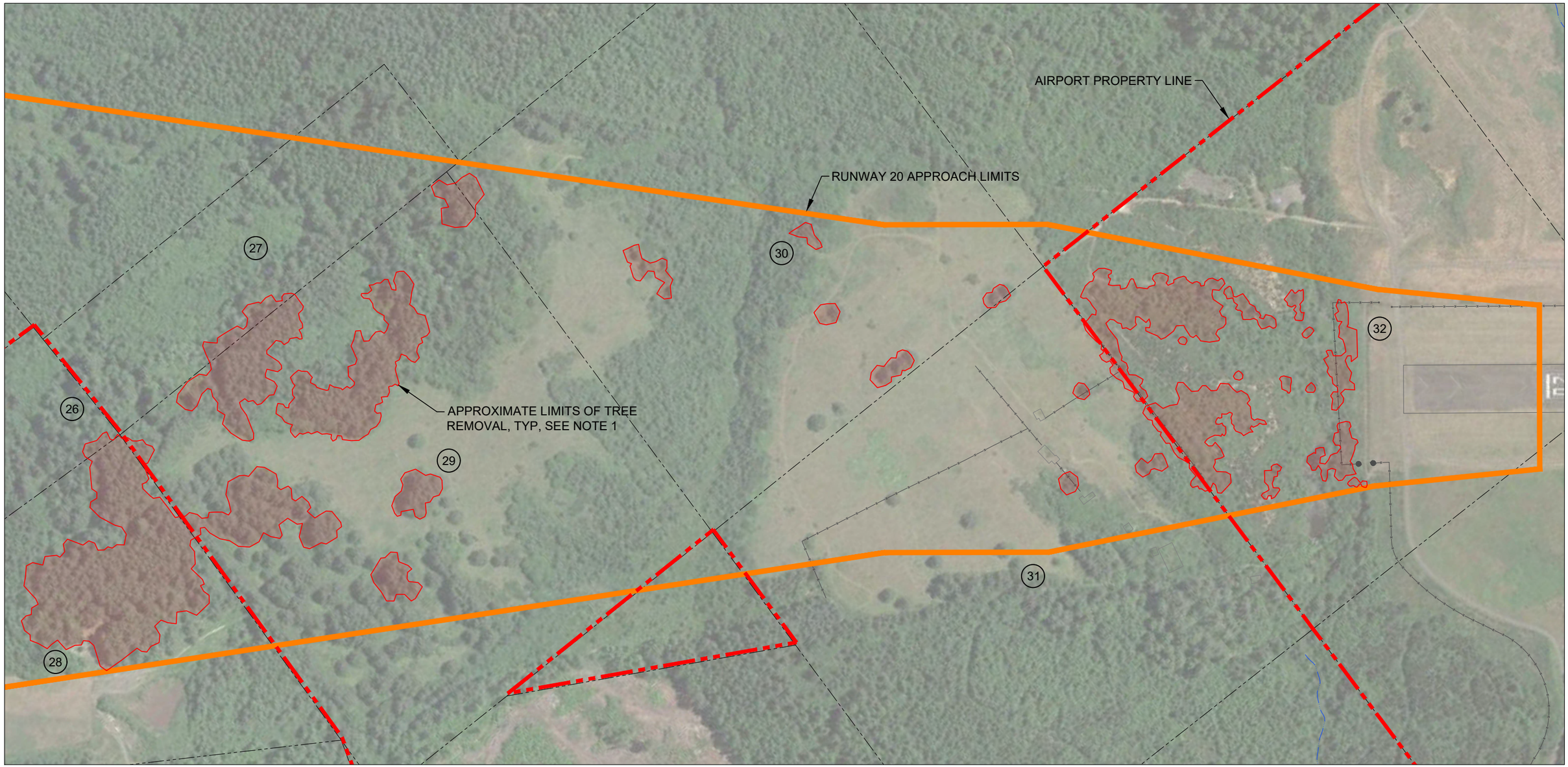
OBSTRUCTION REMOVAL

RUNWAY 16 OBSTRUCTION REMOVAL AREAS

Figure 5 MARCH 2022



TAG	PARCEL ID	OWNER	TREE REMOVAL
26	11-11-21-00-01600-00	CITY OF NEWPORT	0.06 AC
27	11-11-28-00-00700-00	HALL	0.25 AC
28	11-11-20-00-02700-00	CITY OF NEWPORT	4.80 AC
29	11-11-29-00-00100-00	HALL	5.90 AC
30	11-11-29-00-00600-00	HALL	0.72 AC
31	11-11-29-00-00500-00	HALL	0.54 AC
32	11-11-29-00-01000-00	CITY OF NEWPORT	3.70 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.

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NORTH

0 150 300

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NEWPORT MUNICIPAL AIRPORT
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RUNWAY 20 OBSTRUCTION REMOVAL AREAS

Figure 6 MARCH 2022

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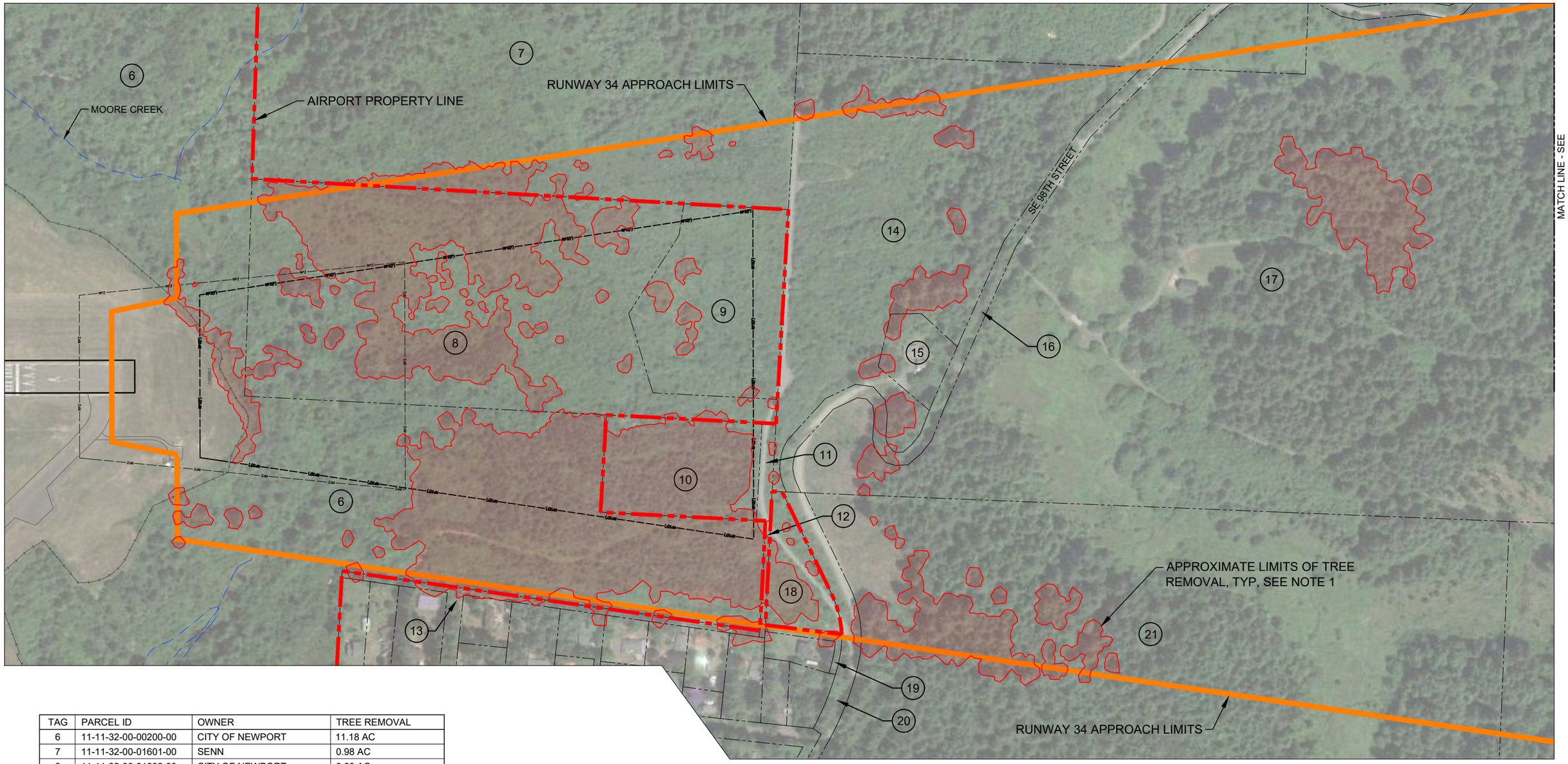

TAG	PARCEL ID	OWNER	TREE REMOVAL
6	11-11-32-00-00200-00	CITY OF NEWPORT	11.18 AC
7	11-11-32-00-01601-00	SENN	0.98 AC
8	11-11-32-00-01602-00	CITY OF NEWPORT	8.68 AC
9	11-11-32-00-01604-00	CITY OF NEWPORT	0.38 AC
10	11-11-32-00-00201-00	STATE OF OREGON	2.80 AC
11	11-11-32-00-01603-00	FERRIS	0.03 AC
12	11-11-32-00-01600-00	LINCOLN COUNTY	0.09 AC
13	11-11-32-CC-0ROAD-00	ROW	0.50 AC
14	12-11-05-00-00800-00	STEEL STRING INC	1.50 AC
15	12-11-05-00-00600-00	STEEL STRING INC	0.11 AC
16	12-11-05-00-0ROAD-00	ROW	0.10 AC
17	12-11-05-00-00803-00	STEEL STRING INC	2.55 AC
18	12-11-06-00-00100-00	CITY OF NEWPORT	0.53 AC
19	12-11-06-00-00200-00	WATTS	0.06 AC
20	12-11-06-00-0ROAD-01	ROW	0.08 AC
21	12-11-06-00-00600-00	STEEL STRING INC	3.03 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.

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NORTH

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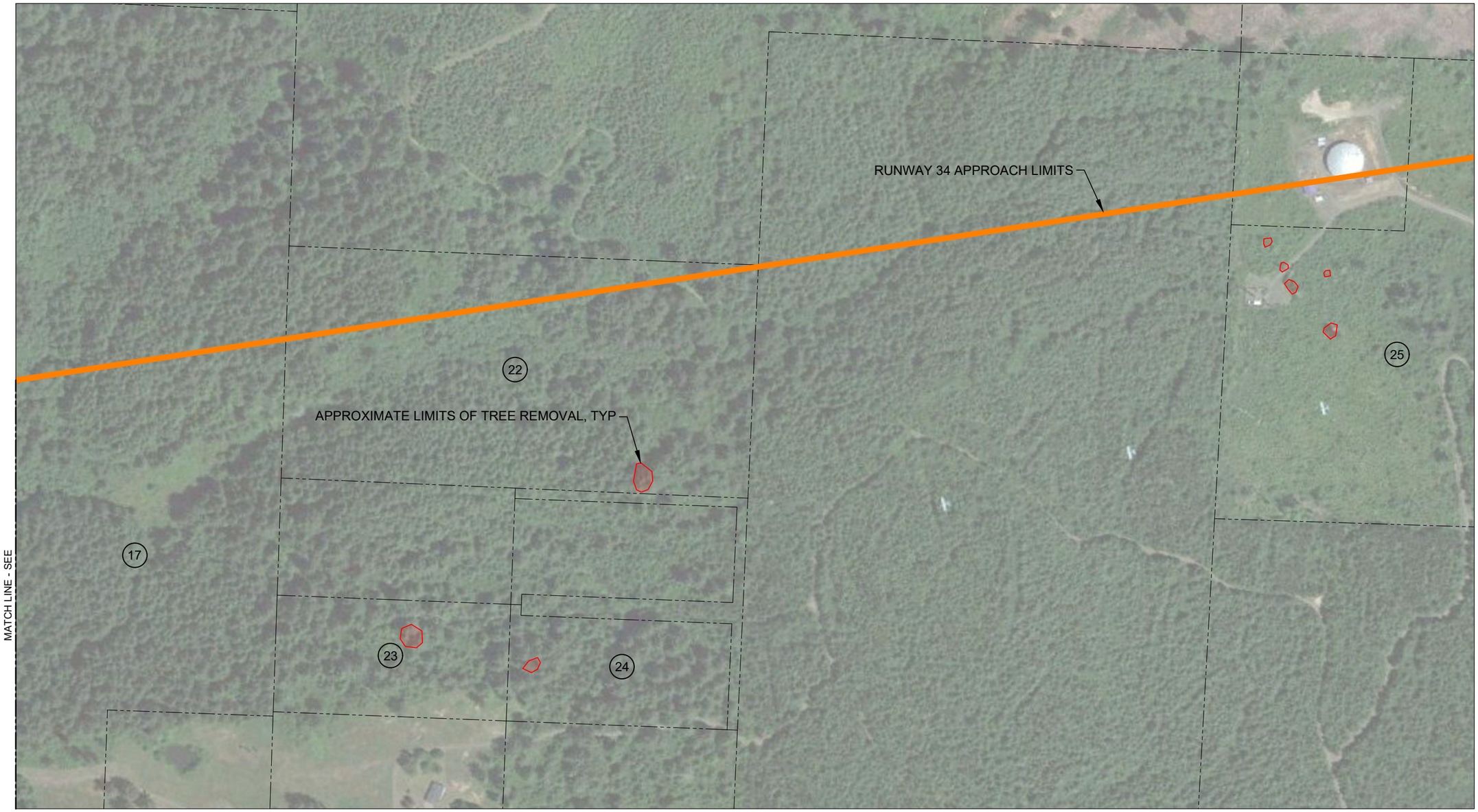
RUNWAY 34 OBSTRUCTION REMOVAL AREAS (North)

Figure 7 MARCH 2022



TAG	PARCEL ID	OWNER	TREE REMOVAL
17	12-11-05-00-00803-00	STEEL STRING INC	2.55 AC
22	12-11-05-00-00802-00	WEYERHAEUSER CO	0.08 AC
23	12-11-05-CB-00200-00	STEEL STRING INC	0.08 AC
24	12-11-05-CB-00700-00	STEEL STRING INC	0.03 AC
25	12-11-00-00-03400-00	EMERY INVESTMENTS INC	0.08 AC

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0 150 300
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OBSTRUCTION REMOVAL

RUNWAY 34 OBSTRUCTION REMOVAL AREAS (South)

Figure 8 MARCH 2022

CHAPTER 2

Alternatives

NEPA and FAA Orders 5050.4B and 1050.1F require the consideration of alternatives commensurate with the purpose and need statement. The intent is to evaluate various options that address the recognized need so that potential environmental impacts can be analyzed and compared. This chapter describes the alternatives considered for the Newport Municipal Airport Obstruction Removal Project. It includes a discussion of alternatives that were eliminated because they were determined to be infeasible or not reasonable based on cost, constructability considerations, or impacts on private property owners.

2.1 Alternative Screening Criteria

As part of the alternatives evaluation, an initial screening process was conducted to determine if the alternative satisfies the purpose and need, if the alternative is feasible both in terms of cost and constructability, and if the alternative is prudent or rational when considering impacts on private properties.

Purpose and Need – For an alternative to meet the purpose and need criteria, it must provide improved safety for aircraft during the approach phase of flight and achieve compliance within: (1) the FAR Part 77 approach surface requirements; and (2) AC 150/5300-13A design requirements of threshold siting surfaces.

Cost and Constructability – If an alternative meets the purpose and need, it is evaluated on overall cost and constructability. Several of the obstructions identified in the obstruction analysis are located on private property where the City does not have an avigation easement or right to remove the obstruction.

Private Property Impacts – Impacts on private property, such as how obstruction removal would change or alter landscaping and vegetation, visual conditions, and noise were taken into consideration.

Avigation Easements

Avigation easements refer to a permanent conveyance of airspace, from a property owner to the Airport, granting the Airport the right to remove obstructions from a defined airspace surface and the right to restrict the height of structures, objects, or natural growth and other obstructions. These easements involve appraisals, negotiation with the individual property owner, and acquisition of the perpetual rights to remove existing tree obstructions and prevent future obstructions.

2.2 Alternative 1: No Action Alternative

The No Action Alternative would retain all tree obstructions, with the Airport taking no action to address airspace hazards. The existing trees would continue to remain as penetrations to the FAR Part 77 approach surfaces of Runways 16, 20, and 34 and the AC 150/5300-13A threshold siting surfaces of Runways 16, 20, and 34. The existing airfield conditions would remain unchanged from the present conditions.

Obstructions (vegetation) in the approach surfaces would remain. Additionally, some vegetation that is currently below the regulated surfaces would continue to grow and likely become future obstructions. The vegetation within the approach surface would continue to pose a hazard to aircraft operations. This would lead to a reduction of the usable runway length in order to maintain a clear approach for aircraft operations and negatively impact the ability of certain aircraft to continue safe operation at the Airport. Future aviation activity could be constrained by the operational limits of the existing Airport facilities and obstructions, and may result in having to make a change in approach procedures based on avoiding object penetrations.

As this alternative would not remove tree obstructions to provide clear airspace, it is not desirable from an aircraft approach and presents hazards in the airspace to the flying public. Additionally, addressing obstructions to the airspace is required by the FAA as part of its grant assurances.

The No Action Alternative has the least potential impact on the environment and effect on property owners. This alternative also has no implementation costs. Airports developed or improved with federal funds are obligated to prevent the growth or establishment of obstructions in the approaches to the airport and take reasonable actions to remove existing obstructions. This requirement is identified and described in the FAA Airport Compliance Manual (FAA Order 5190.6B), which establishes policies and procedures to be followed by public airports (FAA 2009). This requirement is also listed in federal grant assurance *No. 20, Hazard Removal and Mitigation of the Airport Improvement Program*, per Federal Statute 49 United States Code (U.S.C.), Section 47101, that states:

> *"[Airport Sponsors] will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.*"

Although the No Action Alternative fails to meet the purpose and need for the Proposed Action, it must be carried forward for analysis pursuant to CEQ regulations and serves as the baseline for comparison to other reasonable alternatives.

2.3 Alternative 2: Remove Approach and Threshold Siting Surface Obstructions Alternative (Proposed Action)

The Remove Approach and Threshold Siting Surface Obstructions Alternative is intended to eliminate the most critical obstructions while substantially reducing the number of affected properties. The approach surface is critical in allowing aircraft to execute landings in a manner that is safe to the aircraft, nearby environmental resources, residences, and the general public. Under this alternative, obstructions (trees) would be removed from:

- Visual approach and threshold siting surface of Runway 20.
- Non-precision instrument approach and threshold siting surfaces of Runway 34.
- Precision instrument approach and threshold siting surfaces of Runway 16.

Removing these trees and vegetation would allow for a clear 50:1 approach surface for Runway 16 for the first 10,000 feet (40:1 for an additional 40,000 feet), 34:1 approach surface for Runway 34, and 20:1 approach surface for Runway 20, as needed per AC 150/5300-13A to maintain the approach paths for the runways.

The obstructions are located on Airport property as well as other City-owned property, County right-of-way, and private property. As part of this alternative, the City would try and obtain avigation easements on private property. If an aviation easement is not secured on private property, the City would obtain private property owner permission to remove the obstruction(s).

This alternative would remove obstructions on the following private properties:

- **Runway 20:** One tree would be removed from private property. Approximately 7.41 acres of trees would be removed for a property that is zoned Industrial and owned by one owner on four parcels (tax lots 11-11-28-00-700, 11-11-29-00-100, 11-11-29-00-600, and 11-11-29-00-500).
- **Runway 16:** One tree would be removed from a private property (tax lot 11-11-29-00-300), at its south property line. It is possible that this tree is actually on City-owned property and only the canopy of the tree overhangs the property line.
- **Runway 34:**
  - Approximately 0.98 acre of trees would be removed from tax lot 11-11-32-00-1601.
  - Approximately 0.03 acre of trees would be removed from tax lot 11-11-32-00-1603.
  - Approximately 7.3 acres of trees would be removed from property owned by Steel String Inc. (tax lots 12-11-05-00-800, 12-11-05-00-600, 12-11-05-00-803, 12-11-06-00-600, 12-11-05-CB-200, and 12-11-05-CB-700).
  - Approximately 0.06 acre would be removed from tax lot 12-11-06-00-200.
  - Approximately 0.08 acre would be removed from tax lot 12-11-00-00-3400.
  - Approximately 0.08 acre would be removed from tax lot 12-11-05-00-802.
  - Additionally, canopy or limbs of trees to be removed on City property overhang the property line of five properties on SE Cedar Street: tax lots 11-11-32-CC-901, 11-11-32-CC-800, 11-11-32-CC-1600, 11-11-32-CC-1400, and 12-11-06-00-300.

This alternative would remove a total of about 60 acres of trees. The obstruction removal would involve cutting woody vegetation within the identified obstruction areas at ground level and leaving stumps in place. There would be no root removal or grading. Outside of riparian areas (areas within 50 feet of a stream), trees would be felled and hauled off-site using existing roads. No new facilities, roads, or impervious surfaces are proposed as part of the project. Construction access and staging areas would be located on existing disturbed areas, including paved and unpaved airport access roads, private roads, as well as old logging roads and paths (see **Figures 9** and **10**). Some portions of roads may need to be improved to allow logging equipment access.

Alternative 2 meets the purpose and need of the project as it removes all of the current and potential future airspace penetrations in three separate FAR Part 77 approach surfaces at the Airport. It also meets the cost and constructability criteria.

2.4 Alternatives Considered but Eliminated

Data gathered from evaluating the AGIS Survey as part of the Airport Master Plan Update conducted in 2018 (WHPacific) identified obstructions in the protected airspace of both the approach and departure surfaces. The subsequent *KONP Obstruction Analysis Report* (Quantum Spatial, Inc. 2019) identified substantial areas of tree obstructions to the approach and departure surfaces to Runways 16-34 and 2-20 at the Airport. The ideal alternative from an aeronautical standpoint would be to remove all tree penetrations to the protected airspace defined by CFR Title 14, Part 77 *Safe, Efficient Use, and Preservation of the Navigable Airspace*. However, as part of the scoping process, several of the identified obstructions were located on private property where the City does not have an avigation easement or right to remove the obstruction. Further consultation with the FAA determined that removal of all surface penetrations would be cost prohibitive. The FAA instructed the Airport to remove obstructions on surfaces where it is required to maintain existing flight procedures. With this guidance, the most critical surfaces were identified.

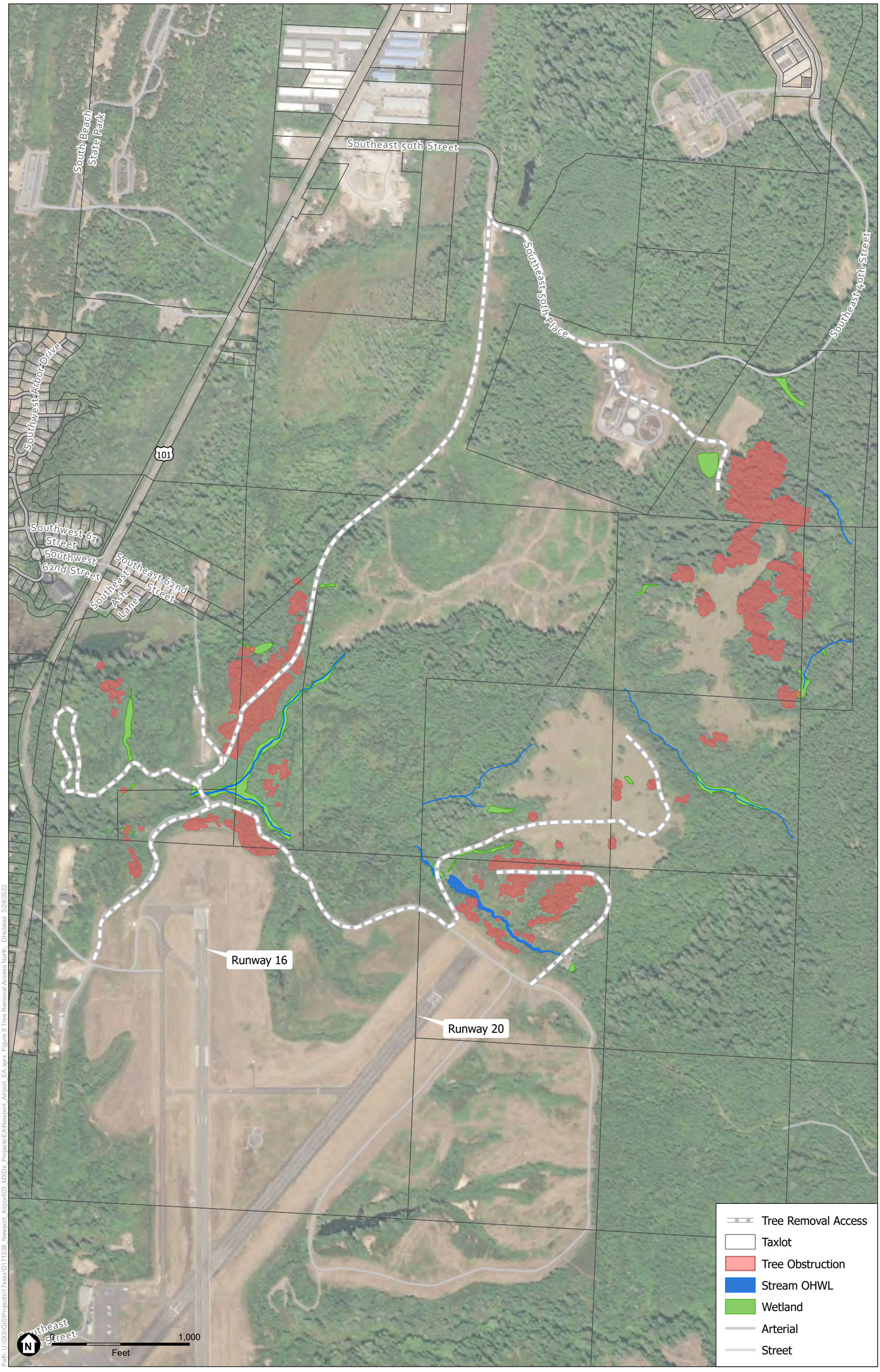
This alternative does not meet the screening criteria and therefore is not carried forward in the EA analysis.

2.5 Proposed Action

Based on the evaluation identified in this chapter, and review by the Airport and FAA, the **Remove Approach and Threshold Siting Surface Obstructions Alternative** has been chosen as the Preferred Alternative for the Airport and is the Proposed Action. This alternative has been identified by the Airport as the most practical solution that balances the Airport's needs and safety while taking into account environmental considerations, minimizing both cost and private property disturbance, and meeting the purpose and need to provide clear airspace and improve compliance with FAA design standards and regulations. The review considered access, ownership, wetlands, and federally listed species and habitat protected under the Endangered Species Act.

2.6 Proposed Action and Estimated Timeframe

The timing for the removal of obstructions is dependent upon securing avigation easements or property owner permission and funding availability. At this time, it is anticipated that obstruction removal would occur in phases, as shown on **Figure 11**. The phasing was based on the following priorities: (1) Precision instrument approach and threshold siting surfaces of Runway 16; (2) Non-precision instrument approach and threshold siting surfaces of Runway 34; and (3) Visual approach of Runway 20. The initial phase could start in late 2022 or 2023.

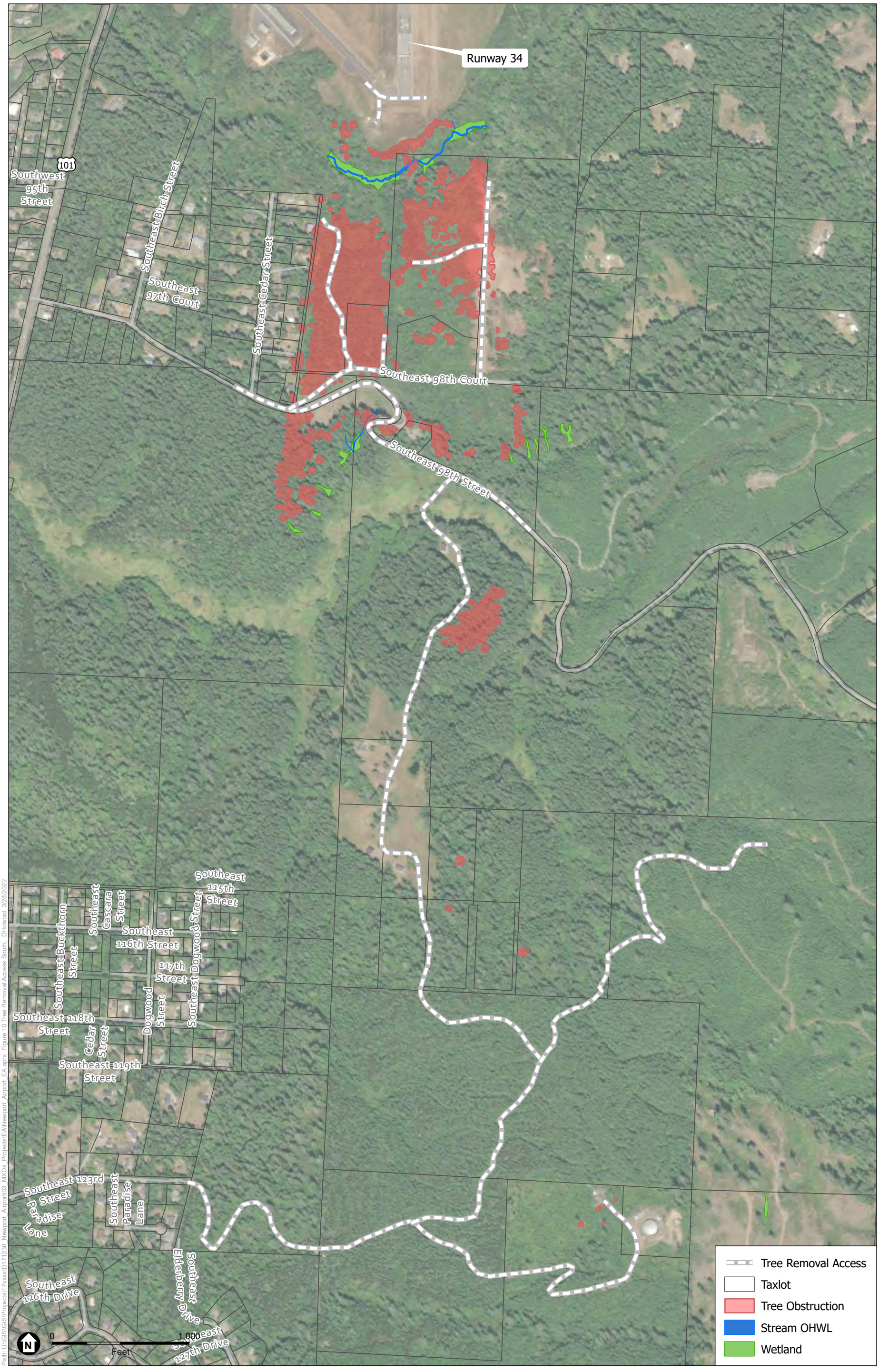


SOURCE: Maxar, 2021; Lincoln County, 2017; Precision Approach, 2021; ESA, 2021.

D171238.00 Newport Airport EA

Figure 9
Tree Removal Access - North
Lincoln County, OR

ESA



Path: U:\GIS\GIS\Projects\17xxxx\D171238 Newport Airport\03 MXDs Projects\EA\Newport Airport EA.aprx Figure 10 Tree Removal Access South DHolstad 3/28/2022

SOURCE: Maxar, 2021; Lincoln County, 2017; Precision Approach, 2021; ESA, 2021.

D171238.00 Newport Airport EA

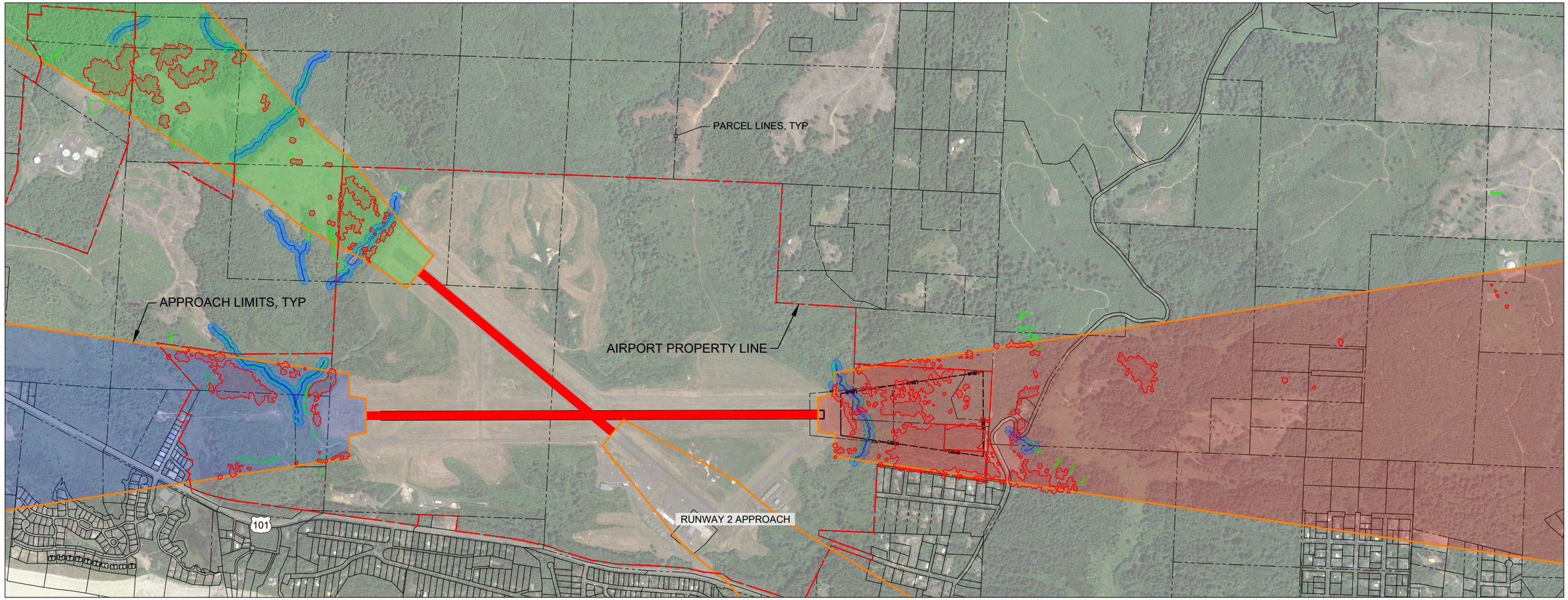
Figure 10
Tree Removal Access - South
Lincoln County, OR

ESA

NORTH

0 600 1200

SCALE IN FEET



PHASING

- PRIORITY 1
- PRIORITY 2
- PRIORITY 3

PRELIMINARY
NOT FOR CONSTRUCTION
03/31/2022

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

NEWPORT MUNICIPAL AIRPORT
OBSTRUCTION REMOVAL

OBSTRUCTION REMOVAL PHASING

Figure 11 MARCH 2022

CHAPTER 3.

Affected Environment & Environmental Consequences

This chapter analyzes the environmental impacts of the Proposed Action and the No Action Alternative. Each environmental impact category[1] is analyzed by its affected environment, environmental consequences, and mitigation measures, if applicable, to determine if the No Action Alternative or Preferred Alternative would cause any significant impacts.

Baseline data used to determine the affected environment were collected by reviewing existing documentation and databases, consulting with various individuals and agencies, and conducting field investigations. In accordance with FAA Order 1050.1F, each resource was evaluated for direct, indirect, and cumulative impacts. Determination of significant impacts was conducted according to the thresholds of significance identified in FAA Order 1050.1F and companion Desk Reference for Airport Actions, Version 2 (2020).

Environmental impacts are described in terms of direct, indirect, and cumulative impacts. Direct impacts are caused by the proposed project during the time of implementation and at the location of the project. Indirect impacts are reasonably foreseeable and occur as a result of a project but later in time or at a different location. Cumulative impacts result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions.

For comparison purposes, the No Action Alternative is evaluated alongside of the Proposed Action. Although the No Action Alternative does not address any of the existing issues or meet the purpose and need as explained in Chapter 2, CEQ and NEPA regulations require the evaluation of a No Action Alternative. When compared with the Proposed Action, the No Action Alternative serves as a reference point.

3.1 Resources Not Affected

The No Action Alternative and Proposed Action would not affect the resources listed below:

> **Air Quality** – The Airport is in an attainment area for air quality. The project does not include the installation of any emissions sources and would not cause permanent increases in air or local traffic. Removal of the obstructions would not increase the capacity of the Airport or change its operational environment. The construction activities required for the obstruction removal are presumed to conform because these activities would not generate emissions that exceed *de minimis* levels. Emissions generated by construction equipment are negligible considering the

[1] Chapter 4 of FAA Order 1050.F identifies environmental impact categories that may be relevant to FAA actions.

temporary nature of construction activities and the type of equipment (i.e., forestry activities and log transport).

Department of Transportation Act Section 4(f) Resources – There are no publicly owned parks, recreation areas, wildlife refuges, or historic sites where tree removal is proposed.

Farmlands – The Proposed Action does not involve land acquisition or the conversion of agricultural land to Airport use. The areas where trees are proposed to be removed do not contain any soils designated by the Natural Resources Conservation Service (2021) as prime, unique, state, or locally important farmland where trees are proposed to be removed.

Hazardous Materials, Solid Waste, and Pollution Prevention – According to the Oregon Department of Environmental Quality, there are no Leaking Underground Storage Tanks within 1 mile of the proposed tree removal areas; and according to the U.S. Environmental Protection Agency's (EPA) Resource Conservation and Recovery Act (RCRA) Information Database, there are no RCRA Corrective Actions Sites within 1 mile of the proposed tree removal areas (EPA 2022).

Light Emissions – No new or change in light emissions are proposed as part of the project.

Natural Resources and Energy Supply – Construction of the project would require the short-term and minor use of consumable natural resources (e.g., fuels for construction equipment). Removal of the obstructions would not change the consumption of natural gas, electricity, or fuel in the long term.

Socioeconomics, Environmental Justice, and Children's Health and Safety Ricks – The removal of obstructions (trees) would not result in changes in population patterns or growth, disrupt the existing communities or neighborhoods, displace any existing or planned residences or businesses, nor cause any disproportionately high and adverse impacts on minority or low-income populations. The project does not present any risks specific to children's health and safety.

Floodplains – Although there are Federal Emergency Management Agency (2009) mapped floodplains in the study area, no tree removal is proposed in floodplains.

Groundwater –The Proposed Action would not involve grading, the addition of impervious surfaces, or other activities that may affect precipitation infiltration and groundwater recharge.

Public Drinking Water Supplies – Drinking water for the City of Newport is from the Big Creek Reservoir and the Siletz River. Water is used from the Siletz River to supplement supply in the summer. These drinking water sources are outside of the project area. No groundwater wells are located where trees are proposed to be removed.

Wild and Scenic Rivers – There are no rivers on the Nationwide Rivers Inventory or State Scenic Waterways near the study area (National Park Service 2019; Oregon Parks and Recreation Department 2021). The nearest designated Wild and Scenic River is the Elk River located near Port Orford, more than 150 miles from where trees are proposed to be removed.

As the project would not affect these resources, they are not addressed further in this EA. The following sections describe the potential project impacts on the following environmental impact categories: Biological Resources; Climate; Coastal Resources; Historic, Archaeological, and Cultural Resources; Land Use; Noise and Compatible Land Use; Visual Resources; Water Resources; and Cumulative Impacts.

3.2 Biological Resources

Section 7 of the Endangered Species Act of 1973 (16 USC Section 1531, et. seq.) requires federal agencies to examine projects for adverse impacts on federally listed endangered or threatened species. The Migratory Bird Treaty Act (MBTA) of 1918 prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests except as authorized under a valid permit (50 CFR 21.11). The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), prohibits anyone from "taking" bald or golden eagles, including their parts, nests, or eggs. Essential Fish Habitat (EFH) is designated under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) of 1976, which regulates marine fisheries in the U.S. and its territorial seas. The Magnuson-Stevens Act mandates that the National Marine Fisheries Service (NMFS) must identify EFH for federally managed marine fish.

3.2.1 Affected Environment

Land Cover, Habitat Types, and Wildlife

Obstruction removal areas are situated on steep terrain in the foothills and headlands of the Central Oregon Coast Range. The steep and diverse topography of the study areas is influenced by the drainages of four streams (Henderson, Grant, Moore, and Theil creeks) that flow west through these areas and into the Pacific Ocean. As a result, the topography is characterized by ridgelines and steep drainages. Elevations in the areas range from 16 feet to 380 feet above mean sea level. The lowest elevations in these study areas are located at the bottom of drainages that flow into one of the four streams.

The temperate rainforest of the area has been significantly altered over the last 25 years. Alterations in and adjacent to obstruction removal areas have influenced the presence, location, and boundaries of habitat types include logging, grading, leveling, building and road construction, and drainage to control naturally occurring hydrology. In areas that have been historically disturbed, the second-growth forests and shrub layers have very dense vegetation.

The habitat north of Runway 16 consists of shrubland, forested terraces and hillslopes, and riparian habitat. The forests in this area consist of mid-seral / mid-structural, thinned stands of western hemlock and Sitka spruce. The understory is dense and consists of salal, evergreen huckleberry, and sword fern. Significant development occurred in the area north of Runway 16 between 2003 and 2005 where extensive vegetation was cleared from an area roughly 150 feet wide by approximately 2,000 feet long north from the edge of pavement of Runway 16 to install a series of towers, lights, and flight navigational aids (**Photo 1)**. As part of the construction, access roads and staging areas were developed that altered and fragmented habitat.

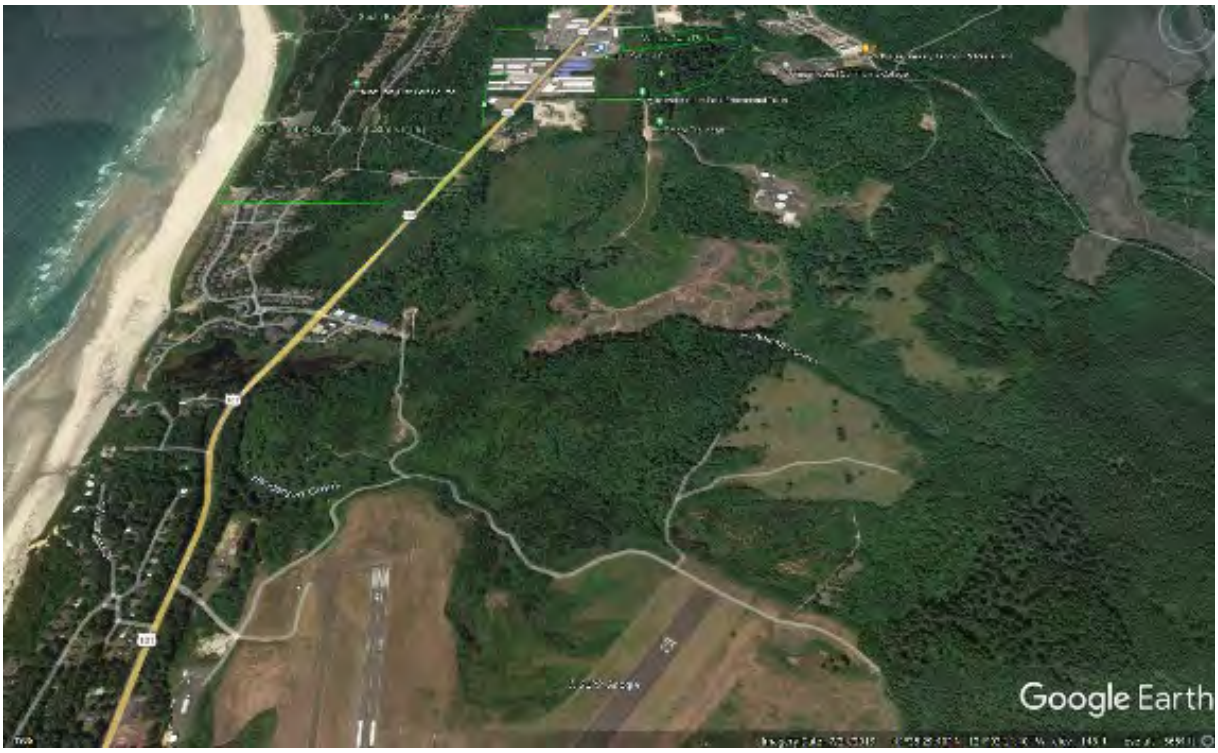


Photo 1
Overview of habitats north of Runway 16 and Runway 20

The area north of Runway 20 was clearcut between 1994 and 2000 and subsequently managed as pasture for livestock (**Photo 1**). There is also a large area for surface application of treated wastewater effluent from City of Newport Public Works wastewater treatment facility. These changes have substantially altered the habitat types and wildlife usage in this location.

Residential development and logging have altered the habitat south of Runway 34. Between 1994 and 2000, most of tax lot parcels 11-11-32-00-01601 and 1602 were clearcut to clear the Runway Protection Zone. Several access roads and staging areas were also constructed in this area during this time. Clearcutting has also occurred on tax lot parcel 12-11-05-00-00600. The clearcutting activity removed most of the area's vegetated cover and caused erosion in some places. Scotch broom quickly colonized this area after harvest. Today, this area consists of young Douglas fir trees with some alders and willows as well as Scotch broom (**Photo 2**). Trees range in height from 20 to 50 feet, with most of the trees between 35 and 45 feet high (Quantum Spatial, Inc. 2019). Adjacent wooded areas on City property are young mixed deciduous/coniferous trees that are generally 40 to 50 feet high. A couple of the trees in this area are 90 feet high but are isolated.

Photo 2
Young Douglas fir trees on City property, south of Moore Creek and north of SE 98th Street

The habitat south of S.E. 98th Street on private lands consists of conifers that exceed 100 feet in height (Quantum Spatial, Inc. 2019) and are generally larger than 15 inches in diameter at breast height (dbh) with some exceeding 25 inches dbh. The forest in this area south of Thiel Creek is characterized by mid-successional to late-successional with varying densities of undergrowth. Trees on the approximate 2.5-acre patch of trees proposed for removal on Steel String property (tax lot parcel 12-11-05-00-00803-00) range in height from 113 to 189 feet (Quantum Spatial, Inc. 2019). The forest on this parcel has some late-successional characteristics, but has a sparse shrub and subcanopy layer with few snags and pieces of large downed wood (**Photo 3**).

Photo 3
Typical mature conifer forest in the area south of SE 98th Street

The forest on Weyerhaeuser property (tax lot parcel 12-11-05-00-00802-00) is typified by large Sitka spruce trees with a dense shrub layer (**Photo 4**). The trees proposed for removal on Emery Investments Inc. property (tax lot parcel 12-11-00-00-03400-00) property adjacent to the Seal Rock water tower **(Photo 5)** are isolated.

Photo 4
Typical large spruce on Weyerhaeuser property

Photo 5
Isolated tall trees proposed for removal adjacent to the Seal Rock water tower

As habitats have been altered over the years, wildlife species that occupy them have also changed. On the north end of the Airport, wildlife most likely to occupy these areas are those tolerate human disturbance or growing urban areas, such as songbirds, woodpeckers, mule deer, coyote, fox, porcupine, raccoons, weasels, and rodents. South of the Airport (south of S.E. 98th Street), habitats would support species that are not as tolerant of humans and inhabit forested habitats such as bald eagle, elk, black bear, bobcat, mountain lion, and others.

Species and Critical Habitat Protected Under the Endangered Species Act

Table 4 shows species listed under the Endangered Species Act by the U.S. Fish and Wildlife Service (USFWS) and NMFS that may occur within the vicinity of the obstruction removal areas or be impacted by construction activities.

Listed Birds and Mammals

Listed birds with the potential to occur in the study area and vicinity include the marbled murrelet and northern spotted owl. Habitat requirements for marbled murrelets and northern spotted owls include a multi-layered, multi-species canopy with moderate to high canopy closure. Occupied marbled murrelet breeding behavior

Occupied vs Contiguous Habitat

Occupied marbled murrelet habitat is defined as habitat that has been surveyed to protocol and breeding behavior has been observed. The current protocol was developed by the Pacific Seabird Group (Evans Mack et al. 2003) and relies on a series of standardized audio-visual surveys. A revised survey protocol is under development (Oregon Department of Fish and Wildlife [ODFW] 2021).

Contiguous habitat is habitat adjacent to occupied habitat that is similar in structure. Contiguous habitat is considered to be occupied by breeding murrelets. even when it has not been surveyed to protocol or breeding behavior has been observed.

TABLE 4
SPECIES AND CRITICAL HABITAT THAT COULD OCCUR IN THE VICINITY OF THE PROPOSED ACTION

Species Name (Scientific Name)	Federal Status	Critical Habitat	Suitable Habitat?
Birds			
Marbled murrelet (*Brachyramphus marmoratus*)	Threatened	Critical habitat areas were originally **Designated** in 1996, revised in 2011, and finalized in 2016 (81 Federal Register [FR] 51348). The study area is not within designated critical habitat. The nearest designated critical habitat is located approximately 0.5 mile east of the southern part of the study area.	Yes, on Weyerhaeuser land, tax lot parcel 12-11-05-00-00802-00.
Northern spotted owl (*Strix occidentalis caurina)*	Threatened	Critical habitat areas were **Designated** in 1992, revised in 2008, and again in 2012 (77 FR 71876). The study area is not within designated critical habitat. The nearest proposed critical habitat is located approximately 2 miles east of the southern part of the study area.	Potential suitable habitat presumed present south of Thiel Creek based on murrelet survey (Weyerhaeuser 2021).
Mammals			
Pacific marten *(Martes caurina)*	Proposed Threatened	Critical habitat areas were **Proposed** on October 25, 2021 (86 FR 58831). The study area is not within designated critical habitat. The nearest proposed critical habitat is the same area designated as critical habitat for the northern spotted owl, located approximately 2 miles east of the southern part of the study area.	Potential suitable habitat presumed present south of Thiel Creek based on murrelet survey (Weyerhaeuser 2021).
Fish			
Oregon Coast Coho Salmon Evolutionarily Significant Unit (*Oncorhynchus kisutch)*	Threatened	Critical Habitat was **Designated** on February 16, 2000 (65 FR 7764). Thiel Creek is designated as critical habitat.	Yes, Thiel Creek.

SOURCE: Oregon Biodiversity Information Center (ORBIC) 2019; USFWS 2021; NMFS 2021

(flight at canopy height) was observed on Weyerhaeuser land south of S.E. 98th Street on tax lot parcel 12-11-05-00-00802-00 during 2021 protocol surveys (Weyerhaeuser 2021). Based on guidance from the USFWS, adjacent or contiguous habitat that is similar in structure is also considered occupied habitat. Consequently, adjacent forested habitat on the Steel String property (tax lot parcels 12-11-05-00-00803-00; 12-11-05-CB-00200-00, and 12-11-05-CB-00700-00) is considered contiguous habitat. There are no documented occurrences of northern spotted owl in or near where trees are proposed to be removed (ORBIC 2019). Weyerhaeuser surveyed for northern spotted owls according to protocol in the spring and summer of 2021 on tax lot parcel12-11-05-00-00802-00 (the same parcel where marbled murrelets were detected), but no northern spotted owls were seen or heard (Hane, pers. comm, 2021).

While the study area contains mature trees, it is primarily a second-growth forest, which is not a preferred habitat for northern spotted owls or marbled murrelets. The occurrence of northern spotted owls and

marbled murrelets is likely limited to transient birds flying over the area to suitable habitats. There are no documented occurrences of either northern spotted owls or marbled murrelets in the area where trees are proposed to be removed (ORBIC 2019).

There are no documented occurrences of Pacific marten in the vicinity of where trees are proposed to be removed (ORBIC 2019). The nearest population of Pacific marten is expected to occur in the Siuslaw National Forest over 2 miles east of the southern portion of the study area. The Siuslaw National Forest is proposed critical habitat for the Pacific marten and is considered the northernmost distribution of coastal martens in Oregon (86 FR 58831).

The Section 7 consultation process under the Endangered Species Act is underway for marbled murrelet, northern spotted owl, and Pacific marten. Consultation will be finalized prior to the FAA's environmental decision and publishing of the Final EA. The USFWS review and effects determination for all three of the terrestrial listed species will be included in their Biological Opinion.

Listed Fish

Several small tributaries of the Pacific Ocean flow across the study area and vicinity: Henderson Creek, Grant Creek, Thiel Creek, and Moore Creek. Thiel Creek is the only stream mapped as critical habitat for federally listed Oregon Coast Coho salmon. Coho salmon are present in Thiel Creek and at low numbers in Henderson Creek, but have not been observed in Moore Creek or Grant Creek (Spangler, pers. comm. 2021).

Essential Fish Habitat

Federal agencies are required to consult with NMFS on all activities, or proposed activities, authorized, funded, or undertaken by the agency that may adversely affect EFH. The Pacific Fishery Management Council has designated EFH for the Pacific salmon fishery, federally managed ground fishes, and coastal pelagic fisheries (2014). Both Henderson Creek and Thiel Creek are considered EFH for Oregon Coast Coho salmon. EFH for Pacific Coast groundfish and Coastal Pelagic species is not present in the study area.

Migratory Birds

The USFWS IPaC tool (i.e., Information for Planning and Consultation; USFWS 2021) identified the following list of Birds of Conservation Concern protected under the MBTA that potentially occur in the vicinity of the Proposed Action:

- Black oystercatcher
- Black turnstone
- Clark's grebe
- Evening grosbeak
- Lesser yellowlegs
- Marbled godwit
- Olive-sided flycatcher
- Rufous hummingbird
- Short-billed dowitcher
- Wrentit

There is no suitable habitat where trees will be removed for the black oystercatcher, black turnstone, lesser yellowlegs, marbled godwit, and short-billed dowitcher, as these are all shorebirds.

Clark's grebe is a transient species in the study area. In winter, Clark's grebes are found mostly on saltwater bays. During the breeding season, they prefer freshwater wetlands with a mix of open water and emergent vegetation. According to IPaC, the probability of presence in the study area is from mid-April through early May.

Evening grosbeak breed in coniferous and mixed forests, and are often associated with spruce and fir. Their probability of presence in the study area is May/early June. They breed from May through August.

Olive-sided flycatchers are generally associated with open forests, often near water and with tall, prominent trees or snags. They may use open, mature coniferous forest, forested riparian areas, forest openings (e.g., burns, harvested forest), and forest edges. They prefer hemlocks or true firs for nesting and require abundant insects for prey.

Rufous hummingbird breeds in open or shrubby areas. According to IPaC, their probability of presence where trees will be removed is February through July.

Wrentit is a year-round resident in coastal scrub habitats.

Bald and Golden Eagles

Eagles and eagle nests were surveyed for during the wetland delineation and upon subsequent field visits. No eagles or nests were seen. Eagle nest locations were discussed at agency meetings, and none were known to occur in the vicinity of the Airport. Additionally, there are no recorded eagle nests in the area (ORBIC 2019).

On April 27, 2022, an active bald eagle's nest was reported to the Airport and noted to be north of Runway 16. The nest tree was located and confirmed to have an active bald eagle nest. The nest tree is located outside of the approach surface of Runway 16 and is not one of the obstructions proposed for removal.

3.2.2 Environmental Consequences

Significance Threshold

Exhibit 4-1 of FAA Order 1050.1F provides the FAA's significance threshold for biological resources (including fish, wildlife, and plants). A significant impact on biological resources would occur when:

> *The USFWS or the NMFS determines that the action would be likely to jeopardize the continued existence of a Federally-listed threatened or endangered species, or would result in the destruction or adverse modification of federally-designated critical habitat.*

The FAA has not established a significance threshold for non-listed species.

In addition to the above threshold, FAA Order 1050.1F outlines additional factors to consider in evaluating the context and intensity of potential environmental impacts for biological resources, including situations in which a proposed action would have the potential for:

- A long-term permanent loss of unlisted plant or wildlife species, i.e., extirpation of the species from a large project area (e.g., a new commercial service airport).
- Adverse impacts on special status species (e.g., state species of concern, species proposed for listing, migratory birds, bald and golden eagles) or their habitats.
- Substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations.
- Adverse impacts on species' reproductive success rates, natural mortality rates, non-natural mortality (e.g., road kills and hunting), or ability to sustain the minimum population levels required for population maintenance.

Alternative 1 – No Action

No tree obstruction removal would occur with this alternative; therefore, there would be no impacts on land cover, habitats, wildlife; federally listed species, designated critical habitat, or EFH; MBTA protected species; or bald and golden eagles.

Alternative 2 – Proposed Action

Land Cover, Habitat Types, and Wildlife

The proposed obstruction removal would clear approximately 60 acres (8.5 acres from the approach area of Runway 16, 16 acres from the approach area of Runway 20, and 32.5 acres from the approach area of Runway 34). A summary of tree removal by habitat is provided in **Table 5**.

TABLE 5
HABITAT IMPACTS

Runway End	Mid- to Late-Successional Forest	Young Forest	Riparian Habitat [a]	TOTAL
	ac	ac	ac	ac
Runway 16	0.0	8.4	0.0	8.5
Runway 20	0.0	15.4	0.5	16
Runway 34	9.2	22.9	0.4	32.5
TOTAL	**9.2**	**46.7**	**0.9**	**57.0**

NOTES:
[a] Riparian habitat is defined as habitat within 50 feet of the ordinary high water line (OHWL).

The areas surrounding the project would be subject to increase noise from construction equipment and activities during tree removal. Wildlife would be disturbed by this increase in noise and human activity and would most likely avoid these areas until construction is completed. This could disrupt breeding activities for some individuals. Habitat modification could cause a change in the species that currently use the habitat and how it is used (indirect effect).

Tree removal has the potential to disturb soils (direct impact) and provide the opportunity for nonnative species (such as Scotch broom) to colonize and outcompete native species (indirect impact). After tree removal, soils would be stabilized with an appropriate seed mix (which may include sterile grass or a native upland forest herbaceous mix) immediately and inter-planted by the next growing season with native shrubs or short-statured trees such as vine maple, red-osier dogwood, cascara, and Douglas hawthorn (i.e., if trees are removed in the late summer/early fall, soil stabilization would occur that same fall, and inter-planting would be accomplished the following spring). This would minimize the opportunity for nonnative species to become established and prevent erosion. With implementation of erosion control Best Management Practices (BMPs) and the proposed revegetation plan, there would be no significant direct or indirect impacts on land cover, habitat types, or wildlife.

Protected Habitat and Species

A Biological Assessment was completed for the project (ESA 2022a) that analyzed potential impacts on listed terrestrial species under the jurisdiction of USFWS, including marbled murrelets, northern spotted owls, and Pacific marten. No direct effects are anticipated to occur to either marbled murrelets, northern spotted owls, or Pacific martens because trees are proposed to be removed from occupied/contiguous habitat after September 14 and before February 1 when no breeding birds or denning Pacific martens would be present. See **Appendix A.** Biological Assessment for additional details.

Although there would be no direct impacts to listed species, tree removal will modify habitat of approximately 3 acres of occupied and contiguous marbled murrelet habitat, which is also considered potential suitable northern spotted owl and Pacific marten habitat. Tree removal in occupied/contiguous habitat would affect 2% of the surrounding suitable forest (approximately 140 acres) and is not expected to adversely impair the ability of marbled murrelets, northern spotted owls or Pacific marten to reproduce in the area (indirect impact). Several mature trees with large limbs and sufficient canopy cover will remain in the Thiel Creek riparian zone and in areas outside of the FAA-regulated airspace that could provide suitable habitat for these species that depend on late successional forests.

Noise generated from the project would likely be from chainsaws, backhoes, dozers, or logging trucks. However, the nearest logging truck activity that may occur in the vicinity of occupied/contiguous marbled murrelet habitat and potential northern spotted owl and Pacific marten habitat during the breeding season would be over 1,000 feet away along SE 98th Street or near the Seal Rock water tower. No logging or tree removal is proposed to occur near potential nesting/denning habitat during the combined marbled murrelet, northern spotted owl and Pacific marten breeding/denning season (February 1 – September 15).

The project was determined to have no effect on designated critical habitat for marbled murrelet and northern spotted owl since no trees would be removed from critical habitat.

On May 16, 2022, the UFWS transmitted their Biological Opinion on the project to FAA (Appendix E). After reviewing the current status of the species, the environmental baseline, the effects of the proposed action, including all measures proposed to avoid and minimize adverse effects, and the cumulative effects, the USFWS concluded that the proposed project will not jeopardize the continued existence of the marbled murrelet. The USFWS concurred with the FAA's determination that the proposed action may affect, but is not likely to adversely affect, the northern spotted owl or coastal marten. As no designated or proposed critical habitat for any listed or proposed species occurs within the action area, none will be adversely modified or destroyed.

An evaluation was completed for the obstruction removal project that analyzed potential impacts on listed fish species under the jurisdiction of NMFS, including Oregon Coast Coho salmon and associated critical habitat. Tree removal, stream crossings, and road construction can cause erosion. Siltation of instream habitat is identified as a major impediment to the recovery of Oregon Coast Coho salmon (NMFS 2016). Construction access will use existing roads (see **Figures 9** and **10**). No new roads or impervious surfaces are proposed and there would be no temporary stream crossings. Additional, the obstruction removal would not require work below the OHWL of any fish-bearing streams or in tributaries to fish-bearing streams. Robust erosion and sedimentation control BMPs are proposed around riparian buffers to control or prevent siltation of streams. ODFW has reviewed the proposed conservation and minimization measures for water resources and fisheries and agree the proposed project would have no significant effect (Spangler, pers. Comm.).

Based on the implementation of erosion control measures and these conservation measures, it was determined the Proposed Action would have no direct or indirect significant impacts on Oregon Coast Coho salmon and critical habitat (See **Appendix B.** No Effect Letter). Essential Fish Habitat

The project is located within mapped EFH for Coho salmon, but is not within a habitat area of particular concern (NMFS 2022). There would be no disturbance to the streambed of any fish-bearing streams or tributaries, and no tree removal would occur within the 50-foot riparian buffer of Thiel Creek (EFH) or Henderson Creek (EFH). A few trees are proposed for removal within the 50-foot buffer of Moore Creek, but this stream does not meet the definition of EFH because it is not known to support Coho salmon per ODFW. Additionally, Moore Creek is not considered Essential Salmon Habitat by the Oregon Department of State Lands (DSL 2022). Robust erosion and sedimentation control BMPs are proposed near and within riparian buffers to prevent siltation of instream habitat (see *Mitigation Measures*, described below). The loss of riparian habitat is not expected not expected to adversely impair water quality functions (indirect impact). The Proposed Action would have no direct or indirect significant impacts on EFH.

Migratory Birds

Of the ten species of migratory birds listed as Birds of Conservation Concern, no suitable habitat is present in the study area for the black oystercatcher, black turnstone, lesser yellowlegs, marbled godwit, and short-billed dowitcher, as these are all shore birds. Clark's grebe is a transient species in the study area and does not breed in the study area. Although rufous hummingbirds and wrentit may be present in the study area, they nest in open or scrub-shrub habitats that would not be directly impacted by tree removal. Construction activities and noise may cause individuals of these species to avoid adjacent areas, and potentially abandon nests (indirect effect).

Evening grosbeak breed in coniferous and mixed forests, and are often associated with spruce and fir. Their probability of presence in the study area is May/early June. They breed from May through August. Avoiding impacts on breeding birds and avoiding nest destruction is an effective minimization measure (USFWS 2021). Suitable breeding habitat for evening grosbeaks in the study area is similar to the occupied or contiguous habitat identified for marbled murrelets. Tree removal in this area would occur outside of the breeding period of March 1 to September 15 to minimize the risk of take.

Olive-sided flycatchers are generally associated with open forests, often near water and with tall, prominent trees or snags. They may use open, mature coniferous forest, forested riparian areas, forest openings (e.g., burns, harvested forest), and forest edges. They prefer hemlocks or true firs for nesting and require abundant insects for prey. Potential nesting habitat for olive-sided flycatchers occurs along Thiel

and Henderson creeks. No tree removal is proposed in the 50-foot riparian buffer of Thiel Creek or Henderson Creek, so there would be no impact on olive-sided flycatchers. Construction activities and noise may cause these species to avoid adjacent areas, and potentially abandon nests (indirect effect).

To avoid MBTA protected species from potentially abandoning nests, tree removal would occur outside of the breeding period of March 1 to September 15 or a pre-construction survey will be done to look for active nests. The USFWS recommends this conservation measure is to avoid MBTA impacts (USFWS 2021). There is suitable habitat for rufous hummingbirds, wrentit, evening grosbeak, and olive-sided flycatchers outside of the FAA regulated airspace that could provide suitable habitat for these species. There would be no significant direct or indirect impacts on MBTA protected species.

Bald and Golden Eagles

There is an active bald eagle nest tree north of Runway 16. The nest tree is outside of the approach surface of Runway 16 and will not be impacted. However, there are trees within the approach surface that have line of sight from the nest tree. In order to minimize impacts to nesting eagles, trees within 0.5 miles of the nest tree will be removed outside of the breeding season (February 1-September 15).

To ensure the nest tree is protected, the tree will be surveyed and marked, and construction fencing will be installed around it.

Based on the proposed mitigation, the project would have no significant impact on bald or golden eagles.

Mitigation Measures

The Proposed Action incorporates a number of avoidance, conservation, and minimization measures that would reduce and mitigation impacts on fish and wildlife and associated habitats. These include:

- After tree removal, Soils would be stabilized with an appropriate seed mix (which may include sterile grass or a native upland forest herbaceous mix) immediately after tree removal and inter-planted by the next growing season with native shrubs or short-statured trees such as vine maple, red-osier dogwood, cascara, and Douglas hawthorn (i.e., if trees are removed in the late summer/early fall, soil stabilization would occur that same fall, and inter-planting would be accomplished the following spring). This would minimize the opportunity for nonnative species to become established and prevent erosion.

- Tree removal in occupied/contiguous habitat would occur outside of the combined marbled murrelet, northern spotted owl and Pacific marten breeding/denning season (February 1 to September 15) to avoid the potential for take.

- Tree removal in occupied/contiguous marbled murrelet habitat would occur during daylight hours (i.e., not at dawn or dusk).

- Tree removal would occur outside of the MBTA breeding period of March 1 to September 15 or a pre-construction survey will be done to look for active MBTA protected species nests.

- Tree removal within 0.5-mile radius of the bald eagle nest tree north of Runway 16 will be conducted outside of the breeding period of February 1 to September 15.

- The bald eagle nest tree will be surveyed and marked, and construction fencing will be installed around it.
- No tree removal would occur within the 50-foot riparian buffer of Thiel Creek or Henderson Creek.
- No removal of trees would occur that provide streamside shading in critical habitat (Thiel Creek).
- Tree removal within the 50 riparian buffer of seeps/streams would occur during the dry season (late July to mid-September) to eliminate the chance of erosion and sedimentation below the OHWL.
- Trees within 50 feet of a stream or within a delineated wetland will be left where they fall rather than hauled off-site. In these areas, obstructions will be removed using hand tools and low-impact equipment. Heavy equipment such as track rigs will not be used. The contractor will be required to access the site and perform the work on foot or using wetland mats to protect sensitive vegetation.
- Riparian setbacks will be flagged prior to construction to prevent inadvertent or unnecessary encroachment.
- Erosion and sedimentation control BMPs will be inspected twice-weekly to prevent soil from mobilizing outside of work areas and into fish-bearing streams.
- Emergency spill response and clean-up equipment will be available on-site during all construction activities.
- Construction access and staging areas will be located on existing paved or disturbed surfaces in upland areas. No staging will occur within delineated wetlands or riparian buffers.

With the implementation of these conservation and minimization measures, the project would have no significant impacts on biological resources, including fish, wildlife, and their habitats.

3.3 Climate

Research has shown that there is a direct link between fuel combustion and greenhouse gas (GHG) emissions. Therefore, all equipment that requires fuel or power at an Airport is a primary source of GHG generation. Aircraft are probably the most often cited air pollutant source, but they produce the same types of emissions as automobiles. Aircraft engines, like many other vehicle engines, produce carbon dioxide (CO2), nitrogen oxides (NO2), and sulfur oxides (SO2), water vapor, unburned or partially combusted hydrocarbons (also known as volatile organic compounds), particulates, and other trace compounds.

3.3.1 Affected Environment

The largest source of GHG emissions from human activities in the United States is from burning fossil fuels for electricity, heat, and transportation (EPA 2021). The Intergovernmental Panel on Climate Change estimates that aviation accounted for 4.1 percent of global transportation GHG emissions (IPPCC

2019). GHG emissions associated with the Airport are produced by planes, helicopters, other on-airport equipment, and associated vehicle traffic, and include CO2, NO2, carbon monoxide (CO), and SO2.

Mature forests absorb CO2 from the atmosphere while growing. When forests are removed, that carbon storage capacity is lost.

3.3.2 Environmental Consequences

Significance Threshold

The FAA has not established a significance threshold for climate.

Alternative 1 – No Action

Under the No Action Alternative, there would be no impacts on climate since no trees would be removed.

Alternative 2 – Proposed Action

During construction, there would be a temporary increase of GHG emission from diesel- and gasoline-powered construction equipment and additional vehicular traffic. These activities would not generate GHG emissions that exceed *de minimis* levels.

The Proposed Action will remove about 60 acres of trees. Removal of these trees will result in a reduction in the current CO2 storage capacity in the areas around the Airport and a slight increase in the Airport's contribution of CO2 to the atmosphere. the project would have no significant direct or indirect impacts on climate.

3.4 Coastal Resources

The Coastal Zone Management Act (CZMA) of 1972, provides the basis for protecting, restoring, and responsibly developing our nation's diverse coastal communities and resources. These include coastal barrier resource systems, coral reefs, and the coastal environment.

3.4.1 Affected Environment

The Airport is inland and there are no coastal barrier resource systems or coral reefs where obstructions are proposed for removal.

In Oregon, the coastal zone includes the state's coastal watersheds and extends seaward 3 nautical miles and inland to the crest of the Central Oregon Coast Range. The Airport is within the designated coastal zone. The Oregon Coastal Management Program (OCMP) is the State of Oregon's implementation of the CZMA. It protects coastal resources, which are defined as coastal ecosystem, estuary and shoreline, marine mammals, threatened and endangered species, wetlands and waters of the US/State, recreation, land use, and economics. The Oregon Department of Land Conservation and Development (DLCD) is the lead agency for the OCMP. For a project to be consistent with the CZMA, an analysis of effects to coastal resources is required and the project must also be consistent with the OCMP's Enforceable Policies. These policies are contained within three OCMP components:

1. The applicable local government comprehensive plan and land use regulations;
2. The statewide planning goals; and
3. Specific state agency authorities (i.e., those governing removal-fill, water quality, and fish & wildlife protections).

3.4.2 Environmental Consequences

Significance Threshold

The FAA has not established a significance threshold for coastal resources, but factors to consider include if the project would have the potential to:

- Be inconsistent with the relevant state coastal zone management plan(s).
- Impact a coastal barrier resources system unit (and the degree to which the resource would be impacted).
- Pose an impact on a coral reef ecosystem (and the degree to which the ecosystem would be affected).
- Cause an unacceptable risk to human safety or property.
- Cause adverse impacts on the coastal environment that cannot be satisfactorily mitigated.

Alternative 1 – No Action

Coastal Effects Analysis

Under the No Action Alternative, there would be no impacts on coastal natural resources.

The No Action Alternative would maintain the existing facilities and capabilities at the Airport, without investing in facility improvements to address safety concerns related to obstructions in the approach and threshold siting surfaces. The existing airfield conditions would remain unchanged from the present conditions. The vegetation within the approach surface would continue to pose a hazard to aircraft operations, and future aviation activity could be constrained by the operational limits of the existing Airport facilities and obstructions, and may result in having to make a change in approach procedures based on avoiding object penetrations.

Oregon Enforceable Policies Analysis

Under the No Action Alterative, no trees would be removed. This would be consistent with the OCMP Enforceable Policies.

Alternative 2 – Proposed Action

Coastal Effects Analysis

Natural Resources – As described under Section 3.2, *Biological Resources*, the areas for the obstruction removal project are situated on steep terrain in the foothills and headlands of the Central Oregon Coast Range. About 60 acres of trees will be removed by the Proposed Action. The project area is not within the designated estuary or shoreline as defined by the Newport Comprehensive Plan (2019); therefore, the Proposed Action would have no effect on estuary and shoreline resources. As described in Section 3.2, *Biological Resources*, with the implementation of conservation and minimization measures, the obstruction removal project would have no significant effect to:

- Marble murrelet and associated critical habitat;
- Northern spotted owl and associated critical habitat;
- Pacific marten; and
- Oregon Coast Coho salmon and associated critical habitat.

A Wetland Delineation was completed for the project (**Appendix C**). Several conservation and minimization measures have been developed to minimize potential impacts on wetlands and waters of the U.S./State (see Section 3.9 *Water Resources*). Implementation of these measures will allow wetlands and riparian areas to maintain functions and values, and therefore there would be no significant impacts on wetlands or waters of the U.S./State.

With implementation of mitigation measures listed in Sections 32. And 3.9, there would be no significant impact on coastal natural resources.

Recreation Resources – The Airport provides recreational uses to pilots and tourists that fly in to visit the area. The Proposed Action would clear the approach for certain aircraft types that currently use the airport for recreational uses. Providing a cleared airspace would benefit current and future recreational

users. There are no other public or formalized recreational opportunities in the area. The proposed project would have beneficial effects on coastal recreation resources.

Economic Resources – Newport Municipal Airport provides many benefits to the city and the county overall, including providing services to recreational and corporate pilots, accommodating air ambulance flights that provide a critical link to trauma facilities in more distant cities, and serving as a critical coastal resource for emergency response in the event of a major earthquake and tsunami event. To serve as an emergency response resource and to be self-sustaining, the Airport needs to maintain its airspace in accordance to FAR Part 77 for current critical aircraft. The Proposed Action would remove all the current and potential future airspace penetrations in three separate FAR Part 77 approach surfaces at the airport.

Coastal Users and Uses – The Airport is located inland from the ocean shore. Several local business and recreational pilots use the Airport. Other users include the US Coast Guard who bases a helicopter rescue team at the Airport, with crews coming from North Bend on rotation. Aircraft rescue and firefighting is available through the City of Newport Fire Department. The station is not normally staffed and emergency response is by an alarm call out. The City will send out fire fighters on standby for the arrival of aircraft seating more than 30 passengers. The Proposed Action will have a beneficial effect to coastal users of the Airport by removing all the current and potential future airspace penetrations in three separate FAR Part 77 approach surfaces at the airport. This would benefit all of the current uses at the Airport.

Secondary Impacts – Tree removal will modify existing habitats and could cause a change in the wildlife species that use the habitat and how it is used. Disturbed soils provide the opportunity of nonnative species to colonize the disturbed area and outcompete native species. With implementation of mitigation measures listed in Sections 32. And 3.9, there would be no significant secondary impacts on coastal natural resources.

Cumulative Impacts – There would be no cumulative impacts of the Proposed Action based on the geographic location of the Airport and the understanding of other uses where trees are proposed to be removed.

Oregon Enforceable Policies Analysis

A summary of applicable enforceable policies is summarized in **Table 6**.

The Proposed Action would have no significant impacts to coastal resources and would be consistent with the OCMP and, therefore, consistent with the CZMA.

TABLE 6.
COMPLIANCE WITH APPLICABLE OREGON ENFORCEABLE POLICIES

Authority	Enforceable Policy(ies)	Coastal Resource	How Proposed Action Complies
Local Regulations			
City of Newport	State Planning Goal 2, Land Use Planning	Land use	The City has adopted the Airport Restricted Area and Airport Development Zone overlay, which encourages and supports the continued operation and vitality of the Newport Municipal Airport by establishing compatibility and safety standards to promote air navigational safety and to reduce potential safety hazards for persons living, working, or recreating near the Airport. The Airport is zoned Public, north of the Airport is zoned Industrial, and south of the Airport is zoned High Density Multi-Family by the City Removal of trees is allowed in these zones.
City of Newport	State Planning Goal 5, Wetlands	Wetland and Waters of the State	Implementation of BMPs would allow wetlands and riparian areas to maintain functions and values as required by the Comprehensive Plan.
Lincoln County	State Planning Goal 2, Land Use Planning	Land use	Some trees proposed to be removed in the approach of Runway 34 are in an area zoned Rural Residential or Timber Conservation. Removal of trees is allowed in these zones.
State Regulations			
Oregon Department of State Lands	Removal-Fill Law (ORS Chapter 196)	Wetlands and Waters of the State	Removal of trees from within wetlands is allowed under the Removal-Fill Law provided that no more than 50 cubic yards of material is placed within or removed from wetlands.
Oregon Department of Fish and Wildlife	Fish and Wildlife Habitat Mitigation Policy (ORS 635)	Ecosystem	Thiel Creek and Henderson Creek are designated as EFH. ODFW has reviewed the proposed conservation and minimization measures for water resources and fisheries agree the proposed project would have no significant effect (Spangler, personal communications).
Oregon Department of Environmental Quality	OAR Chapter 340 Division 41, 468B, 340-048-0050 and 340-048-0020(2)(ii).	Water quality standards	BMPs have been developed to control erosion and be consistent with water quality standards.

OAR = Oregon Administrative Rules; ORS = Oregon Revised Statutes.

SOURCE: Prepared by ESA

3.5 Historic, Archaeological, and Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of this undertaking upon eligible resources (36 CFR800.4(d)(1)).

3.5.1 Affected Environment

A Cultural Resources Assessment was conducted for the project in 2018 (ESA 2019a). The Area of Potential Effects (APE) for the Cultural Resources Assessment included the area that contains all of the obstructions identified in the *KONP Obstruction Analysis Report* (Quantum Spatial, Inc. 2019). It also included a built environment survey, which identified 8 historic-aged (older than 50 years) properties. All are previously undocumented, privately owned homes. No cultural resources were found in the study area. See **Appendix D.** Cultural Resources Assessment.

3.5.2 Environmental Consequences

Significance Threshold

The FAA has not established a significance threshold for Historical, Architectural, Archaeological and Cultural Resources.

Alternative 1 – No Action

The No Action Alternative would have no effect on historic or cultural resources.

Alternative 2 – Proposed Action

The APE for the Proposed Action has been reduced since the Cultural Resources Assessment was conducted. The APE now includes those areas where trees will be removed for the visual approach of Runway 20, non-precision instrument approach and threshold siting surfaces of Runway 34, and precision instrument approach and threshold siting surfaces of Runway 16. The 8 historic-aged (older than 50 years) properties identified in the Cultural Resources Assessment are no longer in the APE. There are no historic or cultural resources in the APE, and the Proposed Action would have no effect on historic or cultural resources.

On July 8, 2019, the FAA initiated Section 106 consultation with the Oregon State Historic Preservation Office (SHPO) and the following Tribes: Confederated Tribes of the Warm Springs Reservation, Confederated Tribes of the Grand Ronde, and Confederated Tribes of the Siletz Indians by providing them a project description, survey methodology, and map of the APE. FAA received concurrence on the APE from SHPO on August 5, 2019.

On December 9, 2019, the FAA submitted the Cultural Resources Assessment along with its finding of *No Historic Properties Affected*. SHPO concurred with FAA's finding for above-ground historic resources on January 2, 2020 (Schwartz 2020) (SHPO Case Number 19-1125). The SHPO provided a separate letter regarding below ground archaeological resources on January 10, 2020, that requested additional information. FAA submitted a response to SHPO's comments on February 3, 2022. No comments were received by March 5, 2022. Therefore, under 36 CFR 800.3(c)(4) and 36 CFR 800.4(d)(1)(i), the FAA's responsibilities under Section 106 have been fulfilled (see **Appendix D**).

3.6 Land Use

Land use within the Newport Urban Growth Boundary (UGB) is regulated by the City of Newport's Comprehensive Plan and the Newport Municipal Code Title XIV Zoning (City of Newport 2019). Outside of the UGB, land use is regulated by Lincoln County Code (2018).

3.6.1 Affected Environment

The tree removal areas are located mostly within the City of Newport's UGB. The City has adopted the Airport Restricted Area and Airport Development Zone to encourage and support the continued operation and vitality of the Newport Municipal Airport by establishing compatibility and safety standards to promote air navigational safety and to reduce potential safety hazards for persons living, working, or recreating near the Airport. The area north of the Airport is zoned Light Industrial or Public Structures. South of the Airport is zoned High Density Multi-Family Housing.

South of the Airport, outside of the UGB, the County has zoned the property where trees will be removed as either Rural Residential or Timber Conservation.

3.6.2 Environmental Consequences

Significance Threshold

The FAA has not established a significance threshold for land use.

Alternative 1 – No Action

The No Action Alternative would have no effect on land use.

Alternative 2 – Proposed Action

Tree removal is allowed in the Light Industrial, Public Structures, and High Density Multi-Family Housing zoning of the City.

Tree removal is an allowed in the Timber Conservation and Rural Residential zone of Lincoln County.

3.7 Noise and Noise Compatible Land Use

FAA Order 1050.1F, FAA Order 5050.4B, and 14 CFR Part 150 specify the methods required for evaluation of the airport noise environment. The FAA requires an analysis of noise exposure when development actions may change the cumulative noise exposure of individuals to aircraft noise in areas surrounding the airport. Common development actions that may change the cumulative noise environment include: runway reconfiguration, changes in aircraft operations or movements, introduction of new aircraft types using the airport, or changes in aircraft tracks and profiles.

Construction noise is regulated by the City's Noise Ordinance (Ordinance No. 1251).

3.7.1 Affected Environment

The FAA defines Day-Night Average Sound Level[2] (DNL) 65 decibels (dB) as the threshold of noise compatibility for residential and other noise-sensitive land uses, such as schools, libraries, and religious facilities. A noise analysis was prepared for the 2018 Master Plan Update and noise contours were developed showing that the areas of 65+ dB DNL are all confined to existing Airport property (WHPacific 2018). Portions of three residential properties (noise-sensitive uses) are within the 55 – 65 dB DNL zone, which are in the Pruner subdivision, located approximately 990 feet southwest of the end of Runway 34 along S.E. Cedar Street. Residential properties are also located to the west of U.S. Highway 101, opposite the Airport. The closest school (Oregon Coast Community College), library (Guin Library at the Hatfield Marine Science Center), or religious facility (South Beach Church) are all located more than 3 miles north of the Airport, well beyond the 65+ dB DNL zone.

Chapter 14.22 of Newport Municipal Code (Code) is the Airport Restricted Area. The purpose of the Airport Restricted Area and Airport Development Zone overlays is to encourage and support the continued operation and vitality of the Newport Municipal Airport by establishing compatibility and safety standards to promote air navigational safety and to reduce potential safety hazards for persons living, working, or recreating near the Airport. The Code defines Airport Noise Impact Boundary as, "*areas within established noise contour boundaries exceeding 55 Average Day-Night Sound Level (DNL), as shown on the "Off-Airport Land Use Map" identified as Sheet No. 15.1 of the Newport Municipal Airport Master Plan, prepared by WHPacific (dated February 2018).*" All lands, water and airspace, or portions thereof, which are located within these boundaries or surfaces shall be subject to the requirements of the Airport Restricted Area Zoning Overlay.

3.7.2 Environmental Consequences

Significance Threshold

Exhibit 4-1 of FAA Order 1050.1F provides the FAA's significance threshold for Noise and Noise-Compatible Land Use as:

> *The action would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe. For example, an increase from DNL 65.5 dB to 67 dB is considered a significant impact, as is an increase from DNL 63.5 dB to 65 dB.*

Alternative 1 – No Action

The No Action Alternative would not result in an increase in aircraft operations, a change in fleet mix, changes in runway use or airfield configuration, or a change in flight tracks that could result in a change in Airport operations-related noise. No tree obstruction removal would occur with this alternative; therefore, there would be no impacts associated with noise.

[2] The day-night average sound level (DNL) noise metric used by the FAA to reflect a person's cumulative exposure over a 24-hour period, expressed as the noise level for the average day or the year on the basis of annual aircraft operations.

Alternative 2 – Proposed Action

The DNL noise metric provides a mechanism to describe the effects of aircraft noise exposure in a simple and uniform way and is the FAA's primary metric for determining the significance of noise impacts. The Proposed Action would not result in an increase in aircraft operations (i.e., activity levels or capacity), a change in fleet mix, changes in runway use or airfield configuration, or a change in flight tracks that could result in a change in airport operations-related noise. As such, a change in the size or location of the existing DNL noise contours is not associated with the Proposed Action.

Trees and vegetation can absorb and attenuate sound as it travels provided it is dense and located directly between the noise source and the receiver. Trees can provide a buffer to noise from aircraft taxiing on the ground or performing engine run-up activities. Once an aircraft leaves the ground and the trees or vegetation are not between the source and receiver, the noise associated with that aircraft is no longer buffered. There are no residential properties or other noise-sensitive land uses near the tree removal areas in either of the Runway 16 or Runway 20 approaches. There are residential properties (Pruner subdivision) located approximately 1,000 feet southwest of the end of Runway 34 and immediately adjacent to tree removal areas in the Runway 34 approach. The removal of trees will likely lead to an increase in noise and vibrations to these residential properties, as the trees will no longer act as a buffer to noise from aircraft on the ground. However, the trees identified as obstructions lie outside the DNL 65 dB noise contour; and therefore, removal of trees will not change the DNL 65 dB noise contour. The natural surface that would remain is considered a soft acoustical surface and provides sound absorption even without the vegetation. The shrubs and short-statured trees proposed for planting after tree removal will provide some sound absorption once established.

Temporary increases in noise are expected from equipment used to remove the trees. The residents along S.E. Cedar Street will experience short-term noise impacts during project construction. The noise from construction would be temporary and is anticipated to take 8 to 10 weeks. To minimize construction impacts to residents, the following measures will be employed:

- Tree removal would be limited to Monday through Friday from the hours of 7:00 AM to 5:00 PM. Work would not take place on Saturdays, Sundays, state and federal holidays, or from 5:00 PM to 7:00 AM.
- The City will provide residents along S.E. Cedar Street and adjacent to lots 11-11-32-00-00200, 11-11-32-00-00201, 12-11-06-00100, and12-11-06-00-00600, 14 days-notice before tree removal will begin off of the end of Runway 34.
- Additionally, all construction equipment and vehicles would be properly maintained, equipped with functional mufflers, and tuned to minimize the potential for noise.
- The contractor will be required to obtain a Construction Permit form the City and comply with the City's Noise Ordinance (Ordinance No. 1251).

Upon project completion, ambient noise levels would return to pre-existing conditions and the DNL 65 dB noise contours are expected to remain the same. No significant noise impacts would occur as a result of the Proposed Action.

Minimization Measures

While no specific mitigation is required, the Proposed Action incorporates minimization measures that would reduce noise impacts. These include:

- Adjacent to the residential properties, tree removal will be limited to Monday through Friday from the hours of 7:00 Am to 5:00 PM.
- Work will not take place on Saturdays, Sundays, state and federal holidays, or from 5:00 PM to 7:00 AM.
- The City will provide residents along N.E. Cedar Street and adjacent to lots 11-11-32-00-00200, 11-11-32-00-00201, 12-11-06-00100, and12-11-06-00-00600, 14 days-notice before tree removal will begin off of the end of Runway 34 14 days-notice before tree removal will begin on adjacent property.

3.8 Visual Resources

Although there are no special purpose laws or requirements specific to light emissions or visual effects, some visual resources are protected under federal, state, or local regulations. Some of these protected visual resources include, but are not limited to: scenic roadways, Wild and Scenic Rivers, National Scenic Areas, scenic easements, trails protected under the National Trails System Act, and biological resources (impacts to sensitive wildlife species). Additional laws protecting resources that may be affected by visual effects include Section 106 of the NHPA, Section 4(f) of the Department of Transportation Act of 1966, and the CZMA.

Broadly defined, visual effects are the extent to which the alternative would either: (1) produce light emissions that create annoyance or interfere with activities; or (2) contrast with, or detract from, the visual resources or the visual character of the existing environment.

3.8.1 Affected Environment

There are no scenic roadways, Wild and Scenic Rivers, National Scenic Areas, scenic easements, or trails protected under the National Trails System Act in the vicinity where trees are proposed to be removed. Additionally, there are no designated visual resources in the City's Comprehensive Plan in the vicinity of the Airport. The closest visual resource is Yaquina Bay Bridge, which is more than 3 miles north of the Airport and not visible from the Airport.

The area north of Runway 16 consists of steep ridgelines and valleys. An established network of access roads and Airport support facilities, such as lighting, are found throughout the area (**Photo 6**). Views of this area consist of forested ridges and semi-cleared open fields and runway lighting.

Photo 6
View from end of Runway 16 looking north

The area north of Runway 20 consists of mixed open grasslands on flat areas and forested areas with established canopy forest along the ridgelines. The area is bisected by the incised channel of Henderson Creek. An established network of access roads is found throughout the area. Views of this area consist of forested ridges and cleared open fields (**Photo 7**).

Photo 7
View of open meadows and forested patches off Runway 20 looking north

Photo 8
View looking south from the end of Runway 34

South of Runway 34 is the steeply banked Moore Creek valley that that separates the active Airport property from the residential and forested parcels to the south (**Photo 8**). The topography south of Moore Creek and north of S.E. 98th Street is predominantly flat. The Pruner subdivision is south of Moore Creek and west of the City-owned parcel 11-11-32-00-00200. A row of tall mature Douglas fir trees grow either along the property line of residence on the east side of S.E. Cedar Street or within the deeded right-of-way.

Views to the south of S.E. 98th Street mostly consist of mature forest and the riparian habitat and floodplain of Thiel Creek, along with recently harvested parcels.

3.8.2 Environmental Consequences

Threshold of Significance

The FAA has not established a significance threshold for Visual Resources / Visual Character. FAA Order 1050.1F includes factors that consider the extent the action would have the potential to:

- Affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources;
- Contrast with the visual resources and/or visual character in the study area; and
- Block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations.

Alternative 1 – No Action

No trees would be removed under the No Action Alternative and existing views would mostly be maintained. Over time, trees would grow taller and vegetative communities would continue to mature.

Alternative 2 – Proposed Action

There are no designated visual resources in the City's Comprehensive Plan in the vicinity of the Airport, so the Proposed Action would have no effect on designated visual resources.

The Proposed Action would remove vegetation in the area directly in-line with the approaches of Runways 16, 20, and 34. Tree removal north of the Airport (off Runway 16 and Runway 20) would not be noticeably visible or seen by the general public. The property where trees will be removed in the approach of Runway 16 is owned by the City and access is limited and controlled for Airport operations. Topography obstructs views from properties owned by others to this area. Trees proposed for removal in the approach of Runway 20 are in an area also either owned by the City or by a private property owner where views to these properties would not been seen by the general public.

Trees proposed for removal in the approach of Runway 34 would be visible to residents who live along the east side of S.E. Cedar Street. The views from their property looking east will change from a dense second-growth forest to a harvested area with stumps. After tree removal, slash piles will be removed or chipped and spread over the site. Soils would be stabilized with an appropriate seed mix (which may include sterile grass or a native upland forest herbaceous mix) and inter-planted by the next growing season with native shrubs or short-statured trees such as vine maple, red-osier dogwood, cascara, and Douglas hawthorn. Over time, these species will grow and have a mixed forested appearance. These species have been selected because they are native and will not grow tall enough to penetrate into the 20:1 approach surface. Therefore, they would not need to be removed in the future.

Photo 9

View looking southeast from S.E. 98th Street at trees proposed to be removed

As shown in **Photo 9**, areas cleared will also be visible to drivers along S.E. 98th Street. These trees will be removed and the view would be of a cleared area, like in the foreground of **Photo 9**. Stumps will be visible until the area is replanted and the newly planted vegetation starts to grow.

The area south of S.E. 98th Street and east of the City-owned property is either zoned by the County as Timber Conservation or owned by timber companies, and logging the properties is an economic source of revenue. Therefore, the proposed tree removal is not a contrast with the existing land use and associated visual resources or visual character in the surrounding area.

Minimization Measures

The Proposed Action incorporates minimization measures that would reduce visual impacts. These include:

- On tax lots 11-11-32-00-00200, 11-11-32-00-01604, and 11-11-32-00-00201, slash piles will be chipped or removed.
- After tree removal, soils would be stabilized with an appropriate seed mix (which may include sterile grass or a native upland forest herbaceous mix) and inter-planted by the next growing season with native shrubs or short-statured trees such as vine maple, red-osier dogwood, cascara, and Douglas hawthorn.

With the implementation of these measures, there would be no significant direct or indirect impact on visual resources.

3.9 Water Resources

Due to the interrelationship between surface water, groundwater, floodplains, and wetlands, these resource categories and their analysis is conducted under the all-encompassing impact category of "water resources." Impacts to any part of the system can have negative consequences to the functioning of the entire system.

3.9.1 Wetlands

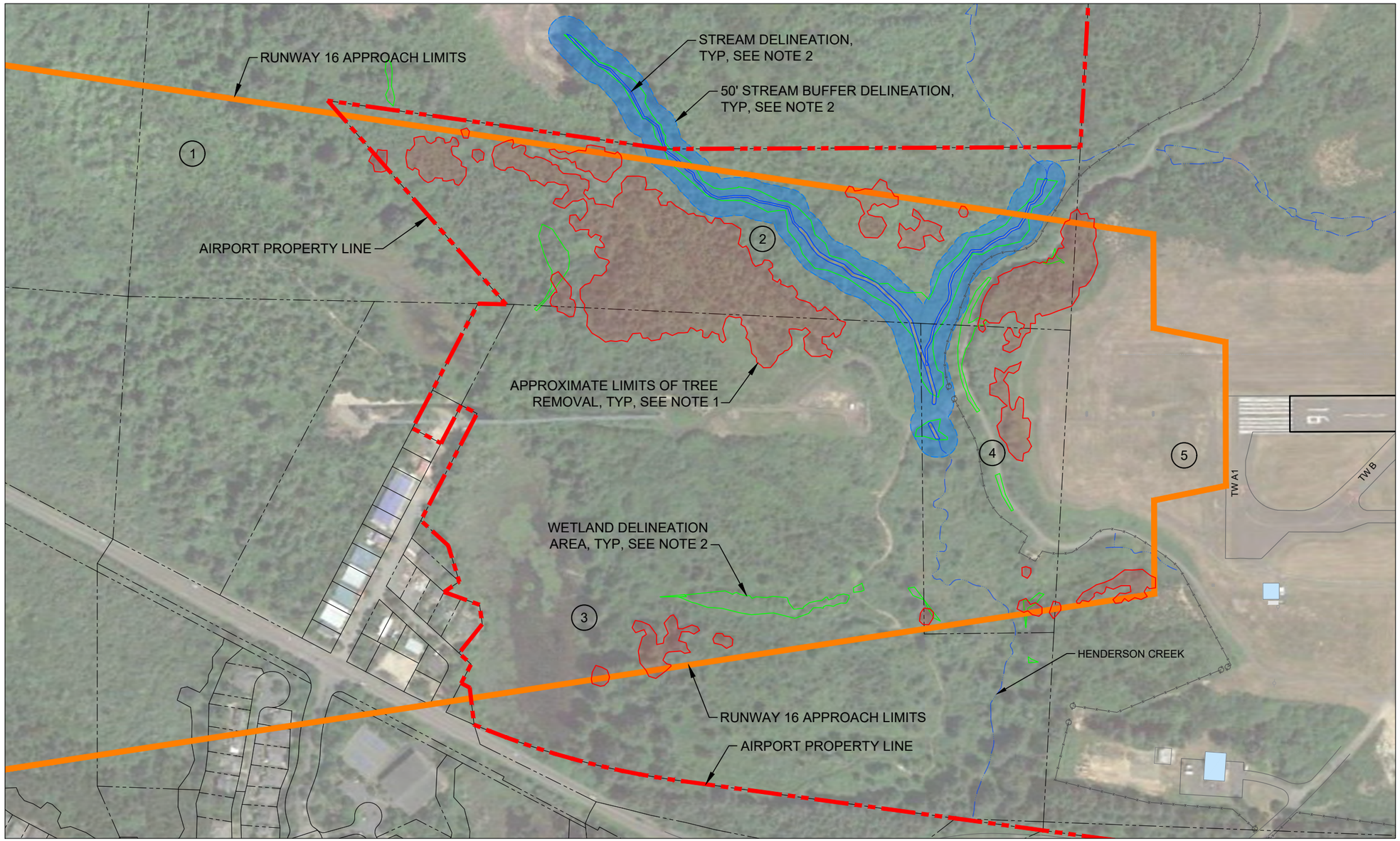
Wetlands are regulated by the Oregon Removal-Fill Law and Section 404 of the Clean Water Act.

Affected Environment

A wetland delineation was conducted for the project (ESA 2019b). Delineated wetlands are shown on **Figures 12** through **14**. The wetlands were either associated with streams, roadside ditches, floodplains or tributary headwaters seeps. For more detailed information see **Appendix C** Water Resources Delineation. Wetlands are described below for the three runway approach areas where tree removal is proposed.

Runway 16 – The wetlands in this area are associated with Henderson Creek or roadside ditches. The previous construction of the flight navigational aids created access roads and associated side ditches has altered the hydrology in this area. The access road that crosses Henderson Creek and its tributaries has likely impounded streamflows at the culvert crossings, which has expanded wetland boundaries. In other areas, access roads have crossed Henderson Creek and separated previously contiguous wetlands.

Runway 20 – Wetlands in this area are either associated with Henderson Creek or are steep headwaters of tributaries of Yaquina Bay. An access road and the City of Newport Police Department shooting range were developed within a wetland complex and tributary channel of Henderson Creek. This development likely displaced historic hydrology and wetlands in this area. Alterations such as roads and gravel pads have also likely impounded previous stream flows, which has converted a small stream into a wetland.



NORTH

0 150 300

SCALE IN FEET

TAG	PARCEL ID	OWNER	TREE REMOVAL
1	11-11-29-00-00300-00	LANDWAVES INC	0.04 AC
2	11-11-29-00-00400-00	CITY OF NEWPORT	5.81 AC
3	11-11-29-00-01402-00	CITY OF NEWPORT	1.70 AC
4	11-11-29-00-01401-00	CITY OF NEWPORT	0.50 AC
5	11-11-29-00-01100-00	CITY OF NEWPORT	0.45 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.
2. STREAM, BUFFERS AND WETLAND AREAS PROVIDED BY ESA, DATED OCT 19, 2021.

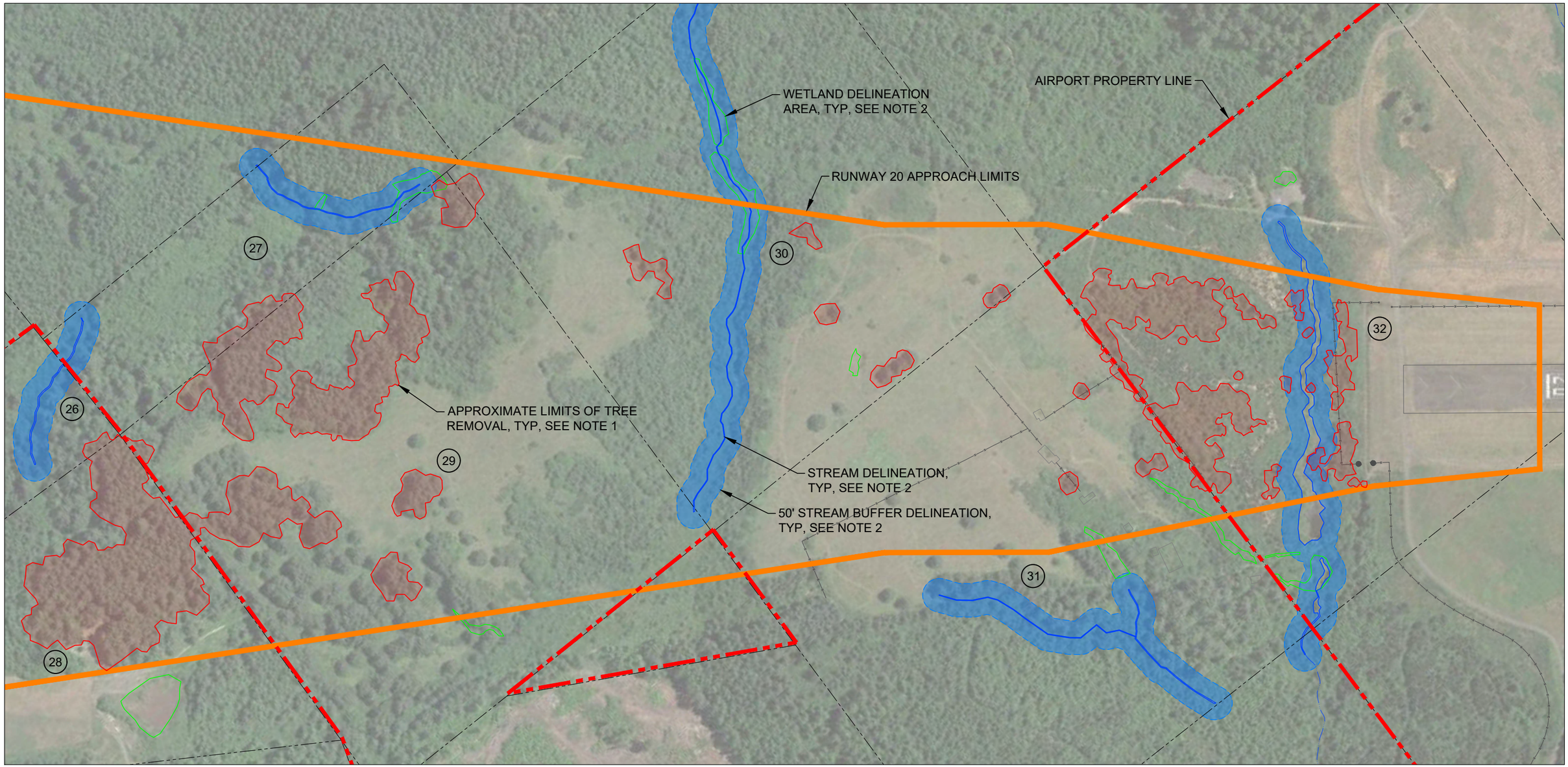
PRELIMINARY
NOT FOR CONSTRUCTION
03/31/2022

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

NEWPORT MUNICIPAL AIRPORT
OBSTRUCTION REMOVAL

RUNWAY 16 WETLAND AND WATER RESOURCES

Figure 14 MARCH 2022



TAG	PARCEL ID	OWNER	TREE REMOVAL
26	11-11-21-00-01600-00	CITY OF NEWPORT	0.06 AC
27	11-11-28-00-00700-00	HALL	0.25 AC
28	11-11-20-00-02700-00	CITY OF NEWPORT	4.80 AC
29	11-11-29-00-00100-00	HALL	5.90 AC
30	11-11-29-00-00600-00	HALL	0.72 AC
31	11-11-29-00-00500-00	HALL	0.54 AC
32	11-11-29-00-01000-00	CITY OF NEWPORT	3.70 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.
2. STREAM, BUFFERS AND WETLAND AREAS PROVIDED BY ESA, DATED OCT 19, 2021.

PRELIMINARY
NOT FOR CONSTRUCTION
03/31/2022

NORTH

0 150 300

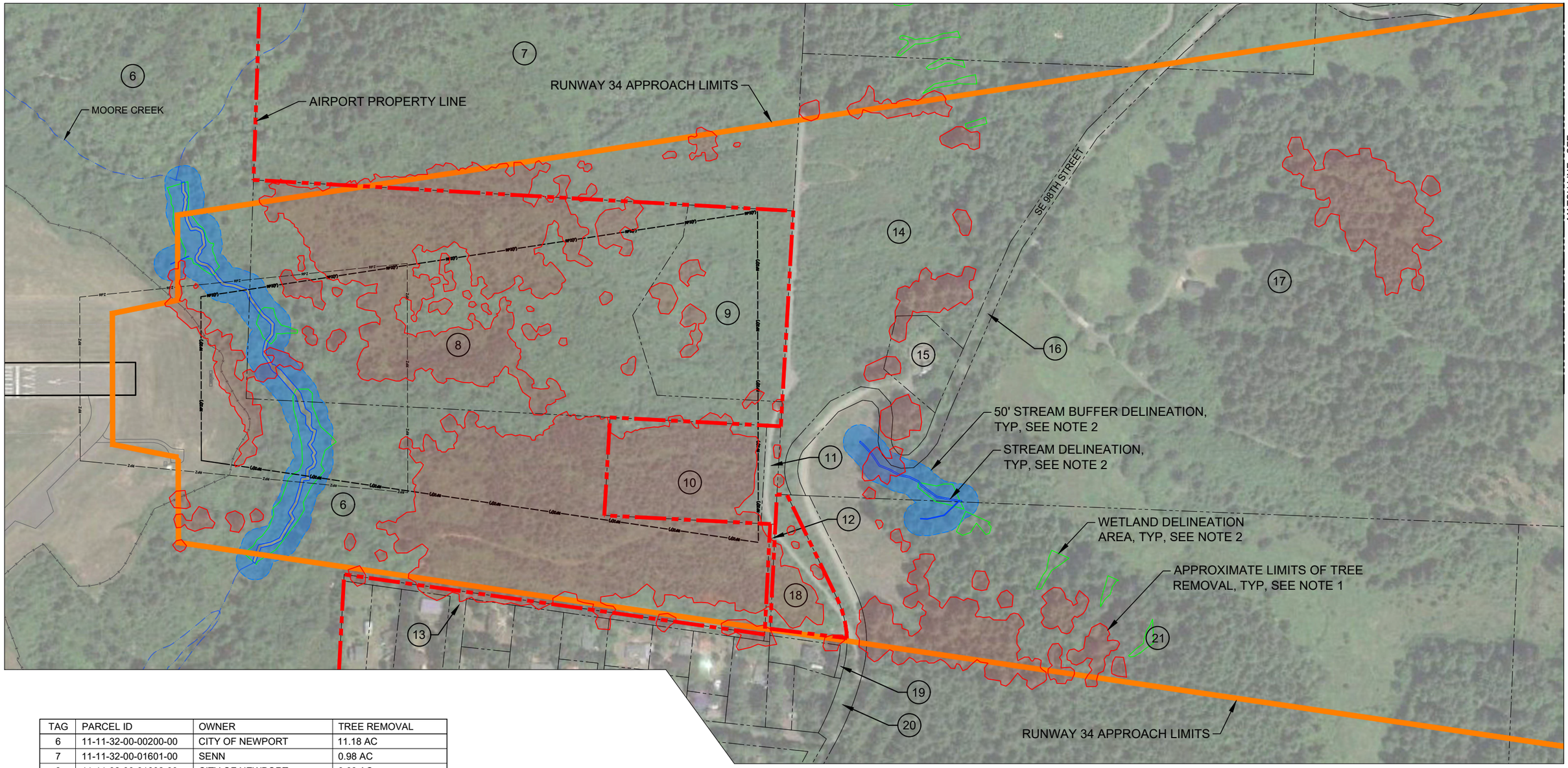
SCALE IN FEET

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

NEWPORT MUNICIPAL AIRPORT
OBSTRUCTION REMOVAL

RUNWAY 20 WETLAND AND WATER RESOURCES

Figure 15 MARCH 2022



TAG	PARCEL ID	OWNER	TREE REMOVAL
6	11-11-32-00-00200-00	CITY OF NEWPORT	11.18 AC
7	11-11-32-00-01601-00	SENN	0.98 AC
8	11-11-32-00-01602-00	CITY OF NEWPORT	8.68 AC
9	11-11-32-00-01604-00	CITY OF NEWPORT	0.38 AC
10	11-11-32-00-00201-00	STATE OF OREGON	2.80 AC
11	11-11-32-00-01603-00	FERRIS	0.03 AC
12	11-11-32-00-01600-00	LINCOLN COUNTY	0.09 AC
13	11-11-32-CC-0ROAD-00	ROW	0.50 AC
14	12-11-05-00-00800-00	STEEL STRING INC	1.50 AC
15	12-11-05-00-00600-00	STEEL STRING INC	0.11 AC
16	12-11-05-00-0ROAD-00	ROW	0.10 AC
17	12-11-05-00-00803-00	STEEL STRING INC	2.55 AC
18	12-11-06-00-00100-00	CITY OF NEWPORT	0.53 AC
19	12-11-06-00-00200-00	WATTS	0.06 AC
20	12-11-06-00-0ROAD-01	ROW	0.08 AC
21	12-11-06-00-00600-00	STEEL STRING INC	3.03 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.
2. STREAM, BUFFERS AND WETLAND AREAS PROVIDED BY ESA, DATED OCT 19, 2021.

PRELIMINARY
NOT FOR CONSTRUCTION
03/31/2022

NORTH

0 150 300
SCALE IN FEET

NEWPORT MUNICIPAL AIRPORT
OBSTRUCTION REMOVAL

RUNWAY 34 WETLAND AND WATER RESOURCES

Figure 16 MARCH 2022

PRECISION APPROACH ENGINEERING
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Corvallis, OR 97333
541•754•0043

Runway 34 – Wetlands in the area north of S.E. 98th Street and south of Runway 34 are similar in vegetation structure, topography, and condition, as they are all either within the floodplain of Moore Creek or spring-fed seeps situated along the same hillslope. South of S.E. 98th Street, wetlands are associated with steep drainages that are tributaries to Thiel Creek.

Environmental Consequences

Significance Threshold

Exhibit 4-1 of FAA Order 1050.1F provides the FAA's significance thresholds for wetlands. A significant impact would occur when the action would:

1. *Adversely affect a wetland's function to protect the quality or quantity of municipal water supplies, including surface waters and sole source and other aquifers;*

2. *Substantially alter the hydrology needed to sustain the affected wetland system's values and functions or those of a wetland to which it is connected;*

3. *Substantially reduce the affected wetland's ability to retain floodwaters or stormwater runoff, thereby threatening public health, safety or welfare;*

4. *Adversely affect the maintenance of natural systems supporting wildlife and fish habitat or economically important timber, food, or fiber resources of the affected or surrounding wetlands;*

5. *Promote development of secondary activities that would cause the circumstances listed above to occur; or*

6. *Be inconsistent with applicable state wetland strategies.*

Alternative 1 – No Action

Under the No Action Alternative, no tree removal would occur; therefore, there would be no impacts on wetlands.

Alternative 2 – Proposed Action

A limited amount of tree removal will occur within and adjacent to delineated wetlands as shown in **Figures 12** through **14**. In the area north of Runway 20, trees would be removed from one wetland. This will convert 0.01 acres of forested wetland to emergent wetland. Four wetlands north of Runway 16 and five wetlands south of Runway 34 will have trees removed within 50 feet of the wetland boundary. Tree removal in these areas will be done with hand tools and access would be on foot.

Although the function to provide shade and shelter will be temporarily impacted, other wetland functions such as water quality, storage, habitat, and food will be maintained. Overtime, these functions will be replaced. Wetlands are anticipated to continue to provide water quality functions and capacity as currently exists.

Tree removal has the potential to disturb soils (direct impact) and provide the opportunity siltation into wetlands and for nonnative species (such as reed canarygrass) to colonize and outcompete native species (indirect impact). After tree removal, soils would be stabilized with an appropriate seed mix and inter-planted by the next growing season with native shrubs or short-statured trees such as willows. This would

minimize the opportunity for nonnative species to become established and prevent erosion. With the implementation of these mitigation measures, there would be no significant direct or indirect impacts on wetlands.

Tree removal is an allowed activity in wetlands under the Oregon Removal-Fill Law and Section 404 of the Clean Water Act, provided that no material is placed or removed from wetlands.

Mitigation Measures

The Proposed Action incorporates a number of avoidance, conservation, and minimization measures that would reduce impacts on wetlands. These include:

- Trees within 50 feet of a wetland will be removed using hand tools and low impact equipment. Heavy equipment such as track rigs will not be used. The contractor will be required to access the site and perform the work on foot or using wetland mats to protect sensitive vegetation.
- Wetlands will be flagged prior to construction to prevent inadvertent or unnecessary encroachment.
- After tree removal, soils would be stabilized with an appropriate seed mix and inter-planted by the next growing season with native shrubs or short-statured trees.

With implementation of these conservation and minimization measures, the project would have no significant direct or indirect impacts to wetlands.

3.9.2 Surface Waters and Water Quality

Surface waters and water quality are regulated under the Oregon Removal-Fill Law and Sections 401 and 404 of the Clean Water Act.

Affected Environment

Four streams flow westerly through the study area and into the Pacific Ocean (from north to south): Henderson Creek, Grant Creek, Moore Creek, and Thiel Creek. With the exception of Moore Creek, these drainages are typified by steep slopes and narrow valley bottoms. A field investigation of the ordinary high water line of streams was conducted for the study area (ESA 2019b). Delineated streams are shown on **Figures 12** through **14**. For more detailed information see Appendix C Water Resources Delineation.

Henderson Creek

Henderson Creek flows northeast to southwest on the north side of the Airport. An unnamed tributary to Henderson Creek also flows from southeast to northwest. The confluence is north of Runway 16. The channel and hydrology of the stream have been significantly altered by roads, culverts, riprap, and impoundments. The riparian habitat of Henderson Creek varies from a mixed second-growth forest with dense understory to scrub-shrub with some patches of ground cover vegetation **(Photo 10**).

Photo 10
Typical riparian habitat along Henderson Creek includes young red alder and dense undergrowth

Yaquina Bay Tributaries

Two small streams are located in the approach of Runway 20 that discharge to Yaquina Bay. Both streams have steep channels clogged with large woody debris (**Photo 11**).

Photo 11
Unnamed tributary of Yaquina Bay.

Moore Creek

Moore Creek flows from east to west south of Runway 34. The stream is confined by steep and densely vegetated valley walls on each bank and a flat floodplain **(Photo 12)**.

Photo 12
Floodplain of Moore Creek

Thiel Creek

Thiel Creek is designated critical habitat for Coastal Coho salmon and is EFH for Coho salmon. Thiel Creek runs east to west through a mature riparian forest (**Photo 13**).

Photo 13
Tributary of Thiel Creek

Environmental Consequences

Significance Threshold

Exhibit 4-1 of FAA Order 1050.1F provides the FAA's significance thresholds for surface waters. A significant impact exists if the action would:

1. *Exceed water quality standards established by federal, state, local, and tribal regulatory agencies; or*

2. *Contaminate public drinking water supply such that public health may be adversely affected.*

In addition to the above thresholds, FAA Order 1050.1F provides additional factors to consider when evaluating the context and intensity of potential environmental impacts for surface waters. These factors include situations in which the proposed action or alternative(s) would have the potential to:

- Adversely affect natural and beneficial water resource values to a degree that substantially diminishes or destroys such values;

- Adversely affect surface waters such that the beneficial uses and values of such waters are appreciably diminished or can no longer be maintained and such impairment cannot be avoided or satisfactorily mitigated; or

- Present difficulties based on water quality impacts when obtaining a permit or authorization.

Alternative 1 – No Action

Under the No Action Alternative, no construction would occur and therefore, there would be no impacts to surface waters.

Alternative 2 – Proposed Action

There would be no direct impacts on the stream channel of Henderson, Moore, or Theil Creek or any associated tributaries. Tree removal within 50 feet of OHWL of streams are shown on **Figures 12** through **14** and includes:

- Unnamed tributary of Henderson Creek – Approximately 0.2 acres of trees will be removed from the riparian area of an unnamed tributary of Henderson Creek.

- Unnamed tributary of Yaquina Bay – Tree removal will affect approximately 0.01 acres in the headwaters of a tributary of the Yaquina Bay. Several mature trees with sufficient canopy cover will remain in the riparian zone and in areas outside of the FAA regulated airspace that could provide shade and other habitat functions lost with the removal of the trees. This habitat modification is not expected to adversely impair water quality functions (indirect impact).

- Moore Creek – Approximately 0.2 acres of riparian habitat will be removed from Moore Creek. Several mature trees with sufficient canopy cover will remain in the riparian zone that can provide shade and other habitat functions lost with the removal of the trees.

- Unnamed tributary of Theil Creek – Approximately 0.15 acres of trees in the headwaters of a tributary of Thiel Creek will be removed. Several mature trees with sufficient canopy cover will

remain in the riparian zone that can provide shade and other habitat functions lost with the removal of the trees. This habitat modification is not expected to adversely impair water quality functions (indirect impact).

The Proposed Action does not include constructing any new roads or increasing the amount of impervious surface. Construction access will be from existing paved and unpaved roads, including Airport access roads, private roads, as well as old logging roads and paths. Construction access and staging areas will be located on existing paved or disturbed surfaces in upland areas. No staging will occur within riparian buffers. Trees will be cut off at ground level and stumps will be left in place to prevent erosion and sedimentation. Trees within 50 feet of a stream will be left where they fall rather than hauled off-site. In these areas, obstructions will be removed using hand tools and low-impact equipment. Heavy equipment such as track rigs will not be used. The contractor will be required to access the site and perform the work on foot or using wetland mats to protect sensitive vegetation.

Additional erosion and sedimentation control BMPs are proposed within riparian buffers to control siltation. The proposed tree removal would not cause water quality to exceed federal, state, local, or tribal standards. No permits are required to remove the trees within the riparian zones of the streams. The contractor will be required to develop a Stormwater Pollution Prevention Plan (SWPP) prior to construction. The SWPP will include a soil and erosion control plan that incorporates the BMPs identified in this EA. No significant impacts on surface waters or water quality would occur as a result of the Proposed Action.

Mitigation Measures

The Proposed Action incorporates a number of avoidance, conservation, and minimization measures that would reduce impacts on surface waters. These include:

- Tree removal within 50 feet of streams will occur during the dry season (late July to mid-September) to eliminate the chance of erosion and sedimentation below the OHWL.
- Trees within 50 feet of a stream will be left where they fall rather than hauled off-site. In these areas, obstructions will be removed using hand tools and low impact equipment. Heavy equipment such as track rigs will not be used. The contractor will be required to access the site and perform the work on foot or using wetland mats to protect sensitive vegetation.
- Riparian setbacks will be flagged prior to construction to prevent inadvertent or unnecessary encroachment.
- Erosion and sedimentation control BMPs will be inspected twice-weekly to prevent soil from mobilizing outside of work areas and into fish-bearing streams.
- Emergency spill response and clean-up equipment will be available on-site during all construction activities.
- Soils will be stabilized with an appropriate seed mix immediately after tree removal and inter-planted by the next growing season with native shrubs or short-statured trees.

With implementation of these conservation and minimization measures, the project would have no significant impacts to surface waters.

3.10 Cumulative Impacts

To adequately understand the potential environmental effects related to cumulative impacts, the past, present, and reasonably foreseeable projects must be identified. The cumulative impact analysis focuses on those resources with direct or indirect impacts by the project. If the Proposed Action would not cause a direct or indirect impact on a resource, no cumulative impact for that resource would occur. As outlined early in this document, Air Quality; Climate; Department of Transportation Act Section 4(f) Resources; Farmlands; Hazardous Materials, Solid Waste, and Pollution Prevention; Historic, Archaeological, and Cultural Resources; Land Use; Light Emissions; Natural Resources and Energy Supply; Socioeconomics, Environmental Justice, and Children's Health and Safety Ricks; Floodplains; Groundwater; Public Drinking Water Supplies; and Wild and Scenic Rivers were determined to have no effect or do not occur in the study area; therefore, they are not considered in this cumulative impacts analysis.

Past projects are those that occurred within the past 5 years; present projects are those that are occurring in the same general time frame as the Proposed Action; and future projects are those projects that are reasonably foreseeable (occurring within the next 3- to 5-year timeframe). These include projects on the Airport's Capital Improvement Plan (WHPacific 2018) and other projects being planned and likely to be implemented in the vicinity of the Airport in that timeframe.

The following past projects were approved by the FAA with a Documented Categorical Exclusion because they were found to be consistent with activities that do not normally have the potential for individual or cumulative significant impacts on the human environment:

1. Storm Pipe Rehabilitation and Outfall F Erosion and Slope Repair, Categorical Exclusion signed December 2019. The project included fish passage mitigation as required by ODFW in compensation for the inability to restore fish passage in the Grant Creek culverts. Fish passage mitigation project (Lake Creek Mitigation Culvert) was constructed in Summer 2021.

2. South Hangar Development (2021), Categorical Exclusion signed July 2021. No quantifiable resource impacts were identified for this project.

Current projects include construction of the Storm Pipe Rehabilitation and Outfall F Erosion and Slope Repair construction.

Reasonable and future projects that could occur at the Airport in the next 5 years include those on the Airport's Capital Improvement Plan (City of Newport 2021):

- Storm Pipe Rehabilitation and Outfall F Erosion and Slope Repair continued construction in 2023.

- Obstruction removal construction (impacts assessed in this EA).

- Automated Weather Observation Station (AWOS) (2025). The current AWOS is old and needs to be replaced. The AWOS will be replaced in the same location. This project would qualify as a Categorical Exclusion under FAA Order 1050.1F, Paragraph 5-6.3c. No quantifiable resource impacts are anticipated for this project.

Biological Resources

Two 48-inch concrete pipes were installed in 1943 to capture and reroute Grant Creek to allow for construction of the Newport Municipal Airport. The concrete pipes collect water from the east side of the Airport and convey the stream to outlets on the west side of the Airport. The pipes are approximately 70-90 feet below ground surface and run underneath the Runway 16-34 and Runway 2-20 intersection. Removal and replacement of the pipes were not a viable option due to the depth and location of the pipes. Rehabilitation of the two 48-inch concrete pipes was intended to be achieved by in-place lining of the existing pipes using geopolymer. In compensation for the inability to restore fish passage in the Grant Creek culverts, ODFW required fish passage mitigation. The Lake Creek Mitigation Culvert Project was constructed in 2021.

Since the AWOS will be replaced in the same location, no quantifiable biological resource impacts are anticipated for the AWOS.

Impacts associated with the obstruction removal are quantified in this EA. There are no significant impacts on biological resources.

Based on the analysis done for past, present, and reasonable foreseeable future projects, implementation of the Proposed Action is not expected to have significant cumulative impacts on biological resources.

Climate

No climate impacts were identified for past and current projects.

Since the AWOS will be replaced in the same location, no quantifiable climate impacts are anticipated for future projects.

The Proposed Action would have a slight loss of carbon sequestration capacity from removal of trees.

Based on the analysis done for past, present, and reasonable foreseeable future projects, implementation of the Proposed Action is not expected to have significant cumulative impacts on the climate.

Coastal Resources

Federal agencies are required to make a consistency determination in their NEPA documents. Since the FAA signed the Storm Pipe Rehabilitation and Outfall F Erosion and Slope Repair Categorical Exclusion in December 2019, they determined the project was consistent with the CZMA.

Since the AWOS will be replaced in the same location, no quantifiable coastal resource impacts are anticipated for future projects.

The Proposed Action would have no significant impacts on coastal resources and was found to be consistent with the CZMA.

Based on the analysis of the past, current, and reasonable foreseeable future projects, implementation of the Proposed Action is not expected to have significant cumulative impacts on coastal resources.

Historic, Architecture, Archaeologic, and Cultural Resources

No impacts on historic or cultural resources were identified for past and current projects.

Since the AWOS will be replaced in the same location, no quantifiable historic or cultural resource impacts are anticipated for future projects.

The Proposed Action would have no impacts on historic or cultural resources.

Based on the analysis of the past, current, and reasonable foreseeable future projects, implementation of the Proposed Action is not expected to have significant cumulative impacts on historic, architecture, archaeological and cultural resources.

Land Use

No land use impacts were identified for past and current projects.

Since the AWOS will be replaced in the same location, no land use impacts are anticipated for future projects.

The Proposed Action would have no land use impacts.

Based on the analysis of the past, current, and reasonable foreseeable future projects, implementation of the Proposed Action is not expected to have any cumulative land use impacts.

Noise and Compatible Land Use

No noise or compatible land use impacts were identified for past and current projects.

Since the AWOS will be replaced in the same location, no noise and compatible land use impacts are anticipated for future projects.

The Proposed Action would have no significant impacts on noise and compatible land use.

Based on the analysis of the past, current, and reasonable foreseeable future projects, implementation of the Proposed Action is not expected to have significant cumulative impacts on noise and compatible land uses.

Visual Resources

No visual impacts were identified for past and current projects.

Since the AWOS will be replaced in the same location, no visual impacts are anticipated for future projects.

The Proposed Action would have no significant impacts on visual resources.

Based on the analysis of the past, current, and reasonable foreseeable future projects, implementation of the Proposed Action is not expected to have significant cumulative impacts on visual resources.

Water Resources

In compensation for the inability to restore fish passage in the Grant Creek culverts, ODFW required fish passage mitigation. The Lake Creek Mitigation Culvert Project was constructed in 2021.

Since the AWOS will be replaced in the same location, no water resource impacts are anticipated for future projects.

The Proposed Action would have no significant impacts on water resources.

Based on the analysis done of the past, current, and reasonable foreseeable future projects, implementation of the Proposed Action is not expected to have significant cumulative impacts on water resources.

3.11 Summary of Impacts

A summary of the potential environmental impacts is provided in **Table 7**.

TABLE 7
SUMMARY OF IMPACTS

	No Action	Proposed Action
Air Quality		
Short term/Construction	No impacts	The construction activities required for the obstruction removal are presumed to conform because these activities would not generate emissions that exceed *de minimis* levels. Emissions generated by construction equipment are negligible considering the temporary nature of construction activities.
Direct Impacts		No impacts
Indirect Impacts		
Cumulative Impacts		
Biological Resources		
Short term/Construction	No impacts	- Wildlife would avoid the areas of active tree removal. - Tree removal could disturb soils and cause siltation.
Direct Impacts		- Would remove about 60 acres of trees.
Indirect Impacts		- Tree removal will modify existing habitats and could cause a change in the wildlife species that use the habitat and how it is used. - Disturbed soils provide the opportunity for nonnative species to colonize the disturbed area and outcompete native species.
Cumulative Impacts		No impacts
Climate		
Short term/Construction	No impacts	- Temporary increase of GHG emissions from diesel- and gasoline-powered construction equipment and additional vehicular traffic.
Direct Impacts		- Reduction in the current CO2 storage capacity around the Airport.
Indirect Impacts		- A slight increase in the Airport's contribution of CO2 to the atmosphere.

	No Action	Proposed Action
Cumulative Impacts		No impact
Coastal Resources		
Short term/Construction	No impacts	No impacts
Direct Impacts	The vegetation within the approach surface would continue to pose a hazard to aircraft operations, and future aviation activity could be constrained by the operational limits of the existing Airport facilities and obstructions.	- Clearing the airspace of obstructions benefits current and future recreational users. - Clearing the airspace of obstructions a cleared airspace ensures readiness as a critical coastal resource for emergency response in the event of a major earthquake and tsunami event.
Indirect Impacts	No impacts	- Tree removal will modify existing habitats and could cause a change in the wildlife species that use the habitat and how it is used. Disturbed soils provide the opportunity of nonnative species to colonize the disturbed area and outcompete native species.
Cumulative Impacts	No impacts	No impacts
Department of Transportation Section 4(f) Resources		
Short term/Construction	No impacts	No impacts
Direct Impacts		
Indirect Impacts		
Cumulative Impacts		
Farmland		
Short term/Construction	No impacts	No impacts
Direct Impacts		
Indirect Impacts		
Cumulative Impacts		
Hazardous Materials, Solid Waste, Pollution Prevention		
Short term/Construction	No impacts	No impacts
Direct Impacts		
Indirect Impacts		
Cumulative Impacts		
Historic, Architecture, Archaeologic, Cultural Resources		
Short term/Construction	No impacts	No impacts
Direct Impacts		
Indirect Impacts		
Cumulative Impacts		
Land Use		
Short term/Construction	No impacts	No impacts
Direct Impacts		

	No Action	Proposed Action
Indirect Impacts		
Cumulative Impacts		
Natural Resources and Energy Supply		
Short term/Construction	No impacts	Construction of the project would require the short-term and minor use of consumable natural resources (e.g., fuels for construction equipment).
Direct Impacts		No impacts
Indirect Impacts		
Cumulative Impacts		
Noise and Compatible Land Use		
Short term/Construction	No impacts	Residences in the vicinity of tree removal areas will experience increased noise for a total of 8-10 weeks associated with construction
Direct Impacts		The removal of trees will likely lead to an increase in noise and vibrations to these residential properties, as the trees will no longer act as a buffer to noise from aircraft on the ground.
Indirect Impacts		No impacts
Cumulative Impacts		No impacts
Socioeconomics, Environmental Justice, Children's Environmental Health and Safety Risks		
Short term/Construction	No impacts	No impacts
Direct Impacts		
Indirect Impacts		
Cumulative Impacts		
Visual Effects		
Short term/Construction	No impacts	- Short-term visual impacts from tree removal.
Direct Impacts		- Residents who live adjacent to tree removal areas will have a change of view from a dense second-growth forest to a harvested area with stumps. - Removal of trees would alter rural forested visual character of the area.
Indirect Impacts		No impacts
Cumulative Impacts		No impacts
Water Resources		
Short term/Construction	No impacts	- Tree removal could disturb soils and cause siltation.
Direct Impacts		- Would convert 0.1 acres of forested wetlands to emergent wetlands. - Loss of 0.1 acres of shade and shelter wetland function. - Loss of 0.56 acres of riparian habitat.
Indirect Impacts		- Habitat modification could cause a change in the wildlife species that use the habitat and how it is used. - Disturbed soils provide the opportunity of nonnative species to colonize the disturbed area and outcompete native species.
Cumulative Impacts		No impacts

3.12 Mitigation Measures

The Proposed Action incorporates a number of avoidance, conservation, and minimization measures that would reduce and mitigate impacts. These include:

- After tree removal, soils would be stabilized with an appropriate seed mix (which may include sterile grass or a native upland forest herbaceous mix) immediately after tree removal and inter-planted by the next growing season with native shrubs or short-statured trees such as vine maple, red-osier dogwood, cascara, and Douglas hawthorn (i.e., if trees are removed in the late summer/early fall, soil stabilization would occur that same fall, and inter-planting would be accomplished the following spring).

- Tree removal in occupied/contiguous habitat would occur outside of the combined marbled murrelet, northern spotted owl and Pacific marten breeding/denning season (February 1 to September 15) to avoid the potential for take.

- Tree removal in occupied/contiguous marbled murrelet habitat would occur during daylight hours (i.e., not at dawn or dusk).

- Tree removal would occur outside of the breeding period of February 1 to September 15 or a pre-construction survey will be done to look for active MBTA protected species nests.

- Tree removal within 0.5-mile radius of the bald eagle nest tree north of Runway 16 will be conducted outside of the breeding period of February 1 to September 15.

- The bald eagle nest tree will be surveyed and marked, and construction fencing will be installed around it.

- Tree removal within 50 feet of streams will occur during the dry season (late July to mid-September) to eliminate the chance of erosion and sedimentation below the OHWL.

- Trees within 50 feet of a stream or within a delineated wetland will be left where they fall rather than hauled off-site. In these areas, obstructions will be removed using hand tools and low-impact equipment. Heavy equipment such as track rigs will not be used. The contractor will be required to access the site and perform the work on foot or using wetland mats to protect sensitive vegetation.

- Riparian setbacks and wetlands will be flagged prior to construction.

- Erosion and sedimentation control BMPs will be inspected twice-weekly to prevent soil from mobilizing outside of work areas and into fish-bearing streams.

- Emergency spill response and clean-up equipment will be available on-site during all construction activities.

- Adjacent to the residential properties, tree removal will be limited to Monday through Friday from the hours of 7:00 AM to 5:00 PM.

- Work will not take place on Saturdays, Sundays, state and federal holidays, or from 5:00 PM to 7:00 AM.
- The City will provide residents 14 days-notice before tree removal will begin on adjacent property.

- On tax lots 11-11-32-00-00200, 11-11-32-00-01604, and 11-11-32-00-00201, slash piles will be chipped or removed.
- Construction access and staging areas will be located on existing paved or disturbed surfaces in upland areas. No staging will occur within delineated wetlands or riparian buffers.

3.13 Permits or Other Approvals Required

The following permits are required prior to construction of the Proposed Action:

- City of Newport Construction Permit – Noise
- Oregon Department of Forestry
    - Notification for an Operation (ORS 527.670)
    - Permit to Use Fire or Power-driven Machinery (ORS 477.625)
    - Intent to Harvest Timber (ORS 321.550)

CHAPTER 4

Agency Coordination, Tribal Consultation and Public Outreach

4.1 Introduction

Agency coordination was conducted during the preparation of this EA to obtain information from interested agencies and to meet the consultation requirements of special purpose environmental laws (e.g., NHPA). A public outreach program was also implemented to ensure information regarding the Proposed Action, alternatives, and its potential environmental impacts was made available to the public and that comments from the public were considered during the preparation of the EA. A summary of this coordination on the EA is provided below.

4.2 Agency Coordination

4.2.1 State Historic Preservation Office

On July 8, 2019, the FAA initiated Section 106 of the National Historic Preservation Act consultation with the SHPO by providing them a project description, survey methodology, and map of the APE. The FAA received concurrence on the APE from SHPO on August 5, 2019 (French 2019).

On December 9, 2019, the FAA submitted the Cultural Resources Assessment (ESA 2019a) along with its finding of *No Historic Properties Affected*. SHPO concurred with FAA's finding for above-ground historic resources on January 2, 2020 (Schwartz 2020) (SHPO Case Number 19-1125). The SHPO provided a separate letter regarding below ground archaeological resources on January 10, 2020, that requested additional information. FAA submitted a response to SHPO's comments on February 3, 2022. No comments were received back from SHPO by March 5, 2022. Therefore, under 36 CFR 800.3(c)(4) and 36 CFR 800.4(d)(1)(i), the FAA's responsibilities under Section 106 have been fulfilled (see **Appendix D**).

4.2.2 Government-to-Government Consultation

The FAA initiated Government-to-Government consultation on July 8, 2019 with the following Tribes: Confederated Tribes of the Warm Springs Reservation, Confederated Tribes of the Grand Ronde, and Confederated Tribes of the Siletz Indians. The consultation letters provided a project description and a graphic depiction of the APE.

On December 9, 2019, the FAA submitted the Cultural Resources Assessment to the consulting Tribes. On December 16, 2019, the FAA received an email from the Confederated Tribes of the Grand Ronde deferring any further comments to primary tribes of the area (Pouley 2019). No other comments were received back. Therefore, under 36 CFR 800.3(c)(4) and 36 CFR 800.4(d)(1)(i), the FAA's responsibilities under Section 106 have been fulfilled (see **Appendix D**).

4.2.3 U.S. Army Corps of Engineers

Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects, infrastructure development, and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States. The U.S. Army Corps of Engineers (Corps) administers the program and issues permit decisions.

The first agency meeting was held on October 11, 2018. Brian Zabel from the Corps called into the meeting. The meeting discussed the Proposed Action, surveys and technical studies to be conducted, and schedule. The agencies were asked if they knew of any resources in the areas that required special attention in regards to the obstruction removal or studies that needed to be conducted. The Corps advised that they should be brought into the Section 106 process early to make sure that Tribal coordination is adequately addressed. Tribes to be consulted should include Grand Ronde and Siletz. If trees are cut at the base and roots are left in the ground, and no temporary roads are needed then a permit would not be required. But if tree removal involves mechanized equipment and grading/excavation in wetlands then a permit may be needed. The Corps requested a copy of the wetland delineation report in advance in order to make a preliminary jurisdictional determination of the wetlands/waters.

A second agency meeting was held on November 21, 2019, to provide the agencies an update on the project and the results of the field surveys. Carrie Bond with the Corps called into the meeting. The Corps requested that the wetland delineation report be submitted to the Corps as well as Oregon Department of State Lands (DSL) for concurrence.

A third agency meeting was held on September 29, 2021, to provide the agency an update on the proposed project and that the scope of the project had been reduced to removing obstructions in the visual approach of Runway 20, the non-precision instrument approach and threshold siting surfaces of Runway 34, and the precision instrument approach and threshold siting surfaces of Runway 16. Katharine Mott from the Corps called into the meeting. The need for a permit will depend on tree removal methods. If clearing by hand, then no permit would likely be needed. If tree removal will require heavy equipment in wetlands/streams, the project may need a permit and could be covered under Nationwide 33 permit, Temporary Construction, Access, and Dewatering; or if several trees will be felled and left in wetlands/streams/riparian zones, the project may require a Nationwide 27 permit for Aquatic Habitat Restoration. Logs left in wetlands could be viewed as fill depending on the effects the down wood would have on the wetland (e.g. impounding water). If logs are left in wetlands and the applicant wants to claim aquatic habitat enhancement, then scientific justification and/or examples of similar beneficial projects would be needed as part of the permitting process.

4.2.4 U.S. Fish and Wildlife Service

The Endangered Species Act provides for the conservation of species that the federal government lists as endangered or threatened and the conservation of ecosystems on which those species depend. USFWS has jurisdiction over terrestrial species and freshwater species and designated Critical Habitat listed under Endangered Species Act. Section 7 consultation is required if the FAA determines that an action may affect a federally-listed threatened or endangered species. Consultation with USFWS (for terrestrial and freshwater species) or NMFS (for marine and anadromous species) is needed to ensure that any action the FAA authorizes, funds, or carries out is not likely to jeopardize the continued existence of any federally-

listed threatened or endangered species, or result in the destruction or adverse modification of critical habitat.

The first agency meeting was held on October 11, 2018. Craig Rowland from USFWS called into the meeting. The meeting discussed the Proposed Action, surveys and technical studies to be conducted, and schedule. The agencies were asked if they knew of any resources in the areas that required special attention in regards to the obstruction removal or studies that needed to be conducted.

A second agency meeting was held on November 21, 2019, to provide the agencies an update on the project and the results of the field surveys. David Leal from USFWS called into the meeting. USFWS recommended doing reconnaissance-level surveys for bald eagle nests. It was reported that during field surveys completed in spring and fall of 2019, no large stick nests near riparian areas have been observed. USFWS inquired about the presence of old-growth trees and mentioned surveys for marbled murrelet may be needed given the proximity of critical habitat mapped in the National Forest located south and east of the study area.

A third agency meeting was held on September 29, 2021, to provide the agency an update on the proposed project and that the scope of the project had been reduced to removing obstructions in the visual approach of Runway 20, the non-precision instrument approach and threshold siting surfaces of Runway 34, and the precision instrument approach and threshold siting surfaces of Runway 16. Michele Zwartjes from USFWS called into the meeting. USFWS inquired about the potential for bald eagle nests in the vicinity. It was reported that during field surveys completed in spring and fall of 2019, no large stick nests near riparian areas have been observed. ODFW and Oregon Department of Forestry (ODF) concurred there were no known nests. USFWS would like FAA to consider measures for minimizing the colonization of invasive plants after tree removal. USFWS inquired if it would be possible to leave some snags for habitat. It was explained that snags are considered a wildlife attractant and are incompatible with the approach and departure surfaces, even at the proposed distances from the runway ends. USFWS is not concerned about impacts on marbled murrelet and spotted owl critical habitat due to the distance from the project (~ 0.6 mile away). They requested discussion of preliminary effect determinations for Section 7 consultation on the marbled murrelet and spotted owl.

Additional coordination occurred with USFWS in the development of conservation measures that were included in the BA. The FAA initiated informal consultation with USFWS on January 7, 2022. A field visit was conducted with USFWS on February 10, 2022, to look at potential murrelet habitat. Based on the field visit, USFWS determined that there are trees in the area that have been determined to be occupied that provide suitable nesting platforms for marbled murrelet, and some of these trees have been slated for removal, thus there would be negative effects to the species from removing nesting habitat. In addition, removing the 2.7 acres of continuous forested area will create a new opening and edge in the forest that will provide easier entry for predators such as corvids. As a result, formal consultation was initiated on February 24, 2022, for the marbled murrelet. USFWS indicated in an email that the project already incorporated significant conservation measures into the project (avoiding tree removal during nesting season, etc.), and does not anticipate any changes needed to the project. The results of the formal consultation will be provision of authorization for incidental take of a listed species under Section 7 of the Endangered Species Act in the form of an incidental take statement, which is part of the Biological Opinion.

On March 4, 2022, USFWS conducted a second field visit to Steel String and Weyerhaeuser properties to assess habitat for the northern spotted owl. In an email on March 15, 2022, USFWS confirmed that the

area in question is potentially suitable northern spotted owl habitat. They indicated that there may not be a large enough contiguous area of suitable habitat to support a pair of nesting owls. They will be doing a GIS exercise and some additional analyses to make a final determination with regard to the effect determination for the northern spotted owl.

On May 12, 2022, the USFWS was contacted to inform them of the bald eagle nest that was identified north of Runway 16. In an email from Michele Zwartjes, USFWS indicated there were several permitting paths available depending on timing of tree removal and if the nest tree itself needed to be removed. If the nest tree does not need to be removed and tree removal in the vicinity of the nest tree is done outside of the breeding season, then no permit is likely needed.

On May 16, 2022, the USFWS transmitted their Biological Opinion on the project to FAA (Appendix E). After reviewing the current status of the species, the environmental baseline, the effects of the proposed action, including all measures proposed to avoid and minimize adverse effects, and the cumulative effects, the USFWS concluded that the proposed project will not jeopardize the continued existence of the marbled murrelet. The USFWS concurred with the FAA's determination that the proposed action may affect, but is not likely to adversely affect, the northern spotted owl or coastal marten. As no designated or proposed critical habitat for any listed or proposed species occurs within the action area, none will be adversely modified or destroyed.

4.2.5 National Marine Fisheries Service

The Endangered Species Act provides for the conservation of species that the federal government lists as endangered or threatened and the conservation of ecosystems on which those species depend. NMFS has jurisdiction over marine species, including anadromous fish and designated Critical Habitat listed under Endangered Species Act.

The first agency meeting was held on October 11, 2018. Jennie Franks from NMFS called into the meeting. The meeting discussed the Proposed Action, surveys and technical studies to be conducted, and schedule. The agencies were asked if they knew of any resources in the areas that required special attention in regards to the obstruction removal or studies that needed to be conducted. NMFS stated that the streams in the area are not listed as critical habitat for fish and that some of the streams (Henderson Creek, Moore Creek) were historical habitat for Oregon Coast Coho, but there are no current data to show that Coho currently use the streams presently, and added that ODFW might have more information about fish use of the streams. NMFS stated that FAA would need to make the determination about potential project impacts on listed fish and EFH per the Magnuson-Stevens Fisheries Conservation & Management Act.

A second agency meeting was held on November 21, 2019, to provide the agencies an update on the project and the results of the field surveys. Michelle McMullan from NMFS called into the meeting. NMFS did not have substantive input into the project.

4.2.6 Oregon Department of State Lands

Oregon's Removal-Fill Law requires people who plan to remove or fill material in wetlands or waterways to obtain a permit from the Department of State Lands. The law applies to all landowners, whether private individuals or public agencies.

The first agency meeting was held on October 11, 2018. Lauren Brown from DSL called into the meeting. The meeting discussed the Proposed Action, surveys and technical studies to be conducted, and schedule. The agencies were asked if they knew of any resources in the areas that required special attention in regards to the obstruction removal or studies that needed to be conducted. DSL does not regulate vegetation removal, unless it is in a wetland, below the OHWL of a stream, or within a tidal water. ODFW indicated that no tidal waters are east of U.S Highway 101. DSL recommended coordination with Carrie Landrum from DSL regarding project timing and delineation methods to collaborate on a strategy for addressing the issue of not being able to investigate all affected tax lots early on, but then having access later in the project. Coordination would help streamline DSL's review.

The wetland delineation was submitted to DSL on January 24, 2020. DSL issued concurrence on the delineation on September 27, 2021 (WD # 2020-0008) (**Appendix C**).

A third agency meeting was held on September 29, 2021, to provide the agency an update on the proposed project and that the scope of the project had been reduced to removing obstructions in the visual approach of Runway 20, the non-precision instrument approach and threshold siting surfaces of Runway 34, and the precision instrument approach and threshold siting surfaces of Runway 16. Carrie Landrum from DSL called into the meeting. She confirmed that DSL had concurred with the wetland delineation.

4.2.7 Oregon Department of Fish and Wildlife

The first agency meeting was held on October 11, 2018. Paul Olmsted and Derek Wilson from ODFW attended the meeting. The meeting discussed the Proposed Action, surveys and technical studies to be conducted, and schedule. The agencies were asked if they knew of any resources in the areas that required special attention in regards to the obstruction removal or studies that needed to be conducted. ODFW stated that the area surrounding the Airport has several large, mature conifers that provide habitat, including potential nesting sites, for marbled murrelet, owls, bald eagles, etc. ODFW inquired if topping of trees to create snags was an option. It was explained that snags are a wildlife attractant that can be hazardous to aviation and thus the practice is discouraged near airports. ODFW inquired about what would happen to the trees once they were cut and would be interested in them for stream restoration projects. ODFW said that mitigation should factor in habitat quality as well as the acreage or footprint of impact. There is no specific mitigation ratio to achieve, but consider conservation along Big Creek (for example) where there are large spruces and other conifers.

A second agency meeting was held on November 21, 2019, to provide the agencies an update on the project and the results of the field surveys. Paul Olmsted from ODFW attended the meeting. ODFW recommended retaining riparian trees to the greatest extent possible, especially trees within 50 feet of streams. They would like the tree trunks and root wads for various restoration projects if available. Tipping the trees and leaving them in the riparian zone with portions of the tree in wetlands/streams would be beneficial and considered mitigation. The Airport is agreeable to letting ODFW have the trees as long as they are able to haul them away.

A third agency meeting was held on September 29, 2021, to provide the agency an update on the proposed project and that the scope of the project had been reduced to removing obstructions in the visual approach of Runway 20, the non-precision instrument approach and threshold siting surfaces of Runway 34, and the precision instrument approach and threshold siting surfaces of Runway 16. John Spangler from ODFW called into the meeting. ODFW would prefer to have trees tipped over and leave woody material in wetlands and the 50-foot riparian setback to the extent possible and also leave woody material

or log piles in uplands beyond the 50-foot riparian setback if possible because ODFW is very interested in using the removed timber for other restoration projects. Coho have been seen in Thiel Creek in small numbers, but not in Henderson Creek or Moore Creek, which are much smaller streams.

On February 16, 2022, the proposed conservation measures for fish and streams were submitted to ODFW (John Spangler) to provide feedback. In an email dated February 18, 2022, ODFW concurred with the proposed conservation measures and the determination that there would be no effect to Oregon Coast Coho salmon.

4.2.7 Oregon Department of Forestry

The first agency meeting was held on October 11, 2018. Joe Koch and Matt Thomas from the ODF attended the meeting. The meeting discussed the Proposed Action, surveys and technical studies to be conducted, and schedule. The agencies were asked if they knew of any resources in the areas that required special attention in regards to the obstruction removal or studies that needed to be conducted. ODF stated that all tree removal for the project would require notification to ODF, which involves filling out an on-line application form. The process is straightforward and requires identifying polygons of trees or general areas of impact (not tree-by-tree data).

A second agency meeting was held on November 21, 2019, to provide the agencies an update on the project and the results of the field surveys. Matt Thomas from ODF attended the meeting. They provided similar input as they did in the first meeting.

A third agency meeting was held on September 29, 2021, to provide the agency an update on the proposed project and that the scope of the project had been reduced to removing obstructions in the visual approach of Runway 20, the non-precision instrument approach and threshold siting surfaces of Runway 34, and the precision instrument approach and threshold siting surfaces of Runway 16. ODF attended the meeting and provided similar input as they did the last two meetings.

4.3 Public Outreach

The first open house for the project was held on October 11, 2018, at City Hall. Notification of the open house was published in the local newspaper and mailed to property owners within 500 feet of the Airport property. The purpose of the meeting was to notify the public of the proposed project. Figures of the obstructions identified in the *KONP Obstruction Analysis Report* (Quantum Spatial, Inc. 2019) were on display for the public to review. City representatives explained that obstructions in the regulated airspace were identified and the City was going to prepare an EA to assess the potential impacts of removing the obstructions. Comments raised by the public included the concern that removing vegetation would cause an increase in noise for departing and arriving aircraft; visual impacts, impact to personal property from tree removal; erosion; and colonization of invasive species. Approximately 20 people attended the meeting.

A second public meeting was held on September 28, 2021, via zoom. There were technical difficulties with the meeting so another meeting was held November 11, 2021. Notification of the public meeting was published in the local newspaper and mailed to property owners on Birch and Cedar streets. The meeting was also recorded and put on the Airport's webpage.
https://www.newportoregon.gov/dept/onp/projects.asp. The purpose of the meeting was to give the public an update on the proposed project and that the scope of the project had been reduced since the last meeting in October 2018. The project moving forward includes removing obstructions in the visual

approach of Runway 20, the non-precision instrument approach and threshold siting surfaces of Runway 34, and the precision instrument approach and threshold siting surfaces of Runway 16. Several comments were received regarding the technical difficulties and concerns about removal of trees on personal property.

A Public Notice was placed in the local newspaper announcing the availability of the Draft EA and the public meeting. Public comment on the Draft EA is available for a 30-day period extending from April 11, 2022, through May 10, 2022. The Draft EA was posted on the Airport's website. Hard copies of the Draft EA were also available at City Hall, the Airport terminal, and provided to anyone who requested a copy. Letters to people who had previously provided comments on the project and property owners on Birch and Cedar streets were also mailed to notify people of the availability of the EA and public meeting. A public meeting was held for the project on April 19, 2022, at City Hall. The meeting was also live streamed. Four people attended the meeting in person. A summary of the comments received at the meeting and a response is included in **Appendix F**. No new issues were brought up at the public meeting that required additional analysis.

Three comment letters were received during the comment period, all from Joan Schroeder. The comments and response to these comments is included in **Appendix F**. No new issues were brought up that required additional analysis.

CHAPTER 5

List of Preparers

The following individuals were involved in the preparation of this EA. Information provided includes the organization for which each individual works, a brief synopsis of their experience and qualifications, and their responsibilities in preparing the EA document.

5.1 Environmental Science Associates

Susan Cunningham, Project Manager. B.S. Biology. Over 30 years of experience in environmental planning, with expertise in biological resources, wetlands, land use, and preparation of NEPA documents. Responsible for project management, project approach, technical writing, and technical compliance.

Sarah Hartung, PWS, Ecologist. Over 20 years of experience with expertise in wetland and riparian ecology and threatened and endangered species. Responsible for biological field surveys; preparing the Biological Assessment, Wetland Delineation Report, No Effect Letter, and technical writing on the EA; and agency coordination.

Luke Johnson, Ecologist. Ten years of experience with expertise in wetland and riparian ecology and threatened and endangered species. Responsible for biological field surveys.

Thomas Ostrander, Archeologist. Ten years of experience as a physical anthropologist and archaeologist. Responsible for leading the cultural resources field investigation and preparing the Cultural and Historic Resources Report and analysis for the EA.

Chris Lockwood, Ph.D., Archaeologist. Over 20 years of experience in archaeology and cultural resources in a broad range of environments including coastal, fluvial, lacustrine, and urban settings. Provided technical compliance review for Cultural and Historical Resources investigation.

Peter Carr, Technical Editor. Over 20 years of experience in technical editing of NEPA documents and supporting technical studies.

5.2 Precision Approach Engineering

Geoff Vaughn, P.E., Design Engineer. Over 15 years of the experience specializing in aviation design and construction services. Responsible for preliminary engineering of Proposed Action.

CHAPTER 6

Acronyms, Abbreviations, and References

6.1 Acronyms and Abbreviations

The following is a list of abbreviations and acronyms used throughout the document:

AC	Advisory Circular
AEDT	Aviation Environmental Design Tool, Vestion 3d
AGIS	Airport Geographic Information System
AIP	Airport Improvement Program
Airport	Newport Municipal Airport
APE	Area of Potential Effect
AWOS	Automated Weather Observing Station
BMPs	best management practices
CU560	Cessna Citation Ultra aircraft
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
City	City of Newport, Oregon
CO	carbon monoxide
CO2	carbon dioxide
Corps	U.S. Army Corps of Engineers
CZMA	Coastal Zone Management Act of 1972
dB	decibels
dbh	diameter at breast height
DLCD	Oregon Department of Land Conservation and Development
DNL	Day-Night Average Sound Level
DSL	Oregon Department of State Lands
EA	Environmental Assessment
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESU	Evolutionarily Significant Unit
FAA	Federal Aviation Administration
FAR	Federal Air Regulation
FBO	Fixed Base Operator
FEMA	Federal Emergency Management Agency
FR	Federal Register
GHG	Greenhouse gas
IPaC	Information for Planning and Consultation
KONP	Newport Municipal Airport
LiDAR	Light Detection and Ranging
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MBTA	Migratory Bird Treaty Act of 1918
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act

NMFS	National Marine Fisheries Service
NO2	nitrogen dioxide
NPIAS	National Plan of Integrated Airport Systems
OAR	Oregon Administrative Rules
OCMP	Oregon Coastal Management Program
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
OHWL	ordinary high water line
ORBIC	Oregon Biodiversity Information Center
ORS	Oregon Revised Statutes
PFMC	Pacific Fisheries Management Council
RCRA	Resource Conservation and Recovery Act
RDC	Runway Design Code
SHPO	Oregon State Historic Preservation Office
SO2	sulfur dioxide
SWPP	Stormwater Pollution Prevention Plan (
U.S.	United States
UGB	Urban Growth Boundary
U.S.C.	United States Code
USCG	U.S. Coast Guard
USFWS	U.S. Fish and Wildlife Service

6.2 References

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APPENDIX A

Biological Assessment

ENVIRONMENTAL ASSESSMENT

Newport Municipal Airport Obstruction Removal

Final

NEWPORT MUNICIPAL AIRPORT OBSTRUCTION REMOVAL

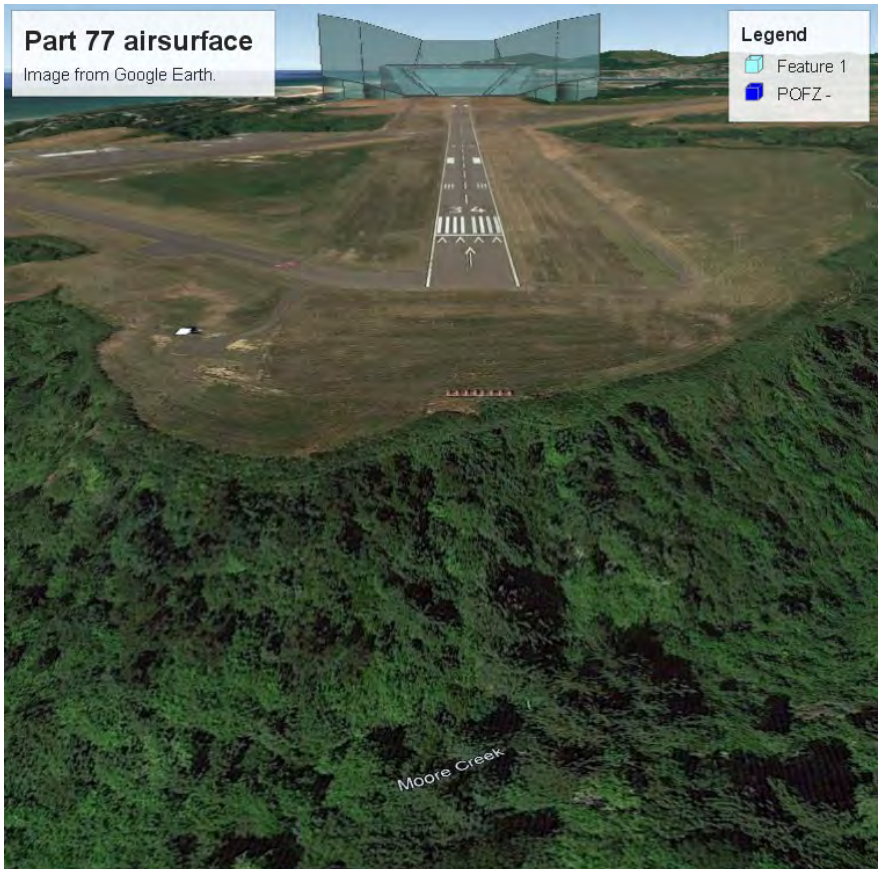
Biological Assessment

Prepared for

City of Newport and Federal Aviation Administration

January 2022

ESA



Final

NEWPORT MUNICIPAL AIRPORT OBSTRUCTION REMOVAL

Biological Assessment

Prepared for

City of Newport and Federal Aviation Administration

January 2022

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NEWPORT AIRPORT OBSTRUCTION REMOVAL

Biological Assessment

Introduction

Background

This Biological Assessment (BA) evaluates the effects of an obstruction (vegetation) removal project at the Newport Municipal Airport (Airport) on the marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), the coastal distinct population segment of the Pacific marten (*Martes caurina*), and designated critical habitat. All are listed as threatened under the federal Endangered Species Act of 1973, as amended. The nearest critical habitat for the marbled murrelet is 0.5 mile from a water tower at the southern boundary of where identified obstructions (trees) would be removed. The nearest critical habitat for northern spotted owl and Pacific marten (proposed critical habitat) is over two miles east/southeast of the southern obstruction removal area in the Siuslaw National Forest. This BA also provides justification for a no effect determination for the western snowy plover (*Charadrius nivosus nivosus*). The Airport is a designated general aviation facility, owned and operated by the City of Newport (City).

The City proposes to clear approximately 63 acres of vegetation (tall trees and shrubs) that are obstructions to the approach ends of the airport runways. Obstructions would occur on Airport and adjacent properties. Removing these trees and vegetation will allow for a clear 20:1 approach surface to be maintained. The approach surface is critical in allowing aircraft to execute lands in a manner that is safe to the aircraft, nearby environmental resources, residences, and the general public. Approximately three acres need to be removed from occupied marbled murrelet habitat and potential suitable northern spotted owl and Pacific marten habitat south of the Airport within the approach to Runway 34.

Occupied vs Contiguous Habitat

Occupied marble murrelet habitat is defined as habitat that has been surveyed to protocol and breeding behavior has been observed. The current protocol was developed by the Pacific Seabird Group (Evans Mack et al. 2003) and relies on a series of standardized audio-visual surveys. A revised survey protocol is under development (ODFW 2021).

Contiguous habitat is habitat adjacent to occupied habitat that is similar in structure. This habitat has not been surveyed but is considered to be occupied by breeding murrelets.

The proposed project requires funding and approval from the Federal Aviation Administration (FAA), the lead agency for Section 7 Endangered Species Act consultation. Refer to separate documentation for No Effect determination related to Oregon coho salmon under the jurisdiction of the National Marine Fisheries Service (NMFS) (ESA 2021).

This BA was developed using 2021 protocol survey data provided by Weyerhaeuser, existing data from the Oregon Biodiversity Information Center (ORBIC), species list and information from the U.S. Fish and Wildlife Service (USFWS), literature reviews, and field reconnaissance conducted in the study area in 2019.

Consultation History

USFWS staff attended three public agency meetings regarding the project, although the availability of protocol survey data from Weyerhaeuser were not known when the meetings occurred. Meeting dates are as follows: October 11, 2018; November 21, 2019; and September 29, 2021.

Project Description

Project Summary

The City proposes to remove obstructions from Federal Air Regulations (FAR) Part 77 airspace approach surfaces at the Airport to improve the safety of aircraft operations. The Airport is located at 135 SE 84th Street, Newport, in the South Beach Urban Renewal District, Lincoln County, Oregon. The Airport itself and the properties where obstructions are proposed to be removed are entirely within the Newport city limits (with the exception of a few parcels), and are zoned as either Industrial, Public Structures, or High Density Multi-Family. Refer to **Figures 1, 2 and 7 (Appendix A)** for a depiction of the study area setting in relation to the City of Newport and the extent of trees proposed for removal.

The City proposes to remove obstructions (primarily tall trees) within three separate FAR Part 77 approach surfaces:

- Visual approach of Runway 20 (north of the Airport).
- Non-precision instrument approach and threshold siting surfaces of Runway 34 (south of the Airport).
- Precision instrument approach and threshold siting surfaces of Runway 16 (north of the Airport).

Light Detection and Ranging (LiDAR) was flown in 2018 for the study area and processed in February 2019 to identify tall trees penetrating the 3D FAA regulated airspace. The original number of trees slated for removal were scaled-back markedly in 2020 and 2021 after coordination with landowners and the FAA. The original footprint of clearing all possible obstructions totaled approximately 240 acres, whereas the current proposed footprint of tree removal is approximately 63 acres affecting 32 separate tax lots north and south of the Airport **(Figures 1-6)**. The proposed project would be constructed between 2022 and 2024.

Project Components

The project consists of removing tall vegetation (trees and shrubs/saplings) from the FAA regulated airspaces north and south of the Airport. The crowns of trees proposed for removal are outlined in red on **Figure 2** and shown in green on **Figure 7**. No new facilities, roads, or impervious surfaces are proposed as part of the project. The contractor selected for the project would access obstructions from existing disturbed areas including paved and unpaved airport access roads, private roads as well as old logging roads and paths (**Figure 8**). Staging would occur in existing disturbed areas that are already cleared of vegetation. Tree removal would occur during daylight hours (i.e., not at dawn or dusk). The total footprint of proposed tree removal per area is summarized in Table 1 below.

TABLE 1.
SUMMARY OF TREE REMOVAL IMPACTS

Area	Footprint of obstruction removal (ac)
Occupied marbled murrelet habitat (Parcel ID 12-11-05-00-00802-00)	<0.1
Contiguous suitable habitat (Parcel IDs 12-11-05-00-00803-00; 12-11-05-CB-00200-00; and 12-11-05-CB-00700-00)	3.0
Remainder of the project (considered unsuitable forested habitat)	60.0
Total	**63.1**

Avoidance, Minimization, and Conservation Measures

The following list summarizes the measures incorporated into the project to avoid and minimize impacts on the environment and Endangered Species Act-listed species and habitat during construction.

1. No tree removal is proposed in occupied/contiguous habitat (as shown on **Figures 7 and 8**) during the combined marbled murrelet, northern spotted owl, and Pacific marten breeding/denning season (February 1 to September 15).

2. Tree removal in occupied/contiguous habitat would occur during daylight hours (i.e., not at dawn or dusk).

3. Minimization measures incorporated into the design of the project include reducing the footprint of obstructions that could be removed from the FAA regulated airspaces from approximately 240 acres to 63 acres.

4. Work areas will be confined to the minimum area needed to complete the action.

5. Construction vehicles and equipment will be stored, fueled, and maintained in designated staging areas, making use of existing disturbed areas that area already cleared of vegetation.

6. Areas permanently disturbed (tree removal areas) will be restored following removal with native groundcover and shrubs.

7. No new facilities, roads, or impervious surfaces are proposed as part of the project. The contractor selected for the project would access obstructions from existing disturbed areas including paved and unpaved airport access roads, private roads as well as old logging roads and paths (**Figure 8**).

Study Area and Action Area

The proposed project would occur on various publicly and privately owned parcels north and south of the airfield. The study area consists of the footprint of obstructions proposed for removal as well as access roads and staging areas. Refer to the attached preliminary site plans for a list of affected tax lots, property owners, and approximate extent of obstructions proposed for removal (**Appendix A**).

The action area encompasses all areas affected directly or indirectly by the proposed project. The action area for this project includes the project footprint (including construction access and staging areas) and areas within an approximately 825-foot radius of the project footprint that may be affected by construction noise, as described below.

Proposed Tree Removal Areas Existing Conditions

The proposed study area north and south of the Airport consists of hilly terrain in the foothills and headlands of the Central Oregon Coast Range. The temperate forests of the area have been altered through fire, logging and development of roads. In areas that have been significantly disturbed, second-growth forest and shrub layers have very dense vegetation. Four streams flow westerly through the study area and into the Pacific Ocean (from north to south): Henderson Creek, Grant Creek, Moore Creek, and Thiel Creek (**Figure 7**). With the exception of Moore Creek, these drainages are typified by steep slopes and narrow valley bottoms. Elevations in the area range from 20 feet to 275 feet above mean sea level.

Tree removal north of the Airport would occur on shrubland, forested terraces and hillslopes, and riparian habitat **(Exhibits 1 and 2**). The forests in this area consist of mid-seral / mid-structural, thinned stands of western hemlock (*Tsuga heterophylla*) and Sitka spruce (*Picea sitchensis*). The understory is dense and consists of salal (*Gaultheria shallon*), evergreen huckleberry (*Vaccinium ovatum*) and sword fern (*Polystichum munitum*). In areas where wetlands have been delineated, the vegetation is dominated by Douglas spirea (*Spiraea douglasii*), twinberry honeysuckle (*Lonicera involucratra*), red alder (*Alnus rubra*), and slough sedge (*Carex obnupta*) (ESA 2019).

These wooded areas north of the Airport have not been surveyed for listed species, but are not considered potential suitable habitat for marbled murrelet, northern spotted owl, or Pacific marten due to lack of complex forest structure, habitat fragmentation, and close proximity to human activity.

Exhibit 1. Typical mid-seral forested conditions north of Henderson Creek on City property, May 2019.

Exhibit 2. Typical riparian habitat along Henderson Creek includes young red alder and dense undergrowth, May 2019.

Tree removal south of the Airport would occur along Moore Creek (**Exhibit 3**) just south of the end of Runway 34; the wooded areas between SE 98th Street and Moore Creek (**Exhibit 4**); and areas south of SE 98th Street **(Exhibits 5–7**). The riparian habitat along Moore Creek consists of young trees and palustrine emergent wetlands dominated by slough sedge **(Exhibit 3)**.

Exhibit 3. Palustrine emergent wetland along Moore Creek on City property, May 2019.

The habitat south of Moore Creek but north of SE 98th Street, consists of young Douglas fir (*Pseudotsuga menziesii*) trees with some alders and willows (*Salix* spp.) as well as Scotch broom (*Cytisus scoparius*) (**Exhibit 4**). Trees range in height from 20 to 50 feet, with most of the trees between 35 and 45 feet high (Quantum Spatial, Inc. 2019). Adjacent wooded areas on City property are young mixed deciduous/coniferous trees that are generally 40 to 50 feet high. A couple of the trees in this area are 90 feet high, but are isolated. These trees would not provide suitable marbled murrelet nesting habitat and

Exhibit 4. Young Douglas-fir trees on City property, south of Moore Creek and north of SE 98th Street, May 2019.

lacks the older forest complexity, snags and downed wood that is preferred by the marbled murrelet, northern spotted owl, and Pacific marten.

The trees proposed for removal on occupied and contiguous marbled murrelet habitat on private land to the south consist of conifers that exceed 100 feet in height (Quantum Spatial, Inc. 2019) and are generally larger than 15 inches in diameter at breast height (dbh) with some exceeding 25 inches dbh (**Exhibits 5 and 6**). The forest in this area south of Thiel Creek is characterized by mid-successional to late-successional with varying densities of undergrowth. The approximate 2.5-acre patch of trees proposed for removal on Steel String property (Parcel ID 12-11-05-00-00803-00, **Figure 5**) ranges in height from 113 to 189 feet (Quantum Spatial, Inc. 2019). The forest on this parcel has some late-successional characteristics, but has a sparse shrub and subcanopy layer with few snags and pieces of large downed wood that may be suitable for Pacific marten **(Exhibit 5)**. The 2.5-acre patch is anticipated to be only marginally suitable for marbled murrelet and northern spotted owl due to lack of multiple canopy layers.

Exhibit 5. Typical conifer forest contiguous with occupied marbled murrelet habitat south of SE 98th Street on Steel String property (Parcel ID 12-11-05-00-00803-00). Note sparse shrub layer, May 2019.

The forest on Weyerhaeuser land in occupied murrelet habitat (Parcel ID 12-11-05-00-00802-00) is typified by large Sitka spruce trees with a dense shrub layer **(Exhibit 6)**.

Exhibit 6. Typical large Sitka spruce on Weyerhaeuser property (Parcel ID 12-11-05-00-00802-00), May 2019.

The trees proposed for removal on Emery Investments Inc. (Parcel ID 12-11-00-00-03400-00) property adjacent to the Seal Rock water tower **(Figure 5)** are isolated and do not provide suitable habitat for the listed species **(Exhibit 7)**.

Exhibit 7. Isolated tall trees proposed for removal adjacent to the Seal Rock water tower (Parcel ID 12-11-00-00-03400-00), May 2019.

Status / Presence of Listed Species and Designated Critical Habitat in the Action Area

A list of threatened and endangered species that may occur in the proposed study area was obtained from the USFWS on November 11, 2021 (**Appendix B**). Listed species and associated critical habitat addressed in this BA are presented in **Table 2**.

TABLE 2.
LISTED SPECIES, CRITICAL HABITAT, AND PRESENCE WITHIN THE ACTION AREA

Species and Federal Listing	Critical Habitat Status	Breeding Season	Occupied habitat within Study area?
Marbled murrelet Listed as **Threatened** in 1992 (57 Federal Register [FR] 45328).	Critical habitat areas were originally **Designated** in 1996, revised in 2011, and finalized in 2016 (81 FR 51348). The study area is not within designated critical habitat. The nearest designated critical habitat is located approximately 0.5 mile east of the southern part of the study area (Figure 7).	Mid-April to Mid-September	Yes, on Weyerhaeuser land, tax map 12-11-05-00-00802-00
Northern spotted owl Listed as **Threatened** in 1990 (55 FR 26114).	Critical habitat areas were **Designated** in 1992, revised in 2008, and again in 2012 (77 FR 71876). The study area is not within designated critical habitat. The nearest proposed critical habitat is located approximately 2 miles east of the southern part of the study area (Figure 7).	February 1 through August 31	No, but potential suitable habitat presumed present south of Thiel Creek based on murrelet survey (Weyerhaeuser 2021).
Pacific marten Listed as **Threatened** in 2020 (85 FR 63806).	Critical habitat areas were **Proposed** October 25, 2021 (86 FR 58831). The study area is not within designated critical habitat. The nearest proposed critical habitat is the same area designated as critical habitat for the northern spotted owl, located approximately 2 miles east of the southern part of the study area (Figure 7).	Mid-April to Mid-September	No, but potential suitable habitat presumed present south of Thiel Creek based on murrelet survey (Weyerhaeuser 2021).

Species Not Analyzed in this BA: Western Snowy Plover (No Effect)

The western snowy plover is a small, federal threatened shorebird that resides in marine shoreline habitat, specifically coastal dunes, the upper intertidal zone, as well as beaches at creek and river mouths and salt pans at lagoons and estuaries (77 FR 36728). None of these habitats occur within the action area nor would they be affected by the project. The nearest critical habitat is located outside of Lincoln City, several miles to the north of the study area. Due to the absence of suitable habitat in the study area, the project would have no effect on the western snowy plover.

Marbled Murrelet

The marbled murrelet is a small seabird that breeds in coastal forests in British Columbia, Washington, Oregon, and California. Breeding pairs generally lay one egg during the nesting season and may not breed every year. No nest structure is built, but the egg is laid on a horizontal branch with moss or lichen. General habitat attributes are characteristic throughout its range, including the presence of nesting

platforms, adequate canopy cover over the nest, landscape condition, and distance to the marine environment. Nest sites typically occur in mature and old-growth coniferous forests but are also found in younger forests containing suitable nesting platforms. Wildfires and timber harvest are major threats contributing to the on-going loss of marbled murrelet nesting habitat (USFWS 2019).

Stand age is a key indicator of marbled murrelet habitat. There is a positive correlation between stand age and the presence of potential nesting platforms; the older a coniferous tree becomes, the more likely it is to have suitable nesting platforms for marbled murrelets.

An essential structural component of suitable marbled murrelet habitat is the presence of potential nesting platforms (USFWS 2012). In general, old-growth, mature, or younger coniferous forests with appropriate structures can provide these platforms. The USFWS defines a suitable nesting platform as a relatively flat surface at least 10 centimeters (4 inches) in diameter and located a minimum of 10 meters (33 feet) high in the live crown of a coniferous tree. Another important attribute of nesting habitat is vertical and horizontal cover around potential nest platforms to protect chicks and adults from predation while allowing adults access to nest platforms (USFWS 2012).

Marbled murrelets have occupied small patches of habitat within larger areas of unsuitable habitat, and some occupied sites have included large, residual trees in low densities; over 20 percent of occupied sites in Oregon were less than 80 years old (USFWS 2012).

Presence in the Action Area: Occupied marbled murrelet breeding behavior (flight at canopy height) was observed on Weyerhaeuser land south of SE 98th Street on parcel ID 12-11-05-00-00802-00 during 2021 protocol surveys (Weyerhaeuser 2021) (**Figures 7 and 8**). Based on guidance from the USFWS, adjacent or contiguous habitat that is similar in structure is also considered occupied habitat. Consequently, adjacent forested habitat on Steel String property (parcel IDs 12-11-05-00-00803-00; 12-11-05-CB-00200-00, and 12-11-05-CB-00700-00) is considered contiguous habitat.

Northern Spotted Owl

Northern spotted owls primarily utilize late successional mature and old-growth forests with large diameter coniferous trees, snags, downed wood, and a closed canopy with multiple canopy layers for nesting and roosting (Davis et al. 2016). Foraging habitat for northern spotted owls is similar but may not contain suitable nesting structures to support successful breeding pairs (Sovern et al. 2015). The range of this species is from southwestern British Columbia through western Washington, western Oregon, and the Klamath Mountains and Coast Ranges of northwestern California south to San Francisco Bay (55 FR 26114).

The northern spotted owl is a nocturnal owl species and resident of structurally complex forests. It prefers late successional mature and old-growth forest or forests with old-growth characteristics. Preferred nesting and roosting habitats include a multi-story forest containing a diversity of tree species, moderate to dense canopy cover (>60 percent) dominated by large trees with a high incidence of cavities or broken tops, sufficient open space below the canopy for flight, and an accumulation of woody debris on the ground (USFWS 2011).

Northern spotted owls usually nest in tree and snag cavities or in broken tops of large trees. They less frequently nest in mistletoe clumps and abandoned raptor and raven nests (Zeiner et al. 1990). Northern spotted owl are territorial, although home ranges of adjacent pairs can overlap. The size of the home range varies with geography and availability of prey species.

Northern spotted owl will feed on a variety of prey items, including small mammals, birds, amphibians, reptiles, and insects (Zeiner et al. 1990; USFWS 2011). Foraging habitat for northern spotted owl is similar to nesting and roosting habitat but may not contain suitable nesting structures to support successful breeding pairs (Sovern et al. 2015).

The northern spotted owl is a long-lived species, with a long reproductive life span. It is monogamous, but pairs do not necessarily breed every year. Breeding generally begins at two to five years of age. Following courtship, breeding may start as early as mid-February, and the female typically lays one to four eggs by late-March or April. The male delivers food to the female and the young while the female is brooding. Juvenile owls fledge in late-May or June; however, they still depend on food provided by their parents until about September (Zeiner et al. 1990; USFWS 2011).

Presence in the Action Area: There are no documented occurrences of northern spotted owl in or near the action area (ORBIC 2019). Weyerhaeuser surveyed for northern spotted owls according to protocol in the spring and summer of 2021 on parcel ID 12-11-05-00-00802-00 (the same parcel where marbled murrelets were detected), but no northern spotted owls were seen or heard (Hane, personal communication, 2021).

Pacific Marten

The Pacific marten is a medium-sized, solitary carnivore related to weasels, minks, otters, and fishers (85 FR 63806). Pacific martens are territorial and dominant males will maintain home ranges that encompass one or more female's home ranges. Male home ranges are larger than female home ranges and can cover 0.8 to 10.5 mi.^{2} (512 to 6,720 acres) (WDFW 2021). Pacific martens are primarily carnivorous and prey on small mammals, birds, insects, but also consume berries and other fruits depending on availability. Pacific martens generally select older forest stands that are structurally complex (e.g., late-successional, old growth, large-conifer, mature, late-seral). These forests generally have multiple canopy layers, snags and other decay elements, dense understory, and have a biologically complex structure and composition. Small patches of forest are in less suitable for the Pacific marten because their primary predator, the bobcat, is more abundant fragmented forests than large unbroken tracks (86 FR 58831).

Den sites most often consist of large diameter trees (live or dead) with cavities, but may also include hollow logs, crevices under rocks, log piles, and squirrel nests (86 FR 58831). Pacific martens breed in the summer, bearing one to five young (WDFW 2021). Young are independent by late summer. According to a Northern California study, the denning season for coastal martens extends from mid-April to mid-September (Delheimer, et al. 2021).

Presence in the Action Area: There are no documented occurrences of Pacific marten in or near the action area (ORBIC 2019). The nearest population of Pacific marten is anticipated to occur in the Siuslaw

National Forest over two miles east of the southern project boundary. The Siuslaw National Forest is proposed critical habitat for the Pacific marten and is considered the northernmost distribution of coastal martens in Oregon (86 FR 58831).

Analysis of Effects of the Action

Direct Effects

No direct effects are anticipated to occur to either marbled murrelets, northern spotted owls, or Pacific martens because trees are proposed to be removed from occupied/contiguous habitat after September 14 and before February 1 when no breeding birds or denning Pacific martens would be present. Marbled murrelets generally nest from mid-April to mid-September (September 15), northern spotted owl generally breed from February 1 through August 31, and the denning season for Pacific marten generally extends from mid-April to mid-September (September 15).

The action area includes the area surrounding the project that would be subject to increased noise from construction equipment and activities during project work. The area of potential noise disturbance was determined for the project using noise analysis from USFWS (2020) entitled, "*Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California.*" Inputs for the noise analysis were based on the following:

- Ambient daytime noise levels adjacent to occupied/contiguous marbled murrelet habitat and potential suitable northern spotted owl habitat is considered to be "low" or 61–70 decibels (dB), which includes sounds from residences located along SE Cedar Street.

- The loudest piece of equipment anticipated for the project (and the associated average maximum sound level at 50 feet) is likely to be a logging truck (97 dB) categorized as a "very high" action-generated sound level. Obstruction removal would occur during daylight hours.

Using Table 1 from USFWS (2020) (reproduced below), the disturbance distance for construction equipment generating "very high" sound levels is 250 meters or 825 feet—i.e., logging truck activity within 825 feet of nesting activity is expected to result in "take" of marbled murrelets or northern spotted owls. However, the nearest logging truck activity that may occur in the vicinity of occupied/contiguous marbled murrelet habitat and potential northern spotted owl and Pacific marten habitat during the breeding season would be over 1,000 feet away along SE 98th Street or near the Seal Rock water tower **(Figure 7**). No logging or tree removal is proposed to occur near potential nesting/denning habitat during the combined marbled murrelet, northern spotted owl and Pacific marten breeding/denning season (February 1 – September 15).

Table 1. Estimated disturbance distance (in feet) due to elevated action-generated sound levels affecting the northern spotted owl and marbled murrelet, by sound level.

Existing (Ambient) Pre-Project Sound Level (dB) [1, 2]	Anticipated Action-Generated Sound Level (dB) [2, 3]			
	Moderate (71-80)	High (81-90)	Very High (91-100)	Extreme (101-110)
"Natural Ambient" [4] (< = 50)	50 (165)[5,6]	150 (500)	400 (1,320)	400 (1,320)
Very Low (51-60)	0	100 (330)	250 (825)	400 (1,320)
Low (61-70)	0	50 (165)	250 (825)	400 (1,320)
Moderate (71-80)	0	50 (165)	100 (330)	400 (1,320)
High (81-90)	0	50 (165)	50 (165)	150 (500)

Source: USFWS (2020). Disturbance distances are presented in meters and (feet).

Indirect Effects

Habitat modification or tree removal is proposed to affect approximately three acres of occupied and contiguous marbled murrelet habitat (see Table 1), which is also considered potential suitable northern spotted owl and Pacific marten habitat. Tree removal in occupied/contiguous habitat would affect two percent of the surrounding suitable forest (approximately 140 acres) and is not expected to adversely impair the ability of marbled murrelets, northern spotted owl or Pacific marten to reproduce in the area. Several mature trees with large limbs and sufficient canopy cover will remain in the Thiel Creek riparian zone and in areas outside of the FAA regulated airspace that could provide suitable habitat for these species that depend on late successional forests.

Noise generated from the project would likely be from chainsaws, backhoes, dozers, or logging trucks. These noise sources would occur more than 1,000 feet away from occupied/contiguous marbled murrelet and potential northern spotted owl and Pacific marten habitat and are anticipated to have minimal impacts. Refer to the section on construction noise analysis for more details.

The wooded areas north of the Airport where obstruction removal is proposed do no provide suitable habitat for the marbled murrelet, the northern spotted owl or Pacific marten. These areas lack late successional mature and old-growth forest structural characteristics and are close to human disturbances and large openings that reduce the suitability of the forest because of the ability of competitors/predators (i.e., barred owls, red-tailed hawks, bobcats etc.) to readily access potential nests.

Effects from Interrelated and Interdependent Actions

An interdependent activity is an activity that has no independent utility apart from the proposed project. An interrelated activity is an activity that is part of a larger action and depends on the larger action for its justification.

The proposed project consists of removing tall trees from regulated airspace to maintain safe conditions for landing aircraft and is not part of a larger action or series of actions that depend on the obstruction removal. Effects from activities associated with the various elements of the project, including construction staging and access, are considered in the direct and indirect effects analyses for this BA.

Cumulative Effects

Cumulative effects are those effects of future state or private activities, not involving federal activities, that are reasonably certain to occur within the action area of the federal action subject to consultation (50 CFR 402.02).

The City of Newport's Capital Improvement Plan (CIP) for fiscal years 2021-2022 to 2026-2027 was reviewed to determine potential future projects within the action area, which is effectively limited to the City-owned Airport property for the purposes of this consultation. The CIP does not identify any projects planned for the Airport, either federal or non-federal.

Finding of Effect

The following effect determinations for listed species and critical habitat are made for the Newport Airport Obstruction Removal Project:

Marbled Murrelet, Northern Spotted Owl, and Pacific Marten: **May Affect, Not Likely to Adversely Affect (NLAA).**

Critical Habitat: **No Effect.**

The following justifications are provided for these determinations for all three species:

- Tree removal is not proposed in designated or proposed critical habitat for the marbled murrelet, northern spotted owl or Pacific marten.
- Tree removal in occupied/contiguous habitat (as shown on **Figures 7 and 8**) would occur outside of the combined marbled murrelet, northern spotted owl and Pacific marten breeding/denning season (February 1 to September 15) to avoid the potential for take.
- Tree removal in occupied/contiguous habitat would occur during daylight hours (i.e., not at dawn or dusk).
- Obstruction removal that may occur prior to September 15 in areas north of Thiel Creek off of SE 98th Street or near the Seal Rock water tower (both > 1,000 feet from occupied/contiguous habitat) are anticipated to have minimal noise impacts due to the distance from potential marbled murrelet and northern spotted owl nesting and Pacific marten denning areas.
- Tree removal would be limited in scope and scale affecting just under three acres (2.74 acres), or two percent of the occupied and contiguous habitat patch (totaling approximately 140 acres) outlined on **Figures 7 and 8**.

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Appendix A
Figures

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NORTH

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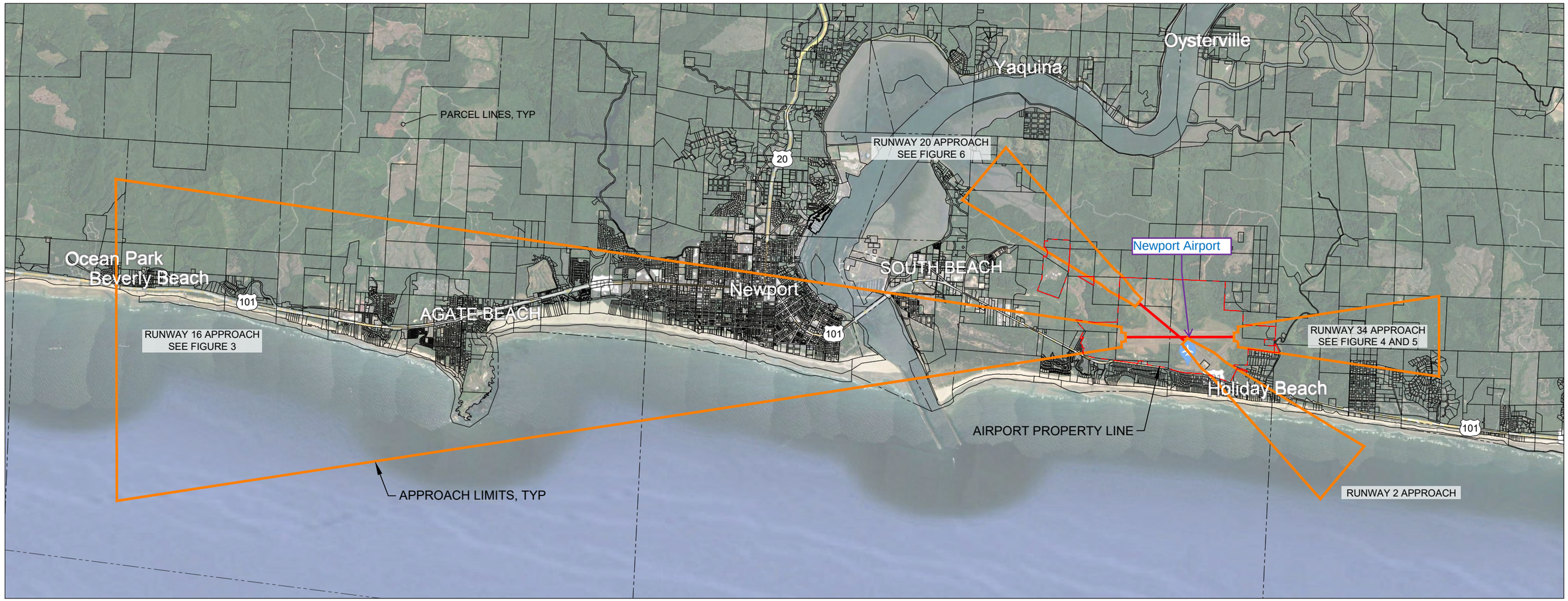
SCALE IN FEET



PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

NEWPORT MUNICIPAL AIRPORT APPROACH AREAS

Figure 1 DEC 2021

NORTH

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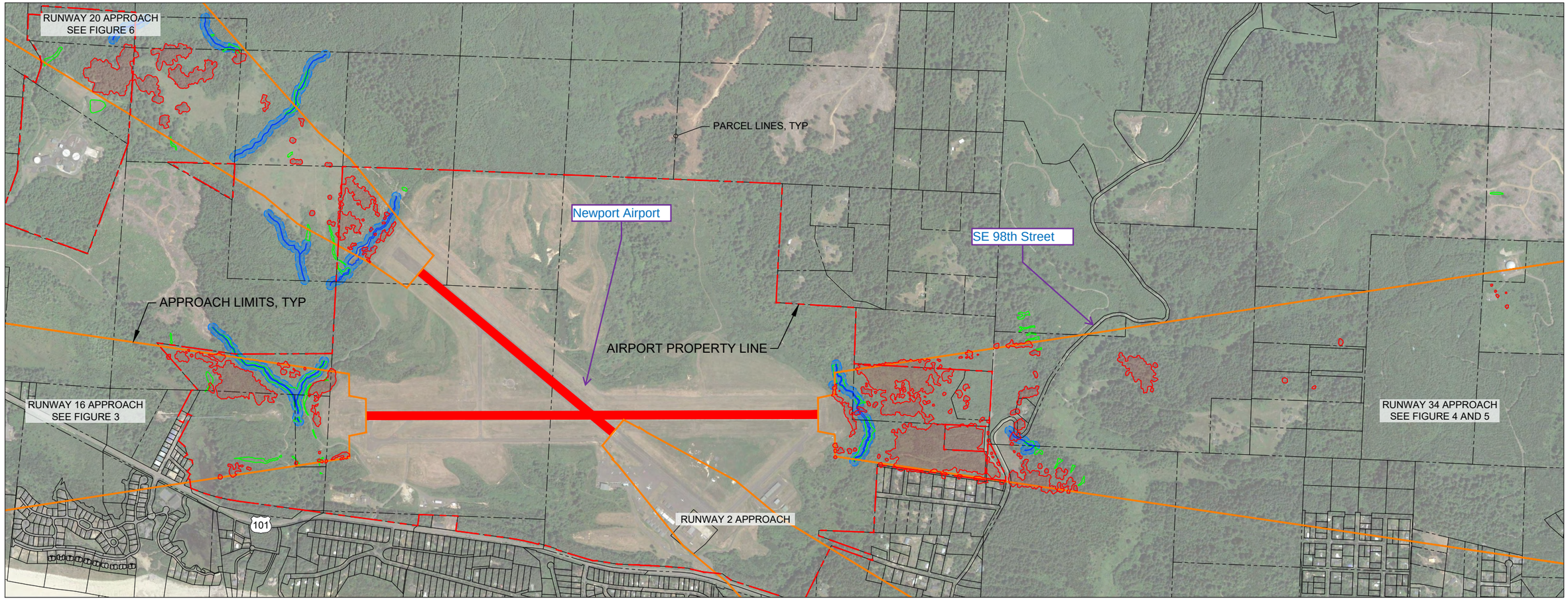
SCALE IN FEET



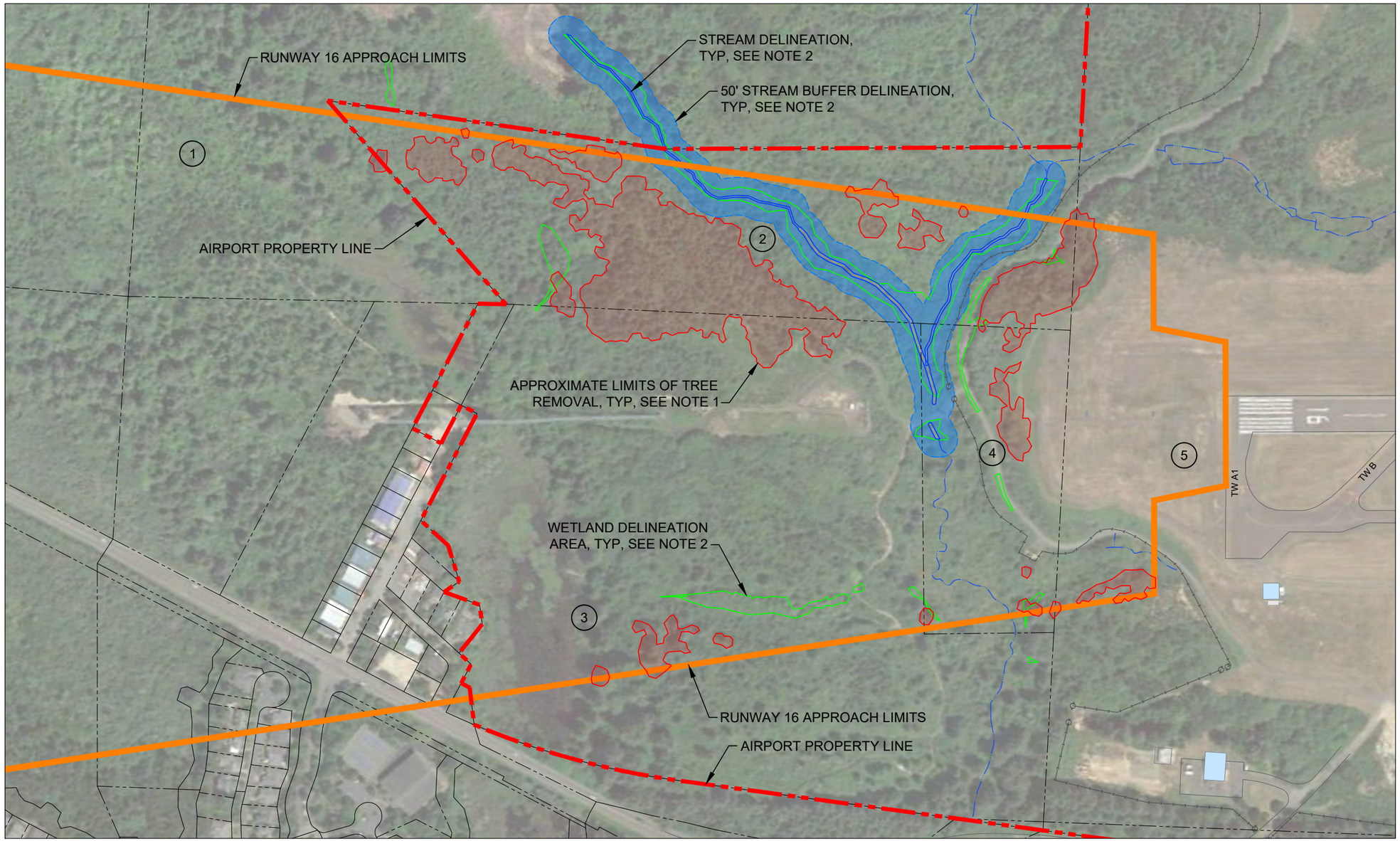
PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

OBSTRUCTION REMOVAL PLAN

Figure 2 DEC 2021



NORTH

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SCALE IN FEET

TAG	PARCEL ID	OWNER	TREE REMOVAL
1	11-11-29-00-00300-00	LANDWAVES INC	0.04 AC
2	11-11-29-00-00400-00	CITY OF NEWPORT	5.81 AC
3	11-11-29-00-01402-00	CITY OF NEWPORT	1.70 AC
4	11-11-29-00-01401-00	CITY OF NEWPORT	0.50 AC
5	11-11-29-00-01100-00	CITY OF NEWPORT	0.45 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.
2. STREAM, BUFFERS AND WETLAND AREAS PROVIDED BY ESA, DATED OCT 19, 2021.

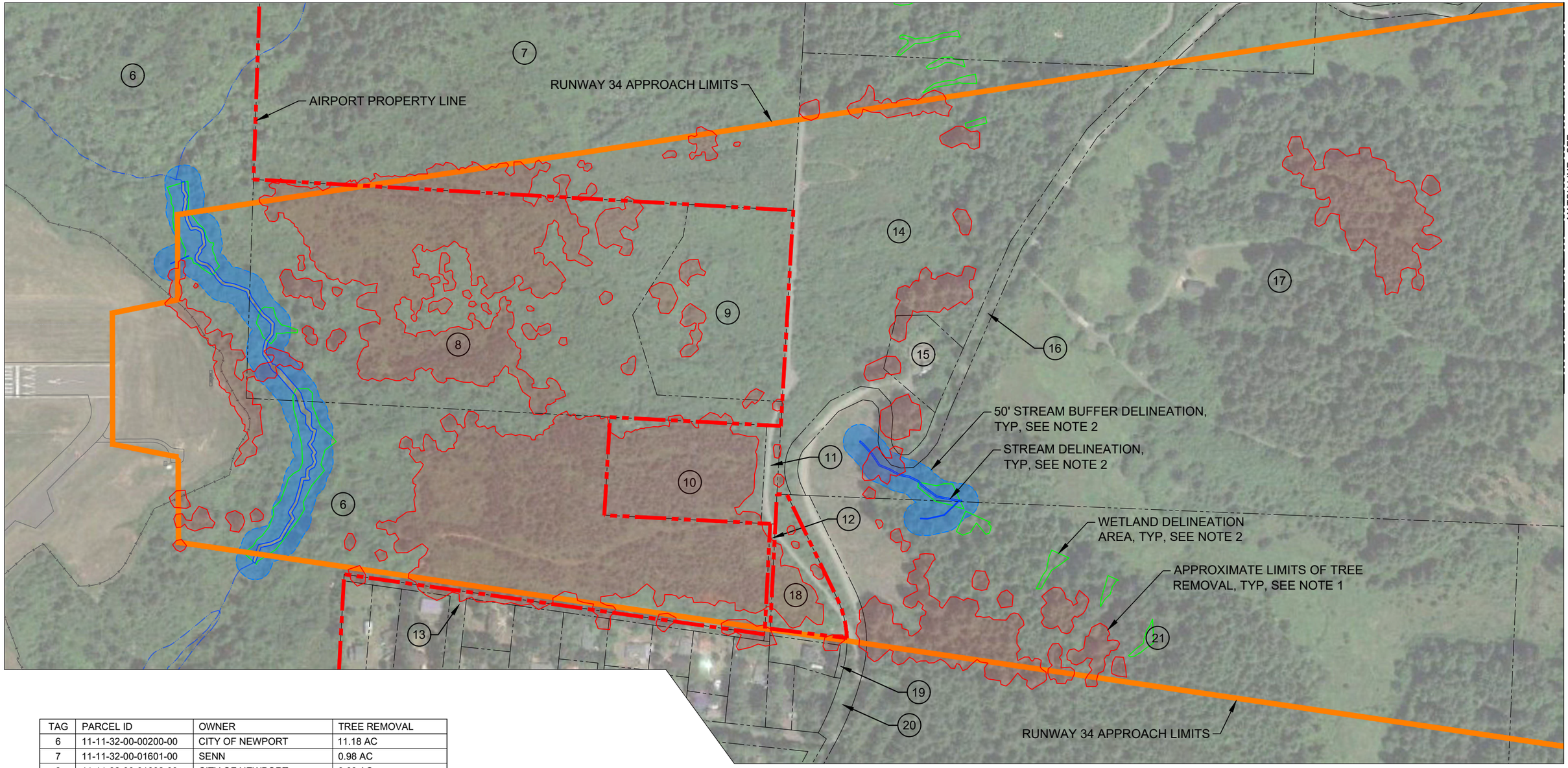
PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

RUNWAY 16 APPROACH

Figure 3 DEC 2021



TAG	PARCEL ID	OWNER	TREE REMOVAL
6	11-11-32-00-00200-00	CITY OF NEWPORT	11.18 AC
7	11-11-32-00-01601-00	SENN	0.98 AC
8	11-11-32-00-01602-00	CITY OF NEWPORT	8.68 AC
9	11-11-32-00-01604-00	CITY OF NEWPORT	0.38 AC
10	11-11-32-00-00201-00	STATE OF OREGON	2.80 AC
11	11-11-32-00-01603-00	FERRIS	0.03 AC
12	11-11-32-00-01600-00	LINCOLN COUNTY	0.09 AC
13	11-11-32-CC-0ROAD-00	ROW	0.50 AC
14	12-11-05-00-00800-00	STEEL STRING INC	1.50 AC
15	12-11-05-00-00600-00	STEEL STRING INC	0.11 AC
16	12-11-05-00-0ROAD-00	ROW	0.10 AC
17	12-11-05-00-00803-00	STEEL STRING INC	2.55 AC
18	12-11-06-00-00100-00	CITY OF NEWPORT	0.53 AC
19	12-11-06-00-00200-00	WATTS	0.06 AC
20	12-11-06-00-0ROAD-01	ROW	0.08 AC
21	12-11-06-00-00600-00	STEEL STRING INC	3.03 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.
2. STREAM, BUFFERS AND WETLAND AREAS PROVIDED BY ESA, DATED OCT 19, 2021.

PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

NORTH

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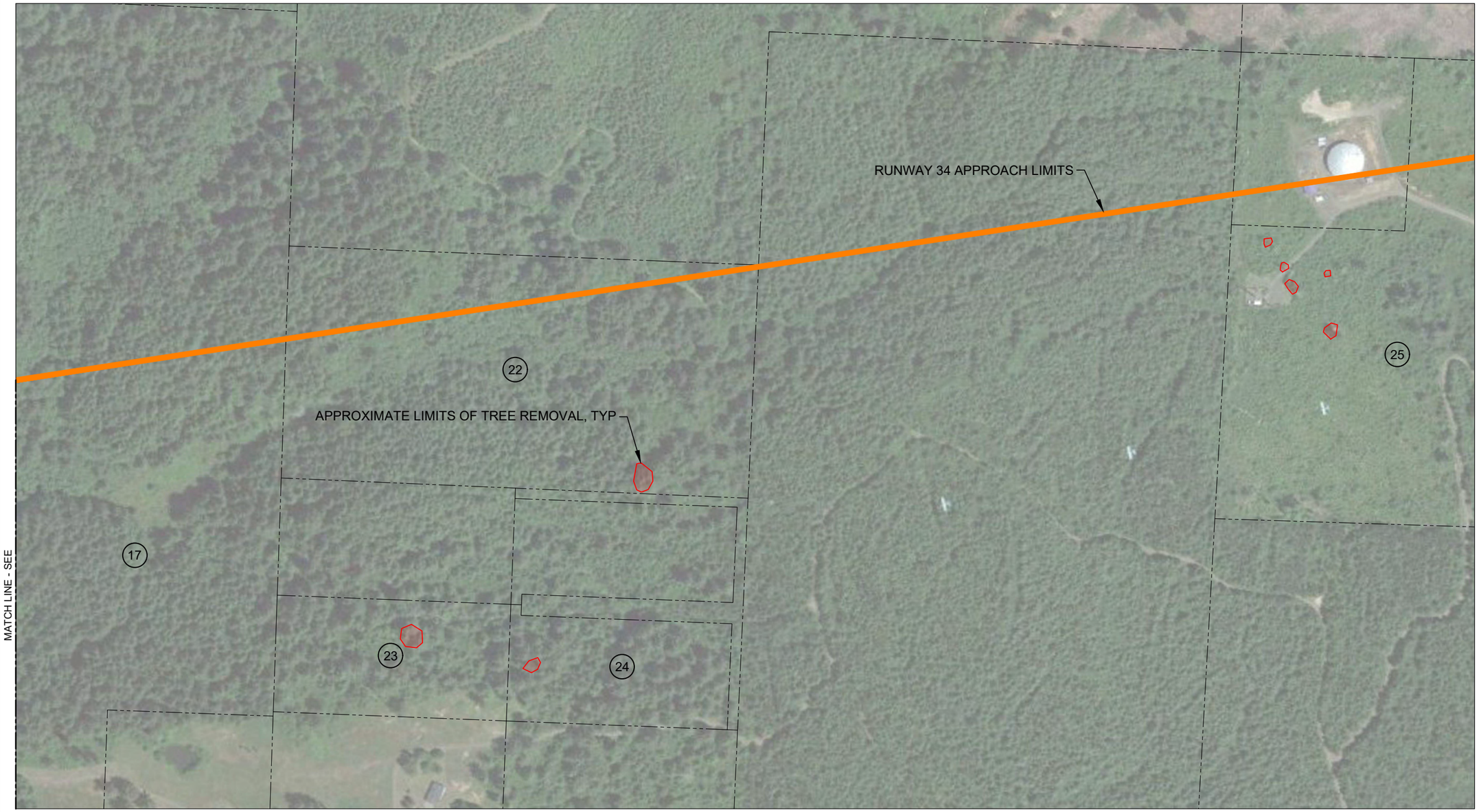
SCALE IN FEET

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

RUNWAY 34 APPROACH (North)

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

Figure 4 DEC 2021



TAG	PARCEL ID	OWNER	TREE REMOVAL
17	12-11-05-00-00803-00	STEEL STRING INC	2.55 AC
22	12-11-05-00-00802-00	WEYERHAEUSER CO	0.08 AC
23	12-11-05-CB-00200-00	STEEL STRING INC	0.08 AC
24	12-11-05-CB-00700-00	STEEL STRING INC	0.03 AC
25	12-11-00-00-03400-00	EMERY INVESTMENTS INC	0.08 AC

PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

NORTH

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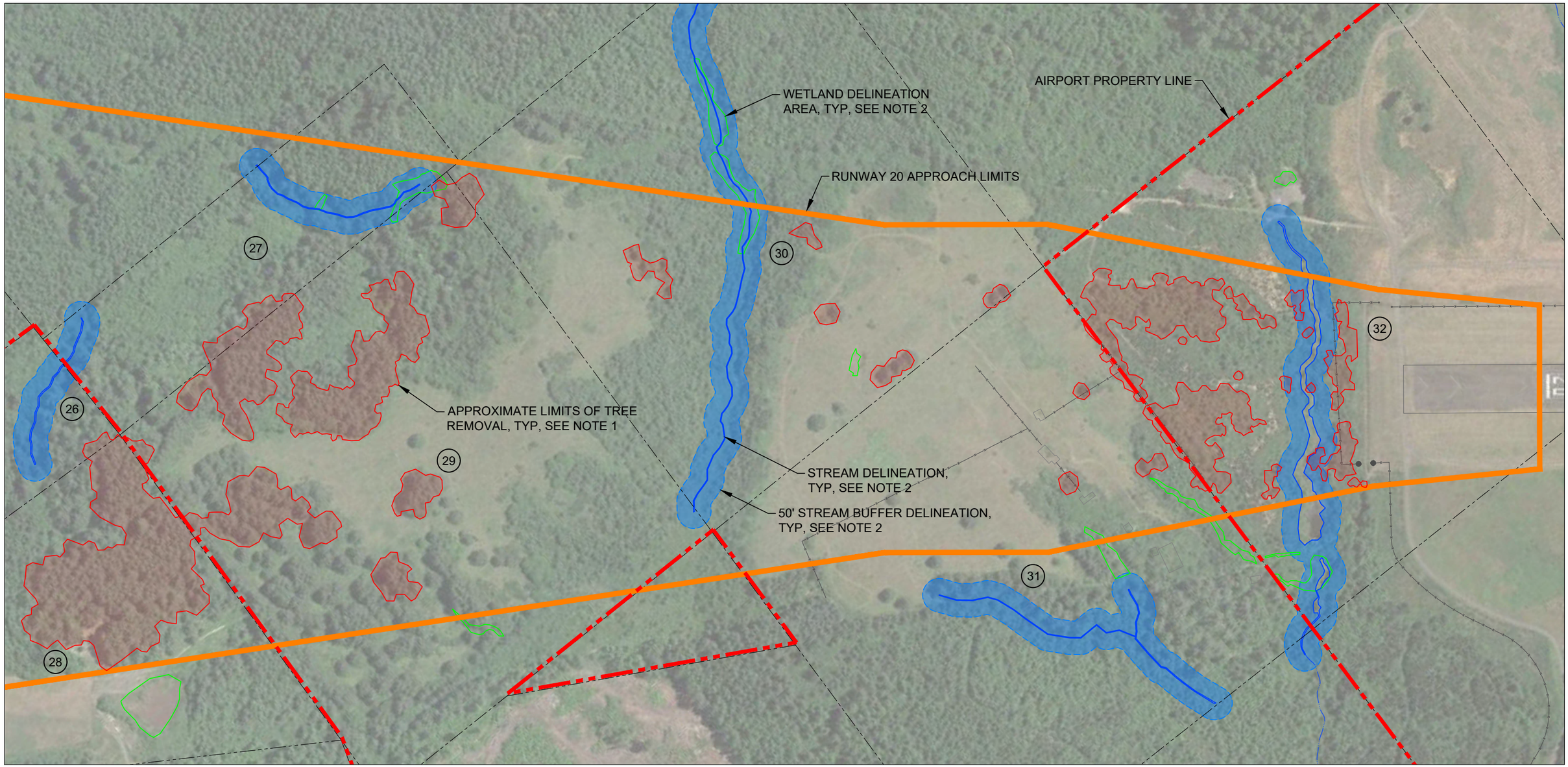
SCALE IN FEET

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

RUNWAY 34 APPROACH (South)

Figure 5 DEC 2021

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043



TAG	PARCEL ID	OWNER	TREE REMOVAL
26	11-11-21-00-01600-00	CITY OF NEWPORT	0.06 AC
27	11-11-28-00-00700-00	HALL	0.25 AC
28	11-11-20-00-02700-00	CITY OF NEWPORT	4.80 AC
29	11-11-29-00-00100-00	HALL	5.90 AC
30	11-11-29-00-00600-00	HALL	0.72 AC
31	11-11-29-00-00500-00	HALL	0.54 AC
32	11-11-29-00-01000-00	CITY OF NEWPORT	3.70 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.
2. STREAM, BUFFERS AND WETLAND AREAS PROVIDED BY ESA, DATED OCT 19, 2021.

PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

NORTH

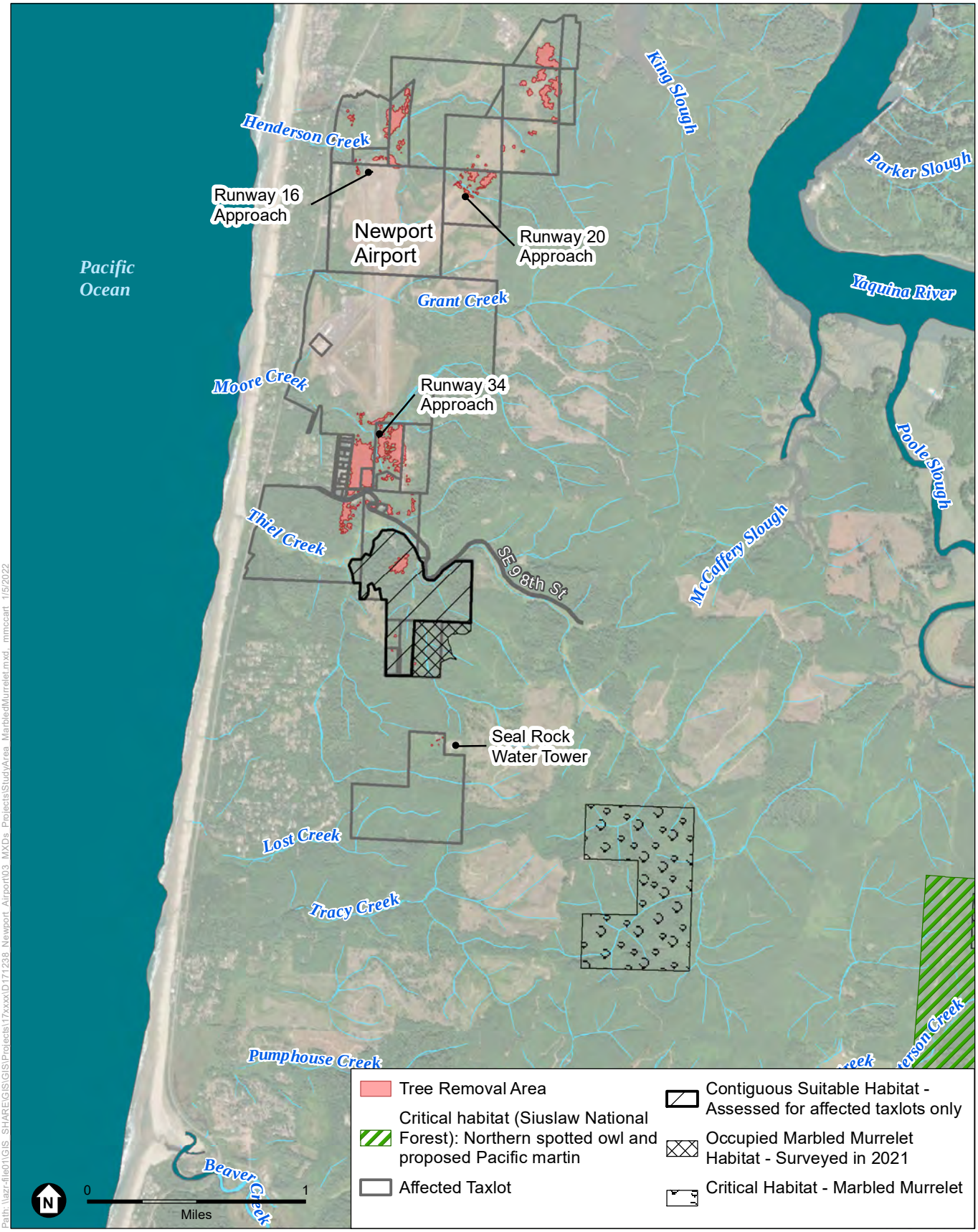
0 150 300
SCALE IN FEET

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

RUNWAY 20 APPROACH

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

Figure 6 DEC 2021

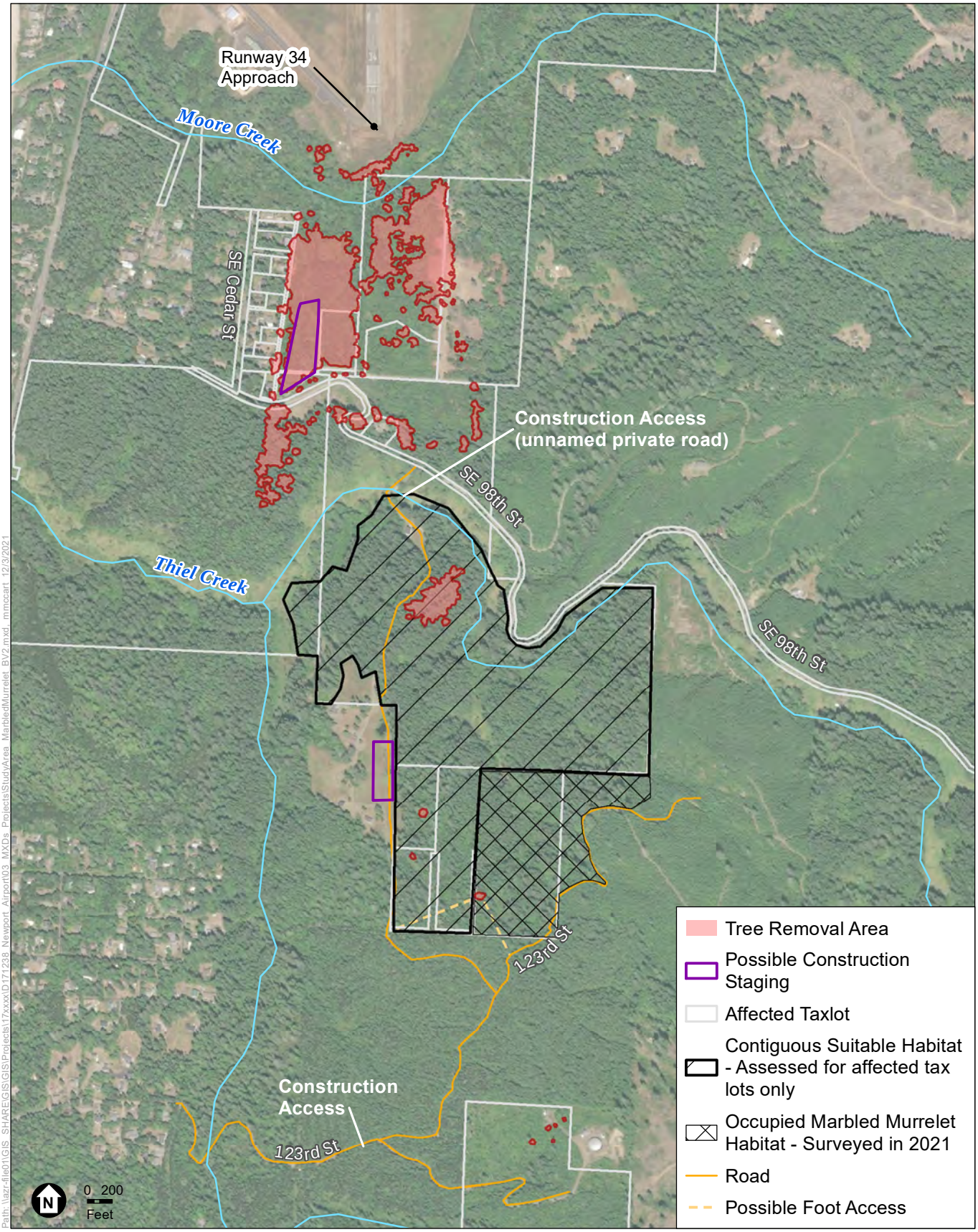


SOURCE: ESRI, 2020; Weyerhaeuser, 2021; Precision Approach Engineering, 2019

Newport Airport Obstruction Removal Phase 2

Figure 7
Study Area Overview and Critical Habitat

ESA



SOURCE: ESRI, 2020; Weyerhaeuser, 2021; Precision Approach Engineering, 2019

Newport Airport Obstruction Removal Phase 2

Figure 8
Construction Access and Staging

ESA

Appendix B
USFWS Species List

ESA

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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: November 11, 2021
Consultation Code: 01EOFW00-2022-SLI-0095
Event Code: 01EOFW00-2022-E-00244
Project Name: Newport Airport Obstruction Removal Project

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.

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). 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).

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

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

Project Summary

Consultation Code: 01EOFW00-2022-SLI-0095
Event Code: Some(01EOFW00-2022-E-00244)
Project Name: Newport Airport Obstruction Removal Project
Project Type: TRANSPORTATION
Project Description: The City of Newport (City) proposes to remove obstructions from Federal Air Regulations (FAR) Part 77 airspace approach surfaces at the Newport Municipal Airport (Airport) to improve the safety of aircraft operations. Data gathered from evaluating the Airport Geographic Information System Survey as part of the Master Plan Update conducted in 2018 identified obstructions in the protected airspace. A LiDAR survey (Quantum Spatial, Inc. 2019) confirmed numerous obstructions (trees) penetrating the protected airspace.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.57426325,-124.05783486009176,14z

Counties: Lincoln County, Oregon

Endangered Species Act Species

There is a total of 8 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[1], 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.

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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.

Mammals

NAME	STATUS
Pacific Marten, Coastal Distinct Population Segment *Martes caurina* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/9081	Threatened

Birds

NAME	STATUS
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

Reptiles

NAME	STATUS
Leatherback Sea Turtle *Dermochelys coriacea* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1493	Endangered
Loggerhead Sea Turtle *Caretta caretta* Population: North Pacific Ocean DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1110	Endangered
Olive Ridley Sea Turtle *Lepidochelys olivacea* Population: Wherever found, except when listed as endangered under 50 CFR 224.101 No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1513	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

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

APPENDIX B

No Effect Letter

ENVIRONMENTAL ASSESSMENT

Newport Municipal Airport Obstruction Removal

ESA

819 SE Morrison Street
Suite 310
Portland, OR 97214
503.274.2010 phone
503.274.2024 fax

esassoc.com

memorandum

date	April 8, 2022
to	Ilon Logan, Federal Aviation Administration
cc	Lance Vanderbeck
from	Sarah Hartung and Hannah Smiley, ESA
subject	Newport Municipal Airport Obstruction Removal Project – Letter of No Effect

Project Description

The City of Newport (City) proposes to remove approximately 60 acres of vegetation and trees that are obstructions to the approach of Runways 16, 20, and 34 at the Newport Municipal Airport (Airport). Removing these trees and vegetation will allow for a clear approach surface to improve the safety of aircraft operations. Data gathered from evaluating the Airport Geographic Information System Survey as part of the Master Plan Update conducted in 2018 (WHPacific) identified obstructions in the protected airspace. A LiDAR survey (Quantum Spatial, Inc. 2019) confirmed numerous obstructions (trees) penetrating the protected airspace. The City proposes to remove obstructions (trees) within three separate Federal Air Regulations Part 77 *Safe, Efficient Use, and Preservation of the Navigable Airspace* (FAA 2010) approach surfaces:

- Visual approach of Runway 20
- Non-precision instrument approach and threshold siting surfaces of Runway 34.
- Precision instrument approach and threshold siting surfaces of Runway 16.

Areas of trees identified as penetrating the approach and threshold siting surfaces and proposed to be removed are shown on the attached figures. The original number of trees slated for removal were scaled-back markedly in 2020 and 2021 after coordination with landowners and the FAA. The original footprint of clearing all possible obstructions totaled approximately 240 acres, whereas the current proposed footprint of tree removal is approximately 60 acres.

We have prepared this assessment on behalf of the Federal Aviation Administration (FAA) to evaluate potential project impacts to species listed under the Endangered Species Act that under the jurisdiction of the National Marine Fisheries Service (NMFS). We also evaluated the presence of Essential Fish Habitat (EFH) as indicated in the Magnuson Stevens Fishery Conservation and Management Act (Magnuson Stevens Act).

Species Evaluated

A data review as well as meetings and correspondence with the NMFS have determined that the following threatened species and designated critical habitat have the potential to occur in the vicinity of the project:

- Oregon Coast Coho Salmon (*Oncorhynchus kisutch*) and Critical Habitat

Thiel Creek is designated critical habitat for Oregon Coast Coho Salmon.

Habitat in the Project Area

Several small tributaries of the Pacific Ocean flow across the study area and vicinity: Henderson Creek, Grant Creek, Thiel Creek, and Moore Creek (Figure 7.0, attached). Thiel Creek is the only stream mapped as critical habitat for federally-listed Oregon Coast Coho Salmon. Coho salmon are present in Thiel Creek and at low numbers in Henderson Creek, but have not been observed in Moore Creek or Grant Creek (Spangler, pers. comm. 2021).

Effect Determination and Justification

The obstruction removal project would have ***no effect*** on Oregon Coast Coho Salmon and associated Critical Habitat based on the following reasons:

- Robust erosion and sedimentation control best management practices (BMPs) are proposed near and within wetland and riparian buffers to prevent siltation of in-stream habitat.
- No work is proposed below the ordinary high water mark (OHWM) of fish-bearing streams or in tributaries to fish-bearing streams.
- No work is proposed in the 50-foot riparian buffer of Thiel Creek or Henderson Creek. A few trees are proposed for removal within the 50-foot buffer of Moore Creek, but this stream is not critical habitat.
- No trees that provide streamside shading in critical habitat would be removed.
- No new permanent roads or new permanent impervious surfaces are proposed.
- No temporary stream crossings are proposed.

The no effect determination is based on conservation and minimization measures listed below. Robust erosion and sedimentation control best management practices (BMPs) are proposed near and within wetland and riparian buffers because siltation of in-stream habitat is identified as a major impediment to the recovery of Oregon Coast Coho Salmon (NMFS 2016). These include:

- Trees would be cut at ground level and tree stumps would be left in place to minimize soil disturbance.
- Trees within upland areas (i.e., outside of delineated wetlands and riparian buffers) will be felled and hauled offsite using existing roads.
- Trees within 50 feet of a creek or within a delineated wetland would be left where they fall rather than hauled offsite to benefit aquatic organisms, especially coho in Henderson and Thiel Creeks. In these areas, obstructions will be removed using hand tools and low impact equipment. Heavy equipment such as track rigs will not be used. The contractor will be required to access the site and perform the work using on foot or using wetland mats to protect sensitive vegetation.
- Construction access and staging areas would be located on existing paved or disturbed surfaces in upland areas to the extent practicable. No staging would occur within delineated wetlands or riparian buffers.

  All construction staging and construction access areas will be restored to previous contours, de-compacted, and seeded with native groundcover species within one year of construction. Any natural areas disturbed due to obstruction removal would be restored with native groundcover and/or native shrub species as appropriate.
- Wetlands and riparian setbacks will be flagged prior to construction to prevent inadvertent or unnecessary encroachment.
- Require emergency spill response and clean-up equipment to be available on site during all construction activities.

- In the Henderson Creek drainage basin:
    - Tree removal in wetland buffers and tributary stream buffers would occur during the dry season (late July to mid-September) to eliminate the chance of erosion and sedimentation below the OHWM. Refer to Figure 7.1 for notes on timing restrictions.
    - Erosion and sedimentation control BMPs (silt fencing, straw wattles, coir fabric, etc.) would be installed and inspected twice-weekly inspections to prevent soil from mobilizing outside of work areas and into fish-bearing streams.
    - Soils would be stabilized with an appropriate seed mix (may include sterile grass or a native upland forest herbaceous mix) immediately after tree removal and inter-planted by the next growing season with native shrubs or short-statured trees such as vine maple, red-osier dogwood, cascara, and Douglas hawthorn (i.e., if trees are removed in the late summer/early fall, soil stabilization would occur that same fall, and inter-planting would be accomplished the following spring.
- In the Thiel Creek drainage basin:
    - Tree removal within 50 feet of wetlands and seeps/streams would occur during the dry season (late July to mid-September) to eliminate the chance of erosion and sedimentation below the OHWM. Refer to Figure 7.2 for notes on timing restrictions. These areas are outside of suitable habitat for the marbled murrelet, northern spotted owl and Pacific marten which occurs south of the creek. Refer to the Biological Assessment for more details (ESA 2022).
    - Erosion and sedimentation control BMPs (silt fencing, straw wattles, coir fabric, etc.) would be installed and inspected twice-weekly inspections to prevent soil from mobilizing outside of work areas and into fish-bearing streams.
    - Soils would be stabilized with an appropriate seed mix (may include sterile grass or a native upland forest herbaceous mix) immediately after tree removal and inter-planted by the next growing season with native shrubs or short-statured trees such as vine maple, red-osier dogwood, cascara, and Douglas hawthorn (i.e., if trees are removed in the late summer/early fall, soil stabilization would occur that same fall, and inter-planting would be accomplished the following spring.
- In the Moore Creek drainage basin:
    - Although no listed fish species are mapped for Moore Creek, timing restrictions on tree removal within the 50-foot buffer and adjacent wetlands are included to minimize impacts to aquatic organisms such as cutthroat trout per input from ODFW (Spangler, pers. comm. 2022).

Essential Fish Habitat

The project is located within mapped EFH for Coho, but is not within a habitat area of particular concern (NMFS 2022). The Magnuson-Stevens Act mandates that NMFS must identify EFH for federally managed marine fish. Federal agencies are required to consult with NMFS on all activities, or proposed activities, authorized, funded, or undertaken by the agency that may adversely affect EFH.

The obstruction removal project would have ***no effect*** on EFH based on the following reasons:

- Robust erosion and sedimentation control BMPs are proposed near and within wetland and riparian buffers to prevent siltation of in-stream habitat (see conservation and minimization measures described above).
- No work is proposed below the OHWM of fish-bearing streams or in tributaries to fish-bearing streams.

- No work is proposed in the 50-foot riparian buffer of Thiel Creek (EFH) or Henderson Creek (EFH). A few trees are proposed for removal within the 50-foot buffer of Moore Creek, but this stream does not meet the definition of EFH because it is not known to support Coho per ODFW. Additionally, Moore Creek is not considered ESH by Oregon Department of State Lands (DSL, 2021).
- No new permanent roads or new permanent impervious surfaces are proposed.
- No temporary stream crossings are proposed.

We believe that assessment satisfies the FAA's responsibilities under Section 7(c) of the Endangered Species Act and the Magnuson-Stevens Act at this time. We will continue to remain aware of any change in status of these species and will be prepared to reevaluate potential project impacts if necessary.

References

DSL (Department of State Lands). 2018. Essential Salmon Habitat Map. URL: https://maps.dsl.state.or.us/esh/

ESA (Environmental Science Associates). 2022. Newport Municipal Airport Obstruction Removal: Biological Assessment. Prepared for City of Newport and FAA. January 2022.

FAA (Federal Aviation Administration). 2010. 14 Code of Federal Regulations Part 77 *Safe, Efficient Use, and Preservation of the Navigable Airspace*. 75 Federal Register 42296.

NMFS (National Marine Fisheries Service). 2016. Recovery Plan for Oregon Coast Coho Salmon (*Oncorhynchus kisutch*).

NMFS (National Marine Fisheries Service). 2017. Magnuson-Stevens Fishery Conservation and Management Act.

NMFS (National Marine Fisheries Service). 2021. Oregon Coast Coho salmon critical habitat. URL: Https://www.westcoast.fisheries.noaa.gov/publications/gis_maps/maps/salmon_steelhead/critical_habitat/coho/coho_orc_update.pdf

NMFS (National Marine Fisheries Service). 2022. Essential Fish Habitat Mapper. URL: https://www.habitat.noaa.gov/apps/efhmapper.

Oregon Biodiversity Information Center (ORBIC). 2019. Data system search for rare, threatened, and endangered plant and animal records for the Newport Municipal Airport Environmental Assessment Project. Institute for Natural Resources, Oregon State University and Portland State University.

Quantum Spatial, Inc. 2019. KONP Obstruction Analysis Report. Newport Municipal Airport.

Spangler. 2021 and 2002. Personal communication between John Spangler, ODFW and Sarah Hartung, ESA on September 29, 2021 and February 25, 2022.

WHPacific. 2018. Airport Master Plan Update. Newport Municipal Airport. Final Report February 2018.

NORTH

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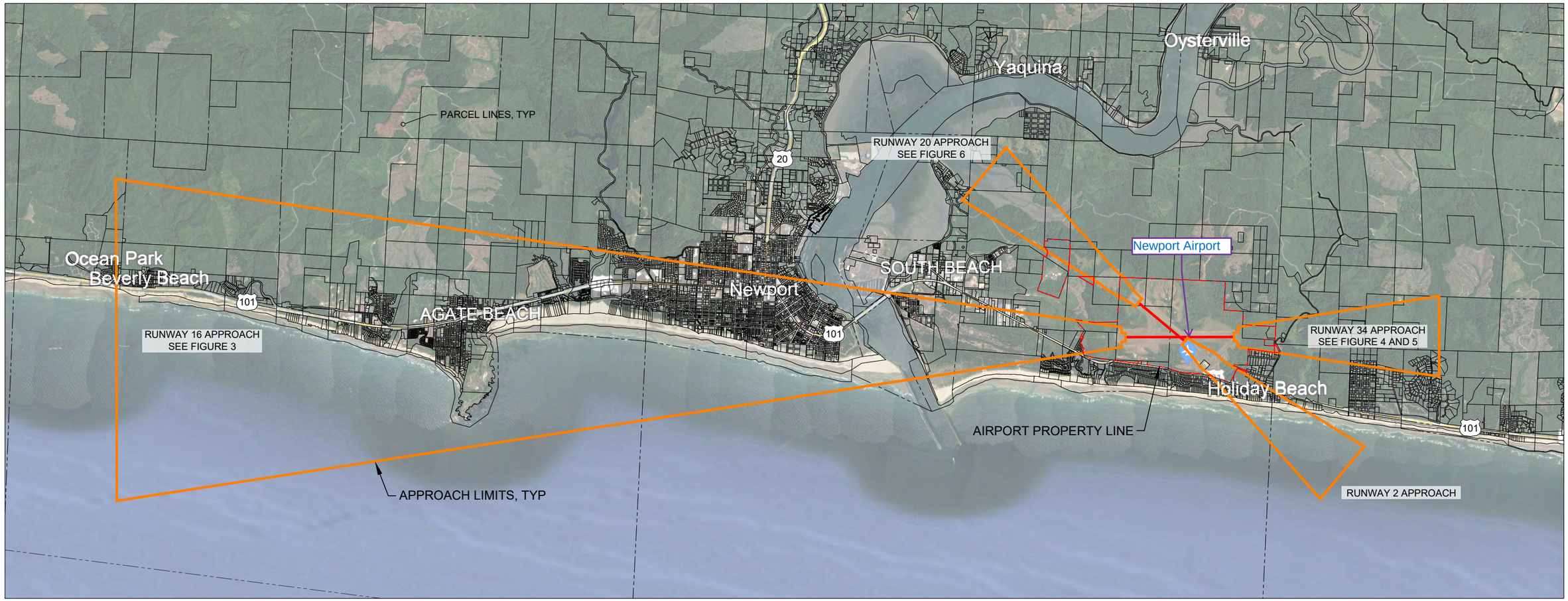
SCALE IN FEET



PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

NEWPORT MUNICIPAL AIRPORT APPROACH AREAS

Figure 1 DEC 2021

NORTH

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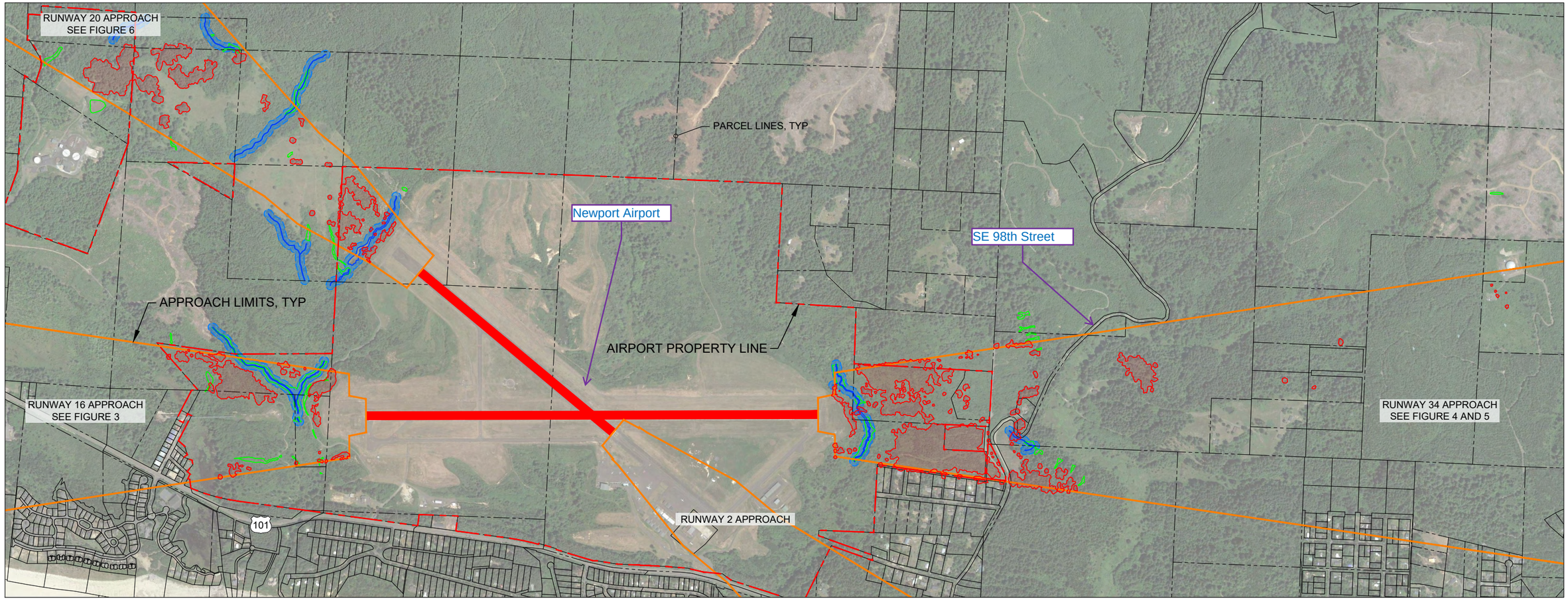
SCALE IN FEET



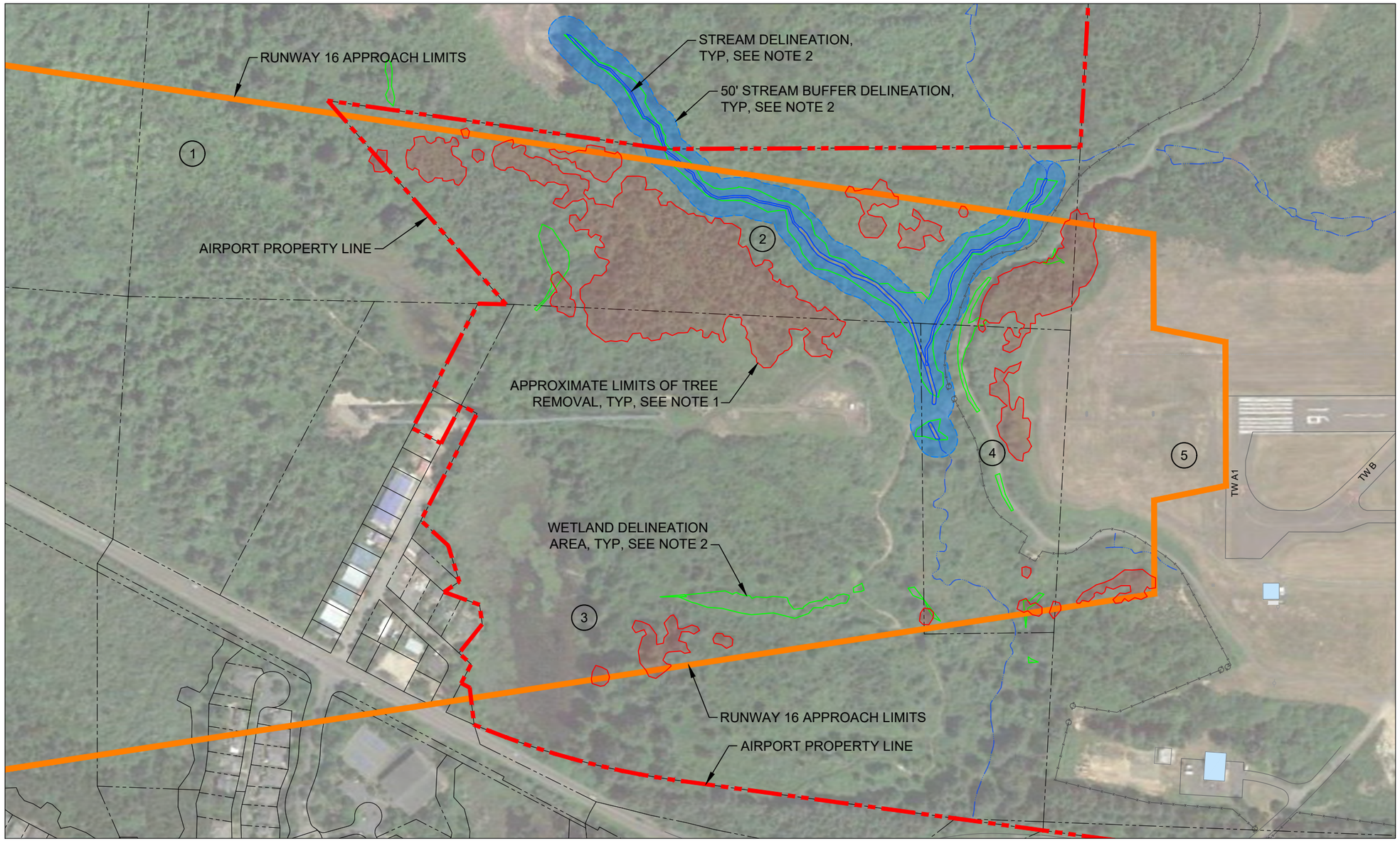
PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

OBSTRUCTION REMOVAL PLAN

Figure 2 DEC 2021



NORTH

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SCALE IN FEET

TAG	PARCEL ID	OWNER	TREE REMOVAL
1	11-11-29-00-00300-00	LANDWAVES INC	0.04 AC
2	11-11-29-00-00400-00	CITY OF NEWPORT	5.81 AC
3	11-11-29-00-01402-00	CITY OF NEWPORT	1.70 AC
4	11-11-29-00-01401-00	CITY OF NEWPORT	0.50 AC
5	11-11-29-00-01100-00	CITY OF NEWPORT	0.45 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.
2. STREAM, BUFFERS AND WETLAND AREAS PROVIDED BY ESA, DATED OCT 19, 2021.

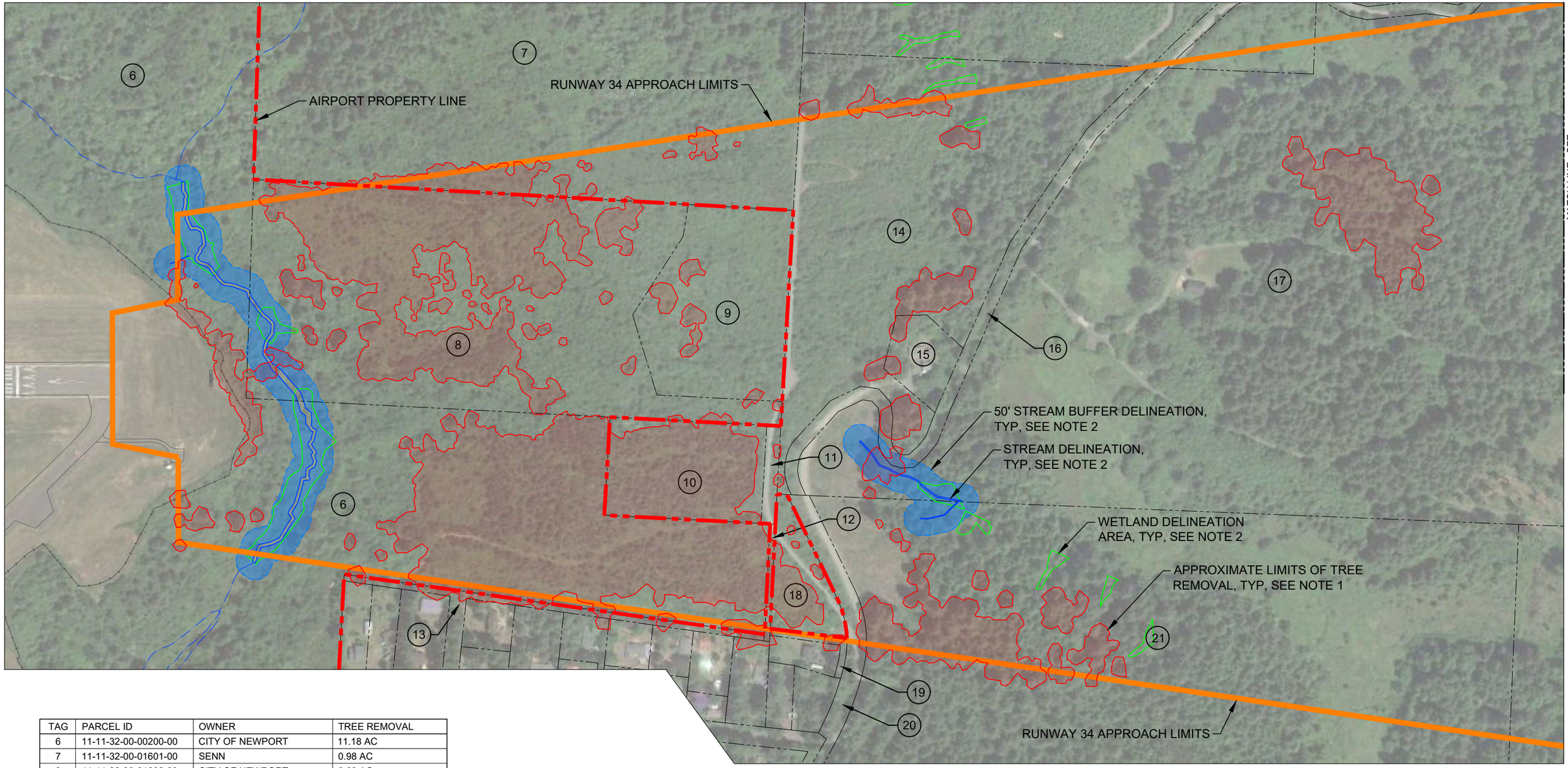
PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

RUNWAY 16 APPROACH

Figure 3 DEC 2021



TAG	PARCEL ID	OWNER	TREE REMOVAL
6	11-11-32-00-00200-00	CITY OF NEWPORT	11.18 AC
7	11-11-32-00-01601-00	SENN	0.98 AC
8	11-11-32-00-01602-00	CITY OF NEWPORT	8.68 AC
9	11-11-32-00-01604-00	CITY OF NEWPORT	0.38 AC
10	11-11-32-00-00201-00	STATE OF OREGON	2.80 AC
11	11-11-32-00-01603-00	FERRIS	0.03 AC
12	11-11-32-00-01600-00	LINCOLN COUNTY	0.09 AC
13	11-11-32-CC-0ROAD-00	ROW	0.50 AC
14	12-11-05-00-00800-00	STEEL STRING INC	1.50 AC
15	12-11-05-00-00600-00	STEEL STRING INC	0.11 AC
16	12-11-05-00-0ROAD-00	ROW	0.10 AC
17	12-11-05-00-00803-00	STEEL STRING INC	2.55 AC
18	12-11-06-00-00100-00	CITY OF NEWPORT	0.53 AC
19	12-11-06-00-00200-00	WATTS	0.06 AC
20	12-11-06-00-0ROAD-01	ROW	0.08 AC
21	12-11-06-00-00600-00	STEEL STRING INC	3.03 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.
2. STREAM, BUFFERS AND WETLAND AREAS PROVIDED BY ESA, DATED OCT 19, 2021.

PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

NORTH

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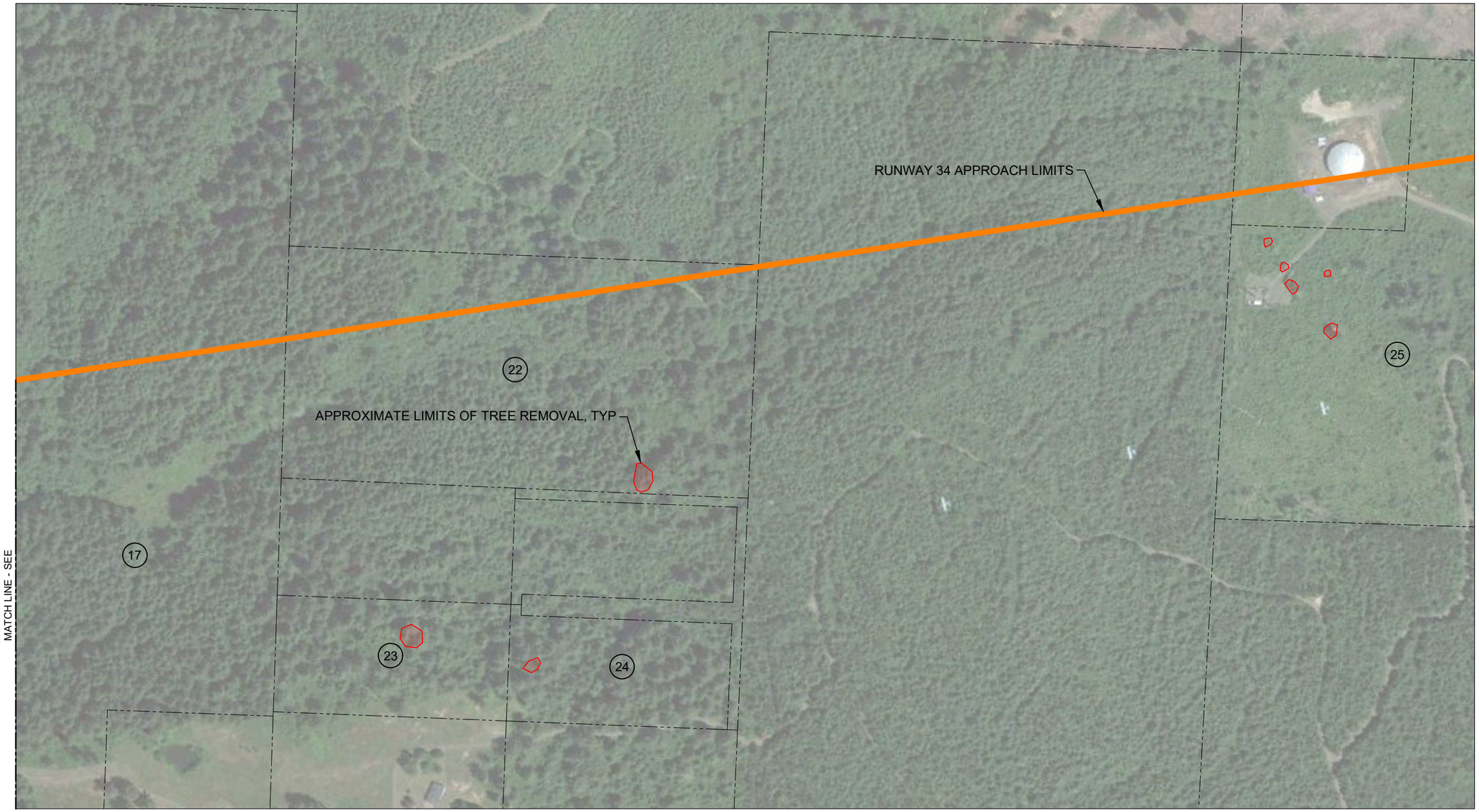
SCALE IN FEET

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

RUNWAY 34 APPROACH (North)

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

Figure 4 DEC 2021



TAG	PARCEL ID	OWNER	TREE REMOVAL
17	12-11-05-00-00803-00	STEEL STRING INC	2.55 AC
22	12-11-05-00-00802-00	WEYERHAEUSER CO	0.08 AC
23	12-11-05-CB-00200-00	STEEL STRING INC	0.08 AC
24	12-11-05-CB-00700-00	STEEL STRING INC	0.03 AC
25	12-11-00-00-03400-00	EMERY INVESTMENTS INC	0.08 AC

PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

NORTH

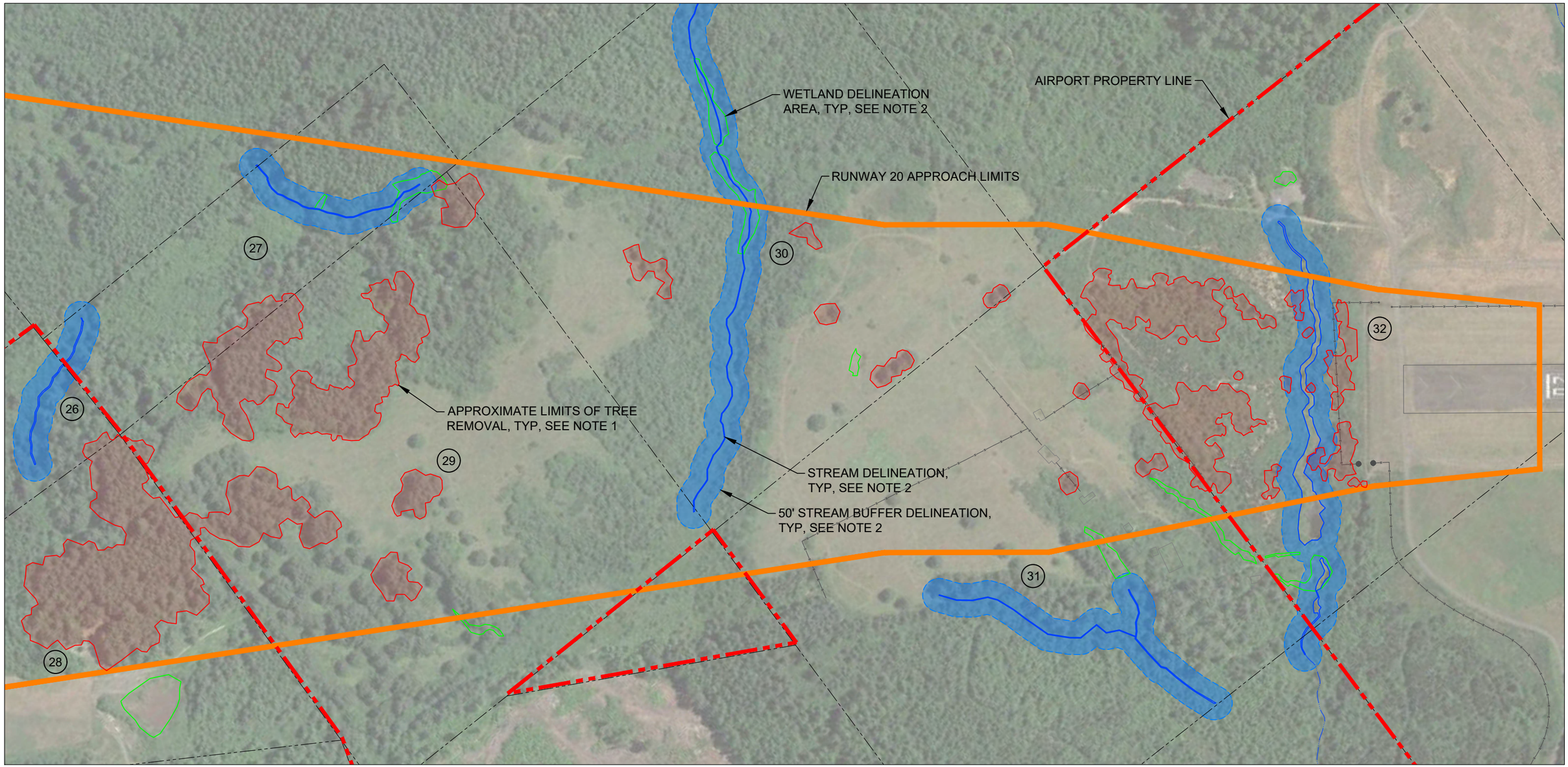
0 150 300
SCALE IN FEET

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

RUNWAY 34 APPROACH (South)

Figure 5 DEC 2021

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043



TAG	PARCEL ID	OWNER	TREE REMOVAL
26	11-11-21-00-01600-00	CITY OF NEWPORT	0.06 AC
27	11-11-28-00-00700-00	HALL	0.25 AC
28	11-11-20-00-02700-00	CITY OF NEWPORT	4.80 AC
29	11-11-29-00-00100-00	HALL	5.90 AC
30	11-11-29-00-00600-00	HALL	0.72 AC
31	11-11-29-00-00500-00	HALL	0.54 AC
32	11-11-29-00-01000-00	CITY OF NEWPORT	3.70 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.
2. STREAM, BUFFERS AND WETLAND AREAS PROVIDED BY ESA, DATED OCT 19, 2021.

PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

NORTH

0 150 300

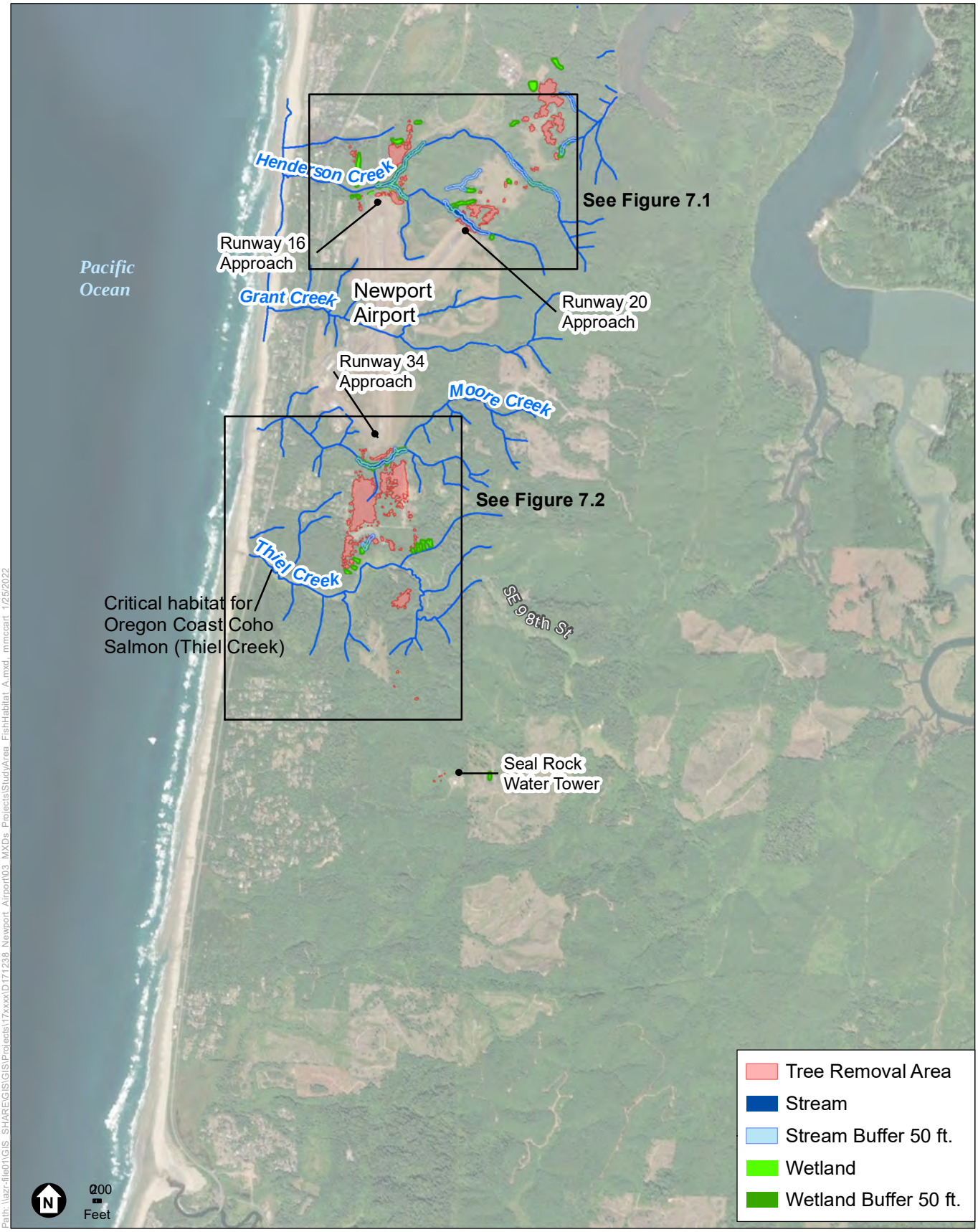
SCALE IN FEET

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

RUNWAY 20 APPROACH

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

Figure 6 DEC 2021

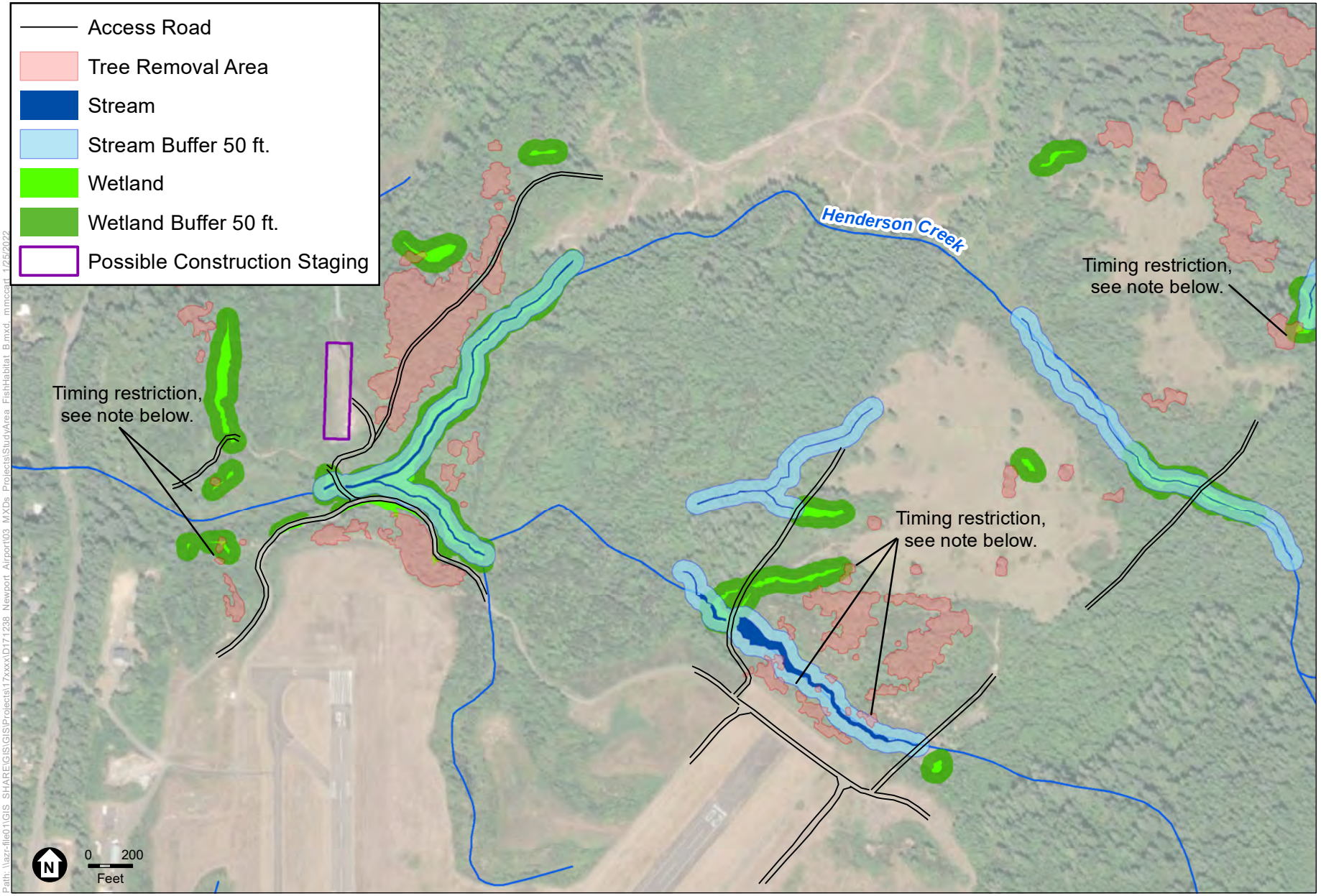


SOURCE: ESRI, 2020; Weyerhaeuser, 2021; Precision Approach Engineering, 2019

Newport Airport Obstruction Removal Phase 2

Figure 7.0
Study Area Overview and Fish Habitat

ESA



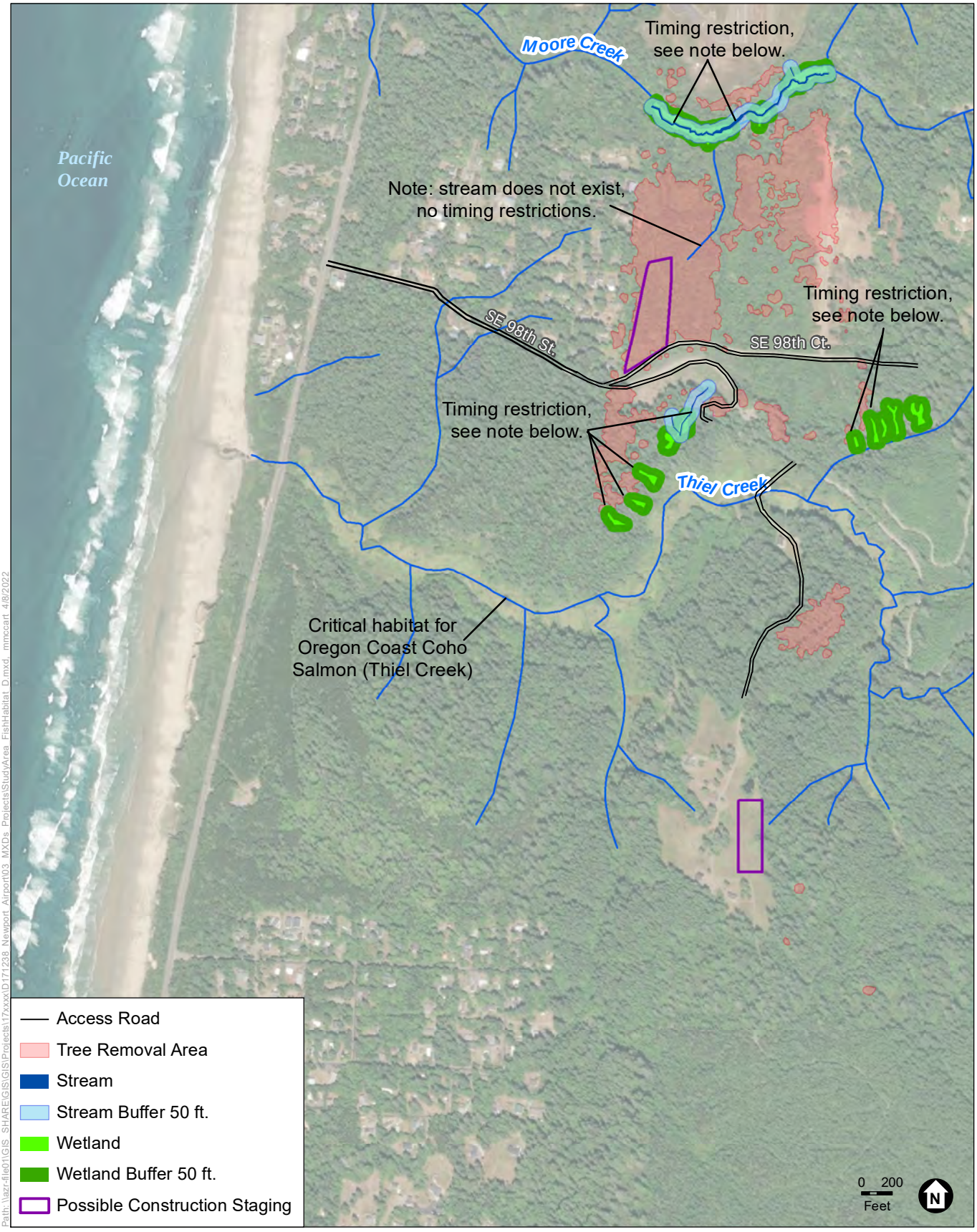
SOURCE: ESRI, 2020; Weyerhaeuser, 2021; Precision Approach Engineering, 2019

Newport Airport Obstruction Removal Phase 2

ESA

Note: Tree removal within wetland and stream buffers that drain to Henderson Creek and other fish-bearing waters are restricted to the dry season (late July to mid-September) to limit erosion and sedimentation.

Figure 7.1
Henderson Creek Construction Timing Restrictions



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SOURCE: ESRI, 2020; Weyerhaeuser, 2021; Precision Approach Engineering, 2019

Newport Airport Obstruction Removal Phase 2

ESA

Note: Tree removal within wetland and stream buffers are restricted to the dry season (late July to mid-September) to limit erosion and sedimentation.

Figure 7.2
Thiel Creek
Construction Timing Restrictions

APPENDIX C

Wetland Delineation

ENVIRONMENTAL ASSESSMENT

Newport Municipal Airport Obstruction Removal

Oregon
Kate Brown, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregon.gov/dsl

State Land Board

Kate Brown
Governor

Shemia Fagan
Secretary of State

Tobias Read
State Treasurer

March 16, 2021

Newport Municipal Airport
Attn: Lance Vanderbeck, Airport Director
135 SE 84th Street
South Beach, OR 97366

Re: WD # 2020-0008 **Approved** (Correction)
Report for Newport Municipal Airport Obstruction
Removal Lincoln County; T11S R11W S29 and T11S R11W S32
Includes Multiple Tax Lots (see attached maps)

Dear Mr. Vanderbeck:

The concurrence letter dated March 8, 2021, for the wetland delineation report referenced above contained an error. The letter indicated that the seven ditches may be exempt per OAR 141-085-0515(10), but only as a preliminary jurisdictional determination due to lack of access. The letter has been amended to change the preliminary jurisdictional determination of the seven ditches as exempt, to a jurisdictional determination of exemption, as they were accessed in the field.

The Department of State Lands has reviewed the wetland delineation report prepared by Environmental Science Associates for 10 study areas identified on attached figures. Please note that only portions of tax lots are identified in these study areas (see the attached maps). Based upon the information presented in the report, and additional information submitted upon request, we concur with the wetland and waterway boundaries as mapped in revised Figure 5A through 5K of the report. Please replace all copies of the preliminary wetland maps with these final Department approved maps.

Within the 10 study areas, 37 wetlands (Wetland 2-16, 18-21, and 23-30), 10 waterways (Henderson Creek, Moore Creek, and Stream 1 through Stream 8), and 7 ditches (Ditch 1 through Ditch 7) were identified. Twenty-six of the 27 wetlands (Wetland 2-14, 16, 18-21, and 23-30, totaling approximately 7.29 acres) and the 12 waterways are subject to the permit requirements of the state Removal-Fill Law. Normally, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in wetlands or below the ordinary high-water line (OHWL) of the waterway (or the 2-year recurrence interval flood elevation if OHWL cannot be determined). However, Henderson and Moore Creeks are essential salmonid streams; therefore, fill or removal of any amount of material below their OHWLs or within hydrologically connected wetlands (Wetland 11d, 11e, 21a, 21b, 30a, 30b. 30c, 30d, and 30e) may require a permit.

In addition, Wetland 15 is exempt per OAR 141-085-0515(7c) and is not subject to current state Removal-Fill requirements. The 7 ditches are exempt per OAR 141-085-0515(10). Furthermore, Study Area 6, as indicated on the attached maps, was not investigated in the field; therefore, the determination of upland for this area should be considered a preliminary jurisdictional determination.

This concurrence is for purposes of the state Removal-Fill Law only. We recommend that you attach a copy of this concurrence letter to any subsequent state permit application to speed application review. Federal or local permit requirements may apply as well. The U.S. Army Corps of Engineers will determine jurisdiction under the Clean Water Act, which may require submittal of a complete Wetland Delineation Report.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Because measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from March 8, 2021 unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

The Department apologizes for any confusion this mistake may have caused and thank you again for having the site evaluated. Please phone me at 503-986-5262 if you have any questions.

Sincerely,

Matt Unitis
Jurisdiction Coordinator

Enclosures

ec: Luke Johnson, Environmental Science Associates
City of Newport Planning Department
Carrie Bond, Corps of Engineers
Oregon Coastal Management Program
Joy Vaughan, ODFW
Carrie Landrum, DSL

Oregon
Kate Brown, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregon.gov/dsl

March 8, 2021

Newport Municipal Airport
Attn: Lance Vanderbeck, Airport Director
135 SE 84th Street
South Beach, OR 97366

Re: WD # 2020-0008 **Approved**
Report for Newport Municipal Airport Obstruction Removal
Lincoln County; T11S R11W S29 and T11S R11W S32
Includes Multiple Tax Lots (see attached maps)

Dear Mr. Vanderbeck:

The Department of State Lands has reviewed the wetland delineation report prepared by Environmental Science Associates for 10 study areas identified on attached figures. Please note that only portions of tax lots are identified in these study areas (see the attached maps). Based upon the information presented in the report, and additional information submitted upon request, we concur with the wetland and waterway boundaries as mapped in revised Figure 5A through 5K of the report. Please replace all copies of the preliminary wetland maps with these final Department approved maps.

Within the 10 study areas, 37 wetlands (Wetland 2-16, 18-21, and 23-30), 10 waterways (Henderson Creek, Moore Creek, and Stream 1 through Stream 8), and 7 ditches (Ditch 1 through Ditch 7) were identified. Twenty-six of the 27 wetlands (Wetland 2-14, 16, 18-21, and 23-30, totaling approximately 7.29 acres) and the 12 waterways are subject to the permit requirements of the state Removal-Fill Law. Normally, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in wetlands or below the ordinary high-water line (OHWL) of the waterway (or the 2-year recurrence interval flood elevation if OHWL cannot be determined). However, Henderson and Moore Creeks are essential salmonid streams; therefore, fill or removal of any amount of material below their OHWLs or within hydrologically connected wetlands (Wetland 11d, 11e, 21a, 21b, 30a, 30b. 30c, 30d, and 30e) may require a permit.

In addition, Wetland 15 is exempt per OAR 141-085-0515(7c) and is not subject to current state Removal-Fill requirements. The 7 ditches may be exempt per OAR 141-085-0515(10), but because the ditches are in an area indicated as having no right of entry, their determinations can only be considered preliminary jurisdictional determinations. Furthermore, Study Area 6, as indicated on the attached maps, was not investigated in the field; therefore, the determination of upland for this area should also be considered a preliminary jurisdictional determination.

This concurrence is for purposes of the state Removal-Fill Law only. We recommend that you attach a copy of this concurrence letter to any subsequent state permit application to speed application review. Federal or local permit requirements may apply as well. The U.S. Army Corps of Engineers will determine jurisdiction under the Clean Water Act, which may require submittal of a complete Wetland Delineation Report.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Because measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. If you have any questions, please contact the Jurisdiction Coordinator for Lincoln County, Matt Unitis, at (503) 986-5262.

Sincerely,

Peter Ryan, SPWS
Aquatic Resource Specialist

Enclosures

ec: Luke Johnson, Environmental Science Associates
City of Newport Planning Department
Carrie Bond, Corps of Engineers
Oregon Coastal Management Program
Joy Vaughan, ODFW
Carrie Landrum, DSL

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

Fully completed and signed report cover forms and applicable fees are required before report review timelines are initiated by the Department of State Lands. Make checks payable to the Oregon Department of State Lands. To pay fees by credit card, go online at: https://apps.oregon.gov/DSL/EPS/program?key=4.

Attach this completed and signed form to the front of an unbound report or include a hard copy with a digital version (single PDF file of the report cover form and report, minimum 300 dpi resolution) and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.** A single PDF of the completed cover from and report may be e-mailed to: **Wetland_Delineation@dsl.state.or.us**. For submittal of PDF files larger than 10 MB, e-mail DSL instructions on how to access the file from your ftp or other file sharing website.

Contact and Authorization Information

☒ Applicant ☐ Owner Name, Firm and Address:
Lance Vanderbeck, Airport Director
Newport Municipal Airport
135 SE 84th Street
South Beach, OR 97366

Business phone # (541) 867-7422
Mobile phone # (optional)
E-mail: L.Vanderbeck@NewportOregon.gov

☐ Authorized Legal Agent, Name and Address (if different):

Business phone #
Mobile phone # (optional)
E-mail:

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: Lance Vanderbeck **Signature:**
Date: 12-23-2019 Special instructions regarding site access:

Project and Site Information

Project Name: Newport Municipal Airport Obstruction Removal

Latitude: 44.579275° Longitude: -124.059759°
decimal degree - centroid of site or start & end points of linear project

Proposed Use:
Removal of obstructions (trees) from FAA regulated cone of approach to Airport runways.

Tax Map # See attached table. Tax maps and lots organized by study area
Tax Lot(s)

Tax Map #
Tax Lot(s)

Project Street Address (or other descriptive location):
135 SE 84th Street

Township 11 S Range 11 S Section 29 QQ
Use separate sheet for additional tax and location information

City: Newport/South Beach County: Lincoln

Waterway: Henderson Creek River Mile: NA

Wetland Delineation Information

Wetland Consultant Name, Firm and Address:
Luke Johnson, Wetland Biologist
Environmental Science Associates
819 SE Morrison Street, Suite 310
Portland, OR 97214

Phone # (971) 295-5041
Mobile phone # (if applicable)
E-mail: ljohnson@esassoc.com

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.
Consultant Signature: Luke Johnson Date: 10/24/2019

Primary Contact for report review and site access is ☒ Consultant ☐ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No Study Area size: 521.25 acres Total Wetland Acreage: 7.2800

Check Applicable Boxes Below

☐ R-F permit application submitted
☐ Mitigation bank site
☐ EFSC/ODOE Proj. Mgr:
☐ Wetland restoration/enhancement project (not mitigation)
☐ Previous delineation/application on parcel
If known, previous DSL # _____

☒ Fee payment submitted $ ~~454~~ $466
☐ Resubmittal of rejected report ($100)
☐ Request for Reissuance. See eligibility criteria. (no fee)
DSL # _____ Expiration date_____
☐ LWI shows wetlands or waters on parcel
Wetland ID code _____

For Office Use Only

DSL Reviewer: MU Fee Paid Date: ___/___/___ DSL WD # 2020-0008

Date Delineation Received: 1/2/20 Scanned: ☐ Electronic: ☒ DSL App.# _____

Study Area	Tax Map	OR Tax lot #	Right of Entry
1	11-11-29-00-01402-00	2111.00S11.00W2900--000001402	Yes
	11-11-29-00-01401-00	2111.00S11.00W2900--000001401	Yes
2	11-11-29-00-01402-00	2111.00S11.00W2900--000001402	Yes
	11-11-29-00-01401-00	2111.00S11.00W2900--000001401	Yes
	11-11-29-00-00400-00	2111.00S11.00W2900--000000400	Yes
	11-11-29-00-00300-00	2111.00S11.00W2900--000000300	Yes
	11-11-29-00-01100-00	2111.00S11.00W2900--000001100	Yes
3	11-11-20-00-02700-00	2111.00S11.00W2000--000002700	Yes
	11-11-21-00-01600-00	2111.00S11.00W2100--000001600	Yes
	11-11-28-00-00700-00	2111.00S11.00W2800--000000700	Yes
	11-11-29-00-00100-00	2111.00S11.00W2900--000000100	Yes
	11-11-29-00-00500-00	2111.00S11.00W2900--000000500	Yes
	11-11-29-00-00600-00	2111.00S11.00W2900--000000600	Yes
	11-11-29-00-01000-00	2111.00S11.00W2900--000001000	Yes
4	11-11-32-00-00200-00	2111.00S11.00W3200--000000200	Yes
	11-11-32-00-01602-00	2111.00S11.00W3200--000001602	Yes
	11-11-32-00-01601-00	2111.00S11.00W3200--000001601	Yes
	11-11-32-CC-0ROAD-00	2111.00S11.00W32CC--00000ROAD	Yes
	11-11-32-CC-00800-00	2111.00S11.00W32CC--000000800	Yes

Study Area	Tax Map	OR Tax lot #	Right of Entry
4	11-11-32-CC-01601-00	2111.00S11.00W32CC--000001601	Yes
	11-11-32-CC-01400-00	2111.00S11.00W32CC--000001400	Yes
	11-11-32-CC-01300-00	2111.00S11.00W32CC--000001300	Yes
	11-11-32-CC-01201-00	2111.00S11.00W32CC--000001201	Yes
	11-11-32-CC-01101-00	2111.00S11.00W32CC--000001101	Yes
	12-11-05-00-00800-00	2112.00S11.00W0500--000000800	Yes
	12-11-05-00-0ROAD-00	2112.00S11.00W0500--00000ROAD	Yes
	12-11-05-00-00803-00	2112.00S11.00W0500--000000803	Yes
	12-11-05-00-00801-00	2112.00S11.00W0500--000000801	Yes
	12-11-06-00-00600-00	2112.00S11.00W0600--000000600	Yes
	12-11-06-00-0ROAD-00	2112.00S11.00W0600--00000ROAD	Yes
	12-11-06-00-00300-00	2112.00S11.00W0600--D00100300	Yes
	12-11-06-00-00200-00	2112.00S11.00W0600--D00100200	Yes
	12-11-06-00-00100-00	2112.00S11.00W0600--D00100100	Yes
	11-11-32-00-01604-00	2111.00S11.00W3200--000001604	Yes
	11-11-32-CC-01200-00	2111.00S11.00W32CC--000001200	Yes
	12-11-05-00-00600-00	2112.00S11.00W0500--000000600	Yes

Study Area	Tax Map	OR Tax lot #	Right of Entry
4			
5	12-11-05-00-00800-00	2112.00S11.00W0500--000000800	Yes
6	12-11-06-00-01600-00	2112.00S11.00W0600--000001600	Yes (But not accessed)
7	12-11-05-00-00803-00	2112.00S11.00W0500--000000803	Yes
8	12-11-05-00-00801-00	2112.00S11.00W0500--000000801	Yes
9	12-11-05-00-00802-00	2112.00S11.00W0500--000000802	Yes
	12-11-05-CB-00300-00	2112.00S11.00W05CB--000000300	Yes
	12-11-05-CB-00600-00	2112.00S11.00W05CB--000000600	Yes
	12-11-05-CB-00700-00	2112.00S11.00W05CB--000000700	Yes
	12-11-05-CB-00800-00	2112.00S11.00W05CB--000000800	Yes
	12-11-05-CB-0ROAD-00	2112.00S11.00W05CB--00000ROAD	Yes
	12-11-05-CB-00200-00	2112.00S11.00W05CB--000000200	Yes
10	12-11-00-00-03400-00	2112.00S11.00W0000--000003400	Yes
	12-11-00-00-03401-00	2112.00S11.00W0000--000003401	Yes
	12-11-00-00-03600-00	2112.00S11.00W0000--000003600	Yes
	12-11-05-00-00803-00	2112.00S11.00W0500--000000803	Yes
	12-11-05-00-00802-00	2112.00S11.00W0500--000000802	Yes
	12-11-05-00-01000-00	2112.00S11.00W0500--000001000	Yes
	12-11-05-00-00900-00	2112.00S11.00W0500--000000900	Yes

Table 4

WETLANDS

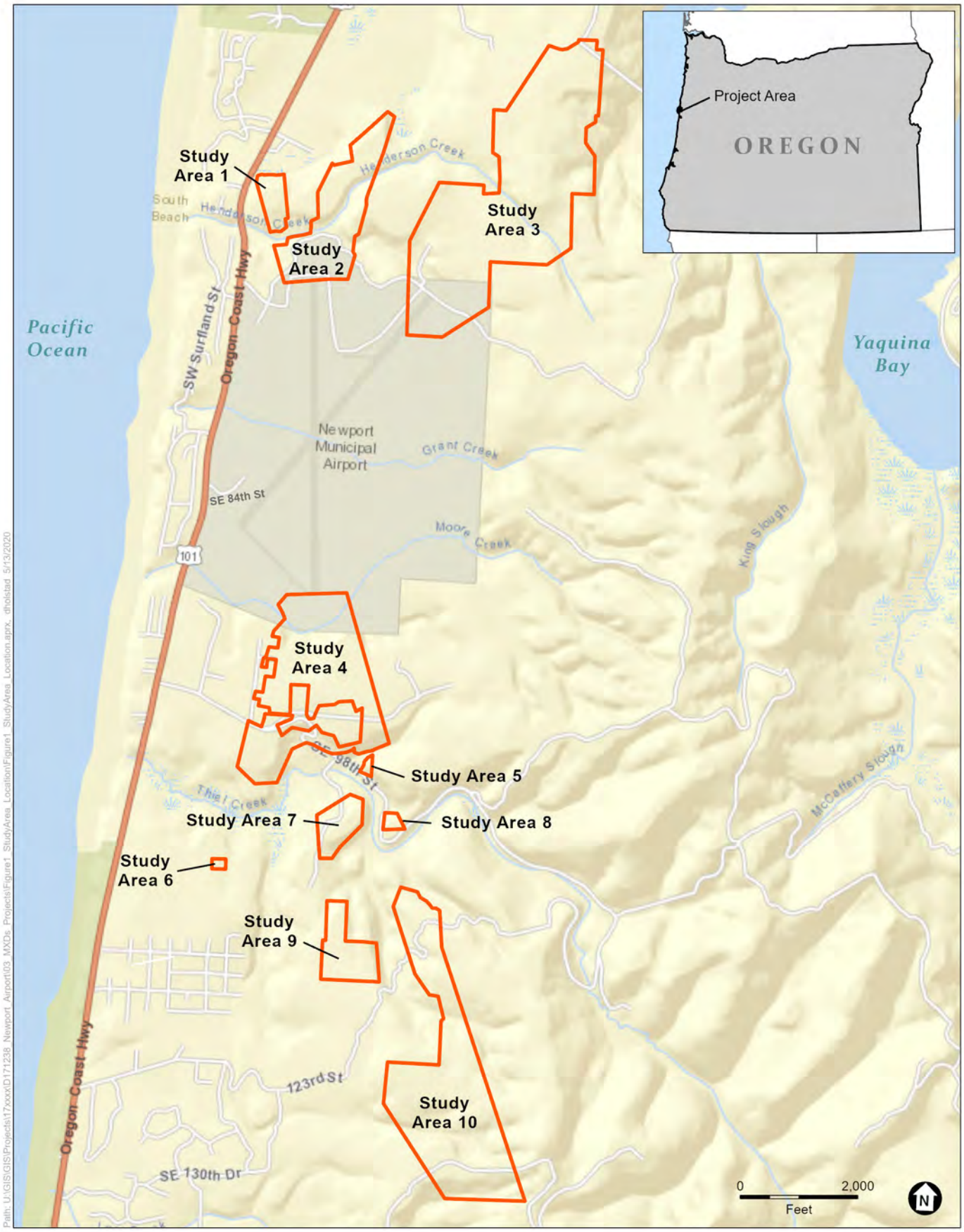
Study Area	Name	Acres	OHW Width (ft)	ESH	Jurisdictional
2	Wetland 2	0.02	N/A	No	Yes
10	Wetland 3	0.07	N/A	No	Yes
3	Wetland 4	0.03	N/A	No	Yes
3	Wetland 5	0.06	N/A	No	Yes
3	Wetland 6	0.04	N/A	No	Yes
3	Wetland 7	0.08	N/A	No	Yes
3	Wetland 8	0.14	N/A	No	Yes
2	Wetland 9	0.04	N/A	No	Yes
2	Wetland 10	0.2	N/A	No	Yes
1	Wetland 11a	0.39	N/A	No	Yes
1	Wetland 11b	0.02	N/A	No	Yes
2	Wetland 11c	0.03	N/A	No	Yes
2	Wetland 11d	0.07	N/A	Yes	Yes
2	Wetland 11e	1.99	N/A	Yes	Yes
2	Wetland 12	0.16	N/A	No	Yes
2	Wetland 13	0.02	N/A	No	Yes
3	Wetland 14	0.24	N/A	No	Yes
3	Wetland 15	0.5	N/A	No	No
3	Wetland 16	0.04	N/A	No	Yes
3	Wetland 18	0.06	N/A	No	Yes
3	Wetland 19	0.22	N/A	No	Yes
3	Wetland 20	0.02	N/A	No	Yes
3	Wetland 21a	0.28	N/A	Yes	Yes
3	Wetland 21b	0.2	N/A	Yes	Yes
3	Wetland 23	0.04	N/A	No	Yes
3	Wetland 24	0.14	N/A	No	Yes
3	Wetland 25a	0.16	N/A	No	Yes
3	Wetland 25b	0.17	N/A	No	Yes
3	Wetland 26	0.02	N/A	No	Yes
4	Wetland 27	0.42	N/A	No	Yes
4	Wetland 28	0.15	N/A	No	Yes
4	Wetland 29	0.89	N/A	No	Yes
4	Wetland 30a	0.13	N/A	Yes	Yes
4	Wetland 30b	0.09	N/A	Yes	Yes
4	Wetland 30c	0.07	N/A	Yes	Yes
4	Wetland 30d	0.04	N/A	Yes	Yes
4	Wetland 30e	0.05	N/A	Yes	Yes
	TOTAL (acres)	7.29			

WATERS

Study Area	Name	Acres	OHW Width (ft)	ESH	Jurisdictional
3, 2	Henderson Creek	N/A	10 ft	Yes	Yes
4	Moore Creek	N/A	18 ft	Yes	Yes
2	Stream 1 (Study Area 2)	N/A	6 ft	No	Yes
3	Stream 1 (Study Area 3)	N/A	78 ft (12 avg)	No	Yes
3	Stream 2	N/A	3 ft	No	Yes
3	Stream 3	N/A	2 ft	No	Yes
3	Stream 4	N/A	3 ft	No	Yes
4	Stream 5	N/A	4 ft	No	Yes
4	Stream 6	N/A	2 ft	No	Yes
4	Stream 7	N/A	1 ft	No	Yes
3	Stream 8	N/A	4 ft	No	Yes

DITCHES

Study Area	Name	Acres	OHW Width (ft)	ESH	Jurisdictional
2	Ditch 1	N/A	N/A	N/A	No
1	Ditch 2	N/A	N/A	N/A	No
2	Ditch 3	N/A	N/A	N/A	No
3	Ditch 4	N/A	N/A	N/A	No
3	Ditch 5	N/A	N/A	N/A	No
3	Ditch 6	N/A	N/A	N/A	No
10	Ditch 7	N/A	N/A	N/A	No

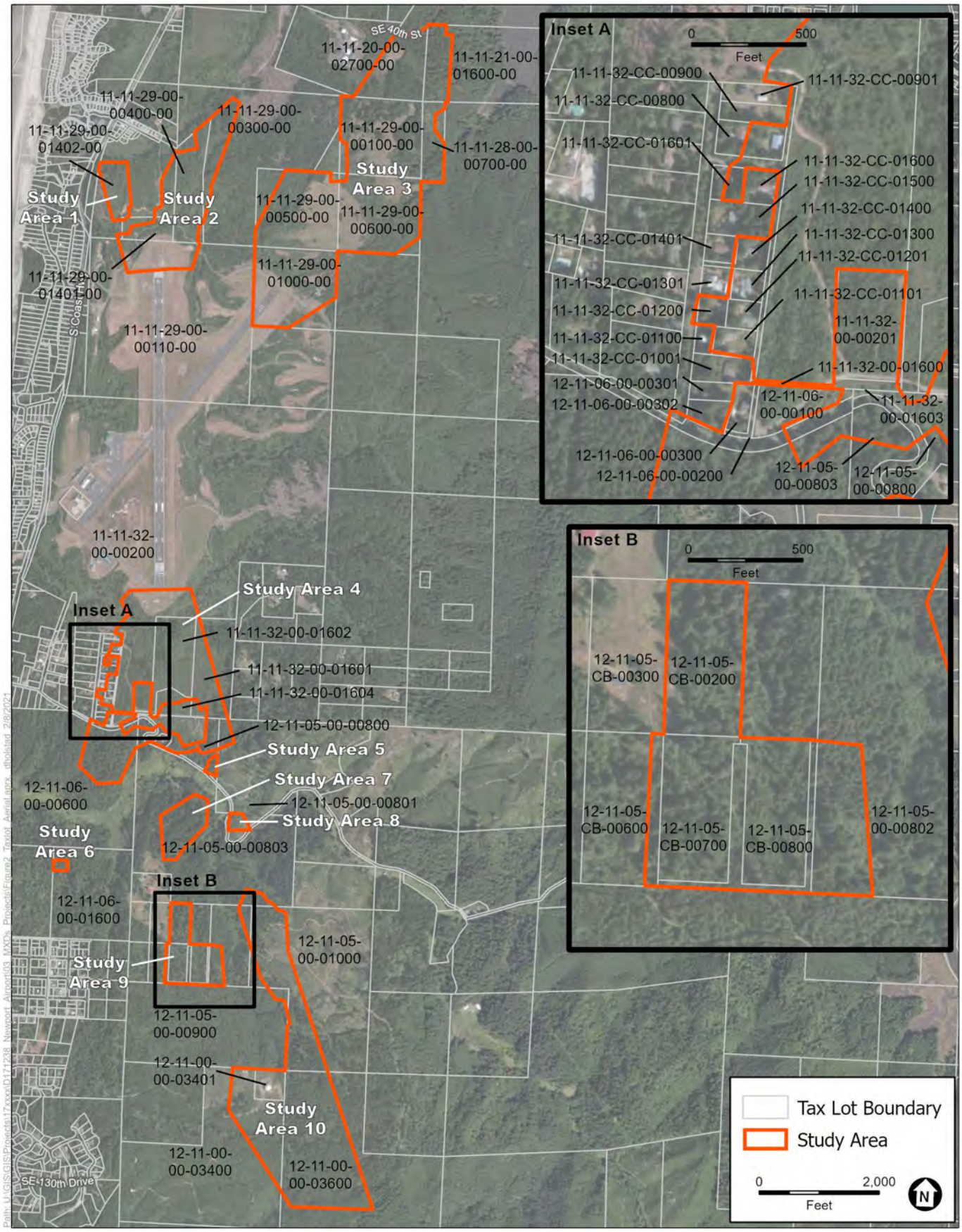


SOURCE: ESA, 2019; ESRI, 2017

D171238.00 Newport Airport EA

Figure 1
Study Area Location Map
Lincoln County, OR

ESA

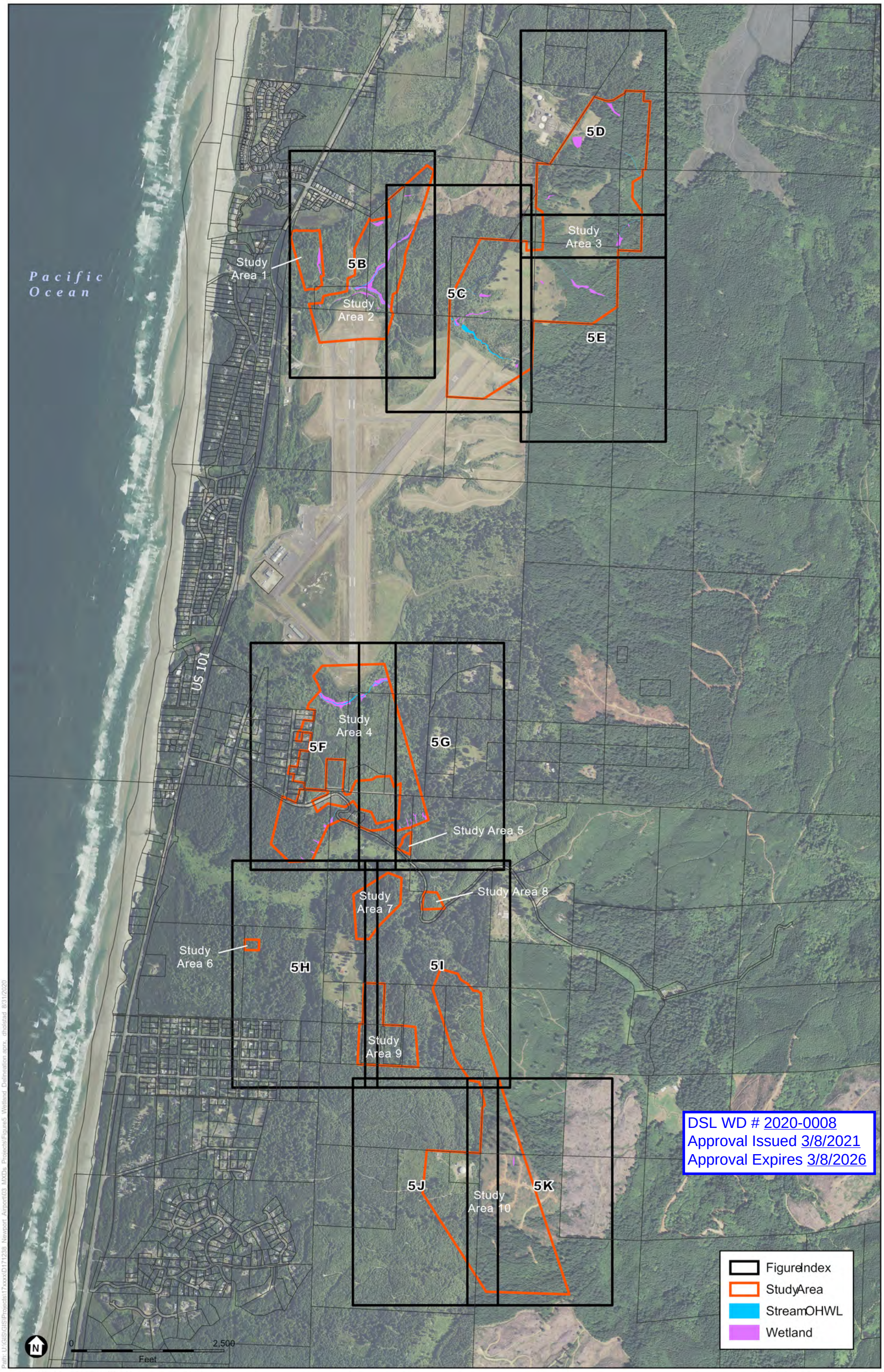


SOURCE: ESA, 2019; ESRI, 2017; Open Street Maps, 2016; Lincoln County, 2017

D171238.00 Newport Airport EA

Figure 2
Tax Lot and Aerial Map
Lincoln County, OR

ESA

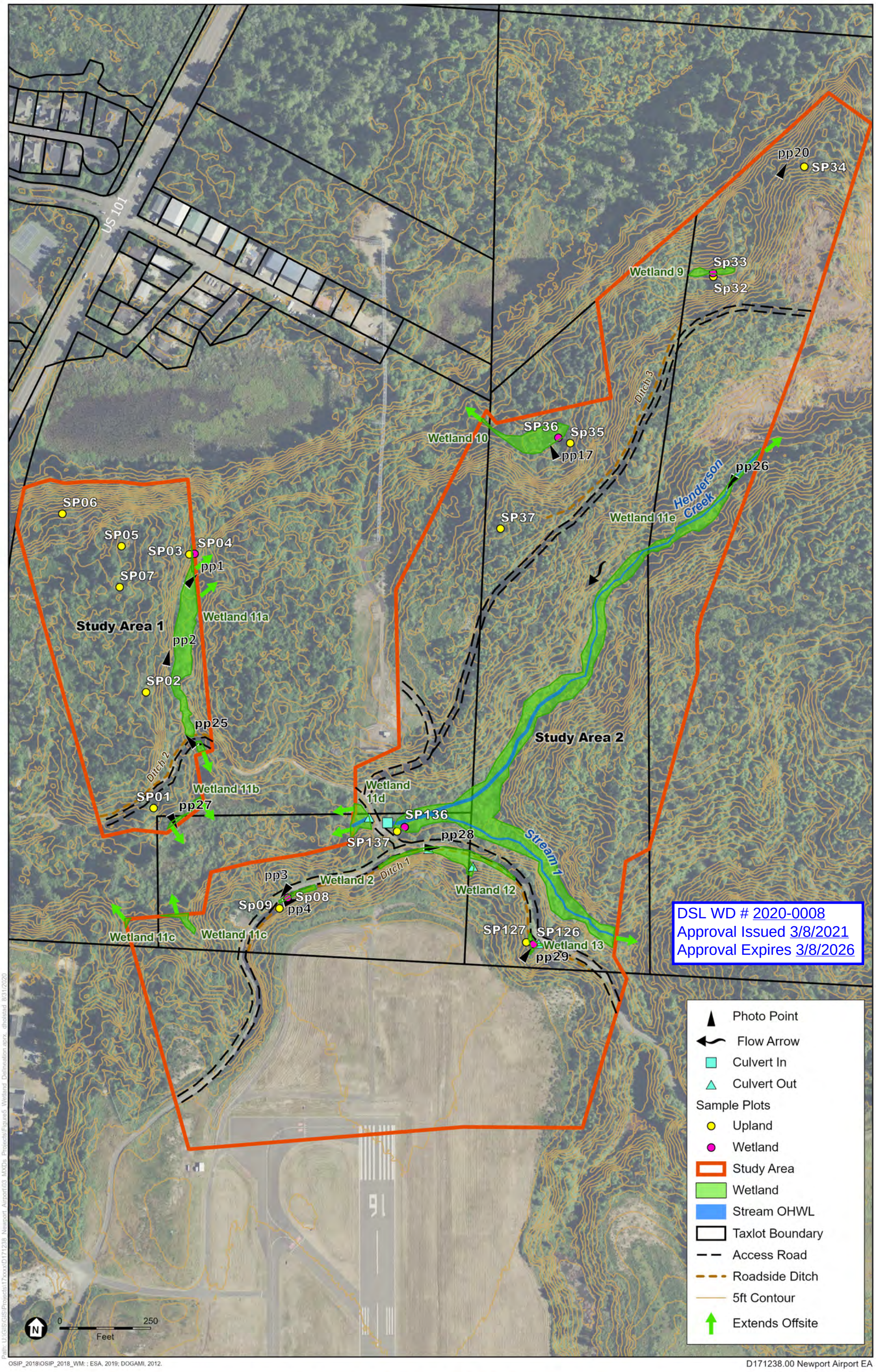


; ESA, 2019; StreamNet, 2019; City of Newport, 2019.

D171238.00 Newport Airport EA

Figure 5A
Wetland Delineation Map
Lincoln County, OR

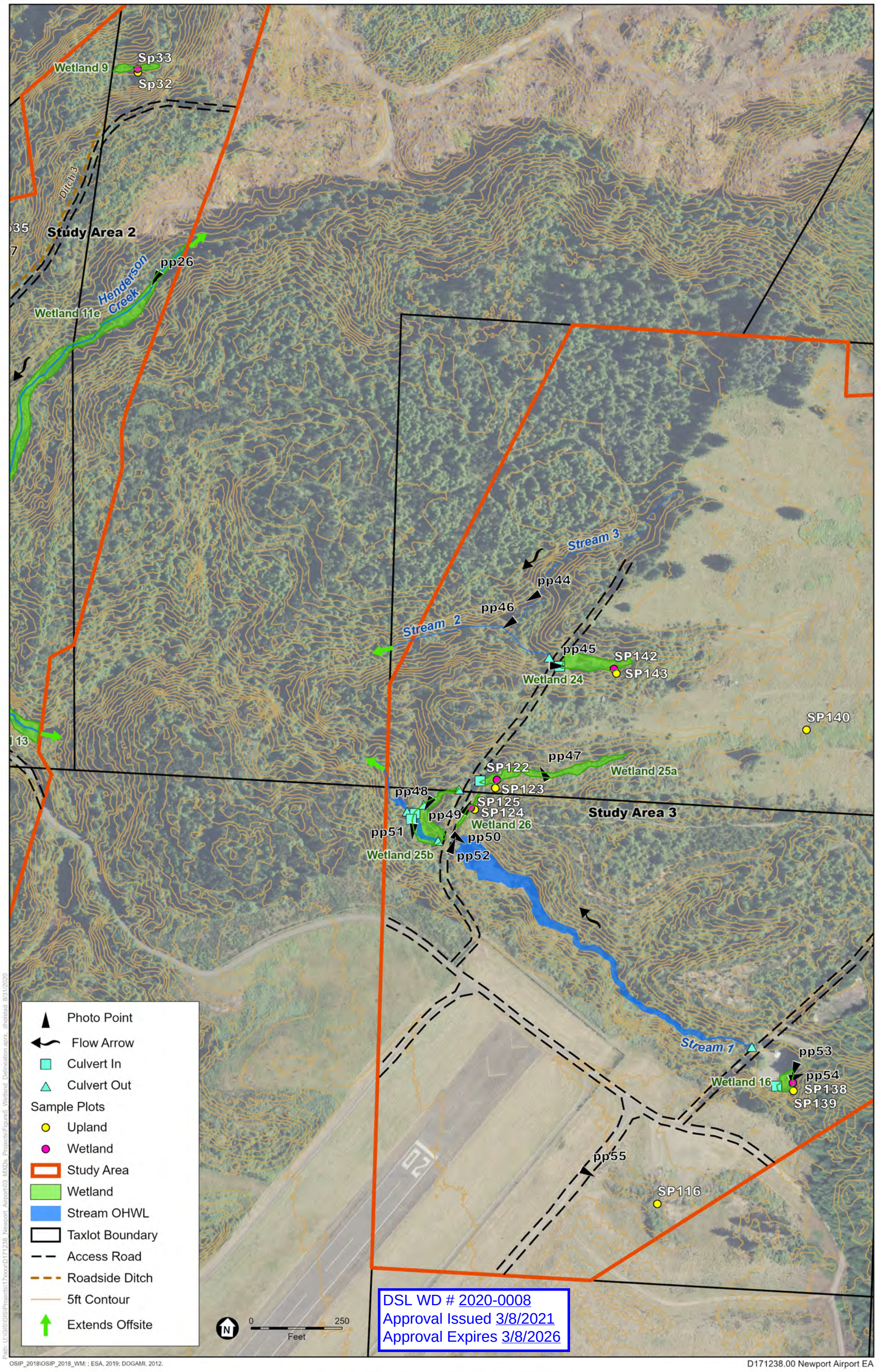
ESA



Accuracy Statement: Sample Points and water resource boundaries were mapped using a Bad Elf GNSS bluetooth receiver and a tablet data collector capable of 1m positional accuracy.

Figure 5B
Wetland Delineation Overview Map
Lincoln County, OR

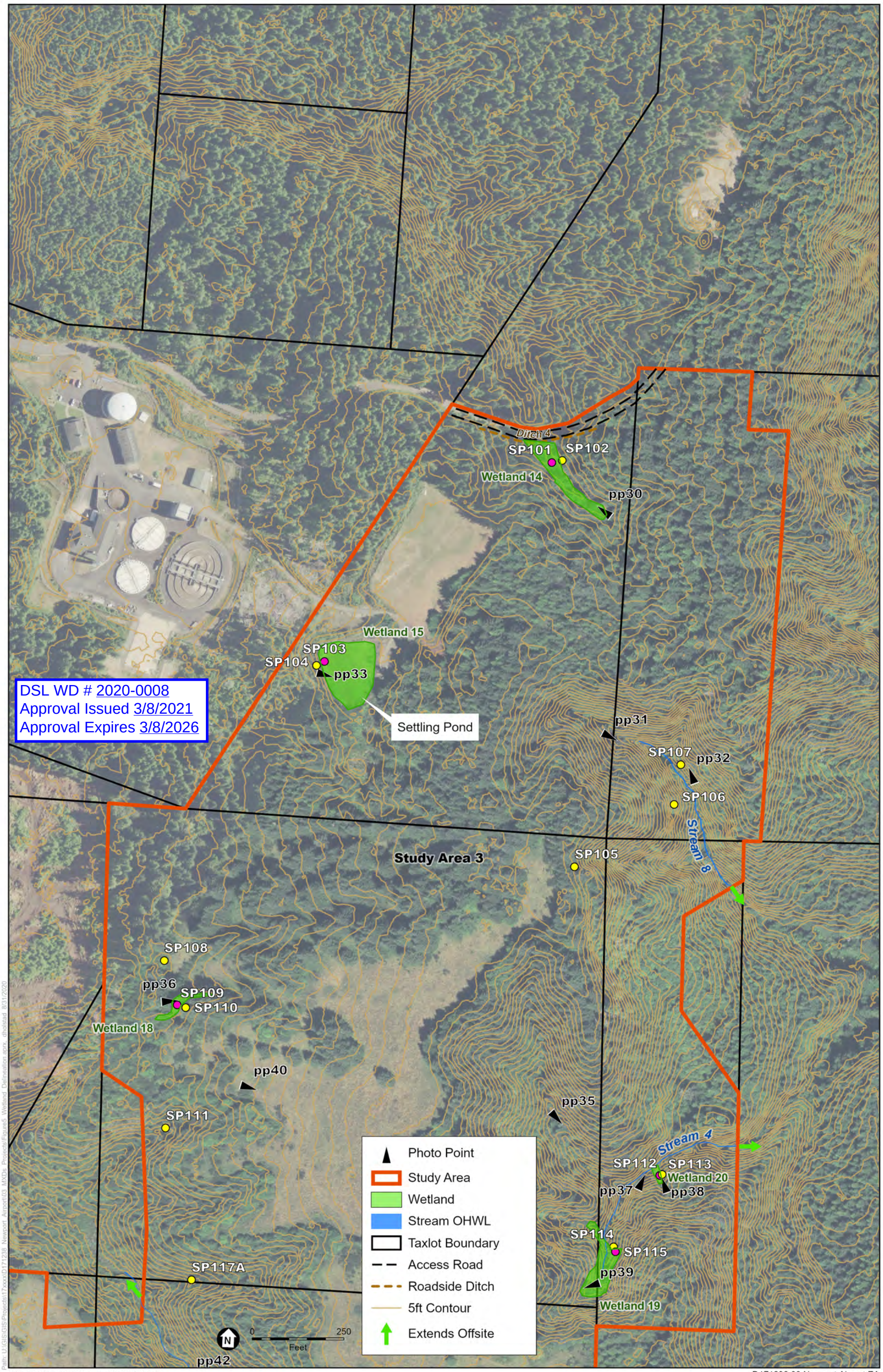
ESA



Accuracy Statement: Sample Points and water resource boundaries were mapped using a Bad Elf GNSS bluetooth receiver and a tablet data collector capable of 1m positional accuracy.

Figure 5C
Wetland Delineation Overview Map
Lincoln County, OR

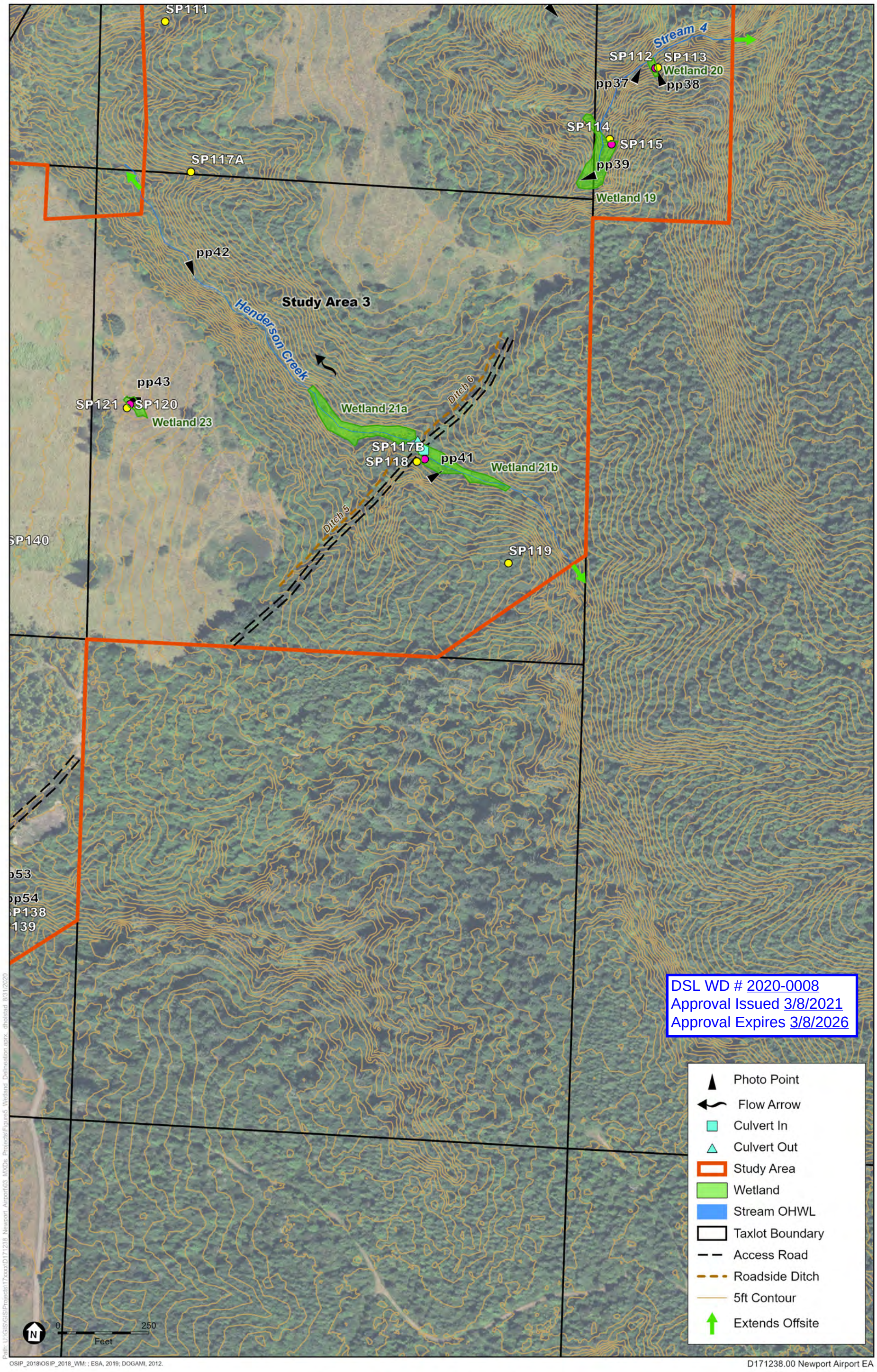
ESA



Accuracy Statement: Sample Points and water resource boundaries were mapped using a Bad Elf GNSS bluetooth receiver and a tablet data collector capable of 1m positional accuracy.

ESA

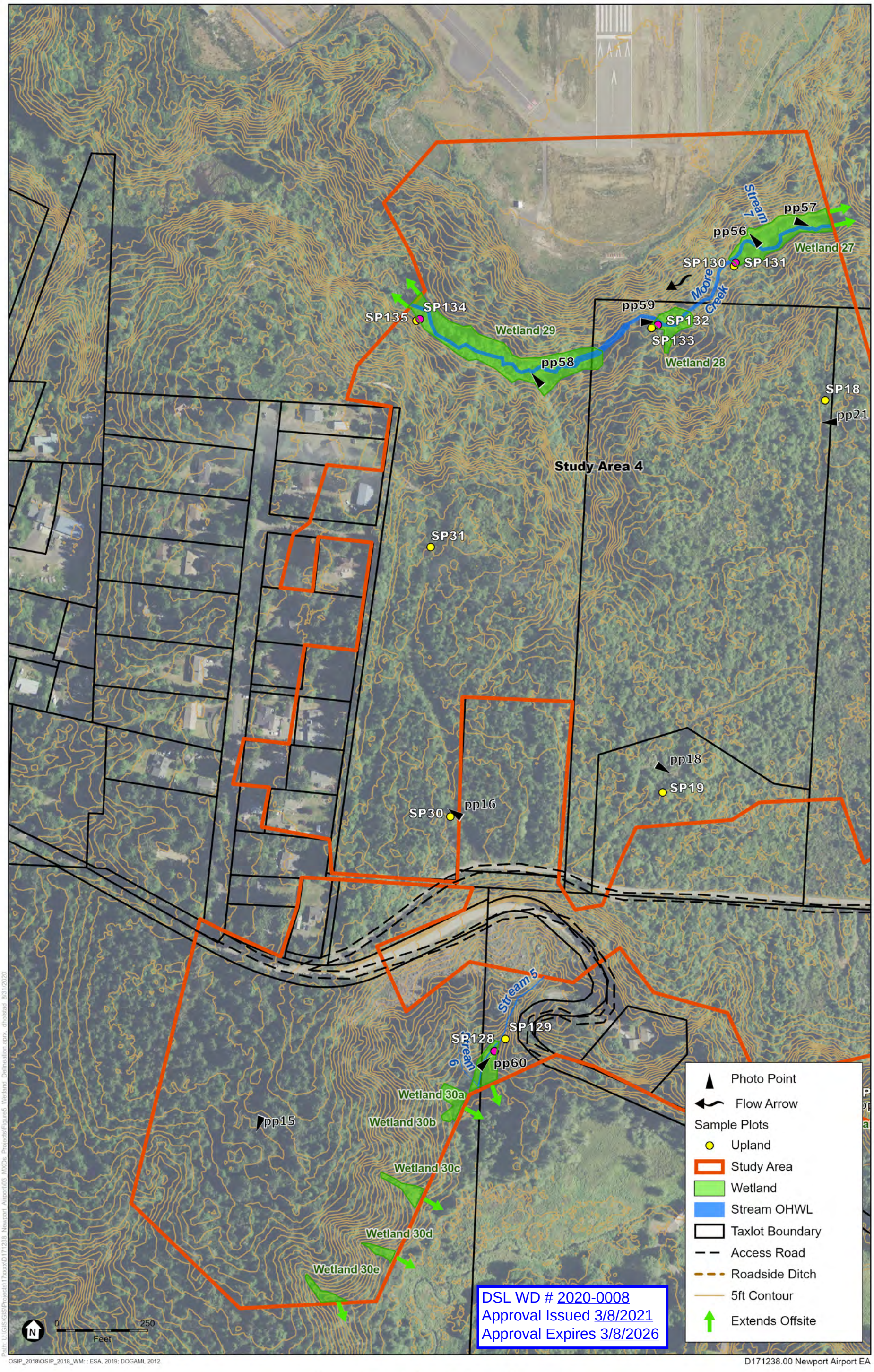
Figure 5D
Wetland Delineation Overview Map
Lincoln County, OR



Accuracy Statement: Sample Points and water resource boundaries were mapped using a Bad Elf GNSS bluetooth receiver and a tablet data collector capable of 1m positional accuracy.

Figure 5E
Wetland Delineation Overview Map
Lincoln County, OR

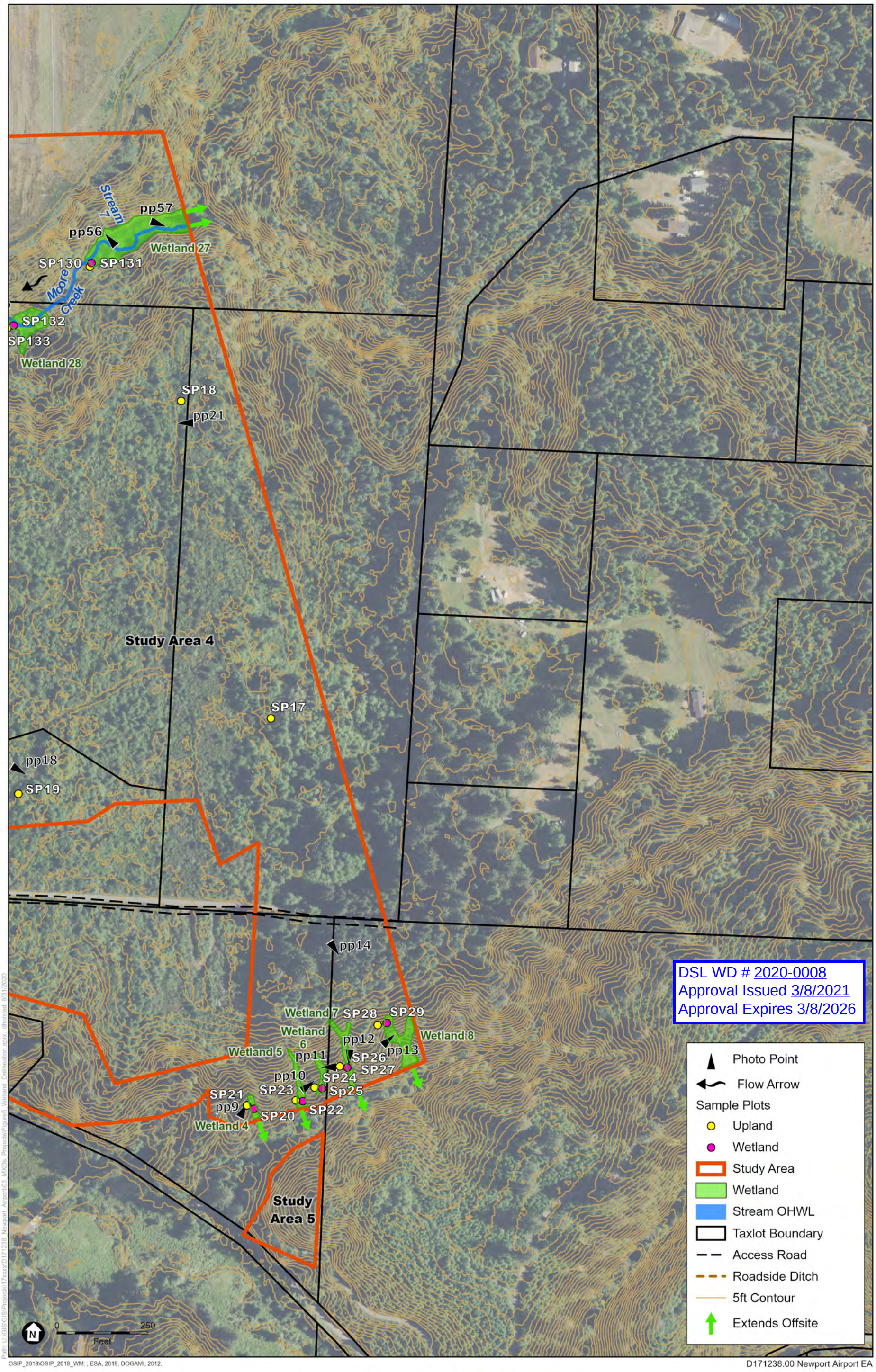
ESA



Accuracy Statement: Sample Points and water resource boundaries were mapped using a Bad Elf GNSS bluetooth receiver and a tablet data collector capable of 1m positional accuracy.

Figure 5F
Wetland Delineation Overview Map
Lincoln County, OR

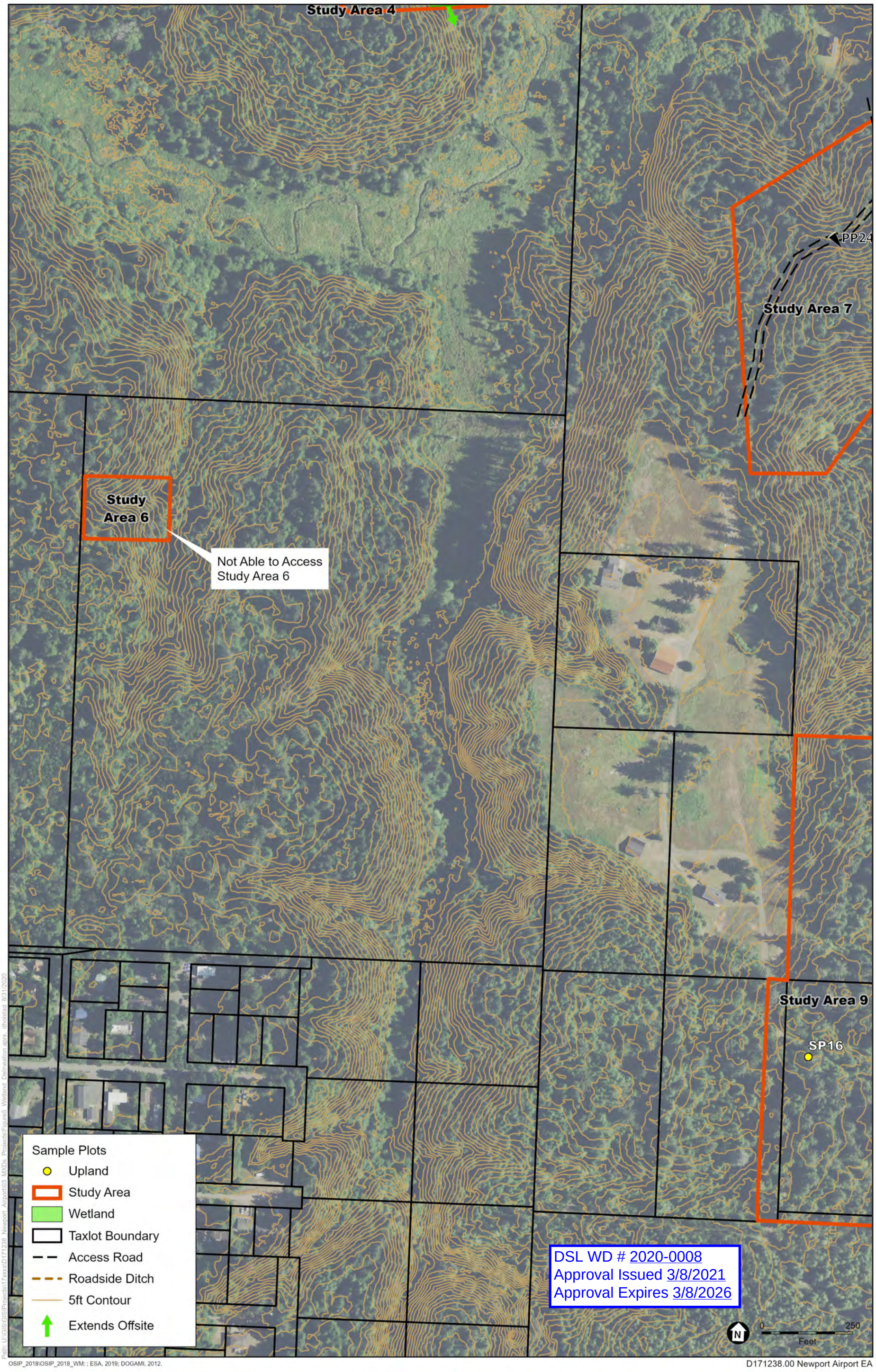
ESA



Accuracy Statement: Sample Points and water resource boundaries were mapped using a Bad Elf GNSS bluetooth receiver and a tablet data collector capable of 1m positional accuracy.

Figure 5G
Wetland Delineation Overview Map
Lincoln County, OR

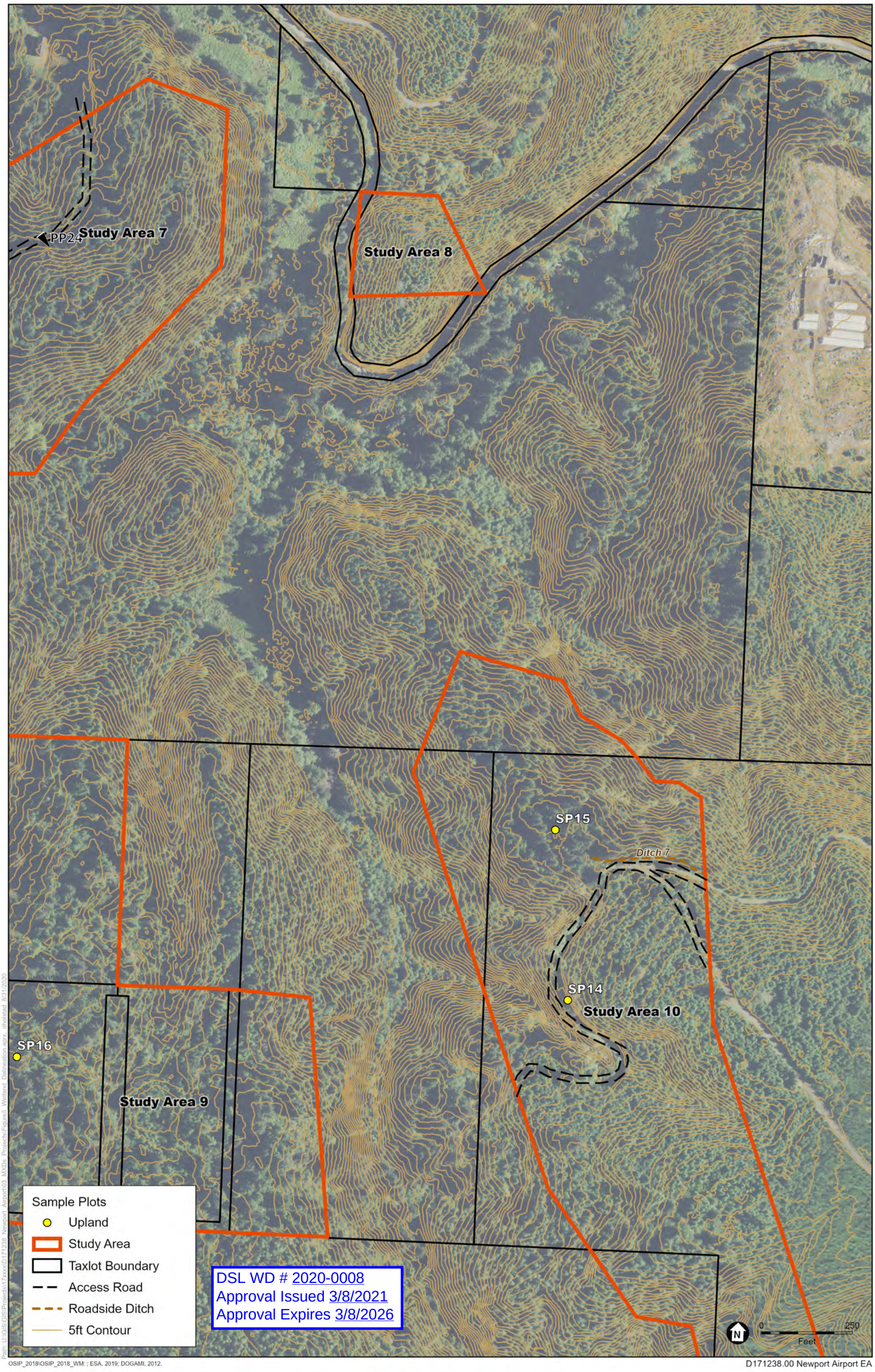
ESA



Accuracy Statement: Sample Points and water resource boundaries were mapped using a Bad Elf GNSS bluetooth receiver and a tablet data collector capable of 1m positional accuracy.

ESA

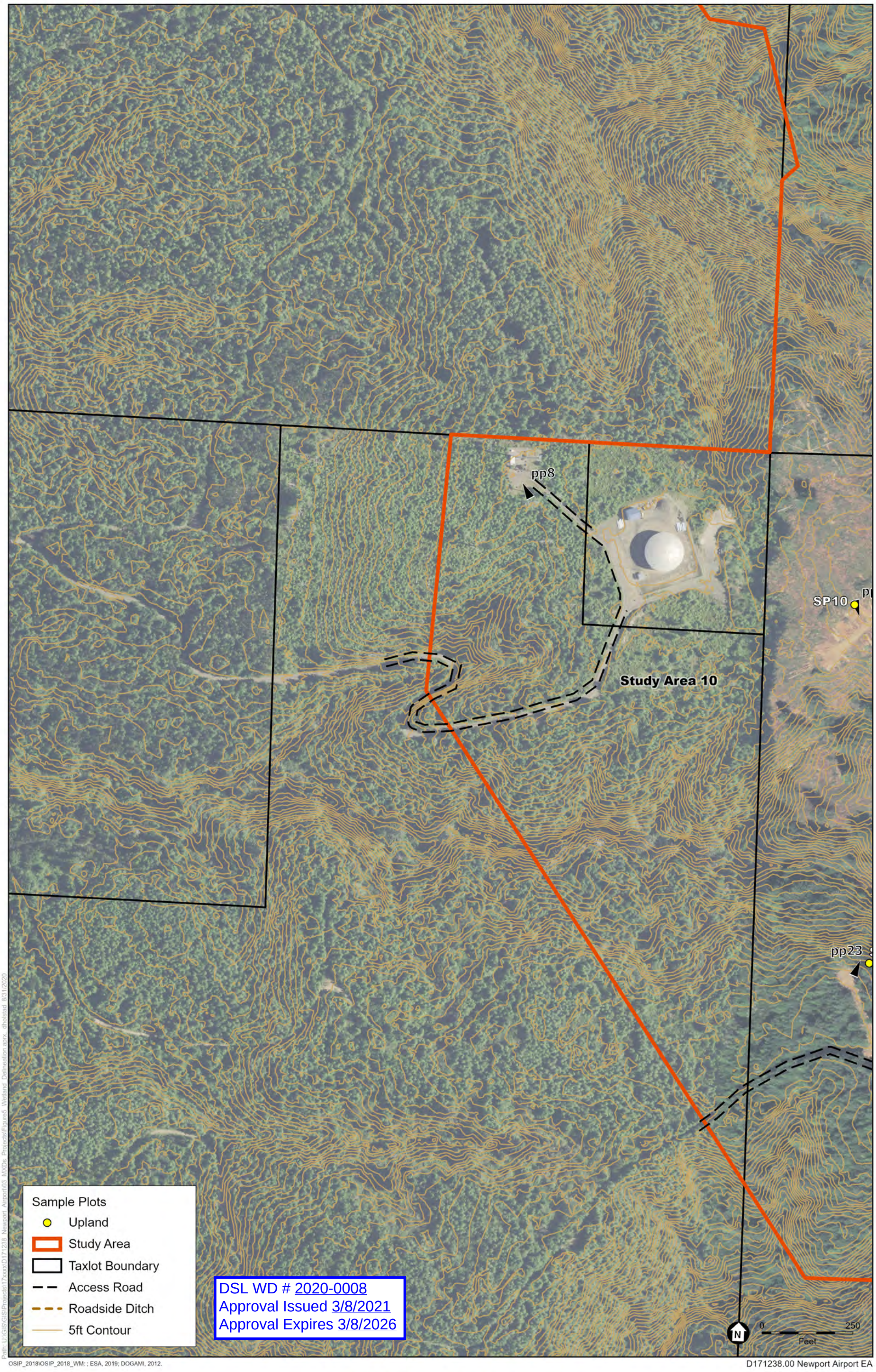
Figure 5H
Wetland Delineation Overview Map
Lincoln County, OR



Accuracy Statement: Sample Points and water resource boundaries were mapped using a Bad Elf GNSS bluetooth receiver and a tablet data collector capable of 1m positional accuracy.

ESA

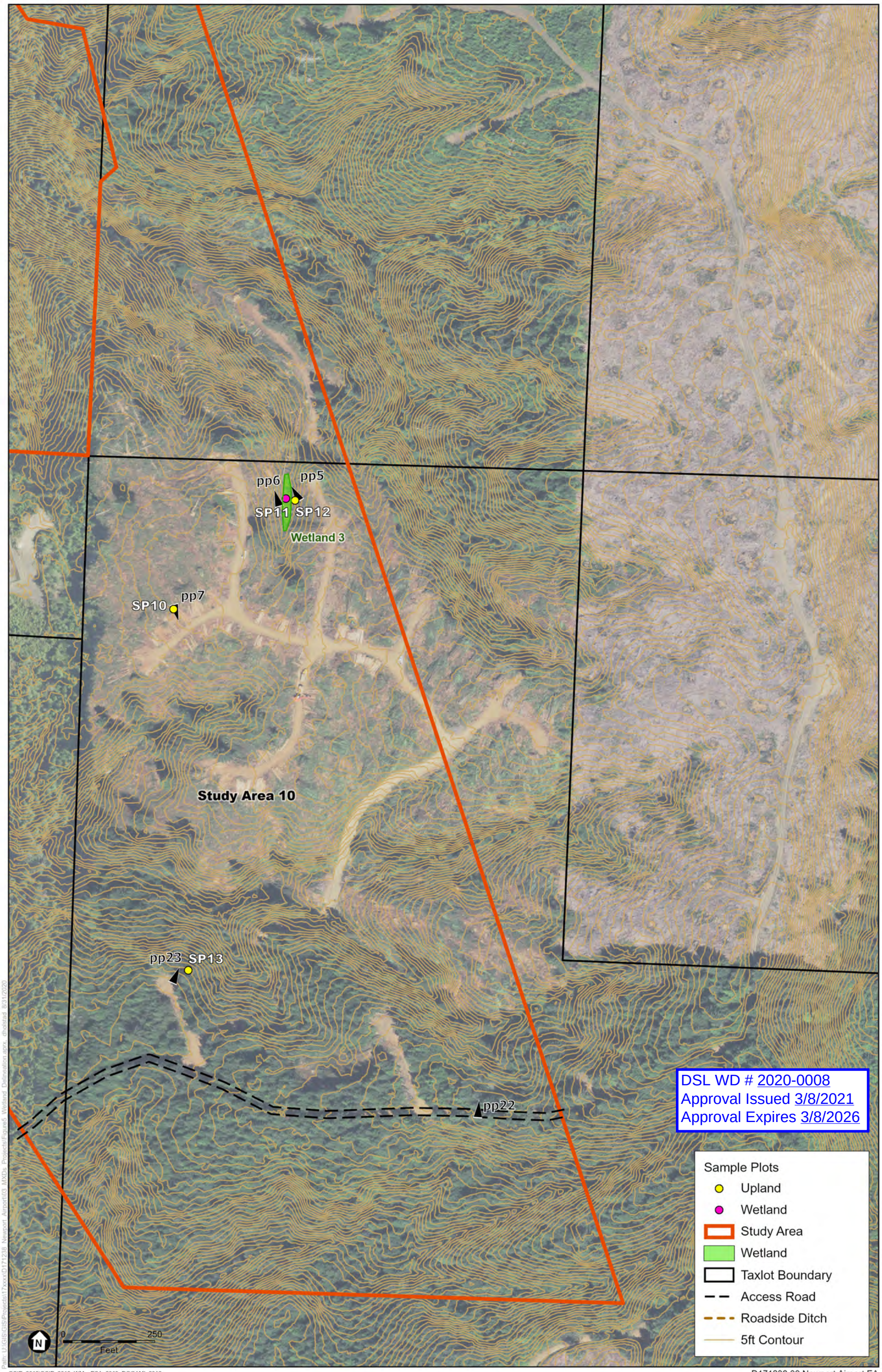
Figure 5I
Wetland Delineation Overview Map
Lincoln County, OR



Accuracy Statement: Sample Points and water resource boundaries were mapped using a Bad Elf GNSS bluetooth receiver and a tablet data collector capable of 1m positional accuracy.

ESA

Figure 5J
Wetland Delineation Overview Map
Lincoln County, OR



Accuracy Statement: Sample Points and water resource boundaries were mapped using a Bad Elf GNSS bluetooth receiver and a tablet data collector capable of 1m positional accuracy.

Figure 5K
Wetland Delineation Overview Map
Lincoln County, OR

ESA

APPENDIX D

Cultural Resources Assessment

ENVIRONMENTAL ASSESSMENT

Newport Municipal Airport Obstruction Removal

Final

NEWPORT MUNICIPAL AIRPORT OBSTRUCTION REMOVAL PROJECT, LINCOLN COUNTY, OREGON

Cultural Resources Assessment

Prepared for

City of Newport

January 2022

Final

NEWPORT MUNICIPAL AIRPORT OBSTRUCTION REMOVAL PROJECT, LINCOLN COUNTY, OREGON

Cultural Resources Assessment

Submitted to

City of Newport

Prepared by

Thomas Ostrander, M.Sc., and Katherine F. Wilson, M.A.

This report is exempt from public distribution and disclosure (ORS 192.501)

ESA Project Number D171238.01

SHPO Project Number 19-1125

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

ESA

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Portland	**Woodland Hills**

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ABSTRACT

Environmental Science Associates (ESA) was retained by the City of Newport (City) to conduct a Cultural Resources Assessment in Lincoln County, Oregon for the Newport Municipal Airport Obstruction Removal Project (Project).

Newport Municipal Airport (Airport) is proposing an obstruction removal project. An Airport Geographic Information Systems survey was completed in 2014 that identified numerous vegetation obstructions in the approach and departure surfaces of Runway 16-34 and the approach surfaces of Runway 20. These trees are potential hazards to the operational safety of the Airport due to their height. The proposed project will assess the potential effects of vegetation removal to allow the safe operation of aircraft using Runway 16, Runway 34, and Runway 20.

Federal funding of the Project by the Federal Aviation Administration (FAA) requires that the Project comply with Section 106 of the National Historic Preservation Act ("Section 106"). Section 106 requires that FAA consider the effects of this undertaking upon Historic Properties within the project's Area of Potential Effects (APE). The APE encompasses areas of potential ground disturbance, specifically areas of potential tree felling, construction staging areas, and access routes. The APE was defined by the FAA in consultation with Oregon State Historic preservation Office (SHPO), Confederated Tribes of the Warm Springs Reservation, Confederated Tribes of the Grande Ronde, Confederated Tribes of the Siletz Indians, and the City. Trees would be cut at the base, leaving stumps and roots in place. Ground disturbance would be limited to dragging and removing the cut vegetation into trucks, and no disturbance is expected below the existing ground surface. The exact placement of access roads and staging areas has not yet been defined. The APE is 622.5acres.

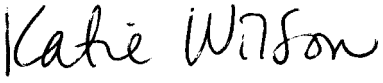
ESA conducted a literature review of the Project's Study Area extending one mile in every direction from the footprint of the APE. No cultural resources were previously identified within the APE. ESA archaeologists Tom Ostrander and Trevor Payne conducted a surface survey of the APE on May 28-31, 2019; after the APE was expanded to include additional tree felling areas Tom Ostrander conducted a supplemental survey on September 22-24, 2019 The survey consisted of 30 meter spaced surface transects within portions of the APE with clustered potential tree removal areas, access routes, and likely staging locations. No subsurface survey was conducted as the project design does not call for ground disturbing excavation. The majority of the APE is active logging land that has been heavily disturbed and reworked during the modern era. ESA did not identify any archaeological sites or isolates during the survey.

The built environment survey identified a total of eight historic-aged (older than 50 years) properties. All are previously undocumented, privately owned homes. None of the historic aged homes will be directly impacted by the proposed actions. While the Newport Municipal Airport is a historic aged, and should be considered an NRHP Potentially Eligible Historic District, no historic aged built environment structures or infrastructure elements of the airport that could contribute to the potential Historic District, are within or adjacent to the areas of proposed tree removal. Tree removal polygons adjacent to the runway are assumed to represent surface topography and were not associated with shrubs or trees. These areas

adjacent to the runways and within the active airport property are already cleared of vegetation as part of standard airport operations activates.

Based upon the results of background research and archaeological fieldwork, ESA recommends that the undertaking will result in **NO ADVERSE EFFECT TO HISTORIC PROPERTIES (36CFR800.4(d)(1)).** ESA recommends no further archaeological work associated with this project. ESA recommends that an inadvertent discovery plan (IDP) be prepared for use during construction. The IDP will provide guidance and procedures to be followed in the event of an archaeological resource discovery.

The author(s) of this report meet(s) the Secretary of the Interior's professional qualification standards for Archaeology and History. The purpose of this report is to determine if archaeological resources or historic period structures meeting eligibility requirements for listing in the National Register of Historic Places (NRHP) may be affected by the proposed project.



Thomas Ostrander, M.Sc.

Katherine Wilson, M.A.

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Newport Municipal Airport Environmental Assessment Project

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1. INTRODUCTION

Environmental Science Associates (ESA) was retained by the City of Newport (City) to conduct a Cultural Resources Assessment in Lincoln County, Oregon for the Newport Municipal Airport Obstruction Removal Project (Project). The project is located within and adjacent to the Newport Municipal Airport, bounded by the SW Coast Highway (US 101) on the west, and undeveloped lands on the south, at and west in, Sections 20, 21, 28, 29, 32, Township 11 South, range 11 West, and Sections 5, 6, 8, Township 12 South, Range 11 West , on the Newport South 7.5' series topographic map (Figure 1, Figure 2). It is located on 64 separate tax lot parcels (Table 1)

TABLE 1
TAX LOT NUMBERS IN THE AREA OF POTENTIAL AFFECTS

11-11-20-00-02700-00	11-11-20-00-02700-00	11-11-20-00-02700-00	11-11-20-00-02700-00
11-11-21-00-01600-00	11-11-21-00-01600-00	11-11-21-00-01600-00	11-11-21-00-01600-00
11-11-28-00-00700-00	11-11-28-00-00700-00	11-11-28-00-00700-00	11-11-28-00-00700-00
11-11-29-00-00300-00	11-11-29-00-00300-00	11-11-29-00-00300-00	11-11-29-00-00300-00
11-11-29-00-00100-00	11-11-29-00-00100-00	11-11-29-00-00100-00	11-11-29-00-00100-00
11-11-29-00-01402-00	11-11-29-00-01402-00	11-11-29-00-01402-00	11-11-29-00-01402-00
11-11-29-00-00500-00	11-11-29-00-00500-00	11-11-29-00-00500-00	11-11-29-00-00500-00
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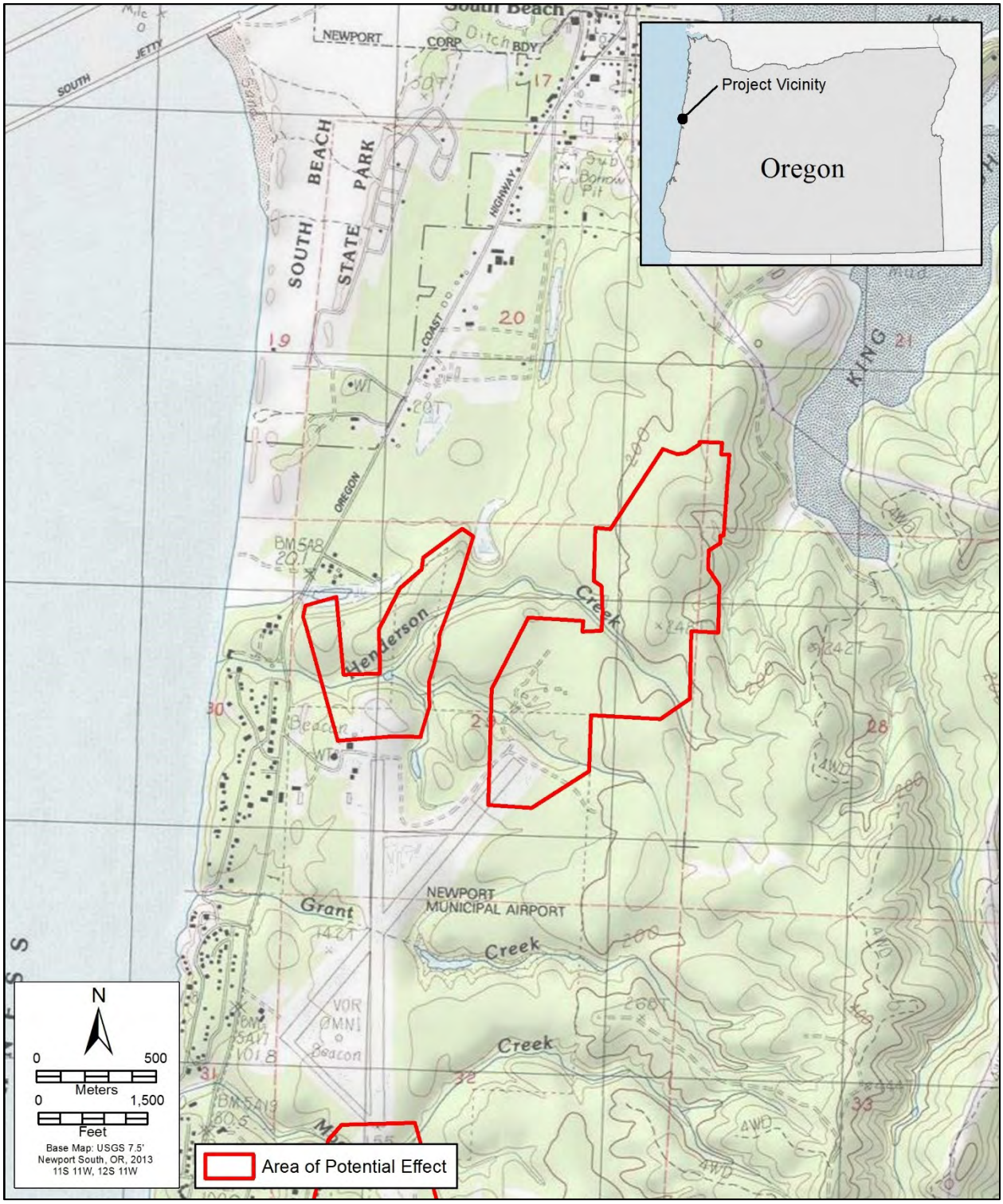
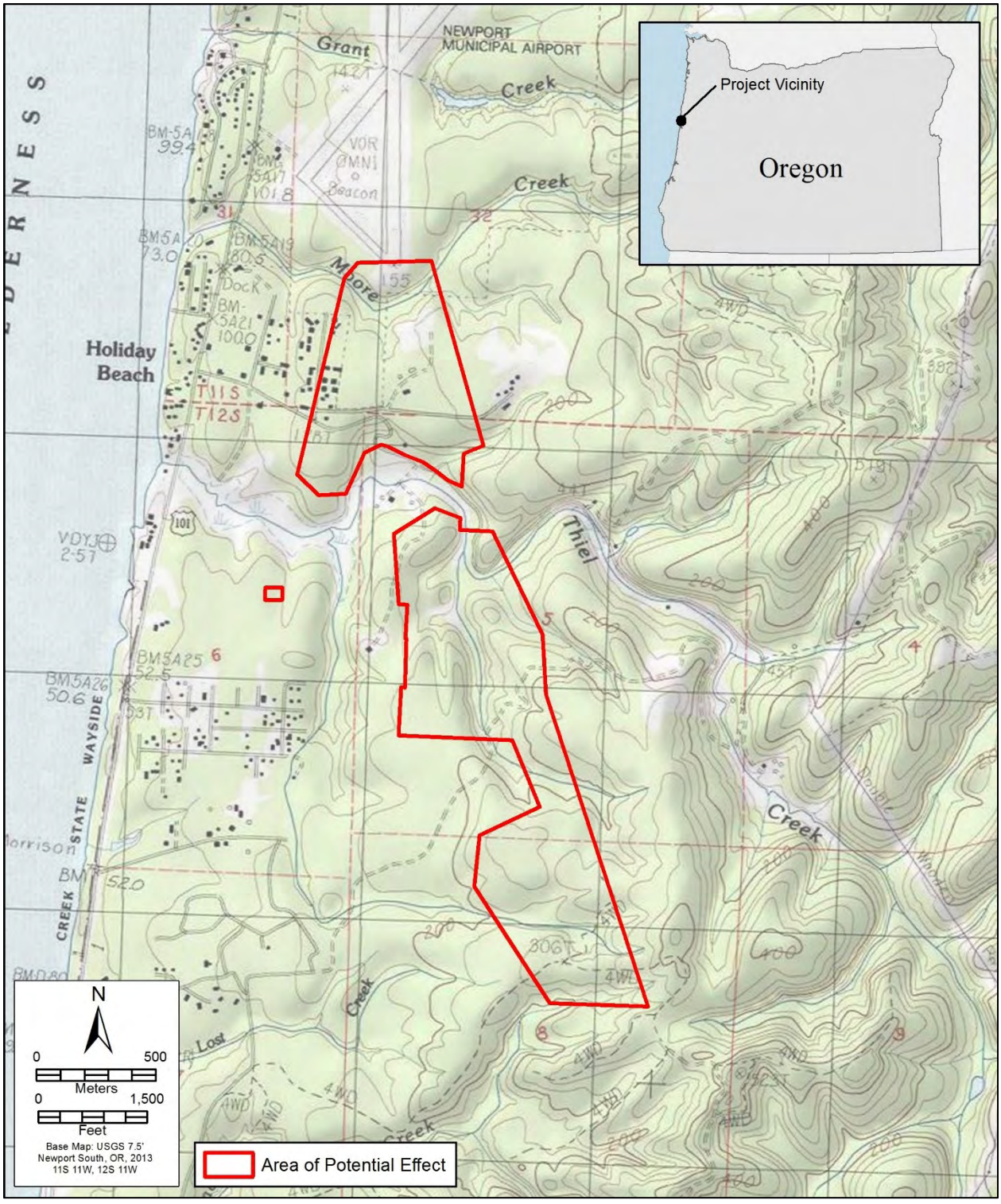


SOURCE: ESA

Figure 1
Location of the Newport Municipal Airport Obstruction Removal(1 of 2)



SOURCE: ESA

Figure 2
Location of the Newport Municipal Airport Obstruction Removal(2 of 2)

1.1 Project Description

The Newport Municipal Airport (Airport) proposes to remove obstructions from the regulated airspace of Runway 16, Runway 20, and Runway 34. An Airport Geographic Information System survey was conducted as part of the Master Plan Update in 2018 (WHPacific) and the data was used to identify obstructions in the protected airspace around the Airport. A subsequent LiDAR survey (Quantum Spatial, Inc. 2019) confirmed numerous obstructions (trees) penetrating into the protected airspace. The obstruction analysis used 14 Code of Federal Regulations (CFR) Part 77 *Safe, Efficient Use, and Preservation of the Navigable Airspace* to identify obstructions. . These trees are potential hazards to the Airport's operational safety because of their height. At this time, it is proposed that the trees would be cut at the base using hand-held equipment (e.g., chainsaws), leaving the stumps and roots in place. The project would attempt to use existing access roads and staging areas that are present across the majority of proposed project footprint to support ongoing logging activities, and that serve the Airport's and private landowner's ongoing operations and maintenance needs. Obstruction removal is estimated to begin in 2023.

1.2 Regulatory Environment

Federal funding of the Project by the Federal Aviation Administration (FAA) requires that the Project comply with Section 106 of the National Historic Preservation Act ("Section 106"). Section 106 requires that (FAA) consider the effects of this undertaking upon Historic Properties within the project's Area of Potential Effects (APE). Federal code implementing Section 106, found at 36 CFR 800, includes a requirement that an effort be made to identify Historic Properties. In coordination with the Oregon State Historic Preservation Office (SHPO), Confederated Tribes of the Warm Springs Reservation, Confederated Tribes of the Grande Ronde, Confederated Tribes of the Siletz Indians, and other stakeholders, the City of Newport and the FAA defined the APE for the Project (Attachment A). This report has been prepared to meet the standards of the Section 106 process. This report documents all of the steps taken to consider the effects of the Project on Historic Properties, and the results of the investigation.

Additional laws that apply to archaeological projects conducted within the State of Oregon include: Archaeological Objects and Sites (ORS 358.905-358.955), the Indian Graves and Protected Objects (ORS 97.740-97.760), Conservation Program (ORS 358.635), Conservation Program (ORS 358.653), Archaeological Sites and Historical Materials (ORS 390.235), and Scenic Waterways (ORS 390.805-390.925).

1.3 Area of Potential Effects

The APE encompasses all areas of potential ground disturbance, construction staging areas, and access routes. The anticipated depth of ground disturbance would be confined to the surface. Trees would be cut at the base using hand-held equipment (e.g. chainsaws). Stumps and roots would be left in place. No new facilities, roads, or impervious surfaces are proposed as part of the project. The contractor selected for the project would access obstructions from existing disturbed areas including paved and unpaved airport access roads, private roads as well as old logging roads and paths. Staging would occur in existing disturbed areas that are already cleared of vegetation. The Area of Potential Effects is 622.5 acres.

2. PROJECT SETTING

2.1 Research Methods

ESA conducted a literature review of the Project's Study Area extending one mile in every direction from the footprint of the APE. Information reviewed included prior archaeological survey reports, recorded cultural resources, historic register-listed properties, ethnographic studies, historical maps, government landowner records, aerial photographs, regional histories, geological maps, soils surveys, and environmental reports. These records were reviewed in order to identify any cultural resources, including Traditional Cultural Properties (TCPs), within the APE. Relevant documents were examined at the Oregon State Historic Preservation Office (SHPO), the Oregon Historic Sites database, the University of Oregon Libraries website, online, and ESA's research library. Archaeological field survey methods are discussed in Section 4.

2.2 Environmental Setting

Climate in the vicinity of the Project is generally mild with an annual high of 58°F and an annual low of 44°F with an annual precipitation of approximately 70 inches of rainfall (U.S. Climate Data 2019).

2.2.1 Geomorphology

The five APE locations consist predominantly of Coastal Terrace Deposits (Qtc) (Figure 3). However, a wide range of secondary geological units are found across the APE. Nye Mudstone (Tn) can be found in four of the five APE segments, with only the most southern segment not containing this unit Mudslide debris (Qls) is found exclusively in the north western most APE segment, Area One. The south-central most APE segment, Area Three, represents the most diverse collection of geologic units, including the largest representation of Yaquina (Tyq) and the only representation of alluvial deposits for the project, (Qal) from Thiel Creek. Yaquina is a sandstone and depending on its elevation can be either a micaceous blue-grey sandstone or a coarse-grained buff-colored sandstone (Harrison and Eaton 1920).

The age of deposition for the Nye Mudstone (formed during the Miocene, 23 to 5 million years ago), and the Yaquina Formation (formed during the Paleogene, 66 to 23 million years ago) suggests that neither of these geologic formations would be suitable candidates to retain archaeological resources because they predate human occupation. The coastal deposits, having been possibly windblown from the nearby beach are also less likely to contain archaeological resources. There is also a low probability that the mudslide debris could have buried some cultural material. The only geologic unit within this project that has the likelihood of burying and preserving some cultural material is the alluvial deposits (Qal) from Thiel Creek. These deposits are confined to the deeply incised channel of the creek. The steep topography of the incised channel has resulted on no appreciable flood plain or terrace deposits being associated with the drainage within the APE. Alluvial deposition here is the result of the erosion of the Nye Mudstone to the east. Material has been deposited as the creek flows westward to the ocean. This seasonal high flow energy combined with a restricted incised channel makes it unlikely that this Holocene aged alluvium contains cultural resources.

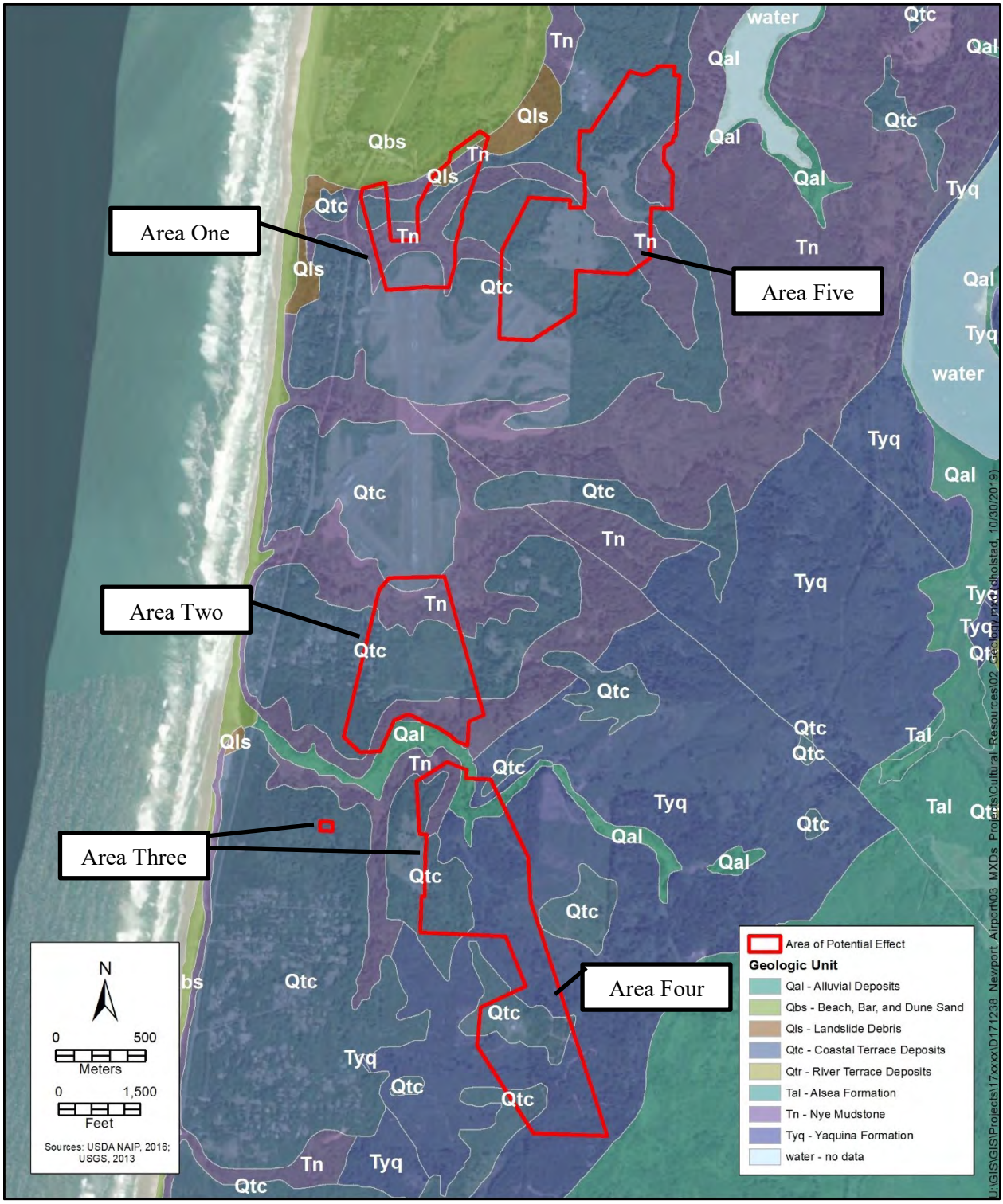


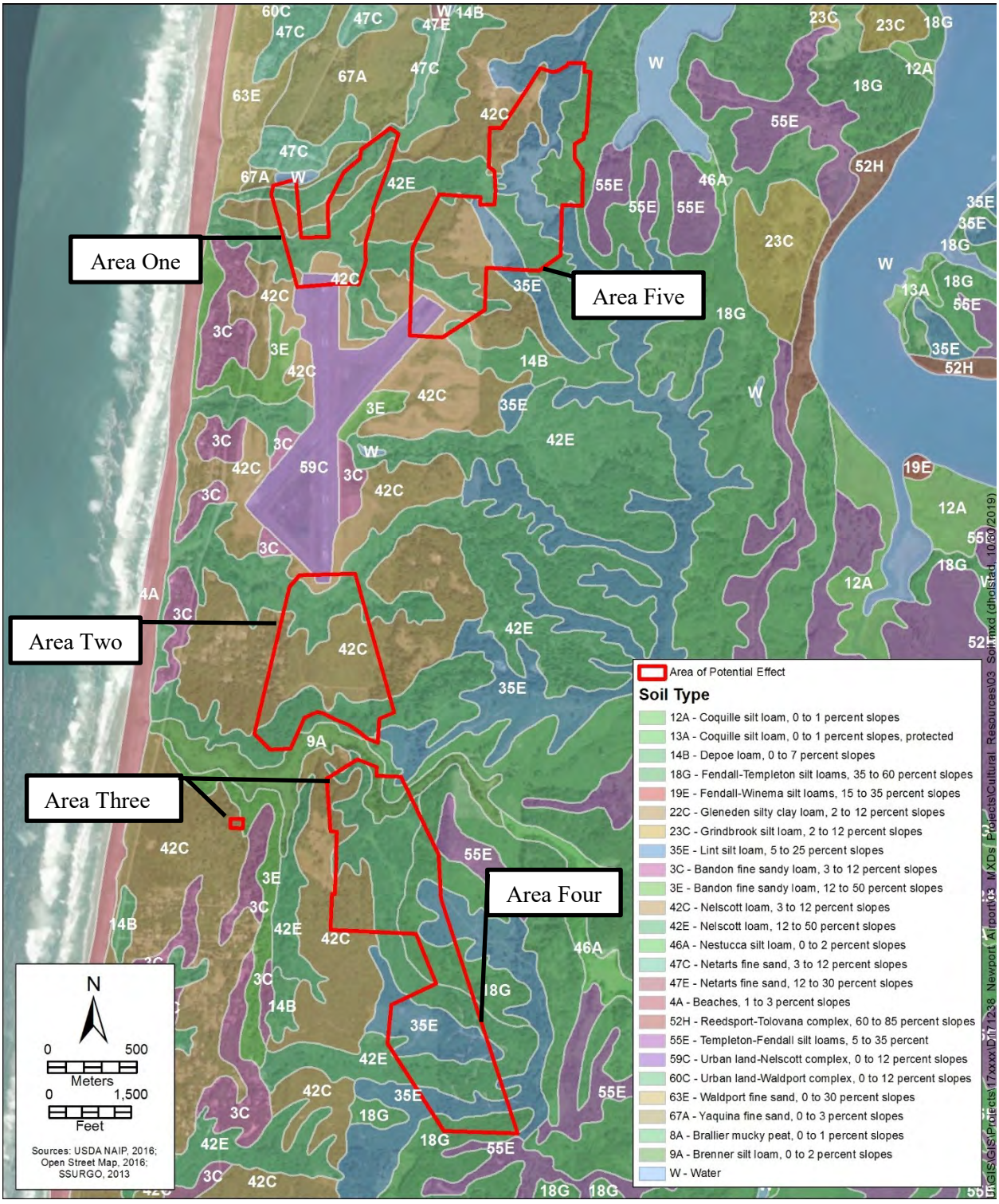
Figure 3
Geological Map of Newport Municipal Airport Obstruction Removal Project

2.2.2 Soils

Soils within the project are discussed based on their specific APE and soil types as described in Figure 4: Area One (Northwestern), Area Two (middle), and Area Three(South central), Area Four (southern-most) and Area Five (Northeastern)

The Area One and Area Two share the Nelscott loam soil type with a mild variation in slope percentages ranging from 42E: 12 to 50 percent slope, 42 C: 3 to 12 percent slopes, and 59C: 0 to 12 percent slopes. The description for 59C also includes a mixture of urban land and the Nelscott complex. Consisting of moderately well drained soils overlying stratified marine sediments, this soil series is found on marine terraces and have a mean annual precipitation of about 70 inches (National Cooperative Soil Survey 2003). The taxonomic description for these soils are "fine-loamy over sandy or sandy-skeletal, isotoic over mixed, isomesic, ortstein Typic Durorthods" (National Cooperative Soil Survey 2003).

The greatest variation in soil types within the project is found Area Three and Area Four, which make up the southern portion of the APE. In this location two Nelscott loam types are present (42C and 42E), but also three other silt loam soil types: the Fendall-Templeton silt loam with a 35 to 65 percent slope (18G), the Lint silt loam, with 5 to 25 percent slope (35E), and the Brenner silt loam with 0 to 2 percent slopes (9A). Each of these additional three soil types are discussed separately below. The Fendall series can be found on coastal hills, mountains, and old dissected marine terraces consisting of "fine, isotic, isomesic Andic Humudepts" (National Cooperative Soil Survey 2011). While the texture consists of more than 35 percent of clay regularly, when factoring in the Templeton soils, this average drops to less than 35 percent of clay in the texture control section of the soil (National Cooperative Soil Survey 2011). The Lint series has a small distribution located only on the coastal area of Oregon and are "formed in alluvium weathered mostly from sedimentary rocks" (National Cooperative Soil Survey 2000b). The final soil series that is associated with this project includes the Brenner Series. Unlike the other soils discussed in this section, the poorly drained Brenner series is found in swales on flood plains adjacent to stream terraces, and are formed in silty mixed recent alluvium that are the result of basic igneous and sedimentary rocks (National Cooperative Soil Survey 2004). This alluvial soil is only found in Area three, the northern half of the Southern APE polygon.



SOURCE: ESA

Figure 4
Soils Map of Newport Municipal Airport Obstruction Removal

2.2.3 Flora and Fauna

The vegetation of the APE is part of the *Picea sitchensis* vegetation zone which follows the coasts of Washington and Oregon, and is only a few kilometers in width (except for where it extends inland along river valleys) (Franklin and Dyrness 1988). This particular forest classification refers to a coniferous forest with a mature overstory and a particularly dense understory. The more mature forests within this zone (specifically in Oregon) include an overstore with the following species: Sitka spruce (*Picea sitchensis)*, western hemlock (*Tsuga heterophylla*), Douglas fir (*Pseudotsuga menziesii*), grand fir (*Abies grandis*), with red alder (*Alnus rubra*) being the species found most common in disturbed locations and *Pinus contorta* being the most common species found nearest to the ocean (Franklin and Dyrness 1973). The understories in these forests are dense and include shrubs, dicotyledonous herbs, ferns and cryptograms. In sites that are located near the ocean the understories include salal (*Gaultheria shallon*), Pacific rhododendron (*Rhododendron macrophyllum*), and evergreen huckleberry (*Vaccinium ovatum*) (Franklin and Dyrness 1973). Native fauna along the Oregon coast include harbor seals, California sea lions, Steller sea lions, bald eagles, osprey, turkey vultures, peregrine falcons, black oystercatcher (*Haematopus bachmani*), short-tailed albatross (*Phoebastria albatrus*), marbled murrelet *(Brachyramphus marmoratus),* western snowy plover (*Charadrius alexandrinus nivosus*), northern spotted owl (*Strix occidentalis caurina*), 13 different species of sea birds, numerous shore birds, four species of sea turtles, Coho Salmon (*Oncorhynchus kisutch*), Chinook Salmon (*Oncorhynchus tshawytscha*), coastal cutthroat trout (*Oncorhynchus clarkii*), and Pacific lamprey (*Entosphenus tridentatus*) (U.S. Fish & Wildlife Service n.d.).

2.3 Precontact Setting

The precontact cultural chronology of the Oregon Coast has been developed based on interpretations of a limited number of archaeological sites (Ross 1990). The chronology interprets broad patterns in culture, such as subsistence, technology, and social organization. The following discussion follows Ross (1990) by recognizing three phases, which are summarized in Table 2.

TABLE 2
PRECONTACT-ERA PERIODS

Period	Approx. Date Range	Characteristics
Late Marine	500-1856 AD	Villages and campsites located along or very close to the coast; use of marine, riverine, and estuarine resources in conjunction with terrestrial resources. Increased amount of shell, use of lithic tools including projectile points with concave base, triangular, and tanged form that are distinctively different from those used in the Pre-Marine Period. Other common stone tools include drills, gravers, hammerstones, pestles, scrapers, and heavy choppers, netsinkers, bifaces, pipes, and bowls. Typical bone artifacts include antler wedges, flaking tools, chisels, bone needles, awls, fishhooks, bi-points, pendants, fish lures, composite harpoon heads, and gaming pieces.
Early Marine and Riverine	3,000 BC –500 AD	Focus on marine and riverine resources. Shell midden sites consisting of mussels and clams. Artifacts are typically of bone items rather than lithic items. They typically include harpoons, antler-tine flake tools, and wedges.
Pre-Marine	Pre-3,000 BC	Focus on upland resources and minor role of marine resources. Artifacts consist of plant processing tools and hunting tools. They typically include groundstone tools, scrapers, blades, knives, and projectile points made of cryptocrystalline silicate and obsidian. Point types are often leaf-shaped, expanded stem, contracting stem, and side-notched.

The Oregon Coast can be separated into three sections: North, Central, and South. The APE is located within the Central Coast section. When the Oregon Coast Precontact cultural chronology was developed, the oldest known site in the Central Coast is the Umpqua/Eden Site (35-DO-83) on Winchester Bay. This site dates to ca. 1010 BC, placing it within the Early Marine and Riverine Period. There has been minimal evidence of Pre-Marine or river-oriented occupation in the Central Coast.

2.4 Ethnographic Setting

2.4.1 Overview

This discussion presents a high-level summary of Native subsistence, settlement, and burial practices in the Study Area. It is primarily based upon information within published 20th century ethnographies and studies.

The Study Area is located within the traditional territory of the Yaquina/Alsea (referred to hereafter collectively as Alsea) (Drucker 1939; Zenk 1990). The area roughly extends along the coast from Otter Rock to Tenmile Creek and includes the Alsea and Yaquina River valleys and tributaries. During the ethnographic period the Alsea were connected with neighboring Tillamooks and Siuslawans through

trade, intermarriage, and language and interacted to a lesser extent with the Willamette Valley Kalapuyans. The Alsea also participated in trade as far north as the Columbia River. The Alsea language has two dialects: Yaquina, originally spoken along the Yaquina River and Bay, and Alsea which was originally spoken along the Alsea River and Bay and along the coast.

Traditional permanent Alsea villages were located along river estuaries and the coast. These locations provided easy access to marine, riverine, and terrestrial resources. Permanent winter houses were rectangular cedar-plank multi-family structures with gable roof and semi-subterranean floors. This style is similar to that of the Tillamooks and Coosans. Traditionally, temporary camps were used during the non-winter months while resource gathering. Summer camps were located inland, along the upriver stretches of the Alsea and Yaquina Rivers. By one account, there were approximately 12 permanent villages and approximately 24 seasonal camps and fishing places throughout the Alsea lands (Drucker 1939). The traditional Alsea funerary practice is aboveground burials, in either elevated canoes or burial houses.

During the ethnographic period the Alsea were known for their canoe manufacturing skills. These were commonly made from Western red cedar and occasionally redwood drift logs found along the coast. The Alsea used both sea and riverine canoes. The traditional Alsea subsistence pattern is based on a seasonal round. Dietary staples include salmon, supplemented by smelt, herring, flounders, perch, lampreys, and salmon trout. Terrestrial resources include elk, deer, beaver, quail, and grouse. Sea lions were hunted and occasionally stranded whale carcasses were harvested. The traditional Alsea diet also includes clams, mussels, camas root, fern and skunk cabbage roots, acorns.

2.4.2 Study Area

One named place is recorded within the Study Area; however, it is likely that additional unrecorded places are also present. The recorded named place is the village of *Mi(·)čú·štik*^{y} which was located in the vicinity of present-day Newport (Zenk 1990).

2.5 Historical Setting

2.5.1 Overview

The first confirmed arrival of non-Natives to the Alsea region was in 1788 when the U.S. *Columbia* arrived off the coast. Subsequent non-Native explorers and fur traders introduced epidemic diseases to the region such as smallpox, which left the Alsea population severely reduced. In 1850 the U.S. Government passed the Oregon Donation Act. This led to waves of non-Native settlers claiming land claims in the area. Settlers displaced existing populations and disrupted traditional subsistence patterns (Beckham 1990).

From the late 1840s through 1855, the U.S. Government pursued treaties with the Native people of western Oregon. Although treaties were negotiated during this time, none were ratified by Congress. The period between 1851 and 1855 was marked by a series of violent attacks carried out by gold miners and voluntary militia against the Native people of western Oregon. These conflicts culminated with the Rouge River War in 1855, which resulted in the deaths of several hundred Native people.

The U.S. Government established the Coast (also known as Siletz) Reservation and the Grand Ronde Reservation in 1855 under and executive order. The original size of both reservations was significantly larger than today's boundaries. At the time of establishment, all surviving Native people of western Oregon were assigned to either of these reservations. The Alsea were relocated in 1861 to the Alsea Subagency on the Siletz Reservation (Lewis 2018). An 1856-1857 census of the two reservations estimated a total of only 4,000 Native people remaining in western Oregon; 63 were identified as Alsea and 33 as Yaquina (Beckham 1990:184).

The Siletz Reservation lacked any streams with salmon runs; poor conditions led to additional population losses from starvation and disease. Despite being within the boundaries of the Siletz Reservation, the U.S. Government passed an executive order in 1865 allowing non-Native settlement within the Yaquina and Alsea River estuaries. In 1875 the Alsea Subagency closed (Lewis 2018). Descendants of the mid-19th century Alsea are enrolled in the Confederated Tribes of the Siletz Indians, the Coquille Indian Tribe, and the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw tribes of Oregon.

The town of Newport formed in the 1860s on the northwest side of the mouth of Yaquina Bay. It was accessed via boat from the town of Elk City, upriver along the Yaquina River. In the 1870s the Oregon Pacific Railroad built a line from Boise, Idaho to the company town of Yaquina City with the intention of using Yaquina Bay as a shipping harbor (Disse 2019). Yaquina City was situated east of Newport, along the Bay. The railroad opened in 1884. However, it was abandoned after two steamships wrecked in the shallow depths of Yaquina Bay (Gordon 2019). The railroad was reopened in 1894 and Newport flourished as a tourist destination. Access to Newport via automobile improved in 1919 when the Roosevelt Coast Military Highway (now U.S. Highway 101) was constructed (Disse 2019). In 1936 the Yaquina Bay Bridge was constructed, replacing the car ferry once necessary to cross the Bay.

2.5.2 Study Area

When surveyed by the U.S. Government in 1867, no homesteads, wagon roads, trails, or other notable features were recorded in the APE. However, there were several homesteads along the coast and shores of Yaquina Bay and the Oysterville Cemetery was located along the west side of the Yaquina River approximately 1.5 miles east of today's Newport Airport (U.S. Surveyor General 1867, 1870a, 1870b). The portion of the APE south of today's Newport Airport was excluded from an 1874 survey due to being "Rough and mountainous. Unfit for settlement and therefore unsurveyed" (U.S. Surveyor General 1874). It was surveyed eight years later; no notable features were recorded (U.S. Surveyor General 1882).

The APE spans over a dozen late 19th century land claims (U.S. Bureau of Land Management 2002, 2018). Due to the volume, these are not discussed individually. The claims were filed between 1876 and 1895, with the majority in 1891-1892. Some of the land remained in the ownership of the same family through the 1930s (Metsker Map Company 1930a, 1930b). Based on available aerial imagery and maps, the APE remained largely undeveloped apart from the construction of the Newport Airport beginning in 1943.

Newport Municipal Airport

The Newport Municipal Airport was built by the Civil Aeronautics Administration in 1943 on land granted by the City of Newport (Task Force 2016; WH Pacific 2018). The airport opened in 1944. The construction involved massive earthwork to grade and fill the Grant Creek gorge that once ran east-west through the middle of today's Airport. This former gorge is outside of the APE. An estimated 300 million cubic yards of sand and clay were moved and 1.7 million cubic yards of fill imported; the fill was obtained from a quarry near Agate Beach. Approximately 94 feet of fill was placed within the gorge and nine miles of concrete drain tiles were installed. Small canyons and gullies were also reportedly graded and filled to accommodate runway construction.

In 1947, after the end of World War II, the Civil Aeronautics Administration transferred ownership of the Airport back to the City of Newport. During the 1950s the City constructed a terminal building on the northwest end of the airport (no longer present); this location was near or possibly within the APE. Several buildings and structures once stood here and were accessed by a road leading from Highway 101. These included at least a water tower and a beacon, which were documented on maps as early as 1957 and are visible on a 1954 aerial photograph (HistoricAerials.com 2019; USGS 1957, 1975, 1984). The road leading to this location was mapped in 1942, prior to construction of the airport; no buildings or structures were recorded along the alignment in this vicinity (USGS 1942). Today, there are three electrical buildings in this location that are likely less than 50 years old (WH Pacific 2018).

Major renovations occurred in the late 1970s and 1980s following adoption of the 1979 Airport Master Plan. These improvements were carried out in phases. Phase 1 included land acquisition, clearing, road relocation, a runway lighting system, and a lighted wind sock. Phase 2 shortened the NE/SW runway and lengthened the N/S runway. Phase 3 constructed taxiways in the discontinued portion of the NE/SW runway. Major improvements took place in 2014-2015 and included runway rebuilding, new storm drainage, new runway lights, relocation of an "old" emergency generator, reestablishment of access roads, and removal of an "old race track" (Task Force 2016). The location of the race track is unknown.

2.6 Existing Cultural Resources

ESA conducted a records search of the SHPO's online Oregon Archaeological Records Remote Access (OARRA) on January 11, 2022.

The records search resulted in the identification of 20 prior cultural resources assessments (Table 3), three recorded sites, and three unrecorded sites/isolates (Table 4) within the Study Area. No recorded cemeteries or aboveground historic register-listed properties are within or directly adjacent to the APE.

There are eight aboveground, historic-aged properties within the APE (Table 5). These resources meet the minimum age threshold for eligibility (50 years or older), but have not yet been evaluated for their potential historic significance (hereafter referred to as "unevaluated historic-aged properties").

2.6.1 Prior Cultural Resources Assessments

Five cultural resource assessments whose study areas overlap with the APE have been previously Conducted. An additional 15 assessments have been conducted within the project's Study Area (Table 3).

TABLE 3
PRIOR CULTURAL RESOURCES ASSESSMENTS CONDUCTED WITHIN THE STUDY AREA

Proximity to APE	Cultural Resources Identified in Study Area	Project	SHPO No.	Citation
Overlaps	1 precontact-era isolate* 35-LNC-129	Cultural Resources Survey of the Newport Airport Runway Rehabilitation Project and Apron Expansion Area	26016	Ellis et al. 2013
Overlaps	None	South Beach Cell Tower (CV63) Cultural Resource Survey	22888	Baker 2009
Overlaps	None	Archeological Reconnaissance of the Proposed Newport to Waldport and Waldport to Yachats Sewer Systems	248	Brauner 1976
Overlaps	None	Archaeological Survey for the Seal Rock Water District System Improvements Project (Phase 3)	27034	Minor and Toepel 2014
Overlaps	None	Results of a Phase I Environmental Site Assessment Cultural Resources Study of the Wilder Industrial Site	29047	Roulette et al. 2016
Outside	[n/a - no Fieldwork]	Units 3 & 4 Cultural Resources Based Upon a Literature Search	191	Beckham and Ross 1976
Outside	None	Cultural Resource Survey of Proposed Alternative Interceptor Routing in the Carmel—Foulweather Sanitary District	249	Zontek et al. 1976
Outside	None	Archaeological Survey of the Proposed Idaho Point Water Line Extension Project	243	Hartmann 1978
Outside	35-LNC-13	An Evaluation of Archaeological Sites on State Park Lands Along the Oregon Coast	7578	Minor 1986
Outside	1 precontact-era isolate*	Cultural Resources Evaluation of the Proposed Thiel Creek Development	8420	Ellis 1987
Outside	35-LNC-13	Archaeological Survey, Oregon Coast Highway @ 130th Avenue (Lost Creek Wayside, Newport)	16309	Connolly 1998a
Outside	None	Oregon Coast Highway at the Newport Airport Access	16592	Connolly 1998b
Outside	None	Cultural Resource Survey for the City of Newport Wastewater Conveyance and Treatment Project	16907	Fagan 1999
Outside	None	Subsurface Testing for the City of Newport Wastewater Conveyance and Treatment Project	17204	Kent and Fagan 2000
Outside	Possible shell midden*	U.S. 101: Yaquina Bay Bridge to SE 123rd St (Mike Miller Road)	19050	O'Grady 2004
Outside	1 historic-era homestead/chimney*	Archaeological Resource Evaluation of Area 1 and Area 4, Oregon State Parks, 2003/2004 Surveys – Volume I: Park Surveys	19806	Tasa et al. 2004
Outside	None	Section 106 Archaeological Review and Inventory at the Proposed CV-63 South Beach Telecommunications Facility	21957	Landreau 2008
Outside	35-LNC-140	Lost Creek State Park Historic Refuse Scatter	29639	Johnson 2018
Outside	None	Archaeological Survey for the US101:SE 32nd – SE 35th Project	30305	Minor 2019
Outside	[n/a - no Fieldwork]	US101: Shell Midden Context Statement, Columbia River to the California Border, MP 0.0 to MP 363.1 ADA-Accessible Ramps and Crossing Signal Pushbuttons Project	30857	Connolly et al 2019

*No site form on file at SHPO

2.6.2 Recorded Archaeological Sites and Isolates

No archaeological sites are recorded within the APE. There are three recorded sites/isolates within the Study Area. One, 35-LNC-129, is located on the northwest end of the Airport, just south of the APE boundary. A precontact-era isolate was identified at the north end of the airport as well, situated between the two runways. See below for more details. The other sites within one mile of the APE are located along the coast.

TABLE 4
RECORDED ARCHAEOLOGICAL SITES OR ISOLATES WITHIN THE STUDY AREA

National Register of Historic Places Status	Site Number	Site Name	Site Type	Description
Not Eligible (Isolate)	No Site Form	--	Precontact-era Isolate	One precontact-era sandstone abrader identified on the surface within Airport property.
Not evaluated	35-LNC-129	--	Historic Foundations	Two ca. 1940 poured concrete features – a circular ring and a vaulted box. Circular foundation likely associated with former storage tank and box likely related to a pump mechanism.
Not evaluated	35-LNC-140	Lost Creek Historic Dump	Historic Refuse Scatter	Refuse scatter eroding from the coastal bank. Site contains sanitary cans, broken bottle glass, Mason jars, rubber-coated wire. The site dates to ca. 1930-1940.
Not evaluated	35-LNC-13	--	Shell Midden	Small shell midden containing fire-modified rock on flat shelf projecting out from a large sand dune. No house pits identified. Originally recorded in 1951. Was not located during site visit in 1993 (likely now destroyed).
Not Eligible (Isolate)	No Site Form	--	Precontact-era Isolate	One piece of cryptocrystalline silicate debitage along the southern tributary of Thiel Creek.
Not evaluated	No Site Form	--	Historic-era Homestead / Chimney	Pre-1939 remnant homestead cobblestone and brick chimney in South Beach State Park.

Precontact-Era Isolate (Field No. 13-07-1)

This isolate was found on the Airport property but outside of the APE. It was located between the north ends of the runways (Ellis et al. 2013). The item is a precontact-era sandstone abrader identified on the surface. Four shovel probes were excavated in the immediate vicinity of the find; not cultural resources were identified.

35-LNC-129 (Field No. 13-07-02)

This site is on the Airport property but outside of the APE. It includes two ca. 1940 foundations (Ellis et al. 2013). They are a circular ring made of poured concrete and a vaulted box made of poured concrete. Recorders interpreted them as likely associated with a former storage tank visible in a 1950s photograph.

2.6.3 Historic Properties

According to a review of the Oregon Historic Site Database (OHSD), no historic register-listed or eligible properties are within or immediately adjacent to the APE. There are eight unevaluated historic-aged properties within the APE (Table 5). These are single-family residences constructed between 1962 and 1970.

TABLE 5
UNEVALUATED HISTORIC-AGED PROPERTIES WITHIN THE APE

Address	Parcel No.	Owner	Property Type	Year Built
425 SE 98th Street	12-11-06-00-00302	Schroeder, Joan	Single Family Residence	1964
585 SE 98th Street	12-11-05-00-00600	Steel String, Inc.	Single Family Residence	1970
9435 SE Cedar Street	11-11-32-CC-00900	Johnson, Patricia	Single Family Residence	1962
9709 SE Cedar Street	11-11-32-CC-01200	Kramer, Larry and Cheryl	Single Family Residence	1967
9711 SE Cedar Street	11-11-32-CC-01201	McDonagh, Becky	Single Family Residence	1966
9735 SE Cedar Street	11-11-32-CC-01100	McLain, Steve	Single Family Residence	1967
9737 SE Cedar Street	11-11-32-CC-01101	Stinson, James and Betty	Single Family Residence	1963
9765 SE Cedar Street	11-11-32-CC-01001	Failor, Joann	Single Family Residence	1964

2.7 Expectations

The overall Project APE is spread over a diverse range of environments, each with its own distinct features and probabilities for containing cultural resources. Each area is discussed independently.

Area One (Northwest Work Area)

Area One comprises the northwest approach/takeoff zone for the Newport Municipal Airport. Two distinct environments are contained within Area One. The first is the cleared and leveled ground of the airport runway approach. The second area is north of the runway and consists of steep forested ridgelines and valleys. An established network of access roads and airport support facilities, such as lighting, are found throughout the area.

The southern portion of Area One consists of the level graded airport property. This portion of the APE has been heavily reshaped through grading and filling to provide a level compacted field for airport operations. Due to the pervasive disturbance associated with the construction of the airport in the mid-20th century ESA does not expect to encounter intact precontact or early historic period cultural resources in this area. However, this portion of the APE is in close proximity to the previously recorded archaeological site 35-LNC-129. The site contains poured concrete features from the mid-20th century, likely associated with former airport operations. The southern portion of Area One is considered very high probability for encountering additional mid-20th century features relating to airport operations and construction. These features are expected to be at or above the current ground surface of the open field.

The northern portion of Area One, contains the steep ridge lines. It is in close proximity to a previously identified isolated precontact period sandstone abrader. The abrader was found at the surface along a ridgeline (Elis et al. 2013). The description of the isolate find location reflects very similar environment to the northern portion of Area One. Due to the steep topography, which is not associated with a permanent waterbody, ESA expects finds to be isolated artifacts associated with precontact hunting and gathering activity; similar to the previously encountered artifact. ESA considers Area One to be moderate probability for encountering historic and precontact period cultural resources.

Area Two (Central Work Area)

Area Two consists of the approach for Runway 34. Portions of the cleared and leveled airport operations area are within Area Two. Area Two also contains private residential housing, and both mature and recently cut logging parcels. The topography is predominantly flat, but a single steeply banked stream channel divides the active airport property in the north of the zone from the residential and logging parcels in the south. A network of access roads, consisting of airport facilities, public and private residential streets, and itinerant logging roads provides access throughout Area Two.

Due to pervasive disturbance from 20th century construction, the airport and residential properties are considered low to moderate probability for precontact artifacts, and high probability for historic period cultural resources. The logging parcels are considered moderate probability for both precontact period and historic period cultural resources. Historic period cultural resources are most likely to consist of refuse deposits related to nearby domestic activity or artifacts associated with historic period logging activity. Precontact cultural resources are likely to consist isolated objects or sparse concentrations of artifacts related to short term resource gathering. While a deeply incised stream channel is present within Area Two, the extreme topographic changes from the stable terraces above the stream to the active channel are such that this area is likely to have been used predominantly as a resource gathering location, rather than a potential camp. While alluvial deposits are capable of burying and preserving cultural resources, the only landform mapped as containing this type of soil matrix is at the base of the narrow steeply sloped ravine containing Moore Creek. The environment in this location does not contain stable terraces but rather transitions abruptly from 30%+ sloped ravine walls to the narrow high energy channel. In this environment, seasonal high energy flows are likely to destroy or remove artifacts and features rather than bury or preserve them.

Area Three (Northern Half of Southern Work Zone)

Area Three consists of forested logging parcels with a network of access roads. The area does not contain significant residential, or commercial structures. This portion of the APE is abutted to the north by 20th century agricultural and residential properties. Portions of Area Three slated for tree removal activities do not contain permeant water bodies. Area Three is extremely topographically diverse, with many deeply incised valleys, steeply rising ridges with narrow flat ridgelines.

ESA considers Area Three to be moderate probability for both historic and precontact period cultural resources. Historic period uses of Area Three was likely limited to logging and hunting activities, as the steep topography would not have been conducive to agricultural or residential use. Isolated artifacts or debris concentrations from this use may be found in the area, constructed features are not considered likely. Similarly, precontact use of Area Three was likely limited to short term resource gathering. The

area lacks easily accessible freshwater resources. Thiel Creek runs through the north portion of Area Three. However, this reach of the creek is located at the base of a steeply incised ravine. Access is treacherous, and the area lacks stable bank adjacent terraces. While the area is mapped as containing alluvial deposits, the narrow channel, without stable terraces likely contains coarse sand and gravel high energy channel deposits, that are unlikely to preserve cultural resources.

Area Four (Southern Half of Southern Work Zone)

Area Four consists of open grassy lowlands with both recently clear-cut and mature timber stands on the slopes and ridge lines. An established network of access roads is present, as is a modern water treatment facility. Portions of Area Four slated for tree removal activities do not contain permeant water bodies. Area Four is extremely topographically diverse, with many deeply incised valleys, steeply rising ridges with narrow flat ridgelines.

ESA considers Area Four to be moderate probability for both historic and precontact period cultural resources. Historic period use of Area Four was likely limited to logging and hunting activities, as the steep topography would not have been conducive to agricultural or residential use. Isolated artifacts or debris concentrations from this use may be found in the area, constructed features are not considered likely. Precontact use of the area was likely limited to seasonal resource gathering, the lack of permeant water features suggests that permanent or seasonal encampments are not likely to be found here. The lack of Holocene aged soil matrix capable of burying and preserving cultural resources indicates that artifacts and features will be found at or very near the surface in this portion of the APE.

Area Five (Northeast Work Zone)

Area Five consists of the northeast corner of the Newport Municipal Airport and extends down into the undeveloped forest and grasslands of the runway approach. It ends before the ridge rises and overlooks the Yaquina River. The area contains a system of walking trails and a disk golf course in the far northern extent, accessed through the municipal water treatment plant. This portion of the APE contains an established network of two track roads within the open grassy meadows and in the forested areas. No modern buildings are contained within the area. However, the Newport Police department does have a shelter awning associated with a rudimentary shooting range. The only permanent water bodies are Henderson Creek. A network of seasonal drainages feeding into the creek are found across the landscape.

ESA considers the area to be moderate probability for both historic period and precontact cultural resources. It is unlikely that precontact peoples would have used portions of Area Five for seasonal or permeant habitation. The area is in close proximity to more desirable locations along the Yaquina River, or Pacific coast. Precontact peoples would have most likely used the area as hunting ground for terrestrial mammals, or gathering for freshwater based resources along Henderson creek. However, the creek banks in this portion of the APE are deeply incised into the sandstone bedrock, without established terrace banks. Alluvium associated with the drainage is washed through during heavy flood events and deep beds of Holocene aged material, capable of burying and preserving cultural resources, are not expected. Historic aged resources are likely to be associated with either logging of agricultural activity. No records of other use types within Area Five were encountered during the background research. No records of homesteads or permeant structures were found, and encountered materials are likely to be scattered of debris relating to refuse disposal.

3. HISTORIC PROPERTY SURVEY

There are eight unevaluated historic aged properties within the APE (Table 6). Build dates and property cards for each property were obtained from the Lincoln County Assessor, through both online, and physical searches of the property archives. These records produced photograph's, permits, and plans for each property. Three of these properties provided full rights of entry, and were photographed and recorded on Section 106 Documentation forms (Appendix B). The other five properties had access restrictions that only allowed photo documentation from public right of ways.

TABLE 6
HISTORIC PROPERTIES INVENTORIED FOR THE NEWPORT MUNICIPAL AIRPORT OBSTRUCTION REMOVAL

Rights of Entry	Address	Parcel No.	Use	Year Built	NRHP Eligibility Recommendation[1]	SHPO Resource No.
No	425 SE 98th Street	12-11-06-00-00302	Single Family Residence	1964	Potentially Eligible (Criterion C)	Not fully recorded due to access
Yes	585 SE 98th Street	12-11-05-00-00600	Single Family Residence	1970	Not Eligible	Not Yet Assigned
No	9435 SE Cedar Street	11-11-32-CC-00900	Single Family Residence	1962	Not Eligible	Not fully recorded due to access
Yes	9709 SE Cedar Street	11-11-32-CC-01200	Single Family Residence	1967	Not Eligible	Not fully recorded due to access
Yes	9711 SE Cedar Street	11-11-32-CC-01201	Single Family Residence	1966	Not Eligible	Not fully recorded due to access
No	9735 SE Cedar Street	11-11-32-CC-01100	Single Family Residence	1967	Not Eligible	Note Yet Assigned
Partial	9737 SE Cedar Street	11-11-32-CC-01101	Single Family Residence	1963	Not Eligible	Not Yet Assigned
No	9765 SE Cedar Street	11-11-32-CC-01001	Single Family Residence	1964	Not Eligible	Not fully recorded due to access

[1] NRHP = National Register of Historic Places

3.1 425 SE 98th Street / Residence

The residence at 425 SE 98th Street is located in South Beach, Lincoln County. ESA did not have Rights of Entry to the property and observed the structure from the public Right of Way. The county assessor lists the construction date as 1964. This residence is a south-facing 1½-story wood A-frame structure with a steep gabled roof that extends to the ground (Figure 5). The house is set back from SE 98th Street. The roof features composition shingles with enclosed eaves. There is a metal chimney present on the west facade and multiple skylights within each of the sloping rooves. The foundation was not visible from the street. Exterior walls are clad with wood frame, and a mix of single-hung and picture windows. There is a wood deck that extends the length of the front façade. The county assessor has no changes to the structure on file.

Statement of Significance

At a reconnaissance level of evaluation, this residence retains some architectural integrity of design, materials, workmanship, and feeling consistent with its contemporary folk A-Frame design (e.g. steeply sloped roofline extending to the structure's foundation, wooden siding). However, the roof has been replaced with asphalt shingles and the skylights appear to be replacements based on observable materials. Additionally, the porch is of simple construction, and no second story balcony is present, as is found in other examples of the style. These conditions diminish its overall integrity, and it does not appear to be an outstanding example of the style. However, a full documentation of the structure would be required to make a conclusive determination. As a result, ESA recommends that the property be considered Potentially Eligible for the NRHP, based on its architectural style and materials (Criterion C), until a full documentation is completed. No connection to local, regional or national events (Criterion A), or important person's (Criterion B), was revealed during the archival research into the original builder or past residents. Finally, as a typical mid-20th century single family residence, the structure does not possess the ability to provide new information about history or prehistory (Criterion D).

The proposed project impacts, of tree clearing, will not impact the structure or its setting. The parcel is adjacent to active logging land and tree clearing has been occurring in the area before the structure was built and throughout its existence. As a result, ESA recommends that the project will not have an adverse effect to the property.

SOURCE: Lincoln County Assessor 2012

Figure 5
425 SE 98th Street, front facade, view to the North

3.2 585 SE 98th Street / Residence

The residence at 585 SE 98th Street, South Beach, is located in Lincoln County. The county assessor lists the construction date as 1970.This residence is a southwest facing 1-story wood frame structure with an L-shape plan and cross-gabled roofline at the rear façade, with open eaves (Figure 6). The attached 2-story garage has a front-gable roof line with open eaves. It is set back from SE 98th Street. The roof is clad with composition shingles; no chimneys are present. The foundation is poured concrete. Exterior walls are clad in wood vertical board and horizontal clapboard at the roofline. The front entry is in the center of the west facade with a secondary entry to the south. There are slider windows with metal frame throughout. There is a small deck off the rear / east facade. According to the county assessor the garage with second floor addition was constructed ca. 1979/1980. A portion of the garage was converted to living space at that time.

Statement of Significance

The structure appears to originally been a single-story contemporary ranch design that was later extensively remodeled. While the addition maintains the same T-111 siding as the original structure, the two story addition obscures the original historic aged structure. It now more closely resembles a split level design, rather than a ranch. These conditions diminish its overall integrity, and it does not represent an outstanding example of its original style. ESA recommends that the property be considered Not Eligible for the NRHP based on its architectural style and materials (Criterion C). No connection to local, regional or national events (Criterion A), or important person's (Criterion B), was revealed during the archival research into the original builder or past residents. Finally, as a typical mid-20th century single family residence, the structure does not possess the ability to provide new information about history or prehistory (Criterion D).

The proposed project impacts, of tree clearing, will not impact the structure or its setting. The parcel is adjacent to active logging land and tree clearing has been occurring in the area before the structure was constructed and throughout its existence. As a result, ESA recommends that the project will not have an adverse effect to the property.

SOURCE: ESA 2019

Figure 6
585 SE 98th Street, front facade, view to the northeast

3.3 9435 SE Cedar Street / Residence

The residence at 9435 SE Cedar Street, South Beach, is located in Lincoln County. ESA did not have Rights of Entry to the property and observed the structure from the public Right of Way. The county assessor lists the construction date as 1962. This residence is a northeast facing 1-story single wide manufactured home with a detached garage / shop approximately 24 feet x 44 feet (Figure 7). The county assessor has no known build date for the garage. The serial number for the manufactured home is E55DC22625. The exterior of the home is metal with slider windows. The addition to the mobile home appears to be constructed of two separate structures. One is constructed with metal siding and the other is wooden shingles. Both have corrugated metal rooves, but of dissimilar materials.

Statement of Significance

The original mobile home appears to have been remodeled, containing both original aluminum and later vinyl frame windows. The additions to the structure are of incongruous design and materials, neither of which match the primary dwelling. These conditions diminish its overall integrity, and it does not represent an outstanding example of its original style. ESA recommends that the property be considered Not Eligible for the NRHP; however, a full documentation of the structure would be required to make a conclusive determination. As a result, ESA recommends that the property be considered Not Eligible for the NRHP based on its architectural style and materials (Criterion C). No connection to local, regional or national events (Criterion A), or important person's (Criterion B), was revealed during the archival research into the original builder or past residents. Finally, as a typical mid-20th century single family residence, the structure does not possess the ability to provide new information about history or prehistory (Criterion D).

The proposed project impacts, of tree clearing, will not impact the structure or its setting. The parcel is adjacent to active logging land and tree clearing has been occurring in the area before the structure was constructed and throughout its existence. As a result, ESA recommends that the project will not have an adverse effect to the property

SOURCE: ESA 2019

Figure 7
9435 SE Cedar Street / Residence, front facade, view

3.4 9709 SE Cedar Street / Residence

The residence at 9709 SE Cedar Street, South Beach, is located in Lincoln County. The county assessor lists the construction date as 1967.This residence is a north facing 1-story rectangle plan structure with a side-gable roofline and attached 2-car garage (Figure 8). It shares a private drive off the east side of SE Cedar Street. The roof is clad with composition shingles and open eaves. There is a brick chimney present. The foundation is poured concrete. Exterior walls are covered with decorative patterned wood shingle and wood vertical board at the roofline on the west facade and wood vertical board on the east facade/garage. The front entry is setback and offset to the east of the north façade and features a wood door with three small diagonal windows. There are vinyl slider windows on the house and single pane windows on the garage. There is a small shed clad in wood horizontal clapboard with a front gable roofline to the west of the house. The county assessor lists the original garage as being removed and replaced with the current garage in 2004.

Statement of Significance

The original single story ranch style home has been remodeled. The windows have been replaced with modern vinyl, and the garage has been demolished and replaced with a structure that no longer matches the original roofline or dimensions of the home. The roof appears to have been replaced with asphalt shingles. It is not clear if the wooden siding is original or a replacement, the assessor was not able to provide photographs of the original structure. These conditions diminish its overall integrity, and it does not represent an outstanding example of its original style. ESA recommends that the property be considered Not Eligible for the NRHP based on its architectural style and materials (Criterion C). No connection to local, regional or national events (Criterion A), or important person's (Criterion B), was revealed during the archival research into the original builder or past residents. Finally, as a typical mid-20th century single family residence, the structure does not possess the ability to provide new information about history or prehistory (Criterion D).

The proposed project impacts, of tree clearing, will not impact the structure or its setting. The parcel is adjacent to active logging land and tree clearing has been occurring in the area before the structure was constructed and throughout its existence. As a result, ESA recommends that the project will not have an adverse effect to the property

SOURCE: ESA 2019

Figure 8
9709 SE Cedar Street, front facade, view

3.5 9711 SE Cedar Street / Residence

The residence at 9711 SE Cedar Street, South Beach, is located in Lincoln County. The county assessor lists the construction date as 1966. This residence is a north facing 1-story structure with a cross-gable roofline and attached 1-car garage (Figure 9). It shares a private drive off the east side of SE Cedar Street. The roof is clad with composition shingles and open eaves. There is a brick chimney present. The foundation is poured concrete. Exterior walls are covered with cedar shingle, decorative vertical board at the roofline and wood vertical board at the foundation. The front entry is offset to the west of the north façade and features a wood six paneled door. The rear entry includes a small concrete porch with sliding glass door. There are vinyl and metal slider windows on the residence. The county assessor has no permits or changes on file for the structure.

Statement of Significance

The structure maintains its original single story ranch floorplan. Some of the windows have been replaced and the composition shingle roof appears to be a replacement. These conditions diminish its overall integrity, how it still retains its general original form it does not represent an outstanding example of its original style. The home appears to be well maintained, but does not represent exemplary construction or materials. ESA recommends that the property be considered Not Eligible for the NRHP based on its architectural style and materials (Criterion C). No connection to local, regional or national events (Criterion A), or important person's (Criterion B), was revealed during the archival research into the original builder or past residents. Finally, as a typical mid-20th century single family residence, the structure does not possess the ability to provide new information about history or prehistory (Criterion D).

The proposed project impacts, of tree clearing, will not impact the structure or its setting. The parcel is adjacent to active logging land and tree clearing has been occurring in the area before the structure was constructed and throughout its existence. As a result, ESA recommends that the project will not have an adverse effect to the property

SOURCE: ESA 2019

Figure 9
9711 SE Cedar Street, front facade, view to the south

3.6 9735 SE Cedar Street / Residence

The residence at 9735 SE Cedar Street, South Beach, is located in Lincoln County. The county assessor lists the construction date as 1967. ESA did not have Rights of Entry to the property and observed the structure from the public Right of Way. . This residence is a south facing 2-story structure with a cross-gable roofline and attached 2-car garage (Figure 10). It shares a private drive off the east side of SE Cedar Street. The roof is clad with composition shingles and open eaves. There is a brick chimney present on the west facade. The foundation is poured concrete. Exterior walls are covered with vertical board and horizontal clapboard at the roofline. The front entry is offset to the east of the south façade. There are vinyl and metal slider windows on the residence. The county assessor lists a second story addition in 1982 and 15-foot x 16-foot addition to the east in 2000.

Statement of Significance

The structure appears to have been originally been a single-story contemporary ranch design that was later extensively remodeled. While the addition maintains the same siding and open gabled roof as the original structure, the two story addition obscures the form of original historic aged structure. These conditions diminish its overall integrity, and it does not represent an outstanding example of its original style. ESA recommends that the property be considered Not Eligible for the NRHP based on its architectural style and materials (Criterion C). No connection to local, regional or national events (Criterion A), or important person's (Criterion B), was revealed during the archival research into the original builder or past residents. Finally, as a typical mid-20th century single family residence, the structure does not possess the ability to provide new information about history or prehistory (Criterion D).

The proposed project impacts, of tree clearing, will not impact the structure or its setting. The parcel is adjacent to active logging land and tree clearing has been occurring in the area before the structure was constructed and throughout its existence. As a result, ESA recommends that the project will not have an adverse effect to the property.

SOURCE: Lincoln County Assessor 2012

Figure 10
9735 SE Cedar Street, front facade, view to the north

3.7 9737 SE Cedar Street / Residence

The residence at 9737 SE Cedar Street, South Beach, is located in Lincoln County. The county assessor lists the construction date as 1963. This property provided Rights of Entry, but could not be accessed without trespassing through the driveway/parking area of a home that had deigned access. As a result evaluation of the property was conducted from the public right-of-way. This residence is a north facing 1-story structure with a rectangular/irregular plan, and side-gable roofline (Figure 11). It shares a private drive off the east side of SE Cedar Street. The roof is clad with composition shingles and open eaves. The foundation is poured concrete. Exterior walls are covered with horizontal wooden board siding. The front entry is set in the center of the north façade and features a wood door with single partial sidelight. There are vinyl and metal slider windows on the residence and one small bay window on the front facade. The county assessor lists the garage being converted to living space ca. 2012.

Statement of Significance

The structure is a single story ranch design that has been remodeled. The large bay window is of vinyl construction, and is likely a later addition. Furthermore, the garage conversion may have replaced the roof in this section of the home, as it no longer maintains a roofline with the rest of the home. These conditions diminish its overall integrity, and it does not represent an outstanding example of its original style. ESA recommends that the property be considered Not Eligible for the NRHP based on its architectural style and materials (Criterion C). No connection to local, regional or national events (Criterion A), or important person's (Criterion B), was revealed during the archival research into the original builder or past residents. Finally, as a typical mid-20th century single family residence, the structure does not possess the ability to provide new information about history or prehistory (Criterion D).

The proposed project impacts, of tree clearing, will not impact the structure or its setting. The parcel is adjacent to active logging land and tree clearing has been occurring in the area before the structure was constructed and throughout its existence. As a result, ESA recommends that the project will not have an adverse effect to the property.

SOURCE: Lincoln County Assessor 2012

Figure 11
9737 SE Cedar Street, front facade, view to the southeast

3.8 9765 SE Cedar Street / Residence

The residence at 9765 SE Cedar Street, South Beach, is located in Lincoln County. . ESA did not have Rights of Entry to the property and observed the structure from the public Right of Way. The county assessor lists the construction date as ca. 1964. This residence is a north facing 1-story structure with a rectangular plan, and cross-gable roofline (Figure 13). It is offset from SE Cedar Street. The roof is clad with composition shingles and open eaves. The foundation is poured concrete. Exterior walls are covered with cedar shingles and vertical board. The front entry is set in the center of the north façade and features an enclosed and covered porch with concrete steps. There is one picture window on the front face and metal slider windows throughout. The county assessor lists the detached garage as being converted into a studio ca. 1989.

Statement of Significance

At a reconnaissance level of evaluation, this residence retains some architectural integrity of design, materials, workmanship, and feeling consistent with its Cape Cod Revival style (e.g., rectangular plan, side-gabled roof, horizontal shake siding, symmetrical front façade, and period-appropriate paint colors). However, portions of the shingle siding have been replaced with horizontal board during the 1989 garage conversion, and some windows have been replaced. These conditions diminish its overall integrity and it is not an outstanding example of this architectural style. ESA recommends that the property be considered Not Eligible for the NRHP based on its architectural style and materials (Criterion C). No connection to local, regional or national events (Criterion A), or important person's (Criterion B), was revealed during the archival research into the original builder or past residents. Finally, as a typical mid-20th century single family residence, the structure does not possess the ability to provide new information about history or prehistory (Criterion D).

The proposed project impacts, of tree clearing, will not impact the structure or its setting. The parcel is adjacent to active logging land and tree clearing has been occurring in the area before the structure was constructed and throughout its existence. As a result, ESA recommends that the project will not have an adverse effect to the property.

SOURCE: Lincoln County Assessor 2012

Figure 12
9765 SE Cedar Street, front facade, view to the southeast

3.9 The Newport Municipal Airport

The Newport Municipal Airport was built by the Civil Aeronautics Administration in 1943 on land granted by the City of Newport (Task Force 2016; WH Pacific 2018). The airport opened in 1944. In 1947, after the end of World War II, the Civil Aeronautics Administration transferred ownership of the Airport back to the City of Newport. Oregon. SHPO requires that historic aged airports be considered both as a whole, or district, and as individual historic aged buildings or infrastructure elements that contribute to the district. Based on its age, the Newport Municipal Airport represents a potential Historic District. The historic bounds of the airport, and thus the potential Historic District, overlap with the APE. However, no historic aged structures were observed within or adjacent to the APE. Furthermore, it is highly unlikely that any clearing activity will be necessary adjacent to the runway, as these facilities are already routinely cleared of brush and vegetation. Any clearing is likely to associated with the young trees and bushes found along the perimeter of the airport. No mature trees were observed inside the fence for the operations buildings and runways.

The portion of the APE that overlaps with the airport facility shows possible tree obstructions within the actively minted airport facility, but no such trees were observed during the survey work. These LiDAR blips are likely a result of minor topographic variation, or possibly low shrubs. One small modern electrical utility shed is found at the southern extent of the Airport facility, in Area Two, this is likely the source of much of the potential tree clearing proposed in this area by the model.

Statement of Significance

While no structural elements of the airport are within the Project's APE The airport itself is of historic age. As a Civil Aeronautics Administration airport that was operation during World War Two the airport was crucial to both military and civilian life in the local area and region. As the airport transitioned into a civilian facility it has continued to serve the community as a vital element of the local infrastructure. ESA considers the airport to be Potentially Eligible for the NRHP as a Historic District under at least Criterion A (contribution to broad patterns of events). It is likely that historic aged properties within the airport still exists, and that they may represent contributing elements of the potential district which could be related to important person(s) (Criterion B) or represent structures constructed using exemplary design or material's (Criterion C). Further evaluation of the airport property would be required in order to develop a full recommendation.

However, ESA recommends that the proposed project actions, of potential, but unlikely, brush/tree clearing within the airport, will result in No Adverse Effect to any historic aged built environment elements, or the overall airport property or potential Historic District.

SOURCE: ESA 2019

Figure 13
Overview of northeastern runway, in Area Five, note the lack of vegetation within the airport grounds, view to the southeast.

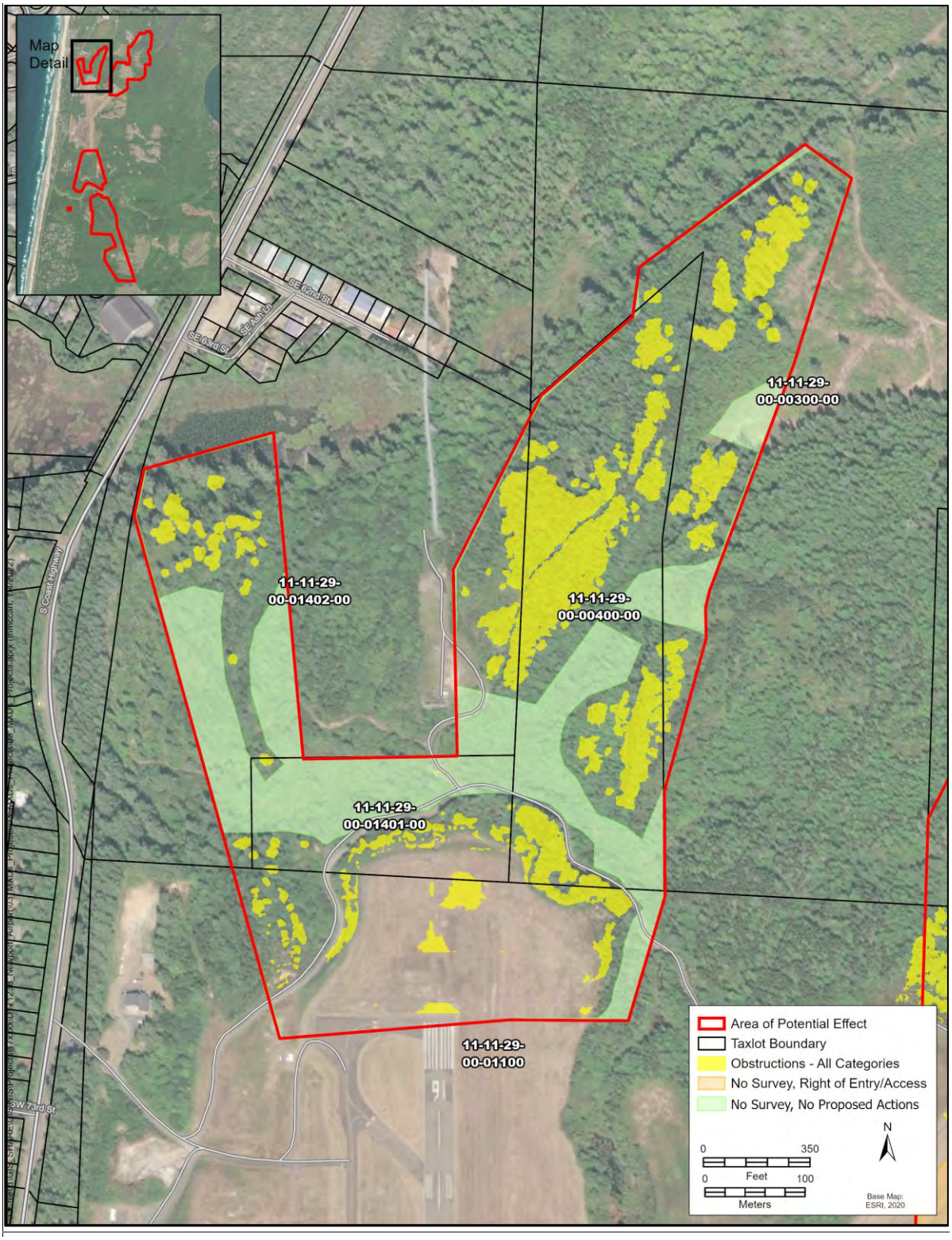
4. ARCHAEOLOGICAL ASSESSMENT

4.1 Methods

ESA archaeologists Tom Ostrander and Trevor Payne conducted a surface survey of the original APE on May 28-31, 2019. Weather conditions were overcast to partly sunny with mild temperatures. Survey was conducted, in areas of proposed tree clearing and along the network of existing access trails/roads. Additional survey of the expanded APE was conducted by ESA archaeologist Tom Ostrander on September 22-24, 2019. Weather conditions were clear and temperate with excellent visibility. (Figure 14, Figure 15, Figure 16, Figure 17). Survey was not conducted on private property where rights of entry could not be obtained or directly adjacent to the active airport runways (orange map areas). Additionally, some portions of the APE were not accessible due to prohibitive environmental conditions, such as steep deeply incised drainages (blue map areas). Finally, portions of the APE not selected for possible tree clearing were not actively surveyed. No subsurface survey was conducted in any portion of the APE, as the anticipated project impacts will be cutting trees at their base. Root balls will be left in situ, and existing access roads will be utilized, resulting in no expected subsurface disturbance.

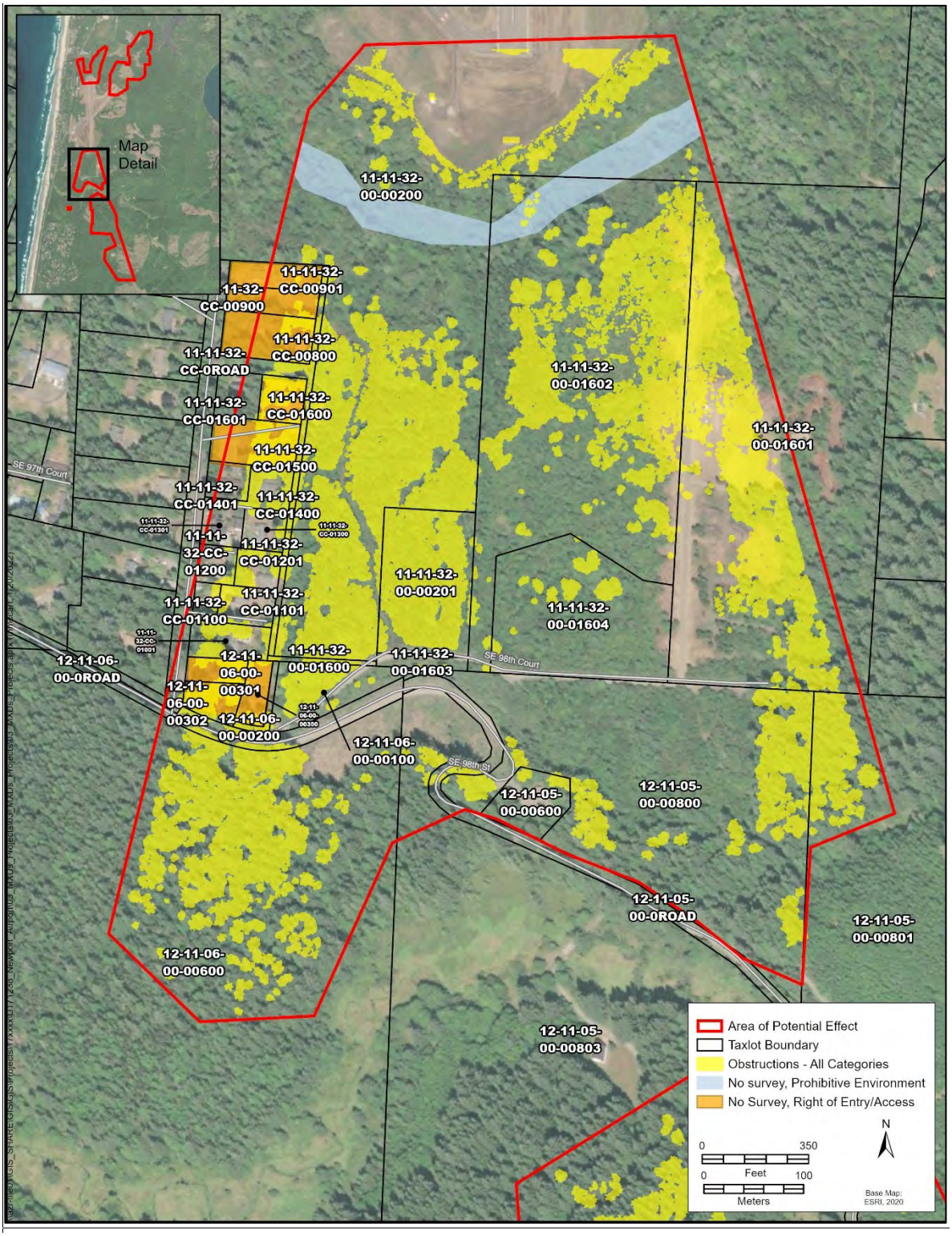
Surface survey was conducted in areas of proposed tree felling. Surface survey was conducted at approximately 30 meters (100 foot) interval transects across areas of proposed tree clearing. Survey transects were not maintained through areas of prohibitive topography, such as steep slopes, ravines or sheer ridges. Immature dense conifer stands often required utilizing existing game trails with meandering paths rather than maintaining transects following cardinal directions. However, once conditions allowed transect spacing and orientation was reestablished.

The survey was aided by mobile data platforms with access to hi definition LiDAR scans, aerial satellite imagery, existing roadways, and the proposed tree clearing activities within the APE This data was accessed using iPad Pro tablets, with external GNSS enabled GPS dongles. GPS resolution varied due to steep topography and tree cover, but accuracy was generally within 5 meters (17 feet). Geotagged photographs were recorded of conditions within the APE. Areas with substantial viewsheds were utilized to gain a broader understanding of the overall landforms.



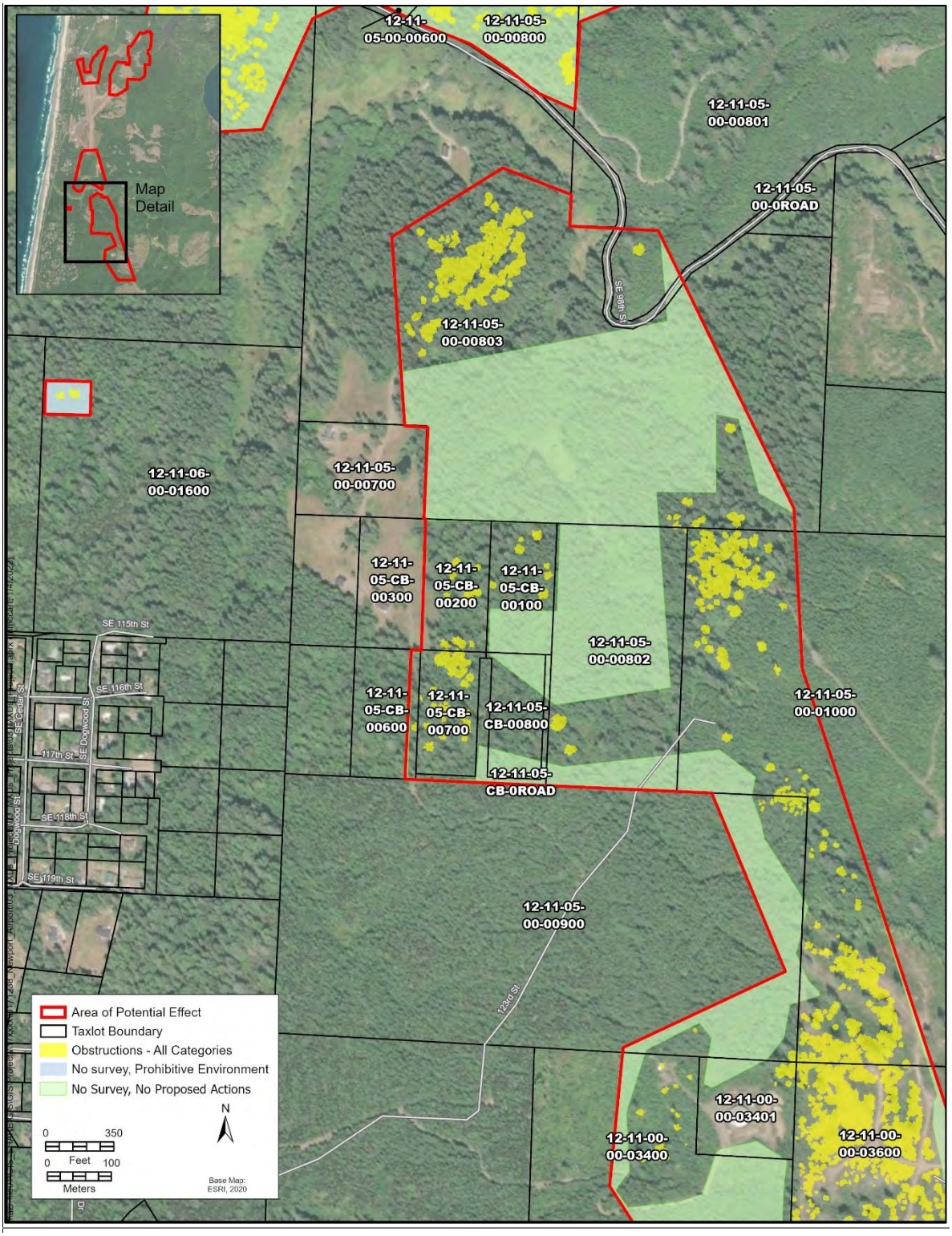
SOURCE: ESA

Figure 14
Area One surveyed area/proposed obstruction removal locations



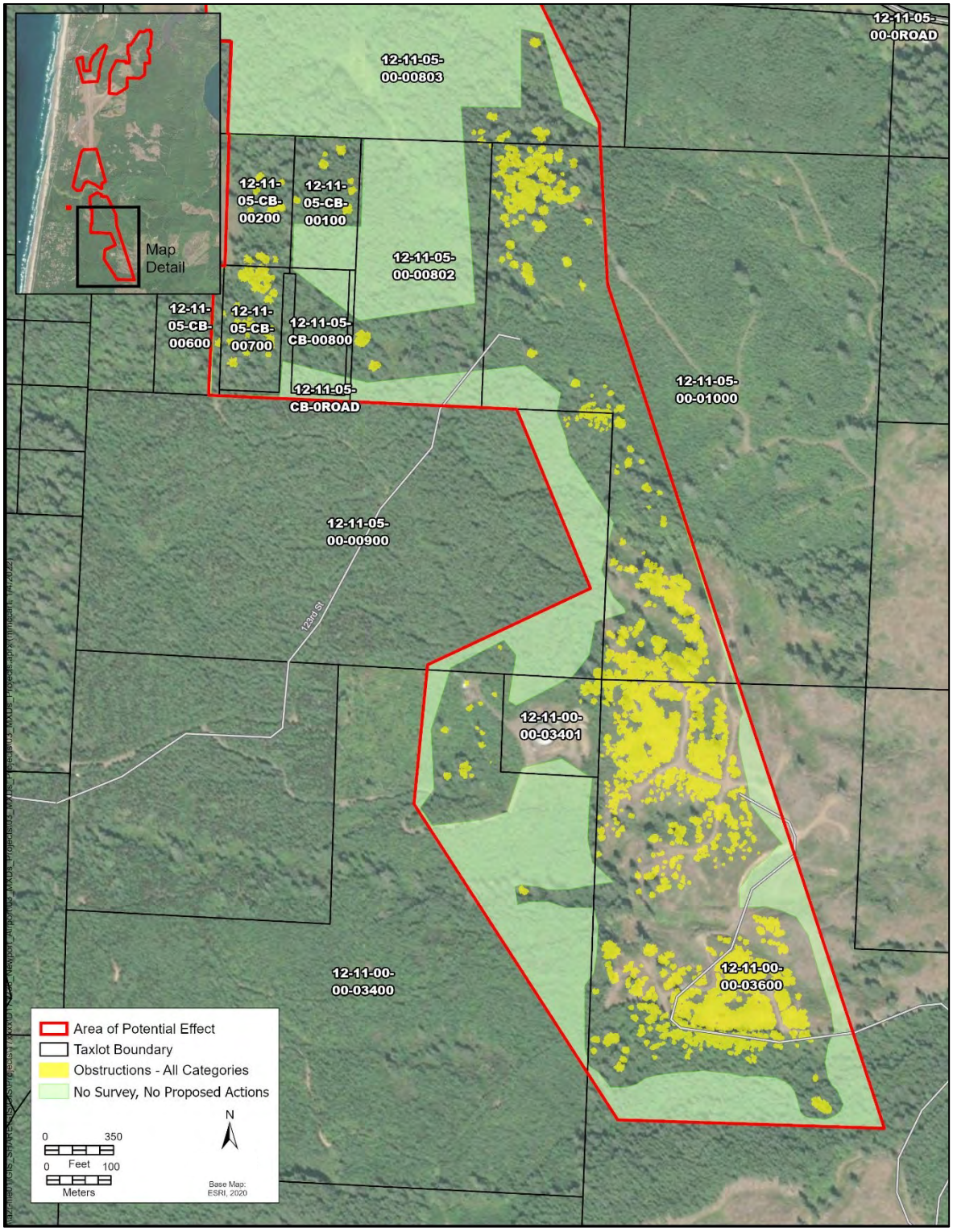
SOURCE: ESA

Figure 15
Area Two surveyed area/proposed obstruction removal locations



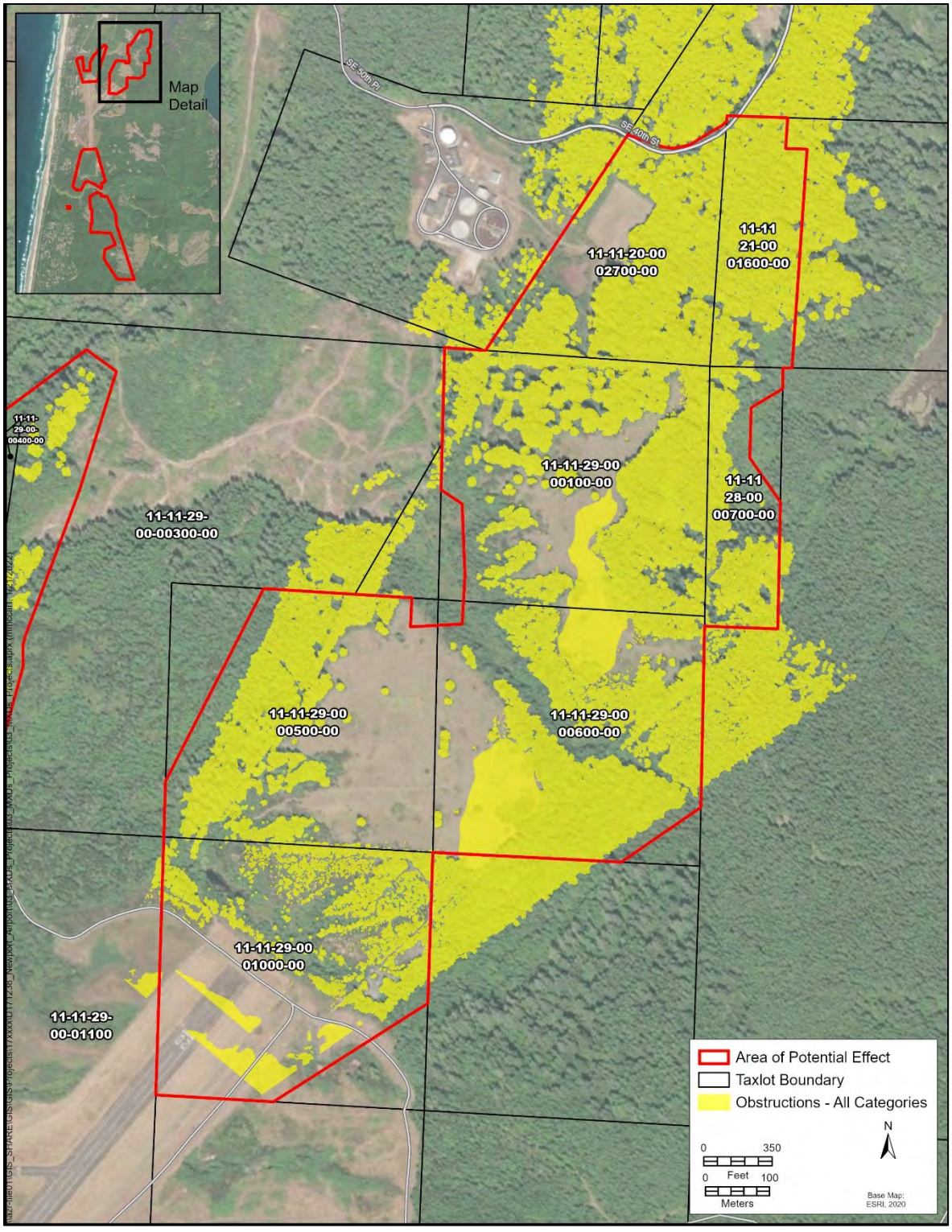
SOURCE: ESA

Figure 16
Area Three surveyed area/proposed obstruction removal locations



SOURCE: ESA

Figure 17
Area Four surveyed area/proposed obstruction removal locations



SOURCE: ESA

Figure 18
Area Five surveyed area/proposed obstruction removal locations

4.2 Results

No archaeological sites or isolates were observed during the cultural resources survey of the Newport Municipal Airport Environmental Assessment Project APE.

4.2.1 Area One (Northwest Work Area)

Area One has two distinct environments. The first is the northern airport facility grounds adjacent to the runway. The second is the forested ridges and semi cleared open fields to the north, in the approach and departure surfaces of Runway 16. Both environments have established access roads and staging areas.

Ground visibility is excellent, greater than 50%, within the airport facility. This portion of the APE has no dense vegetation, obstructions mapped here are likely reflecting surface topography, rather than vegetation obstructions (Figure 19). There are no existing structures in this portion of the APE, and infrastructure is limited to surface lighting and access roads for runways. Previous surveys within the northern end of the Newport Airport identified a ruined foundations related to historic airport facilities (Elis et al. 2013). No such features were observed within this portion of the APE.

SOURCE: ESA

Figure 19
Overview of Area One from Airport, view to south

The area north of Runway 16 is much more heavily vegetated. Existing airport infrastructure such as lighting towers are common, and a complex network of established roads and trails provides excellent access. The area is topographically diverse, with steep ridges and deeply incised valleys (Figure 20). Slopes and areas of sparse canopy cover were covered in Oregon grape, while dense areas of young recently logged forest lacked established understory vegetation, and were chocked by immature conifers (Figure 21). These areas displayed less than 10% ground visibility. Densely forested areas with established canopy, were rare, but when present, contained very little underbrush and had excellent surface visibility, greater than 50%. These areas were typically found along the higher probability ridge lines. While the slopes were more densely vegetated with less mature trees and understory. The forested northern portions of Area One contained pervasive evidence of logging activity, such as cut stumps, piles of limbing debris, and a network of access trails throughout the landscape.

SOURCE: ESA

Figure 20
Overview of Area One from airport, showing existing airport infrastructure and forested ridgelines view to north

SOURCE: ESA

Figure 21
Densely vegetated forest environment typical of the slopes in Area One.

4.2.2 Area Two (Central Work Area)

Area Two is the most diverse of the work areas in the APE. It contains the southern extent of the maintained airport grounds; a residential subdivision, and both recently cut and mature stands of managed forest lands. The airport facility consists of the cleared open fields adjacent to the runway, maintenance and operations infrastructure, such as gravel access roads, and an electrical shed (Figure 22). This area had moderate surface visibility, approximately 20% due to the dense closely cropped grasses. This area shows evidence of heavy past disturbance associated with airport construction and operations. A steep ravine divides the airport property from the rest of Area Two. The ravine was surveyed from both banks and into the cut as much as was feasible, but the steep banks prevented full access to the base, which is occupied by an active drainage.

SOURCE: ESA

Figure 22
Overview of Area Two within the southern airport facility, view to the west.

The residential neighborhood was opportunistically surveyed, but access to private property was often restricted. The subdivision itself was begun in the 1960s and eight of the homes are of historic age. No refuse dumps or ruined foundations were observed during the survey of the area. Abutting the residential neighborhood to the north, south and west are active logging parcels. The northern and western parcels have been recently logged within the last decade and ground visibility is poor due to the dense understory. However the recent logging has left a network of overgrown but useable access roads and paths (Figure 23). This area shows evidence of heavy logging disturbance such as cleared staging areas with limbing debris, and pervasive stumps. Visibility is poor, often less than 10%.

SOURCE: ESA

Figure 23
Overview of Area Two within the immature logging area east of the subdivision.

The portions of Area Two south of the housing development are established older mature conifer forests. Despite variable and often steep topography both visibility and access was excellent (Figure 24). This area contains an active stream channel, and is the closest of any of the zones to a permanent water source. However, the stream channel is deeply incised, often more than 20 meters (66 feet) below the surrounding grade. Access was treacherous, but visibility was excellent. No secondary terraces of stable platforms were observed.

SOURCE: ESA

Figure 24
Overview of mature conifer forest common in Area Two, view to the west.

4.2.3 Area Three (North Half of Southern Work Area)

Area Three consists of mature conifer forest. The ground visibility here is moderate to good, between 25-50% visibility. Ridge lines have the best visibility, due to the more densely spaced mature conifers, while slopes, valley bottoms and open sections without forest canopy are more heavily vegetated and have poor visibility. The entire area shows evidence of pervasive disturbance related to logging activity, in the form of cleared staging areas and access roads, and piles of woody debris and common cut stumps. The area is not in close proximity to permeant water bodies. The vast majority of the area is either heavily sloped or occupied by constructed access or staging infrastructure (Figure 25). Higher probability landforms, such as ridgelines and terraces with a view shed are small and uncommon. This area are also often heavily disturbed by previous logging activity (Figure 26).

SOURCE: ESA

Figure 25
Overview of steep slopes with established canopy conifer forest typical of Area Three.

SOURCE: ESA

Figure 26
Typical open ridge lines with access paths and cleared former staging area.

4.2.4 Area Four (South Half of Southern Work Zone)

Area Four consists of an open grassy plain occupied by a modern municipal water treatment facility, and recently clear cut logging parcels. The municipal water treatment facility and its associated access roads and staging facilities are in the northwestern portion of Area Four. The construction of this modern facility has resulted in clearing of most vegetation and pervasive grading to level the area (Figure 27). Surface visibility is excellent, greater than 50%. Very little tree clearing is proposed in this area.

SOURCE: ESA

Figure 27
Water treatment structure in Area Four, view to the east.

Besides the level industrial facility, the other main environment in Area Four are the logging parcels, which have been recently clear cut. These areas are topographically diverse, with many ridges and valleys. The clear cutting activity has removed the vegetation and ground visibility is greater than 50%. The area has a network of existing access roads and staging areas. Tree clearing activity is unlikely to be needed in much of this environment outside of scattered isolated conifers left over from the logging activity (Figure 28).

SOURCE: ESA

Figure 28
Overview of clear cut within Area Four, view to the South

Multiple cut in access roads have exposed the soil matric present within Area Four. These cut profiles evidence a massive sandy conglomerate of marine deposits. A thinly developed A horizon is present at the surface (Figure 29). No beds of finer grained material were observed. This confirms the mapped geological conditions in the area.

SOURCE: ESA

Figure 29
Exposed cut bank in area four showing typical geologic and soils conditions for the area.

4.2.5 Area Five (Northeastern Work Zone)

Area Five consists of the northeastern corner of the Newport Airport facility and transitions into mixed open grasslands and established canopy forest. Area Five is bisected by the incised channel of Henderson Creek. An established network of access roads and trails are found throughout the zone. Area Five contains multiple modern built environment features. The southern portion of Area Five contains the airport runway and associated lighting and access roads. The central portion of Area Five contains modern agricultural sheds and access roads, and the northern portion of Area Five contains public recreation facilities, such as a cleared field and a recently installed disk golf course. The Project does not propose to impact any of these facilities.

Surface visibility is variable between the airport facility, central meadows, and northern mature forest. Within the airport facility visibility was moderate at 50%. Vegetation here consists of close cropped grasses and small shrubs. No trees currently exist here and the mapped obstructions are likely reflecting surface topography, rather than vegetation, which the project does not propose to alter. The central meadows consist of tall grasses and shrubs with scattered mature conifers. This area has poor surface visibility at approximately 10%, however the general topography is very clear across the landscape. Finally, the northern mature forest has excellent ground visibility at approximately 75%. The dense canopy has sparse undergrowth, with scattered ferns and shrubs. Areas adjacent to Henderson Creek,

which bisects Area Five, running east to west in the center of the zone, are anomalous, in that the dense reparation vegetation completely obscures the ground surface.

The open fields within the Newport Airport have been heavily modified and graded as a result of airport construction and maintenance. There are no buildings foundations or features other than gravel access roads and the runway surface (Figure 30). The area does not match the surrounding topography; it is artificially constructed. The open level expanse is in stark contrast to the steep ridges and ravines that define the typical local conditions.

SOURCE: ESA

Figure 30
Overview of graded airport facility within Area Five, view to the south.

The forested areas have an established canopy, with mature conifers. A network of two track roads and foot paths are found throughout, providing excellent access. Buckboard notched old growth stumps are common, suggesting that the area has not been wholly regraded. (Figure 31). Many areas show smaller diameter stumps, indicating that multiple logging events have occurred after the initial historic cutting. The forest topography is quite steep. The topography is defined by ridge lines, with slopes in excess of 25%, leading into narrow gullies. While these steep slopes make access difficult, the ridgelines provide excellent visibility of the landscape. Additionally, exposures of parent material, consisting of marine sandstone are evidenced in common exposures.

SOURCE: ESA

Figure 31
Overview of typical forest conditions, with old growth stumps, in Area Five

The more open meadows are undulating, without the steep ridges found in the forests(Figure 32). Modern fence lines consisting of wire mesh and metal t-posts divide the fields. These open fields also contain many two rack access roads. The open grass lands provide ample staging opportunities. Small seasonal drainages are found throughout, and the incised banks again show the marine sandstone parent materials.

SOURCE: ESA

Figure 32
Typical grassy meadow conditions, with scattered trees in Area Five, view to the northwest

Disused modern agricultural sheds and outbuildings are found at the edges of the meadows. The current landowner acquired the lands near the turn of the 21st century and has not maintained the farm buildings, rather they use the property as hunting lands. No large barns are present. Rather the structures appear to have been shelters for livestock. They are made using modern materials, such as galvanized roofing with fiberglass inserts (Figure 33). The construction materials, milled timbers with galvanized and brass hardware are indeterminate to a specific construction period, but taken together the use of plastic materials and galvanized stamped brackets suggests the structures were constructed in the latter 20th century. Additionally, the refuse piles associated with the ruins and materials within the structures themselves all indicate that the period of use was the last quarter of the 20th century. Plastic paint buckets, water troughs, and modern refuse such as plastic toys and kiddie pools all appear to date to the 1980s-1990s. Furthermore, the materials found adjacent to the buildings and in the creek channels are also from the modern age. One large pile of gallon-wine jugs was identified consisting of a single type of vessel, with no other materials present (Figure 34). Neither the refuse piles or the structures show evidence of historic period use. There are no additions to the shelters, and there does not appear to be multiple phases of deposition within the refuse piles. The ruins represent a late 20th century agricultural property, and are not considered to be historic aged structures, or archaeological sites.

SOURCE: ESA

Figure 33
Partially collapsed modern livestock shelter in Area Five

SOURCE: ESA

Figure 34
Modern deposit entirely consisting of modern glass gallon sized wine jugs found adjacent to collapsed shelter.

5. INTERPRETATION & EVALUATION

The overall APE has been heavily disturbed during the historic and recent past by multiple phases of development and resource extraction, primarily through the logging activity, and later thorough residential and commercial development. This activity has installed a complex network of establish and itinerant access roads and staging areas; furthermore, the pervasive multiple waves of logging actions have cleared and or disturbed the majority of the surface deposits. The Project should have no issues gaining access to the necessary parts of the APE using the existing road and staging area network.

The topographically diverse landscape is largely removed from sources of freshwater, and would have been most attractive for terrestrial mammal hunting, or for periodic resource gathering during the precontact period. This type of use is often exceedingly difficult to identify during survey level investigations, but obvious potential quarry sites or other attractive resources nodes were not identified. Two larger permanent drainages, Henderson Creek and Moore Creek do run thorough the APE. However, the steep incised creek banks, without associated floodplains or stable terrace banks are unlikely to preserve intact cultural resources and the topography would not be conducive to habitation. However, even if resources are present buried within the alluvium associated with these constrained drainages the proposed project actions will not involve subsurface excavation.

The observable field conditions reflected and confirmed the mapped geologic and soils conditions in the area. Landforms consist of weathered congregate marine deposits or bedrock, with very thin weakly developed A horizons. This material is unlikely to deeply burry archaeological deposits. While subsurface survey was not conducted, as the project will not result in excavation, deeply bedded Holocene aged sediments are likely to only be found in stream beds and wetland areas, which the project plans to avoid.

In general, the APE appears to have been utilized as logging grounds in the historic period. Later in the 20th century as the region expanded subdivisions began to be constructed, and the northeastern portion of the APE, Area Five, was used as agricultural property. Evidence of historic period logging, in the form of decayed large diameter tree stumps was found across all segments of the APE. No historic aged sites or isolates were observed. The collapsed agricultural sheds, and associated debris piles commonly observed in Area Five all evidenced a period of use within the last quarter of the 20th century. Modern plastic and glass vessels along with tires and domestic debris such as garden hose, kitchen appliances and general plastic rubbish was observed in the debris piles; no older period materials were identified. The collapsed sheds evidenced modern galvanized metal rooves with fiberglass inserts. Lumber was modern in appearance and hardware was galvanized or brass. No evidence of earlier structures or additions were observed in the collapsed or partially standing livestock shelters and storage sheds.

The Project APE extends into the Newport Municipal Airport, which is a historic aged facility, originally constructed during World War Two. No evidence of derelict airport facilities was observed within the APE. Due to the extensive grading required to construct the airport facility it is very unlikely that intact precontact or early historic period resources are contained within the airport facility. If once present these materials would have been removed for wholly reworked during the initial construction.

6. RECOMMENDATIONS

Based on the available information, ESA recommends the Project will result in **No Historic Properties Adversely Affected** (36CF800.4(d)(1)). The FAA should request concurrence from Oregon SHPO on this recommendation.

As noted in Section 3, ESA extends a recommendation of No Adverse Effect to built environment Historic Properties. While ESA was unable to fully document all the historic aged structures within the APE due to private access restrictions, the Project is not proposing any direct impacts to existing structures, and the housing development containing the historic aged structures is bordered by active logging parcels which continually experience the type of tree felling activity proposed by the Project. The Newport Airport itself may represent an NRHP Eligible Historic Property, due to its use and form associated with costal airports during World War Two. However, the Project does not propose to alter any features of the airport, and the clearing of vegetation within and around the facility is in keeping with the historic and modern period maintenance and operations actions that have occurred at the facility since its construction. These actions do not constitute a loss of integrity to the Potential Historic Property, and do not alter the associations, form, or data potential of the airport.

Based upon the results of the survey and proposed tree-removal methods, ESA extends no recommendations for further cultural resources work within the APE. While some portions of the APE were not able to be directly accessed due to lack of entry rights or prohibitive conditions these areas do not represent areas thought to have a high potential to contain archaeological resources. No Archaeological Historic properties were identified within the APE However, an Inadvertent Discovery Plan (IDP) should be established for the Project.

The findings and professional opinions included in this report are based on standard archaeological techniques including pedestrian survey and archival research; however, each has its limitations. It is possible that unanticipated cultural resource materials may be encountered during construction. In the event that cultural resources are observed during implementation of the project, work should be temporarily suspended at that location and the procedures for inadvertent discoveries by applicable Federal and State laws should be followed.

Native American Human Remains, funerary objects, sacred objects and objects of cultural patrimony associated with Oregon Tribes are protected under Oregon state law (ORS 97.740-.994 and 358.905-961). As summarized by the Legislative Commission on Indian Services, the procedures for the identification of and notification for human remains are as follows (Legislative Commission on Indian Services 2022):

1. *Oregon laws (ORS 146.090 and 146.095) outline the types of deaths that require investigation and the accompanying responsibilities for that investigation. The law enforcement official, district medical examiner, and the district attorney for the county where the death occurs are responsible for deaths requiring investigation. Deaths that require investigation include those occurring under suspicious or unknown circumstances.*

2. *If human remains that are inadvertently discovered or discovered through criminal investigations are not clearly modern, then there is high probability that the remains are Native American and therefore ORS 97.745(4) applies, which requires immediate notification with State Police, State Historic Preservation Office, Commission on Indian Services, and all appropriate Native American Tribes. To determine who the "appropriate Native American Tribe" is, the responsible parties should contact the Legislative Commission on Indian Services (LCIS). To determine whether the human remains are Native American, the responsible parties should contact the appropriate Native American Tribes at the initial discovery. It should be noted that there may be more than one appropriate Native American Tribe to be contacted.*

3. *If the human remains are possibly Native American then the area should be secured from further disturbance. The human remains and associated objects should not be disturbed, manipulated, or transported from the original location until a plan is developed in consultation with the above named parties. These actions will help ensure compliance with Oregon state law that prohibits any person willfully removing human remains and/or objects of cultural significance from its original location (ORS 97.745).*

4. *All parties involved and the appropriate Native American Tribes shall implement a culturally sensitive plan for reburial.*

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Appendix A
Section 106 Correspondence

U.S. Department
of Transportation
**Federal Aviation
Administration**

**Seattle Airports District Office
2200 S. 216th Street
Des Moines, WA. 98198**

July 8, 2019

Mr. Dennis Griffin
State Archaeologist
Oregon SHPO
725 Summer Street, NE, Suite C
Salem, Oregon 97301-1266

Newport Airport – Obstruction Removal Project
Request for Initiate Section 106 Consultation; request for comment on Area of Potential Effects
Newport Municipal Airport
Newport, Oregon

Dear Mr. Griffin:

The Federal Aviation Administration (FAA) would like to initiate consultation with you in accordance with Section 106 of the National Historic Preservation Act of 1966, and implementing regulations 36 CFR Part 800 for the aforementioned project. FAA has provided a project description and a definition of the Area of Potential Effects (APE) below for your review.

Project Description
Newport Municipal Airport (Airport) is proposing an obstruction removal project. An Airport Geographic Information Systems survey was completed in 2014 that identified numerous obstructions in the Runway 16-34 Federal Aviation Regulation Part 77 approach surfaces and runway departure surfaces. These trees are potential hazards to the operational safety of the Airport due to their height. The proposed project will assess the potential effects of vegetation removal to allow the improvement of the associated surfaces for Runway 16-34 and Runway 2-20. The proposed vegetation for removal is located in the approach/departure zones surrounding the airport operations area.

Definition of the APE
The APE encompasses all areas of potential ground disturbance, construction staging areas, and access routes. The anticipated depth of ground disturbance would be limited to the extent of falling trees. The exact placement of access roads and staging areas has not yet been defined but these locations are not anticipated to extend beyond APE limits. The survey methods include a literature review and a field investigation. The literature review study area will be a one-mile radius from the APE. Fieldwork will include a pedestrian survey of the APE and a historic property inventory of buildings and structures within the APE.

Tribal Consultation
FAA is concurrently offering to conduct government-to-government consultation with the Confederated Tribes of the Warm Springs Reservation of Oregon, Confederated Tribes of the Grand Ronde Community of Oregon, and the Confederated Tribes of Siletz Indians of Oregon FAA will notify SHPO of any concerns raised during the consultation process.

Should you have any questions or wish to discuss aspects of the project in further detail, please contact me at (206) 231-4143.

Sincerely,
Sean E. Callahan
Sean E. Callahan
Environmental Protection Specialist
Seattle Airports District Office

Oregon
Kate Brown, Governor

Parks and Recreation Department
State Historic Preservation Office
725 Summer St NE Ste C
Salem, OR 97301-1266
Phone (503) 986-0690
Fax (503) 986-0793
www.oregonheritage.org

August 5, 2019

Mr. Sean Callahan
FAA - NW Mountain Region
Seattle Airports Dist Off
2200 S 216th St
Des Moines, WA 98198

RE: SHPO Case No. 19-1125
FAA Project, Newport Municipal Airport Vegetation Removal
Tree removals due to potential hazards
135 SE 84th Street, Newport, Lincoln County

Dear Mr. Callahan:

Our office has recently received a letter from your agency noting the Area of Potential Effect (APE) boundaries for the upcoming project referenced above. Upon review of the documents, we concur with the proposed project's APE boundaries and look forward to recieing the cultural resources report when it is completed.

Under federal and state law archaeological sites, objects, and human remains are protected on both public and private lands in Oregon. If you have not already done so, be sure to consult with all appropriate Indian tribes regarding your proposed project. If you have any questions or comments regarding this letter, please do not hesitate to contact me. In order to help us track your project accurately, please be sure to reference the SHPO case number above in all correspondence.

Sincerely,

Jamie French, M.A.
SHPO Archaeologist
(503) 986-0729
Jamie.French@oregon.gov

U.S. Department
of Transportation
Federal Aviation
Administration

Seattle Airports District Office
2200 S. 216th Street
Des Moines, WA. 98198

December 9, 2019

Mr. Dennis Griffin
State Archaeologist
Oregon SHPO
725 Summer Street, NE, Suite C
Salem, Oregon 97301-1266

Newport Airport – Obstruction Removal Project
Newport Municipal Airport
Newport, Oregon

Dear Mr. Griffin:

This letter is in furtherance of our consultation initiated with the Oregon State Historic Preservation Office on July 8, 2019, wherein an Area of Potential Effect (APE) and project description was submitted. A cultural resources assessment was prepared by Environmental Science Associates (ESA) (Thomas Ostrander, M.Sc., and Katherine F. Wilson MA) and the FAA is submitting it to your office.

The project proponent had engaged, ESA to prepare an Archaeological Resources Memorandum for the Newport Municipal Airport obstruction removal project to address the potential for archaeological resources. ESA conducted a literature review of the Project's Study Area extending one mile in every direction from the footprint of the APE. No cultural resources were previously identified within the AP. ESA archaeologists Tom Ostrander and Trevor Payne conducted a surface survey of the APE on May 28-31, 2019; after the APE was expanded to include additional tree felling areas Tom Ostrander conducted a supplemental survey on September 22-24 2019.

The survey consisted of 30 meter spaced surface transects within portions of the APE with clustered potential tree removal areas, access routes, and likely staging locations. No subsurface survey was conducted as the project design does not call for ground disturbing excavation. The majority of the APE is active logging land that has been heavily disturbed and reworked during the modern era. ESA did not identify any archaeological sites or isolates during the survey.

The built environment survey identified a total of eight historic-aged (older than 50 years) properties. All are previously undocumented, privately owned homes. None of the historic aged homes will be directly impacted by the proposed actions. While the Newport Municipal Airport is a historic aged, and should be considered an NRHP Potentially Eligible Historic District, no historic aged built environment structures or infrastructure elements of the airport that could contribute to the potential Historic District, are within or adjacent to the areas of proposed tree removal.

Based upon the findings and recommendations in the memorandum, we have determined that our Federal undertaking will have **No Historic Properties Affected** and request your concurrence. Should you have any questions or wish to discuss aspects of the project in further detail, please contact me at (206) 231-4143.

Sincerely,

Sean E. Callahan

Sean E. Callahan
Environmental Protection Specialist
Seattle Airports District Office

Oregon
Kate Brown, Governor

Parks and Recreation Department
State Historic Preservation Office
725 Summer St NE Ste C
Salem, OR 97301-1266
Phone (503) 986-0690
Fax (503) 986-0793
www.oregonheritage.org

January 2, 2020

Mr. Sean Callahan
FAA - NW Mountain Region
Seattle Airports Dist Off
2200 S 216th St
Des Moines, WA 98198

RE: SHPO Case No. 19-1125
FAA Project, Newport Municipal Airport Vegetation Removal
Tree removals due to potential hazards
135 SE 84th Street, Newport, Lincoln County

Dear Mr. Callahan:

We have reviewed the materials submitted on the project referenced above, and we concur with the following determinations of eligibility:

- Newport Municipal Airport: Treated as eligible for listing in the National Register of Historic Places (NRHP) until a complete evaluation is done.
- 425 SE 9th Street, South Beach: Eligible for listing in the NRHP.
- 585 SE 98th Street, South Beach: Not eligible for listing in the NRHP.
- 9435 SE Cedar Street, South Beach: Not eligible for listing in the NRHP.
- 9709 SE Cedar Street, South Beach: Not eligible for listing in the NRHP.
- 9711 SE Cedar Street, South Beach: Not eligible for listing in the NRHP.
- 9735 SE Cedar Street, South Beach: Not eligible for listing in the NRHP.
- 9737 SE Cedar Street, South Beach: Not eligible for listing in the NRHP.
- 9765 SE Cedar Street, South Beach: Not eligible for listing in the NRHP.

We also concur that the proposed undertaking will result in no adverse effect to historic properties. This letter refers to above-ground historic resources only. Comments pursuant to a review for archaeological resources, if applicable, will be sent separately.

Unless there are changes to the project, this concludes the requirement for consultation with our office under Section 106 of the National Historic Preservation Act (per 36 CFR Part 800) for above-ground historic resources. Local regulations, if any, still apply and review under local ordinances may be required. Please feel free to contact me if you have any questions, comments, or need additional assistance.

Sincerely,

Tracy Schwartz
Historic Preservation Specialist
(503) 986-0677
tracy.schwartz@oregon.gov

cc: Susan Cunningham, Environmental Science Associates

Oregon
Kate Brown, Governor

Parks and Recreation Department
State Historic Preservation Office
725 Summer St NE Ste C
Salem, OR 97301-1266
Phone (503) 986-0690
Fax (503) 986-0793
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January 10, 2020

Mr. Sean Callahan
FAA - NW Mountain Region
Seattle Airports Dist Off
2200 S 216th St
Des Moines, WA 98198

RE: SHPO Case No. 19-1125
FAA Project, Newport Municipal Airport Vegetation Removal
Tree removals due to potential hazards
135 SE 84th Street, Newport, Lincoln County

Dear Mr. Callahan:

We have recently received a request from your office to review the project area referenced above for any known archaeological objects or sites. Unfortunately, our office needs additional information before it can complete its review:

- The entirety of the APE was not surveyed, could you please provide maps and/or shapefiles that indicate precisely which areas were surveyed and which areas were not surveyed.

Thank you. If you have not already done so, be sure to consult with all appropriate Indian tribes regarding your proposed project. In order to help us track your project accurately, please be sure to reference the SHPO case number above in all correspondence.

This letter refers to archaeological resources only. Comments pursuant to a review for above-ground historic resources will be sent separately.

Sincerely,

Jamie French, M.A.
SHPO Archaeologist
(503) 986-0729
Jamie.French@oregon.gov

cc: Susan Cunningham, Environmental Science Associates

Oregon
Kate Brown, Governor

Parks and Recreation Department
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January 2, 2020

Mr. Sean Callahan
FAA - NW Mountain Region
Seattle Airports Dist Off
2200 S 216th St
Des Moines, WA 98198

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Dear Mr. Callahan:

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We also concur that the proposed undertaking will result in no adverse effect to historic properties. This letter refers to above-ground historic resources only. Comments pursuant to a review for archaeological resources, if applicable, will be sent separately.

Unless there are changes to the project, this concludes the requirement for consultation with our office under Section 106 of the National Historic Preservation Act (per 36 CFR Part 800) for above-ground historic resources. Local regulations, if any, still apply and review under local ordinances may be required. Please feel free to contact me if you have any questions, comments, or need additional assistance.

Sincerely,

Tracy Schwartz
Historic Preservation Specialist
(503) 986-0677
tracy.schwartz@oregon.gov

cc: Susan Cunningham, Environmental Science Associates

Oregon
Kate Brown, Governor

Parks and Recreation Department
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January 10, 2020

Mr. Sean Callahan
FAA - NW Mountain Region
Seattle Airports Dist Off
2200 S 216th St
Des Moines, WA 98198

RE: SHPO Case No. 19-1125
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Tree removals due to potential hazards
135 SE 84th Street, Newport, Lincoln County

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- The entirety of the APE was not surveyed, could you please provide maps and/or shapefiles that indicate precisely which areas were surveyed and which areas were not surveyed.

Thank you. If you have not already done so, be sure to consult with all appropriate Indian tribes regarding your proposed project. In order to help us track your project accurately, please be sure to reference the SHPO case number above in all correspondence.

This letter refers to archaeological resources only. Comments pursuant to a review for above-ground historic resources will be sent separately.

Sincerely,

Jamie French, M.A.
SHPO Archaeologist
(503) 986-0729
Jamie.French@oregon.gov

cc: Susan Cunningham, Environmental Science Associates

Appendix B
Historic Property Inventory Data

OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Property Name:	Street Address:	City, County:
Residence	585 SE 98th Street	South Beach, Lincoln

Project Name: Newport Municipal Airport Obstruction Removal	Agency project #:
Agency: Federal Aviation Administration	SHPO Case#: 19-1125
Location Coordinates (to sixth decimal place): Latitude: 44.565362 Longitude: -124.057666	Is the property listed in the National Register of Historic Places? ☐ YES – Individually ☒ NO ☐ YES – In a district

Front facade/south, view to the northeast

Surveyor: Thomas Ostrander	Date Recorded: 7/18/2019
National Register Findings: ☐ **Eligible:** ☐Individually ☐As part of District NR Criteria: ☐A ☐B ☐C ☐D ☒ **Not Eligible:** ☐Irretrievable integrity loss ☐Not 50 Years ☒Fails to meet NR Criteria	**Finding of Effect:** ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect

State Historic Preservation Office Comments – *Official Use Only*:

Eligibility: ☐**Concur** ☐**Do Not Concur:**

Effect: ☐**Concur** ☐**Do Not Concur:**

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Signed _____ Date _____

CONTACT INFORMATION STAMP

Comments:

OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Property Name:	Street Address:	City, County:
Residence	585 SE 98th Street	South Beach, Lincoln

Original Use: Single Dwelling

Number of Associated Resources: 0

Architectural Classification / Resource Type:
Ranch (type) Building

Owner: ☒Private ☐Local Government ☐State ☐Federal

Window type and Materials:
Slider; Metal Frame

Roof Type and Materials:
Cross-gabled with eaves; composition shingle

Exterior Surface Materials:
Primary: Vertical Board
Secondary: Wood: Other/undefined
Decorative: Not Applicable

Integrity:
☐Excellent ☐Good ☐Fair ☒Poor

Construction Date: 1970 (☐Circa)

Architect/Builder (if known):
unknown

Description of Property (including previous alterations & approximate dates):

The building at 585 SE 98th Street, South Beach, is located in Lincoln County. The county assessor lists the construction date as 1970.This residence is a southwest facing 1-story wood frame structure with an L-shape plan and cross-gabled roofline at the rear façade, with open eaves. The attached 2 story garage has a front-gable roof line with open eaves. It is set back from SE 98th Street. The roof is clad with composition shingles; no chimneys are present. The foundation is poured concrete. Exterior walls are clad in wood vertical board and horizontal clapboard at the roofline. The front entry is in the center of the west facade with a secondary entry to the south. There are slider windows with metal frame throughout. There is a small deck off the rear / east facade.According to the county assessor the garage with second floor addition was constructed ca. 1979/1980. A portion of the garage was converted to living space at that time.

Determination of Eligibility, Justification, and Sources (Use continuation sheets if necessary):

Build dates and property cards for the property were obtained from the Lincoln County Assessor, through both online, and physical searches of the property archives. These records produced photograph's, permits, and plans for the structure.

The structure appears to originally been a single-story contemporary ranch design that was later extensively remodeled. While the addition maintains the same T-111 siding as the original structure, the two story addition obscures the original historic aged structure. It now more closely resembles a split level design, rather than a ranch. These conditions diminish its overall integrity, and it does not represent an outstanding example of its original style. ESA recommends that the property be considered Not Eligible for the NRHP based on its architectural style and materials (Criterion C). No connection to local, regional or national events (Cirterion A), or important person's (Criterion B), was revealed during the archival research into the original builder or past residents. Finally, as a typical med 20th century single family residence, the structure does not posses the ability to provide new information about history ore prehistory (Criterion D).

OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Property Name:	Street Address:	City, County:
Residence	585 SE 98th Street	South Beach, Lincoln

Description of project scope, and nature and extent of impacts:

The Newport Municipal Airport (Airport) proposes to remove obstructions from the approach and departure surfaces of Runway 16-34 and the approach surface of Runway 20 during the fall/winter season of 2021. The need for obstruction removal has been identified in the Airport's Capital Improvement Plan (CIP). Obstructions consist largely of tall trees and shrubs. The project involves removing trees that have been identified as obstructions in the associated surfaces of Runway 16-34 and Runway 20. A Geographic Information Systems survey of the Airport that was completed in 2019 identified numerous obstructions in the Federal Aviation Regulation Part 77 in the associated surfaces of Runway 16-34 and Runway 20. These trees are potential hazards to the Airport's operational safety because of their height. At this time, it is proposed that the trees would be cut at the base using hand-held equipment (e.g., chainsaws), leaving the stumps and roots in place.

The proposed project impacts, of tree clearing, will not impact the structure or its setting. The parcel is adjacent to active logging land and tree clearing has been occurring in the area before the structure was built and throughout its existence. As a result, ESA recommends that the project will not have an adverse effect to the property.

Finding of Effect and justification:

Based on the structure at 425 SE 98th Street being recommend Not Eligible for the NRHP, ESA recommends that the Project will result in a finding of No Historic Properties Affected in regard to this address.

Property Name:	Street Address:	City, County:
Residence	585 SE 98th Street	South Beach, Lincoln

View: Front facade/south, view to the northeast

View: Back/North Facade, View to the East

Property Name:	Street Address:	City, County:
Residence	585 SE 98th Street	South Beach, Lincoln

OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Supplemental Photos

Property Name:	Street Address:	City, County:
Residence	585 SE 98th Street	South Beach, Lincoln

View: Garage with second story; view to the southeast

View: West and south facades of garage and house, view to the east

OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Property Name:	Street Address:	City, County:
Kramer Residence	9709 SE Cedar Street	South Beach, Lincoln

Project Name: Newport Municipal Airport Obstruction Removal	Agency project #:
Agency: Federal Aviation Administration (FAA)	SHPO Case#: 19-1125
Location Coordinates (to sixth decimal place): Latitude: 44.567262 Longitude: -124.061833	Is the property listed in the National Register of Historic Places? ☐ YES – Individually ☒ NO ☐ YES – In a district

North / front facade overview, view to the south

Surveyor: Thomas Ostrander	Date Recorded: 7/18/2019
National Register Findings: ☐ **Eligible:** ☐Individually ☐As part of District NR Criteria: ☐A ☐B ☐C ☐D ☒ **Not Eligible:** ☐Irretrievable integrity loss ☐Not 50 Years ☒Fails to meet NR Criteria	**Finding of Effect:** ☒ No Effect ☐ No Adverse Effect ☐ Adverse Effect

State Historic Preservation Office Comments – *Official Use Only*:

Eligibility: ☐**Concur** ☐**Do Not Concur:**

Effect: ☐**Concur** ☐**Do Not Concur:**

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Signed _____ Date _____

CONTACT INFORMATION STAMP

Comments:

OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Property Name:	Street Address:	City, County:
Kramer Residence	9709 SE Cedar Street	South Beach, Lincoln

Original Use: Single Dwelling

Number of Associated Resources: 0

Architectural Classification / Resource Type:
Ranch (type) Building

Owner: ☒Private ☐Local Government ☐State ☐Federal

Window type and Materials:
Slider, vinyl frame

Roof Type and Materials:
Side-gable with eaves; composition shingle

Exterior Surface Materials:
Primary: Shingle
Secondary: Vertical Board
Decorative: Not Applicable

Integrity:
☐Excellent ☐Good ☐Fair ☒Poor

Construction Date: 1967 (☐Circa)

Architect/Builder (if known):
unknown

Description of Property (including previous alterations & approximate dates):

The residence at 9709 SE Cedar Street, South Beach, is located in Lincoln County. The county assessor lists the construction date as 1967.This residence is a north facing 1-story rectangle plan structure with a side-gable roofline and attached 2-car garage. It shares a private drive off the east side of SE Cedar Street. The roof is clad with composition shingles and open eaves. There is a brick chimney present. The foundation is poured concrete. Exterior walls are covered with decorative patterned wood shingle and wood vertical board at the roofline on the west facade and wood vertical board on the east facade/garage. The front entry is setback and offset to the east of the north façade and features a wood door with three small diagonal windows. There are vinyl slider windows on the house and single pane windows on the garage. There is a small shed clad in wood horizontal clapboard with a front gable roofline to the west of the house. The county assessor lists the original garage as being removed and replaced with the current garage in 2004.

Determination of Eligibility, Justification, and Sources (Use continuation sheets if necessary):

Build dates and property cards for the property were obtained from the Lincoln County Assessor, through both online, and physical searches of the property archives. These records produced photograph's, permits, and plans for the structure.

The original single story ranch style home has been remodeled. The windows have been replaced with modern vinyl, and the garage has been demolished and replaced with a structure that no longer matches the original roofline or dimensions of the home. The roof appears to have been replaced with asphalt shingles. It is not clear if the wooden siding is original or a replacement, the assessor was not able to provide photographs of the original structure. These conditions diminish its overall integrity, and it does not represent an outstanding example of its original style. ESA recommends that the property be considered Not Eligible for the NRHP based on its architectural style and materials (Criterion C). No connection to local, regional or national events (Cirterion A), or important person's (Criterion B), was revealed during the archival research into the original builder or past residents. Finally, as a typical med 20th century single family residence, the structure does not posses the ability to provide new information about history ore prehistory (Criterion D).

OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Property Name:	Street Address:	City, County:
Kramer Residence	9709 SE Cedar Street	South Beach, Lincoln

Description of project scope, and nature and extent of impacts:

The Newport Municipal Airport (Airport) proposes to remove obstructions from the approach and departure surfaces of Runway 16-34 and the approach surface of Runway 20 during the fall/winter season of 2021. The need for obstruction removal has been identified in the Airport's Capital Improvement Plan (CIP). Obstructions consist largely of tall trees and shrubs. The project involves removing trees that have been identified as obstructions in the associated surfaces of Runway 16-34 and Runway 20. A Geographic Information Systems survey of the Airport that was completed in 2019 identified numerous obstructions in the Federal Aviation Regulation Part 77 in the associated surfaces of Runway 16-34 and Runway 20. These trees are potential hazards to the Airport's operational safety because of their height. At this time, it is proposed that the trees would be cut at the base using hand-held equipment (e.g., chainsaws), leaving the stumps and roots in place.

The proposed project impacts, of tree clearing, will not impact the structure or its setting. The parcel is adjacent to active logging land and tree clearing has been occurring in the area before the structure was built and throughout its existence. As a result, ESA recommends that the project will not have an adverse effect to the property.

Finding of Effect and justification:

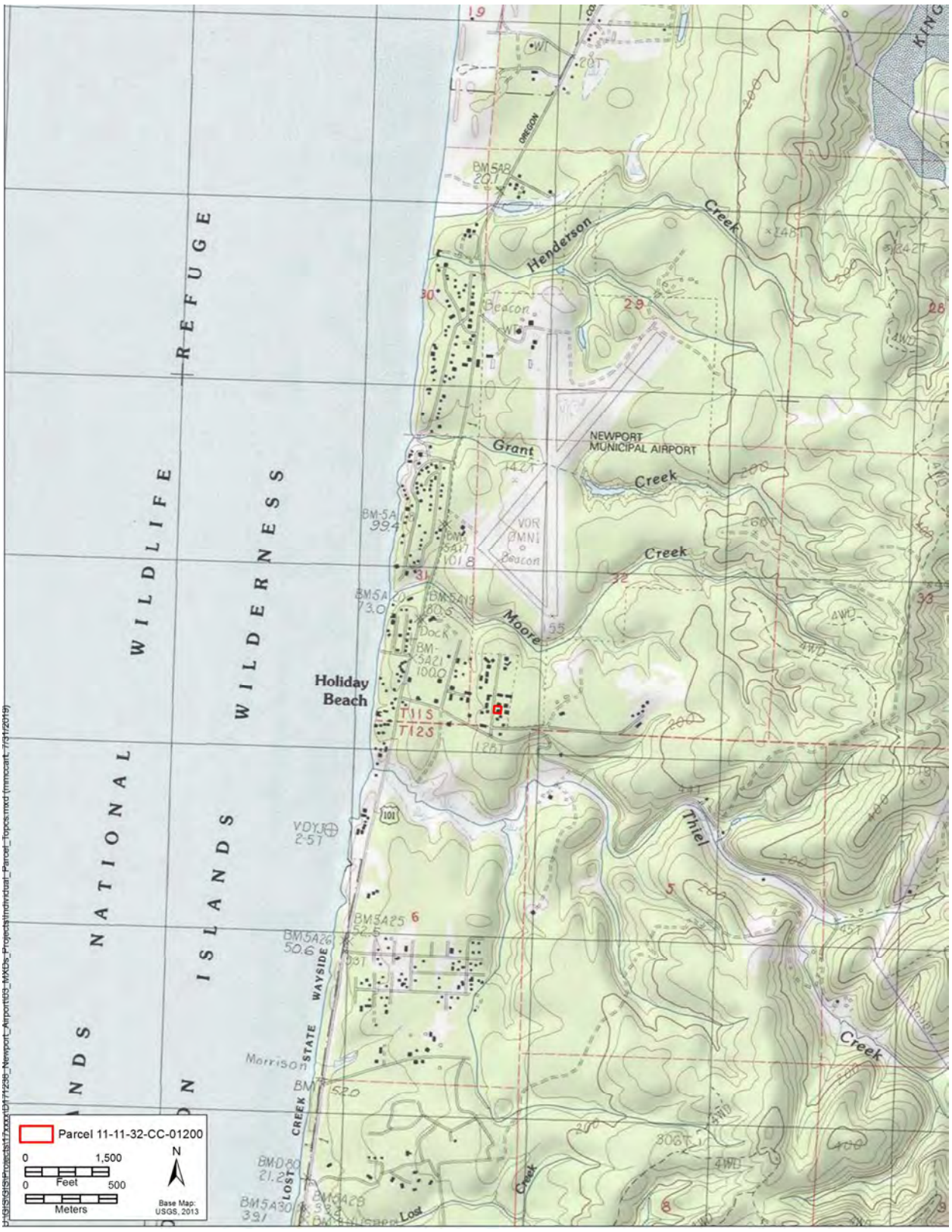
Based on the structure at 9709 SE Cedar Street Street being recommend Not Eligible for the NRHP, ESA recommends that the Project will result in a finding of No Historic Properties Affected in regard to this address.

Property Name:	Street Address:	City, County:
Kramer Residence	9709 SE Cedar Street	South Beach, Lincoln

View: North / front facade overview, view to the south

View: Side / west facade with small shed in foreground, view to the east

Property Name:	Street Address:	City, County:
Kramer Residence	9709 SE Cedar Street	South Beach, Lincoln



OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Supplemental Photos

Property Name:	Street Address:	City, County:
Kramer Residence	9709 SE Cedar Street	South Beach, Lincoln

View: Side / east facade of garage, view to the west

Insert Photo Here

View:

OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Property Name:	Street Address:	City, County:
McDonagh Residence	9711 SE Cedar Street	South Beach, Lincoln

Project Name: Newport Municipal Airport Obstruction Removal	Agency project #:
Agency: Federal Aviation Administration	SHPO Case#: 19-1125
Location Coordinates (to sixth decimal place): Latitude: 44.567270 Longitude: -124.061300	Is the property listed in the National Register of Historic Places? ☐ YES – Individually ☒ NO ☐ YES – In a district

Front/North facade, view to the south

Surveyor: Thomas Ostrander	Date Recorded: 7/18/2019

National Register Findings:

☐ **Eligible:** ☐Individually ☐As part of District NR Criteria: ☐A ☐B ☐C ☐D

☐**Not Eligible:** ☐Irretrievable integrity loss ☐Not 50 Years ☒Fails to meet NR Criteria

Finding of Effect:

☒ No Effect
☐ No Adverse Effect
☐ Adverse Effect

State Historic Preservation Office Comments – *Official Use Only*:

Eligibility: ☐**Concur** ☐**Do Not Concur:**

Effect: ☐**Concur** ☐**Do Not Concur:**

RECEIVED STAMP

Signed _____ Date _____

CONTACT INFORMATION STAMP

Comments:

OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Property Name:	Street Address:	City, County:
McDonagh Residence	9711 SE Cedar Street	South Beach, Lincoln

Original Use: Single Dwelling

Number of Associated Resources: 0

Architectural Classification / Resource Type:
Ranch (type) Building

Owner: ☒Private ☐Local Government ☐State ☐Federal

Window type and Materials:
Slider, Vinyl frame

Roof Type and Materials:
Side-Gable with eave; composition shingle

Exterior Surface Materials:
Primary: Shingle
Secondary: Vertical Board
Decorative: Wood: Other/undefined

Integrity:
☐Excellent ☐Good ☒Fair ☐Poor

Construction Date: 1966 (☐Circa)

Architect/Builder (if known):
unknown

Description of Property (including previous alterations & approximate dates):

The residence at 9711 SE Cedar Street, South Beach, is located in Lincoln County. The county assessor lists the construction date as 1966. This residence is a north facing 1-story structure with a cross-gable roofline and attached 1-car garage. It shares a private drive off the east side of SE Cedar Street. The roof is clad with composition shingles and open eaves. There is a brick chimney present. The foundation is poured concrete. Exterior walls are covered with cedar shingle, decorative vertical board at the roofline and wood vertical board at the foundation. The front entry is offset to the west of the north façade and features a wood paneled door. The rear entry includes a small concrete porch with sliding glass door. There are vinyl and metal slider windows on the residence. The county assessor has no permits or changes on file for the structure.

Determination of Eligibility, Justification, and Sources (Use continuation sheets if necessary):

Build dates and property cards for the property were obtained from the Lincoln County Assessor, through both online, and physical searches of the property archives. These records produced photograph's, permits, and plans for the structure.

The structure maintains its original single story ranch floorplan. Some of the windows have been replaced and the composition shingle roof appears to be a replacement. These conditions diminish its overall integrity, how it still retains its general original form it does not represent an outstanding example of its original style. The home appears to be well maintained, but does not represent exemplary construction or materials. ESA recommends that the property be considered Not Eligible for the NRHP based on its architectural style and materials (Criterion C). No connection to local, regional or national events (Cirterion A), or important person's (Criterion B), was revealed during the archival research into the original builder or past residents. Finally, as a typical med 20th century single family residence, the structure does not posses the ability to provide new information about history or prehistory (Criterion D).

OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Property Name:	Street Address:	City, County:
McDonagh Residence	9711 SE Cedar Street	South Beach, Lincoln

Description of project scope, and nature and extent of impacts:

The Newport Municipal Airport (Airport) proposes to remove obstructions from the approach and departure surfaces of Runway 16-34 and the approach surface of Runway 20 during the fall/winter season of 2021. The need for obstruction removal has been identified in the Airport's Capital Improvement Plan (CIP). Obstructions consist largely of tall trees and shrubs. The project involves removing trees that have been identified as obstructions in the associated surfaces of Runway 16-34 and Runway 20. A Geographic Information Systems survey of the Airport that was completed in 2019 identified numerous obstructions in the Federal Aviation Regulation Part 77 in the associated surfaces of Runway 16-34 and Runway 20. These trees are potential hazards to the Airport's operational safety because of their height. At this time, it is proposed that the trees would be cut at the base using hand-held equipment (e.g., chainsaws), leaving the stumps and roots in place.

The proposed project impacts, of tree clearing, will not impact the structure or its setting. The parcel is adjacent to active logging land and tree clearing has been occurring in the area before the structure was built and throughout its existence. As a result, ESA recommends that the project will not have an adverse effect to the property.

Finding of Effect and justification:

Based on the structure at 9711 SE Cedar Street being recommend Not Eligible for the NRHP, ESA recommends that the Project will result in a finding of No Historic Properties Affected in regard to this address.

Property Name:	Street Address:	City, County:
McDonagh Residence	9711 SE Cedar Street	South Beach, Lincoln

View: Front/North facade, view to the south

View: Side / west facade, view to the east

SECTION 106 DOCUMENTATION FORM
Individual Properties

Property Name:	Street Address:	City, County:
McDonagh Residence	9711 SE Cedar Street	South Beach, Lincoln

OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Supplemental Photos

Property Name:	Street Address:	City, County:
McDonagh Residence	9711 SE Cedar Street	South Beach, Lincoln

View: Side / east facade, view to the west

View: Side / east facade with back porch / entrance, view to the west

APPENDIX E

Biological Opinion

ENVIRONMENTAL ASSESSMENT

Newport Municipal Airport Obstruction Removal

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Newport Field Office
2127 SE Marine Science Drive
Newport, Oregon 97365
Phone: (541) 867-4558 FAX: (541) 867-4551

File Name: Newport Airport Obstruction Removal BiOp transmittal letter.docx
TS Number: 22-380
Ecosphere: 2022-0032242
TAILS/File Number: 2022-F-0005

May 16, 2022

Ilon Elizabeth Logan
U.S. Department of Transportation
Federal Aviation Administration
2200 S. 216th Street
Des Moines, Washington 98198

Subject: Biological Opinion for the proposed Newport Municipal Airport Obstruction Removal Project (Reference No. 2022-0032242)

Dear Ms. Logan:

This letter transmits the U. S. Fish and Wildlife Service's (Service) Biological Opinion (enclosed) on the proposed Obstruction Removal Project for the Newport Municipal Airport located in Lincoln County, Oregon, in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq*.) (Act). The Federal Aviation Administration (FAA) had initially requested informal consultation on the listed marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), coastal distinct population segment of the Pacific marten (*Martes caurina*), and designated critical habitat, and requested Service concurrence with your determination that the project may affect, but was not likely to adversely affect, these listed species. We received your January 7, 2022, request for informal consultation by email on that same date, accompanied by the Biological Assessment (BA) prepared by Environmental Science Associates.

On February 7, 2022, we communicated via email our conclusion that based on the information in the BA, we could not concur with your finding and indicated that formal consultation would likely be needed. Based on additional information gathering and conversations between our staff, on February 24, 2022, the Service determined that a formal consultation would be required for the proposed project based upon our determination that the proposed project may affect and is likely to adversely affect the marbled murrelet, as communicated in an email of that same date.

We therefore consider formal consultation to have been initiated February 24, 2022. Details of the consultation history for this project are provided in the Biological Opinion.

After reviewing the current status of the species, the environmental baseline, the effects of the proposed action, including all measures proposed to avoid and minimize adverse effects, and the cumulative effects, we conclude that the proposed project will not jeopardize the continued existence of the marbled murrelet. Although we anticipate that adverse effects to the marbled murrelet will occur as a result of reducing available nesting habitat, the best available information is currently insufficient to determine whether the magnitude of these effects is reasonably certain to significantly disrupt or impair the behavior of the marbled murrelet, injure the marbled murrelet, or cause mortality, such that take is reasonably certain to occur. Since no incidental take is anticipated, no take exemption has been provided in this Biological Opinion. If incidental take is detected during implementation of the proposed action, reinitiation of formal consultation should be requested immediately.

We concur with the FAA's determination that the proposed action may affect, but is not likely to adversely affect, the northern spotted owl or coastal marten, for the reasons articulated in our Biological Opinion. As no designated or proposed critical habitat for any listed or proposed species occurs within the action area, none will be adversely modified or destroyed.

Finally, the BA provides a rationale for a determination of "no effect" for the western snowy plover (*Charadrius nivosus nivosus*) or its critical habitat. As you may know, the Service does not provide concurrence on "no effect" determinations. However, based on our review of the information provided and personal knowledge of the action area, we agree that your conclusion is reasonable.

The enclosed Biological Opinion is based on information provided in your Biological Assessment, discussions, field visits, and other sources of information cited in the Biological Opinion. A complete record of this consultation is on file at the Newport field office.

We appreciate your coordination and cooperation with us for the purpose of conserving and recovering our endangered and threatened species. If you have any questions regarding the enclosed Biological Opinion or our shared responsibilities under the Act, please contact me at (541) 867-4558, ext. 237, or by email at michele_zwartjes@fws.gov.

Sincerely,

Michele Zwartjes, Ph.D.
Field Supervisor

Enclosure
CC by email:
Lance Vanderbeck, Airport Manager, City of Newport
Susan Cunningham, Environmental Science Associates
Sarah Hartung, Environmental Science Associates

Endangered Species Act - Section 7 Consultation

Biological Opinion

Newport Municipal Airport Obstruction Removal
Lincoln County, Oregon

U.S. Fish and Wildlife Service Reference:
2022-F-0005
Project Code 2022-0032242
TS 22-380

Federal Action Agency:
Federal Aviation Administration

Consultation Conducted By:

U.S. Fish and Wildlife Service
Oregon Fish and Wildlife Office
Newport Field Office

Michele Zwartjes, Ph.D.
Field Supervisor

Date

Contents

INTRODUCTION

This document represents the U. S. Fish and Wildlife Service's (Service) Biological Opinion based on our review of the proposed Newport Municipal Airport Obstruction Removal project in Lincoln County, Oregon, and its effects on the marbled murrelet (*Brachyramphus marmoratus*), the northern spotted owl (*Strix occidentalis caurina*), and the coastal distinct population segment (DPS) of the Pacific marten (*Martes caurina;* hereafter "coastal marten"), in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et *seq.*). On January 7, 2022, we received your request for informal consultation and concurrence with your "not likely to adversely affect" finding by email. On February 7, 2022, we communicated via email our conclusion that based on the information in the Biological Assessment (BA) provided to us, we could not concur with your finding and indicated that formal consultation would likely be needed (see Consultation History, below). Based on additional information gathering and conversations between our staff, on February 24, 2022, the Service determined that a formal consultation would be required for the proposed project, as communicated in an email of that same date. We therefore consider formal consultation to have been initiated February 24, 2022.

This Biological Opinion is based on information provided in your Biological Assessment (BA) for the proposed project dated January 2022 (attached here as Appendix A), discussions with action agency staff and consultants, species experts, field visits and other information. A complete record of this consultation is on file at this office.

Consultation History

Staff from the Service attended several public agency coordination meetings provided by the Federal Aviation Administration (FAA) and its consultant, Environmental Science Associates (ESA). These meetings presented an overview and progress updates for the proposed project and invited early agency input on conservation measures to avoid or minimize any potential negative impacts on any listed species that could be in the action area. These meetings were held on October 11, 2018; November 21, 2019, and September 29, 2021. The information provided at each of these meetings indicated that there were no known occurrences of marbled murrelet, northern spotted owl, or coastal marten within the action area of the project, therefore the FAA had made a preliminary "no effect" determination for each of these listed species. Based on this information, the Service was not anticipating the need for either informal or formal consultation on the project.

On November 30, 2021, the Service (Michele Zwartjes) received an email from ESA (Sarah Hartung) communicating that the preliminary effect determinations for the marbled murrelet and northern spotted owl had been changed from "no effect" to "may affect, not likely to adversely affect." This change was based on ESA learning that observations of marbled murrelets exhibiting behavior indicative of occupancy (breeding) had been made during surveys conducted in spring and summer 2021 on property within the project area owned by Weyerhauser (Parcel ID 12-11-05-00-00802-00). Consistent with Service protocol, as a result of this observation adjacent contiguous habitat within the study area is also considered occupied, which expanded the area of marbled murrelet occupancy to include lands owned by Steel String, Inc. (Parcel IDs 12-11-05-00-00803-00, 12-11-05-CB-00200-00, and 12-11-05-CB-00700-00). Because marbled murrelets and northern spotted owls may utilize forested habitats with similar structural

characteristics, presumed occupancy by the marbled murrelet similarly indicates potential occupancy by the northern spotted owl within the project area. On December 10, 2021, the Service acknowledged receipt of the communication.

Holiday schedules prevented further communications on the subject until subsequent to the Service's receipt of the FAA's request for informal consultation and concurrence with a determination of "may affect, not likely to adversely affect" for the marbled murrelet, northern spotted owl, and coastal marten, accompanied by the BA for the project, on January 7, 2022. Receipt of the BA and request for informal consultation was followed by further email exchanges and information gathering, documented in the record. Based on these exchanges, on February 7, 2022, the Service communicated via email that we could not concur with the "not likely to adversely affect" finding and that formal consultation would likely be needed; we additionally requested a site visit to visually assess the habitat in question.

On February 10, 2022, Michele Zwartjes of the Service and Sarah Hartung of ESA visited the Weyerhauser and Steel String parcels identified as occupied or contiguous/potential habitat and more specifically visited each area where obstruction trees are slated for removal on those properties. Based upon this visit, we determined that some of the large trees identified for removal display characteristics consistent with potential marbled murrelet nest trees (i.e., horizontal, large diameter branches high in the canopy and with sufficient cover to serve as nest platforms). We also determined that other trees with similar characteristics would remain in the area following the removal of individual obstruction trees, thus potential nest trees would remain after completion of the project.

On February 24, 2022, the Service communicated via email that formal consultation would be required, based upon our determination that the project may affect, and is likely to adversely affect, the marbled murrelet. At that time, we also requested a second site visit for the purposes of having an expert in spotted owl habitat assess the areas presumed to be occupied by the marbled murrelet. The Service had earlier understood that northern spotted owls had not been detected during surveys of the project area, but subsequently learned that northern spotted owl surveys conducted on the Weyerhauser property in 2021 had been terminated after that single season. Service protocol requires that two consecutive years of surveys be completed to assume the absence of northern spotted owls (Service 2012). The termination of surveys after a single year therefore cannot be relied upon to presume that northern spotted owls are not present.

On March 4, 2022, Michele Zwartjes and Kevin Maurice of the Service again visited both the Weyerhauser and Steel String properties. Visual assessment made during this site visit confirmed that the forested areas on these properties have characteristics of possible roosting and/or foraging habitat for the northern spotted owl, but there was no obvious nesting habitat present (i.e., decadent trees with cavities). Furthermore, this visit raised questions as to whether the relatively small size of the contiguous forested habitats available surrounded by younger second-growth and residential development would provide a sufficiently large area of habitat suitable to support resident spotted owls.

In an email to the FAA on March 14, 2022, the Service committed to completing a Biological Opinion on the proposed project no later than the end of April 2022.

Service Determination and Concurrence

In the Opinion that follows, the Service concludes that the proposed action is likely to adversely affect the marbled murrelet, but that the adverse effects will not definitively rise to the level of incidental take of individuals of the species and will not jeopardize the species.

The Service concurs with the agency's determination in the BA (Appendix A, p. 14) that the subject action may affect, but is not likely to adversely affect, the northern spotted owl and coastal marten. The basis for these concurrence determinations is presented in Appendix B; these species are not discussed further in this Opinion.

There is no designated critical habitat for the marbled murrelet or northern spotted owl, and no proposed critical habitat for coastal marten, affected by the proposed project, therefore critical habitat is not further addressed within this Opinion.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Project Overview

A full description of the project is included in the BA, which is incorporated into this BO as Appendix A. Here we provide a brief summary of the project.

The Newport Municipal Airport (Airport) is proposing to remove tall vegetation (trees and shrubs/saplings) that pose obstructions to the FAA-regulated airspaces north and south of the Airport. Removing these obstructions will allow for a clear approach surface. The approach surface is critical in allowing aircraft to execute landings in a manner that is safe. The project would provide a clear 50:1 approach surface for Runway 16 for the first 10,000 feet (40:1 for an additional 40,000 feet), 34:1 approach surface for Runway 34, and 20:1 approach surface for Runway 20, in compliance with Federal Air Regulations Part 77. In total, approximately 63 acres of tall vegetation will be removed from the project area, which includes areas to the north and south of the Airport. In some cases contiguous vegetated areas will be cleared, but whenever possible single trees that act as obstructions will be removed individually from the surrounding forest matrix. The project is scheduled to take place beginning in 2022 and will continue through 2024.

Obstructing vegetation was identified for removal by Light Detection and Ranging (LiDAR) to identify tall trees penetrating the FAA-regulated airspace. As noted above, a total of approximately 63 acres has been identified for removal, affecting 32 separate tax lots north and south of the Airport. The Airport is located within the Newport City Limits in the South Beach Urban Renewal District, Lincoln County, Oregon. The Airport itself and properties where obstructions are proposed for removal are zoned as either Industrial, Public Structures, or High-Density Multi-Family. See Figures 1, 2, and 7 of the BA (Appendix A) for visual representations of the project area and the extent of trees proposed for removal.

Most of the vegetation identified for removal (60 acres) occurs within areas that are not considered suitable habitat for marbled murrelets, northern spotted owls, or coastal marten, as they are either developed, cleared, or highly fragmented areas of primarily young second-growth forest. In addition these areas are not considered potential suitable habitat due to lack of complex forest structure, lack of dense understory or multiple canopy layers, habitat fragmentation, and close proximity to human activity.

However, in summer 2021 surveys revealed marbled murrelets displaying behavior associated with breeding (flying at canopy height) that is considered indicative of occupancy in Parcel ID 12-11-05-00-00802-00, owned by Weyerhauser (Tag 22, Figure 5 of the BA, Appendix A; see also Figures 7 and 8). Adjacent contiguous forest that is similar in structure to known occupied habitat is also presumed to be occupied, thus adjacent forested habitat on property owned by Steel String, Inc. (Tags 17, 23, and 24 [Parcel IDs 12-11-05-00-00803-00; 12-11-05-CB-00200-00; and 12-11-05-CB-00700-00], Figure 5 of the BA, Appendix A) is also considered occupied/potential habitat. Collectively this area of occupied and potential habitat south of the Airport within the approach to Runway 34 represents a patch of forest approximately 140 acres in size and is separated from surrounding forest patches by residential areas, industrial timberlands, or meadows and clearings. We considered this 140-acre patch to provide occupied marbled murrelet habitat. Within this 140-acre patch, a total of approximately 3 acres of tall vegetation is slated for removal; most of this is in one contiguous patch of forest (approximately 2.55 acres) of potential habitat on Silver String property (Figure 1, Tree Removal Area A). In addition, there are a few individual trees separately identified for removal that occur both within the parcel where marbled murrelet occupied behaviors were observed on Weyerhauser lands (Figure 1, Tree Removal Area D) and in potential habitat on Silver String lands (Figure 1, Tree Removal Areas B and C). The 2.55-acre patch of forest that is slated for removal (Area A) appears to represent marginal habitat, as it exhibits little structural complexity, there were no observable suitable nest structures, the trees were too small to provide suitable nesting platforms, and the forest lacked multiple canopy layers (BA, Appendix A, p. 7; Zwartjes pers. obs.).

Conservation Measures

As described in the BA (Appendix A, pp. 3-4), the proposed project has been designed to implement the following conservation measures in an attempt to avoid or minimize potential impacts to any listed species that could be present:

- No tree removal is proposed in the 140-acre patch of occupied/contiguous habitat (as shown in Figures 7 and 8 from the BA, Appendix A) during the combined marbled murrelet, northern spotted owl, and coastal marten breeding/denning season (February 1 to September 15).
- Tree removal in occupied/contiguous habitat would be limited to daylight hours (i.e., not at dawn or dusk, when northern spotted owls, marbled murrelets, or coastal marten, if present, would most likely be active).
- Work areas are confined to the minimum area needed to complete the action; individual trees will be removed when possible, as opposed to wholesale clearing of vegetation.
- Staging will occur in existing disturbed areas already cleared of vegetation.

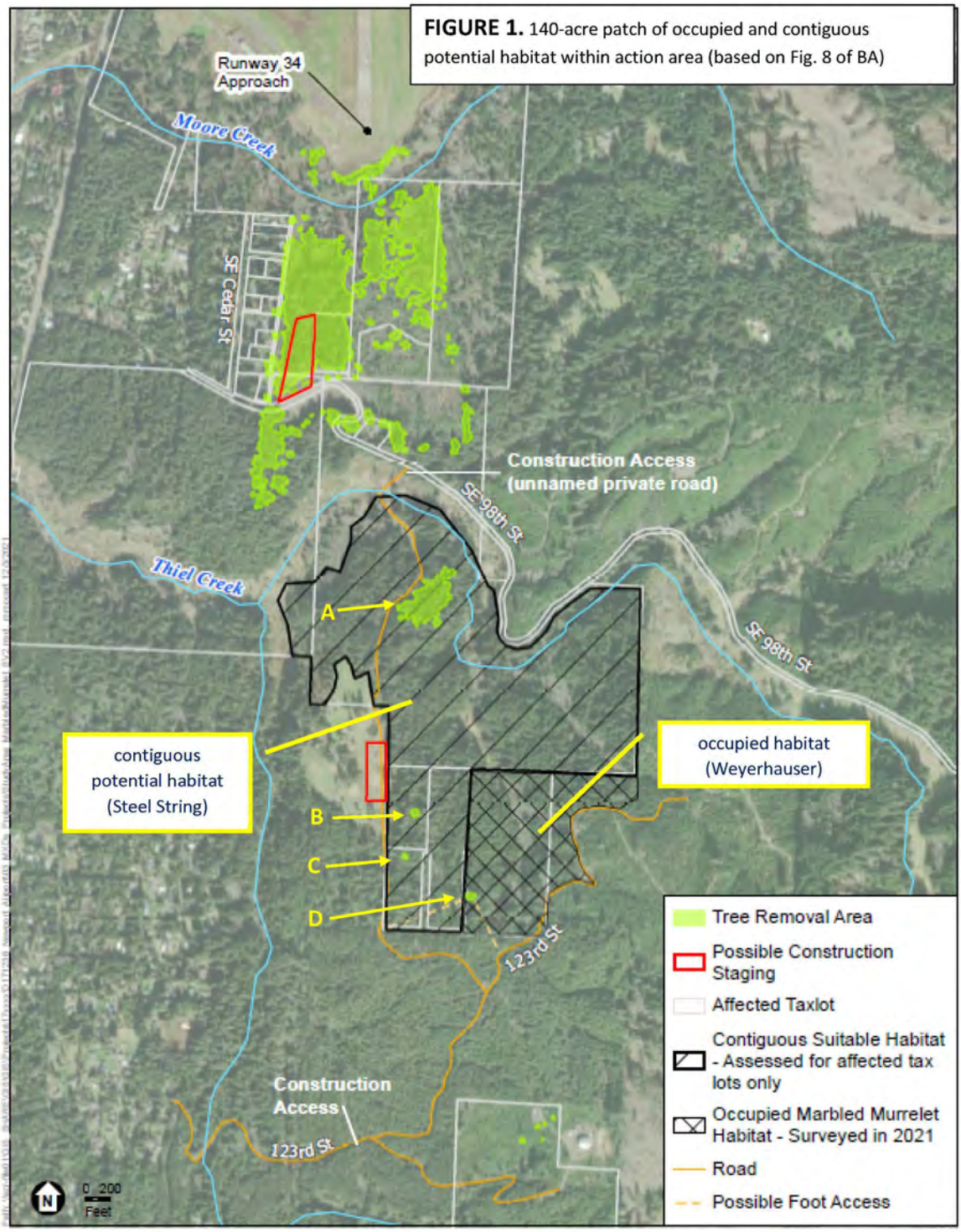


FIGURE 1. 140-acre patch of occupied and contiguous potential habitat within action area (based on Fig. 8 of BA)

SOURCE: ESRI, 2020; Weyerhaeuser, 2021; Precision Approach Engineering, 2019

Newport Airport Obstruction Removal Phase 2

Tree removal areas within contiguous potential habitat

A – 2.55 acres of forest to be cleared and replanted with shrubs

C – one to few individual trees to be removed

D – one to few individual trees to be removed

Tree removal area within occupied habitat

D – one to few individuals trees to be removed

- No new facilities, roads, or impervious surfaces are proposed as part of the project. Obstructions will be accessed from existing disturbed areas including paved and unpaved access roads and private roads as well as old logging roads and paths (see Figure 8 of the BA, Appendix A).
- Areas permanently disturbed (tree removal areas) will be restored following removal with native groundcover and shrubs.

Action Area

The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02). In delineating the action area, we evaluated the farthest reaching physical, chemical, and biotic effects of the action on the environment.

The action area in this case includes the project footprint (including construction access and staging areas) and areas within an approximately 825-foot (25-meter) radius of the project footprint that may be affected by construction noise (see Figure 2 of the BA, Appendix A). This distance is based on the disturbance distance for marbled murrelets or northern spotted owls from construction equipment generating "very high" sound levels, as described in the BA (pages 12-13, Appendix A).

ANALYTICAL FRAMEWORK FOR THE JEOPARDY DETERMINATIONS

Jeopardy

In accordance with regulation (see 84 FR 44976), the jeopardy determination in this Biological Opinion relies on the following four components:

1. The *Status of the Species*, which evaluates the species' current range-wide condition relative to its reproduction, numbers, and distribution; the factors responsible for that condition; its survival and recovery needs; and explains if the species' current range-wide population is likely to persist while retaining the potential for recovery or is not viable;

2. The *Environmental Baseline*, which evaluates the current condition of the species in the action area relative to its reproduction, numbers, and distribution absent the consequences of the proposed action; the factors responsible for that condition; and the relationship of the action area to the survival and recovery of the species;

3. The *Effects of the Action*, which evaluates all future consequences to the species that are reasonably certain to be caused by the proposed action, including the consequences of other activities that are caused by the proposed action, and how those impacts are likely to influence the survival and recovery role of the action area for the species; and

4. *Cumulative Effects*, which evaluates the consequences of future, non-Federal activities reasonably certain to occur in the action area on the species, and how those impacts are likely to influence the survival and recovery role of the action area for the species.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the consequences of the proposed Federal action in the context of the species' current rangewide status, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the species in the wild. The key to making this finding is clearly establishing the role of the action area in the conservation of the species as a whole, and how the effects of the proposed action, taken together with cumulative effects, are likely to alter that role and the continued existence (*i.e*., survival) of the species.

STATUS OF THE SPECIES

Marbled Murrelet

The marbled murrelet was listed as a threatened species under the federal Endangered Species Act in Washington, Oregon, and California in 1992 (57 FR 45328; October 1, 1992). Subsequent reviews have reaffirmed the threatened status of the marbled murrelet, which is recognized as a Distinct Population Segment (DPS) in accordance with Service policy (e.g., see the 2019 5-year review for the species; USFWS 2019). The recovery plan for the marbled murrelet (.USFWS 1997) divides the range of the DPS into six conservation zones; the action area falls within Conservation Zone 3 (Oregon Coast Range Zone), which extends from the Columbia River south to North Bend, Coos County, Oregon. Conservation Zone 3 includes waters within 1.2 miles of the Pacific Ocean shoreline and extends inland a distance of up to 35 miles.

For a detailed description of the status of the marbled murrelet, we refer the reader to Appendix D of this document. Of particular relevance to this Biological Opinion is the characterization of suitable potential nest trees required by the marbled murrelet. In the terrestrial environment, the presence of platforms (large branches or deformities) used for nesting is the most important characteristic of nesting habitat. Habitat use during the breeding season is positively associated with the presence and abundance of mature and old-growth forests, large core areas of old-growth, low amounts of edge habitat, reduced habitat fragmentation, proximity to the marine environment, and forests that are increasing in stand age and height. A suitable nest tree is a coniferous tree, generally within 20 miles of the coast (up to 50 miles for older forest stands) with all of the following characteristics or trees functioning together to provide the following characteristics (based on averages derived from the marbled murrelet recovery plan, USFWS 1997):

- A diameter at breast height (DBH) of at least 19.1inches and a height greater than 107 feet (average DBH 65 inches);
- A nest platform at least 32.5 feet above the ground (average height of nest branch 138 feet) (a nest platform is a relatively flat surface 4 inches wide at a minimum, with nesting substrate (e.g., moss, epiphytes, duff) (average depth 1.2 inches), and an access route through the canopy that a murrelet could use to approach from below the nest and land on or near that platform; and
- A tree branch or foliage, either on the tree with potential structure or on an adjacent tree, which provides protective cover over the platform (average 78% cover within 28 to 39 inches of the platform)

Any tree that does not meet all of these criteria is unlikely to support nesting marbled murrelets.

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR 402.02) define the environmental baseline as the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline.

Current Condition of the Marbled Murrelet in the Action Area

There is relatively little suitable habitat for nesting marbled murrelets within the majority of the action area, which is highly fragmented and surrounded by residential areas and industrial timberlands. Most of the forest in this area is second-growth and lacks trees of sufficient size and structural complexity to provide suitable nest platforms for marbled murrelets (see description above for specific criteria that characterize potential nest trees). However, surveys conducted in 2021 on the Weyerhauser parcel (ID 12-11-05-00-00802-00) documented several instances of marbled murrelets flying above the canopy of this property between May and July 2021 (considered evidence only of birds traveling through the area), with one detection of a marbled murrelet flying at canopy height on July 1, 2021, which is considered behavior indicative of occupancy (breeding) (BA p. 1, Appendix A; Evans Mack et al. 2003, p. 22; S. Hartung, in litt. 2022). The Weyerhauser property comprises the southeast corner of the 140-acre occupied/contiguous patch of forest identified within the action area (Figure 1).

A site visit to the Weyerhauser property in February 2022 confirmed the presence of multiple tall, large trees, primarily Sitka spruce (*Picea sitchensis*), capable of providing suitable nest platforms with sufficient vegetative cover to constitute potential nest trees for marbled murrelets (Zwartjes, pers. obs.; see, e.g., Exhibit 6 of the BA, Appendix A). Nest trees and specific nest sites may be reused by marbled murrelets in subsequent years; rates of reuse of trees range from 11 to 18%, and specific nest sites range from an average of 6% up to 25 or 30% (Lorenz et al. 2019 and references therein, pp. 163-164). There are several such large coniferous trees distributed across the Weyerhauser property that provide potentially suitable nesting sites for marbled murrelets. One or possibly a few of these trees have been identified for removal as part of the proposed action (Figure 1, Tree Removal Area D)[1], but there are multiple trees with suitable nest platforms and habitat conditions that will remain on the landscape in this occupied parcel.

[1] The exact number of trees that will be removed is unknown at this time; LiDAR imaging identified an obstruction of a certain height in this area, but whether this is a single tree or may be two or three trees growing in close proximity to one another is unknown at this time and individual trees slated for removal have not yet been marked.

The contiguous forest that is presumed occupied or potential habitat adjacent to the Weyerhauser property is owned by Steel String. This contiguous patch of forest appears to provide only marginal habitat for marbled murrelets. None of the trees within the 2.55-acre area that is slated for removal (Figure 1, Area A) within this contiguous patch of forest appear to provide suitable nesting conditions for marbled murrelets (see Exhibit 5 of the BA, Appendix A). Larger coniferous trees that do provide potentially suitable nest platforms occur west of this patch, however, across the road and down the drainage from the 2.55-acre patch identified for removal. These trees will remain on the landscape and will not be affected by the proposed action. Most of this area is relatively fragmented by roads and there are clearings for buildings and residences within the Steel String property that increase accessibility to the forest interior for potential nest predators, resulting in reduced habitat quality for marbled murrelets. For example, the few individual large trees identified for removal on the Steel String parcels (Figure 1, Areas B and C), although they provide limbs large enough to serve as potential nest platforms, were very close to roads or cleared areas and had little in the way of protective horizontal or vertical vegetation that would obscure a nest, resulting in suboptimal potential nest sites that would be highly vulnerable to predators and thus would have very low probability of successful nesting.

In sum, although there were multiple observations of marbled murrelets flying over the Weyerhauser property within the action area, there was only a single observation of a marbled murrelet displaying occupied behavior (flying at canopy height) during surveys conducted in 2021. This was the first known observation of marbled murrelets in this area, and the number of marbled murrelets that may possibly nest here is unknown. The Weyerhauser property and some areas of the Steel String property appear to provide some trees with suitable nest sites for marbled murrelets. The proximity of the area to the ocean is highly favorable for marbled murrelets, as it reduces the energetic expenditure required of the birds for flights between foraging and nesting areas. However, with the exception of the Weyerhauser parcel, the majority of the forest within the action area appears to be of marginal quality for marbled murrelets and unlikely to support successful nesting. The forest in this area is primarily younger second-growth and highly fragmented such that any nest site that is not far from a forest edge is likely vulnerable to failure from predation.

In addition, as the action area is directly in the flight path of aircraft taking off and landing, the area is subject to disturbance from the engine noise of aircraft on a daily basis. The Airport supports an average of 55 aircraft operations a day, and services a variety of aircraft including both private and military airplanes, jets, helicopters, and various military aircraft (AirNav.com 2022). In particular, the area identified as occupied/contiguous habitat for marbled murrelets is below the flightpath for Runway 34 to the south of the Airport, and aircraft pass over this area at relatively low altitudes as they approach or depart the Airport, thus noise levels can be high.

Conservation Role of the Action Area

As noted above, the action area falls within marbled murrelet Conservation Zone 3 as identified in the marbled murrelet recovery plan (USFWS 1997). In 2014, the marbled murrelet population for Conservation Zone 3 was estimated at 8,840 birds (Crescent Coastal Research 2015, p. 2). Although there is evidence of a slight positive population trend for marbled murrelets in Conservation Zone 3 for the years 2000 through 2016, there is uncertainty around this trend as the confidence intervals overlap zero (USFWS 2019, p. 16). The most recent analysis of marbled

murrelet nesting habitat in Oregon shows small net increases in higher probability nesting habitat over the period 1993 to 2017 (Lorenz et al. 2021, p. 34). As of 2017, in Oregon there were an estimated 5,402,9076 acres of lower probability nesting habitat, 688,906 acres of moderate probability nesting habitat, and 517,686 acres of higher probability nesting habitat for marbled murrelets across all landownerships (Lorenz et al. 2021, p. 28).

The recovery plan calls for efforts in Conservation Zone 3 to focus on the maintenance of suitable and occupied nesting habitat in the Elliott State Forest, Tillamook State Forest, Siuslaw National Forest, and the Bureau of Land Management-administered forests as an essential component for the stabilization and recovery of the marbled murrelet, with particular emphasis on populations in the western portion of the Tillamook State Forest. In addition, restoring some of the north-south distribution of marbled murrelet populations and habitat within Conservation Zone 3 is identified as a priority (USFWS 1997, p. 127). The action area under consideration here has the potential to contribute to maintaining or restoring the north-south distribution of marbled murrelet populations within Conservation Zone 3 by providing nesting habitat.

EFFECTS OF THE ACTION

Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (50 CFR 402.02).

Impacts to marbled murrelets

Here we analyze the ways in which the proposed project **may affect** marbled murrelets in the action area, as a consequence of the following:

- Disturbance impacts from increased noise and activity associated with vegetation removal;
- Increased vulnerability of nests to nest predators as a result of edge effects; and
- Reduced availability of nesting habitat due to removal of potential nest trees.

Disturbance Impacts from Increased Noise and Activity Associated with Vegetation Removal

The project would involve the use of heavy equipment and activities related to tree removal (e.g., use of chainsaws). Construction equipment generating “very high” sound levels would cause increased noise disturbance in the immediate area and up to 850 feet (250 meters) from the source of the activity, which would be considered an adverse effect to marbled murrelets if individuals were exposed to these noise levels (BA p. 13, Appendix A). However, tree removal activities within occupied/contiguous habitat will be restricted to September 15 through January 30, thereby entirely avoiding potential disturbance impacts from noise or tree removal activities during the marbled murrelet nesting season (mid-April to mid-September), which is the only time that marbled murrelets would be expected to be present within the action area. The vulnerability of marbled murrelets is generally considered to be greatest early in the critical

breeding season for the species, between early April and early August.

The nearest activity that is proposed to occur in the vicinity of occupied or potential marbled murrelet habitat is more than 1,000 feet (305 meters) away from the habitat boundary (Figure 7 of BA, Appendix A). Furthermore, any marbled murrelets present in this area would already be exposed to a high level of background noise as a consequence of nesting directly below the approach to Runway 34. Collectively, avoidance of tree removal activities during the entirety of the marbled murrelet nesting season (and especially during the critical nesting season), the low probability of marbled murrelets being present during activities outside of the nesting season, the distance of more than 1,000 feet (305 meters) from any construction activities during the nesting season, and the high ambient levels of background noise experienced in the occupied/potential habitat area all contribute to our conclusion that adverse effects of noise-related disturbance will be discountable or insignificant and therefore unlikely to alter the essential behaviors or life functions of marbled murrelets.

Increased vulnerability of nests to nest predators as a result of edge effects

Forest fragmentation has been implicated as a primary contributing factor to nest failure in the marbled murrelet, in large part because nest predation increases with proximity of the nest to forest edges. Corvids (crows, ravens, and jays) are frequently identified as primary nest predators that may have greater access to marbled murrelet nests as a result of forest fragmentation and clearing. Higher probability nesting habitat for marbled murrelets includes "core habitat" that represents unfragmented patches of nesting habitat in forest interior, which provides higher quality habitat than forest edges and small, scattered patches (Lorenz et al. 2021, pp. 1-2). Following a review of the literature, Lorenz et al. (2021, p. 2) conclude that a distance of 197 feet (60 meters) is most appropriate to delineate "core" versus "edge" habitat for marbled murrelets, as nests within 164 to 197 feet (50 to 60 meters) of an edge are most susceptible to depredation and nest failure (Lorenz et al. 2021 and references therein, p. 13). Core habitat is considered the highest quality nesting habitat for marbled murrelets and is defined as habitats with a minimum patch size of 5.56 acres (2.25 hectares) farther than 197 feet (60 meters) from the edge of nonhabitat (Lorenz et al. 2021, p. 15).

Within the 140-acre patch of occupied/potential habitat for marbled murrelets, there are four areas slated for tree removal that could potentially further add to forest fragmentation and edge effects (Figure 1). Three of these areas (B, C, and D in Figure 1) are areas in which a single or only a few individual trees are identified for removal. Trees in areas B and C are already on the forest edge and represent suboptimal potential nest sites due to their current vulnerability to nest predators. Removal of these trees thus would not result in any increase in forest openness or edge effects. Only the individual tree(s) identified for removal on the Weyerhauser property[2] are within the forest interior. Visual inspection of Area D where one or possibly several trees have been identified for removal suggests that the relatively small opening that would be created as a result is unlikely to be any different than would be experienced through natural processes such as windthrow and would not create a significant opening in the canopy. Finally, the 2.55-acre patch

[2] As noted earlier, the exact number of trees that will be removed is unknown at this time; LiDAR imaging identified an obstruction of a certain height in this area, but whether this is a single tree or may be two or three trees growing in close proximity to one another is not yet known.

slated for removal (Area A on Figure 1) will result in the removal of a contiguous stand of trees within marginal habitat that is already situated on a forest edge, as it occurs along the access road to the structures on the Steel String property and in close proximity to surrounding meadows. Following clearing, the new boundary (edge) will be greater than 197 feet (60 meters) distant from any known potentially suitable nest trees, thus the clearing of this patch will not result in a reduction of any core, higher probability nesting habitat that may exist within the identified 140-acre block of occupied and contiguous potential habitat within the action area.

We thus considered the following factors: the few individual trees to be removed in Areas B and C (Figure 1) already occur within the forest edge; the opening that will result from removing one to a few individual trees in the forest interior (Area D; Figure 1) will be so small as to be relatively indistinguishable from natural openings in the canopy; the 2.55 acres of forest to be cleared (Area A; Figure 1) within the area of potential habitat is of marginal quality and already occurs along the forest edge in a highly fragmented landscape; and the clearing of this patch will not result in a new forest edge within a distance that is likely to provide increased predator access to potentially suitable nest trees. Based on all of these considerations, we conclude there is little likelihood that edge effects resulting from the proposed action will be noticeably different from the current condition, thus we have determined that the potential adverse effects of increased nest predation as a result of edge effects or fragmentation as a consequence of the project will be insignificant to the marbled murrelet.

Reduced availability of nesting habitat due to removal of potential nest trees

Within the action area, there has been a single detection of a marbled murrelet exhibiting flight behavior indicative of occupancy (as defined in Evans Mack et al. 2003, p. 22) within the Weyerhauser parcel. We therefore consider this parcel to be occupied, and site visits confirmed the presence of multiple trees on this property that could serve as potentially suitable nest trees for marbled murrelets. Consistent with Service protocol, forested habitat that is similar in structure and adjacent to occupied habitat is also presumed to be occupied and is described here as potential habitat. As a result, the adjacent forested areas on Steel String property are considered potential habitat. Individual trees that could potentially serve as suitable nest trees for marbled murrelets have been identified as obstructions to the FAA-regulated airspace and are slated for removal on both the Weyerhauser and Steel String properties. Whether the specific trees that will be removed have been used for nesting by marbled murrelets in the past is unknown. Also unknown is whether marbled murrelets definitively nest within this specific area (e.g., Lorenz et al. [2021, p. 10] note that occupied behaviors rarely provide an exact nest location) and if so, how many marbled murrelets may possibly use this area for nesting.

Marbled murrelets are unlikely to be present within the 140-acre patch of occupied/contiguous habitat when tree removal activities occur, as all tree removal activities in this area will take place entirely outside of the marbled murrelet nesting season (February 1 through September 15). Thus we do not anticipate any direct effects to marbled murrelets as a result of the project. However, there will be an indirect **adverse effect** to marbled murrelets because the number of potentially suitable trees available for future nesting will be reduced through habitat modification as a result of the project. If a marbled murrelet were to return to a nest stand that now has fewer potentially suitable trees, or to a specific previously used nest tree, there may be some small increased cost to that individual in terms of time or effort required to locate and choose an

alternative suitable tree for nesting. Whether the trees that will be removed are definitively suitable nest trees for marbled murrelets or may have served as nest trees for marbled murrelets in the past is unknown.

As discussed above, large trees identified for removal on Steel String property (Figure 1, Areas B and C) occur on the forest edge and represent poor quality nest sites that would be highly unlikely to support successful nesting (due to vulnerability to predation), and no trees large enough to serve as potentially suitable nest trees were observed in the 2.55-acre patch planned for clearing (Figure 1, Area A). Of the areas within the 140-acre patch of occupied/contiguous habitat where tree removal is planned, we consider only the single or few trees identified on the Weyerhauser property to represent potentially high-quality nest trees (Figure 1, Area D). In this one area, we assume that the removal of a few trees that could possibly serve as nest trees will reduce the suitability of the habitat for nesting to some small degree, but given that one or very few trees will be removed and that multiple other trees that will remain within the same stand provide good potential nesting sites, we conclude the removal will not appreciably reduce the overall amount and distribution of suitable habitat in that area or the current use of the area by murrelets. The remaining availability of multiple suitable nest trees within this area will allow this area to continue to potentially contribute to maintaining north-south connectivity of marbled murrelet populations along the Oregon Coast. Furthermore, the amount of suitable habitat to be removed is a vanishingly small fraction of the amount of suitable habitat currently known to occur within Conservation Zone 3 (even if removals were conservatively assumed to be in higher probability nesting habitat, the removal in question would amount to a few trees out of more than half a million acres of higher probability nesting habitat on the Oregon coast); the planned removal, therefore, is not likely to measurably impair the role of this Conservation Zone in the long-term recovery and survival of the species.

Although we have resolved there will be an adverse effect to marbled murrelets due to the removal of potential nest trees as a consequence of the project, we do not foresee any mortality or injury to individuals of the species as we do not anticipate individuals being present outside of the nesting season when activities will occur within the occupied/potential habitat area. We also do not anticipate that the habitat modification caused by the action is reasonably certain to kill or injure the species by significantly impairing essential behavior patterns, for the reasons explained above. In short, only a few potentially suitable trees will be removed in a stand that contains multiple potential nest trees, such that any disruption or impairment of behaviors related to searching for a suitable nest site will be minimal. In addition, as it is not definitively known whether the specific trees that will be removed are either suitable potential nest trees or trees that have been used for nesting in the past, it is speculative to conclude that impairment of essential behaviors is reasonably certain to occur as a consequence of the proposed action.

In sum, we anticipate that adverse effects to the marbled murrelet will occur as a result of reducing available nesting habitat by removing potential nest trees. However, the best available information is currently insufficient to determine whether the magnitude of these effects is reasonably certain to significantly disrupt or impair the behavior of the marbled murrelet, injure the marbled murrelet, or cause mortality.

CUMULATIVE EFFECTS

Cumulative effects are those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 CFR 402.02). Future federal actions that are unrelated to the proposed action are not considered in this section because they will require separate consultation pursuant to section 7 of the Act.

Timber harvest has previously occurred on private lands in the area in and around the action area and is likely to continue in the reasonably foreseeable future. Due to previous harvest, most of the associated forest is not high-quality habitat, but probably provides some degree of suitability for the marbled murrelet due to proximity to the coastline and as indicated by the observations of marbled murrelets flying over the action area. This reasonably foreseeable future timber harvest is likely to result in further long-term reductions in the amount and distribution of habitat in the local area beyond that which is anticipated to occur as a result of the project. The extent to which this will occur or to which it will impact the overall conservation value of the area for the marbled murrelet is not known. We are unaware of any specific non-federal actions in the action area that are reasonably certain to occur.

CONCLUSION

After reviewing the status of the marbled murrelet, the environmental baseline for the action area, and the effects of the proposed action, including all measures proposed to avoid and minimize adverse effects, and the cumulative effects, it is the Service's Biological Opinion that the Newport Municipal Airport Obstruction Removal project is not likely to jeopardize the continued existence of the marbled murrelet.

This no jeopardy finding for the marbled murrelet is supported by the following:

1. Adverse effects of noise-related disturbance will be insignificant or discountable, as it is highly unlikely that individuals of the species will be present when tree removal activities take place within the portion of the action area that is occupied or potential habitat;
2. No significant increase in vulnerability to nest predation is anticipated as a result of forest fragmentation or the creation of new forest edge from tree removal activities, as most of the trees slated for removal already occur within edge habitat, the only opening created within the forest interior will be as small as naturally occurring openings in the canopy, and the new forest edge from the one cleared area will not place any potentially suitable nest trees within the distance known to experience elevated levels of predation;
3. Individuals of the species are highly unlikely to be directly or immediately harmed or injured by the project's tree removal activities as those activities will take place in occupied or potential habitat outside of the nesting season;
4. The amount of potentially suitable nesting habitat that will be removed is exceedingly small, on the order of a few individual trees, and multiple potentially suitable nest trees will remain in the same patch of forest, such that the use of the area by nesting marbled murrelets is not expected to be substantially altered as a result of tree removal;
5. We do not anticipate any effects of the action whatsoever, however negligible they may be, to extend beyond effects to the population in the immediate action area; and

6. Because we do not anticipate a significant alteration of essential nesting behaviors to the population in the action area, we do not anticipate any significant impacts to the contribution of this area to the stated goal of Conservation Zone 3 to provide north-south connectivity for marbled murrelet populations.
7. As a result of the negligible potential impacts on future nesting attempts by marbled murrelets and the insignificant reduction in suitable nesting habitat available as a result of the project, we do not anticipate an appreciable reduction in the likelihood of survival or recovery for the marbled murrelet population at the scale of the action area, the Conservation Zone, or for the species rangewide.

No critical habitat has been designated for this species; therefore, none will be affected.

INCIDENTAL TAKE STATEMENT

While we determined that the project would result in adverse effects to the marbled murrelet as the result of a reduction in available suitable habitat (removal of potential nest trees), the combination of conservation measures incorporated into the project and the uncertain nature of the use of the action area by marbled murrelets – and more specifically, potential use of the specific individual trees slated for removal – makes it somewhat speculative as to whether these effects will actually result in harm, harassment, or injury to individuals of this species.

Based on these considerations, and as detailed above in the Effects of the Action section, incidental take of listed species is not reasonably certain to occur, therefore no incidental take statement is provided herein. Since no incidental take is anticipated, no take exemption has been provided. If incidental take is detected during implementation of the proposed action, reinitiation of formal consultation should be requested immediately.

AMOUNT OR EXTENT OF TAKE

The Service does not anticipate that the proposed action will incidentally take any listed species. Although the Effects of the Action section above includes a finding that implementation of the proposed action has the potential to cause biological effects to the species that conform to the regulatory definition of take, the mere potential for take is not a legitimate basis for a take exemption. The Service must provide a reasoned basis for a likelihood of take in order to anticipate and exempt it. Since no take is anticipated or exempted, no reasonable and prudent measures and terms and conditions are provided in this Biological Opinion.

NOTIFICATIONS

The Service is to be notified within three working days upon locating a dead, injured or sick endangered or threatened species specimen. Initial notification must be made to the nearest U.S. Fish and Wildlife Service Law Enforcement Office. Notification must include the date, time, precise location of the injured animal or carcass, and any other pertinent information. Care should be taken in handling sick or injured specimens to preserve biological materials in the best possible state for later analysis of cause of death, if that occurs. In conjunction with the care of sick or injured endangered or threatened species or preservation of biological materials from a

dead animal, the finder has the responsibility to ensure that evidence associated with the specimen is not unnecessarily disturbed. Contact the U.S. Fish and Wildlife Service Law Enforcement Office at (503) 682-6131, or the Service's Oregon Fish and Wildlife Office at (503) 231-6179.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The Service is not offering any conservation recommendations in association with the subject project at this time.

REINITIATION NOTICE

This concludes formal consultation on the Newport Municipal Airport Obstruction Removal project. As provided in 50 CFR 402.16, reinitiation of consultation is required and shall be requested by the Federal agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (1) If the amount or extent of taking specified in the incidental take statement is exceeded; (2) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the Biological Opinion; or (4) If a new species is listed or critical habitat designated that may be affected by the identified action. If you have any questions about this consultation, please contact Michele Zwartjes of the Newport (Oregon Coast) Field Office at (503) 541-8667, x237.

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Appendix A. Biological Assessment, Newport Municipal Airport Obstruction Removal, January 2022.

Final

NEWPORT MUNICIPAL AIRPORT OBSTRUCTION REMOVAL

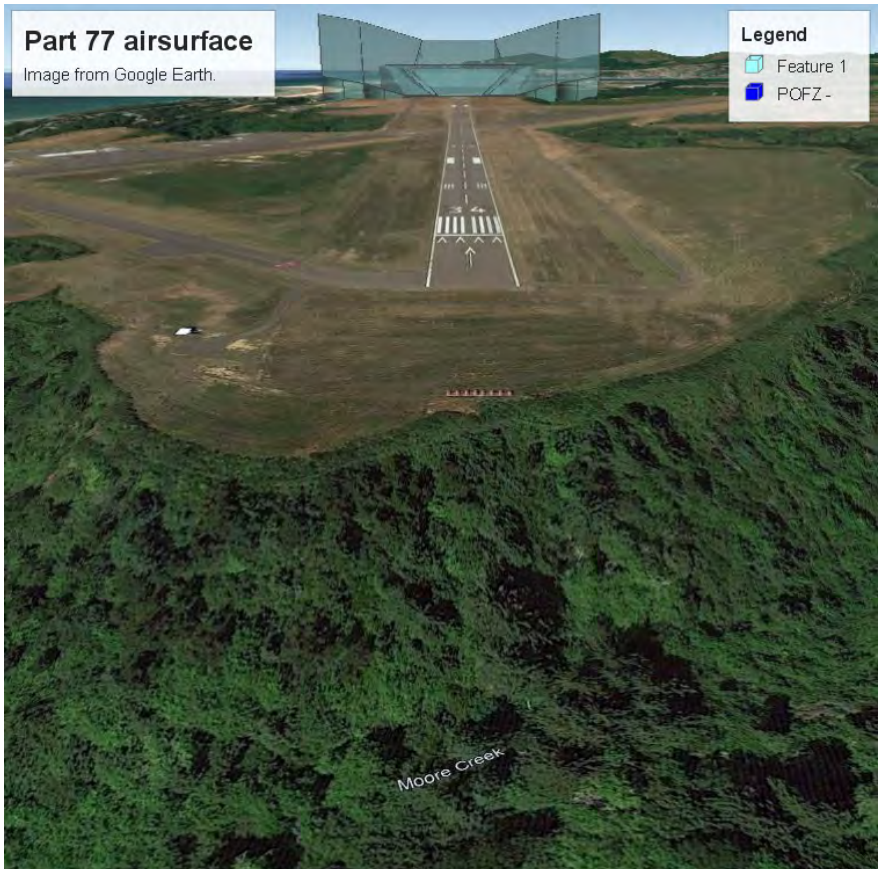
Biological Assessment

Prepared for

City of Newport and Federal Aviation Administration

January 2022

ESA



Final

NEWPORT MUNICIPAL AIRPORT OBSTRUCTION REMOVAL

Biological Assessment

Prepared for

City of Newport and Federal Aviation Administration

January 2022

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NEWPORT AIRPORT OBSTRUCTION REMOVAL

Biological Assessment

Introduction

Background

This Biological Assessment (BA) evaluates the effects of an obstruction (vegetation) removal project at the Newport Municipal Airport (Airport) on the marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), the coastal distinct population segment of the Pacific marten (*Martes caurina*), and designated critical habitat. All are listed as threatened under the federal Endangered Species Act of 1973, as amended. The nearest critical habitat for the marbled murrelet is 0.5 mile from a water tower at the southern boundary of where identified obstructions (trees) would be removed. The nearest critical habitat for northern spotted owl and Pacific marten (proposed critical habitat) is over two miles east/southeast of the southern obstruction removal area in the Siuslaw National Forest. This BA also provides justification for a no effect determination for the western snowy plover (*Charadrius nivosus nivosus*). The Airport is a designated general aviation facility, owned and operated by the City of Newport (City).

The City proposes to clear approximately 63 acres of vegetation (tall trees and shrubs) that are obstructions to the approach ends of the airport runways. Obstructions would occur on Airport and adjacent properties. Removing these trees and vegetation will allow for a clear 20:1 approach surface to be maintained. The approach surface is critical in allowing aircraft to execute lands in a manner that is safe to the aircraft, nearby environmental resources, residences, and the general public. Approximately three acres need to be removed from occupied marbled murrelet habitat and potential suitable northern spotted owl and Pacific marten habitat south of the Airport within the approach to Runway 34.

Occupied vs Contiguous Habitat

Occupied marble murrelet habitat is defined as habitat that has been surveyed to protocol and breeding behavior has been observed. The current protocol was developed by the Pacific Seabird Group (Evans Mack et al. 2003) and relies on a series of standardized audio-visual surveys. A revised survey protocol is under development (ODFW 2021).

Contiguous habitat is habitat adjacent to occupied habitat that is similar in structure. This habitat has not been surveyed but is considered to be occupied by breeding murrelets.

The proposed project requires funding and approval from the Federal Aviation Administration (FAA), the lead agency for Section 7 Endangered Species Act consultation. Refer to separate documentation for No Effect determination related to Oregon coho salmon under the jurisdiction of the National Marine Fisheries Service (NMFS) (ESA 2021).

This BA was developed using 2021 protocol survey data provided by Weyerhaeuser, existing data from the Oregon Biodiversity Information Center (ORBIC), species list and information from the U.S. Fish and Wildlife Service (USFWS), literature reviews, and field reconnaissance conducted in the study area in 2019.

Consultation History

USFWS staff attended three public agency meetings regarding the project, although the availability of protocol survey data from Weyerhaeuser were not known when the meetings occurred. Meeting dates are as follows: October 11, 2018; November 21, 2019; and September 29, 2021.

Project Description

Project Summary

The City proposes to remove obstructions from Federal Air Regulations (FAR) Part 77 airspace approach surfaces at the Airport to improve the safety of aircraft operations. The Airport is located at 135 SE 84th Street, Newport, in the South Beach Urban Renewal District, Lincoln County, Oregon. The Airport itself and the properties where obstructions are proposed to be removed are entirely within the Newport city limits (with the exception of a few parcels), and are zoned as either Industrial, Public Structures, or High Density Multi-Family. Refer to **Figures 1, 2 and 7 (Appendix A)** for a depiction of the study area setting in relation to the City of Newport and the extent of trees proposed for removal.

The City proposes to remove obstructions (primarily tall trees) within three separate FAR Part 77 approach surfaces:

- Visual approach of Runway 20 (north of the Airport).
- Non-precision instrument approach and threshold siting surfaces of Runway 34 (south of the Airport).
- Precision instrument approach and threshold siting surfaces of Runway 16 (north of the Airport).

Light Detection and Ranging (LiDAR) was flown in 2018 for the study area and processed in February 2019 to identify tall trees penetrating the 3D FAA regulated airspace. The original number of trees slated for removal were scaled-back markedly in 2020 and 2021 after coordination with landowners and the FAA. The original footprint of clearing all possible obstructions totaled approximately 240 acres, whereas the current proposed footprint of tree removal is approximately 63 acres affecting 32 separate tax lots north and south of the Airport **(Figures 1-6)**. The proposed project would be constructed between 2022 and 2024.

Project Components

The project consists of removing tall vegetation (trees and shrubs/saplings) from the FAA regulated airspaces north and south of the Airport. The crowns of trees proposed for removal are outlined in red on **Figure 2** and shown in green on **Figure 7**. No new facilities, roads, or impervious surfaces are proposed as part of the project. The contractor selected for the project would access obstructions from existing disturbed areas including paved and unpaved airport access roads, private roads as well as old logging roads and paths (**Figure 8**). Staging would occur in existing disturbed areas that are already cleared of vegetation. Tree removal would occur during daylight hours (i.e., not at dawn or dusk). The total footprint of proposed tree removal per area is summarized in Table 1 below.

TABLE 1.
SUMMARY OF TREE REMOVAL IMPACTS

Area	Footprint of obstruction removal (ac)
Occupied marbled murrelet habitat (Parcel ID 12-11-05-00-00802-00)	<0.1
Contiguous suitable habitat (Parcel IDs 12-11-05-00-00803-00; 12-11-05-CB-00200-00; and 12-11-05-CB-00700-00)	3.0
Remainder of the project (considered unsuitable forested habitat)	60.0
Total	**63.1**

Avoidance, Minimization, and Conservation Measures

The following list summarizes the measures incorporated into the project to avoid and minimize impacts on the environment and Endangered Species Act-listed species and habitat during construction.

1. No tree removal is proposed in occupied/contiguous habitat (as shown on **Figures 7 and 8**) during the combined marbled murrelet, northern spotted owl, and Pacific marten breeding/denning season (February 1 to September 15).

2. Tree removal in occupied/contiguous habitat would occur during daylight hours (i.e., not at dawn or dusk).

3. Minimization measures incorporated into the design of the project include reducing the footprint of obstructions that could be removed from the FAA regulated airspaces from approximately 240 acres to 63 acres.

4. Work areas will be confined to the minimum area needed to complete the action.

5. Construction vehicles and equipment will be stored, fueled, and maintained in designated staging areas, making use of existing disturbed areas that area already cleared of vegetation.

6. Areas permanently disturbed (tree removal areas) will be restored following removal with native groundcover and shrubs.

7. No new facilities, roads, or impervious surfaces are proposed as part of the project. The contractor selected for the project would access obstructions from existing disturbed areas including paved and unpaved airport access roads, private roads as well as old logging roads and paths (**Figure 8**).

Study Area and Action Area

The proposed project would occur on various publicly and privately owned parcels north and south of the airfield. The study area consists of the footprint of obstructions proposed for removal as well as access roads and staging areas. Refer to the attached preliminary site plans for a list of affected tax lots, property owners, and approximate extent of obstructions proposed for removal (**Appendix A**).

The action area encompasses all areas affected directly or indirectly by the proposed project. The action area for this project includes the project footprint (including construction access and staging areas) and areas within an approximately 825-foot radius of the project footprint that may be affected by construction noise, as described below.

Proposed Tree Removal Areas Existing Conditions

The proposed study area north and south of the Airport consists of hilly terrain in the foothills and headlands of the Central Oregon Coast Range. The temperate forests of the area have been altered through fire, logging and development of roads. In areas that have been significantly disturbed, second-growth forest and shrub layers have very dense vegetation. Four streams flow westerly through the study area and into the Pacific Ocean (from north to south): Henderson Creek, Grant Creek, Moore Creek, and Thiel Creek (**Figure 7**). With the exception of Moore Creek, these drainages are typified by steep slopes and narrow valley bottoms. Elevations in the area range from 20 feet to 275 feet above mean sea level.

Tree removal north of the Airport would occur on shrubland, forested terraces and hillslopes, and riparian habitat **(Exhibits 1 and 2**). The forests in this area consist of mid-seral / mid-structural, thinned stands of western hemlock (*Tsuga heterophylla*) and Sitka spruce (*Picea sitchensis*). The understory is dense and consists of salal (*Gaultheria shallon*), evergreen huckleberry (*Vaccinium ovatum*) and sword fern (*Polystichum munitum*). In areas where wetlands have been delineated, the vegetation is dominated by Douglas spirea (*Spiraea douglasii*), twinberry honeysuckle (*Lonicera involucratra*), red alder (*Alnus rubra*), and slough sedge (*Carex obnupta*) (ESA 2019).

These wooded areas north of the Airport have not been surveyed for listed species, but are not considered potential suitable habitat for marbled murrelet, northern spotted owl, or Pacific marten due to lack of complex forest structure, habitat fragmentation, and close proximity to human activity.

Exhibit 1. Typical mid-seral forested conditions north of Henderson Creek on City property, May 2019.

Exhibit 2. Typical riparian habitat along Henderson Creek includes young red alder and dense undergrowth, May 2019.

Tree removal south of the Airport would occur along Moore Creek (**Exhibit 3**) just south of the end of Runway 34; the wooded areas between SE 98th Street and Moore Creek (**Exhibit 4**); and areas south of SE 98th Street **(Exhibits 5–7**). The riparian habitat along Moore Creek consists of young trees and palustrine emergent wetlands dominated by slough sedge **(Exhibit 3)**.

Exhibit 3. Palustrine emergent wetland along Moore Creek on City property, May 2019.

The habitat south of Moore Creek but north of SE 98th Street, consists of young Douglas fir (*Pseudotsuga menziesii*) trees with some alders and willows (*Salix* spp.) as well as Scotch broom (*Cytisus scoparius*) (**Exhibit 4**). Trees range in height from 20 to 50 feet, with most of the trees between 35 and 45 feet high (Quantum Spatial, Inc. 2019). Adjacent wooded areas on City property are young mixed deciduous/coniferous trees that are generally 40 to 50 feet high. A couple of the trees in this area are 90 feet high, but are isolated. These trees would not provide suitable marbled murrelet nesting habitat and

Exhibit 4. Young Douglas-fir trees on City property, south of Moore Creek and north of SE 98th Street, May 2019.

lacks the older forest complexity, snags and downed wood that is preferred by the marbled murrelet, northern spotted owl, and Pacific marten.

The trees proposed for removal on occupied and contiguous marbled murrelet habitat on private land to the south consist of conifers that exceed 100 feet in height (Quantum Spatial, Inc. 2019) and are generally larger than 15 inches in diameter at breast height (dbh) with some exceeding 25 inches dbh (**Exhibits 5 and 6**). The forest in this area south of Thiel Creek is characterized by mid-successional to late-successional with varying densities of undergrowth. The approximate 2.5-acre patch of trees proposed for removal on Steel String property (Parcel ID 12-11-05-00-00803-00, **Figure 5**) ranges in height from 113 to 189 feet (Quantum Spatial, Inc. 2019). The forest on this parcel has some late-successional characteristics, but has a sparse shrub and subcanopy layer with few snags and pieces of large downed wood that may be suitable for Pacific marten **(Exhibit 5)**. The 2.5-acre patch is anticipated to be only marginally suitable for marbled murrelet and northern spotted owl due to lack of multiple canopy layers.

Exhibit 5. Typical conifer forest contiguous with occupied marbled murrelet habitat south of SE 98th Street on Steel String property (Parcel ID 12-11-05-00-00803-00). Note sparse shrub layer, May 2019.

The forest on Weyerhaeuser land in occupied murrelet habitat (Parcel ID 12-11-05-00-00802-00) is typified by large Sitka spruce trees with a dense shrub layer **(Exhibit 6)**.

Exhibit 6. Typical large Sitka spruce on Weyerhaeuser property (Parcel ID 12-11-05-00-00802-00), May 2019.

The trees proposed for removal on Emery Investments Inc. (Parcel ID 12-11-00-00-03400-00) property adjacent to the Seal Rock water tower **(Figure 5)** are isolated and do not provide suitable habitat for the listed species **(Exhibit 7)**.

Exhibit 7. Isolated tall trees proposed for removal adjacent to the Seal Rock water tower (Parcel ID 12-11-00-00-03400-00), May 2019.

Status / Presence of Listed Species and Designated Critical Habitat in the Action Area

A list of threatened and endangered species that may occur in the proposed study area was obtained from the USFWS on November 11, 2021 (**Appendix B**). Listed species and associated critical habitat addressed in this BA are presented in **Table 2**.

TABLE 2.
LISTED SPECIES, CRITICAL HABITAT, AND PRESENCE WITHIN THE ACTION AREA

Species and Federal Listing	Critical Habitat Status	Breeding Season	Occupied habitat within Study area?
Marbled murrelet Listed as **Threatened** in 1992 (57 Federal Register [FR] 45328).	Critical habitat areas were originally **Designated** in 1996, revised in 2011, and finalized in 2016 (81 FR 51348). The study area is not within designated critical habitat. The nearest designated critical habitat is located approximately 0.5 mile east of the southern part of the study area (Figure 7).	Mid-April to Mid-September	Yes, on Weyerhaeuser land, tax map 12-11-05-00-00802-00
Northern spotted owl Listed as **Threatened** in 1990 (55 FR 26114).	Critical habitat areas were **Designated** in 1992, revised in 2008, and again in 2012 (77 FR 71876). The study area is not within designated critical habitat. The nearest proposed critical habitat is located approximately 2 miles east of the southern part of the study area (Figure 7).	February 1 through August 31	No, but potential suitable habitat presumed present south of Thiel Creek based on murrelet survey (Weyerhaeuser 2021).
Pacific marten Listed as **Threatened** in 2020 (85 FR 63806).	Critical habitat areas were **Proposed** October 25, 2021 (86 FR 58831). The study area is not within designated critical habitat. The nearest proposed critical habitat is the same area designated as critical habitat for the northern spotted owl, located approximately 2 miles east of the southern part of the study area (Figure 7).	Mid-April to Mid-September	No, but potential suitable habitat presumed present south of Thiel Creek based on murrelet survey (Weyerhaeuser 2021).

Species Not Analyzed in this BA: Western Snowy Plover (No Effect)

The western snowy plover is a small, federal threatened shorebird that resides in marine shoreline habitat, specifically coastal dunes, the upper intertidal zone, as well as beaches at creek and river mouths and salt pans at lagoons and estuaries (77 FR 36728). None of these habitats occur within the action area nor would they be affected by the project. The nearest critical habitat is located outside of Lincoln City, several miles to the north of the study area. Due to the absence of suitable habitat in the study area, the project would have no effect on the western snowy plover.

Marbled Murrelet

The marbled murrelet is a small seabird that breeds in coastal forests in British Columbia, Washington, Oregon, and California. Breeding pairs generally lay one egg during the nesting season and may not breed every year. No nest structure is built, but the egg is laid on a horizontal branch with moss or lichen. General habitat attributes are characteristic throughout its range, including the presence of nesting

platforms, adequate canopy cover over the nest, landscape condition, and distance to the marine environment. Nest sites typically occur in mature and old-growth coniferous forests but are also found in younger forests containing suitable nesting platforms. Wildfires and timber harvest are major threats contributing to the on-going loss of marbled murrelet nesting habitat (USFWS 2019).

Stand age is a key indicator of marbled murrelet habitat. There is a positive correlation between stand age and the presence of potential nesting platforms; the older a coniferous tree becomes, the more likely it is to have suitable nesting platforms for marbled murrelets.

An essential structural component of suitable marbled murrelet habitat is the presence of potential nesting platforms (USFWS 2012). In general, old-growth, mature, or younger coniferous forests with appropriate structures can provide these platforms. The USFWS defines a suitable nesting platform as a relatively flat surface at least 10 centimeters (4 inches) in diameter and located a minimum of 10 meters (33 feet) high in the live crown of a coniferous tree. Another important attribute of nesting habitat is vertical and horizontal cover around potential nest platforms to protect chicks and adults from predation while allowing adults access to nest platforms (USFWS 2012).

Marbled murrelets have occupied small patches of habitat within larger areas of unsuitable habitat, and some occupied sites have included large, residual trees in low densities; over 20 percent of occupied sites in Oregon were less than 80 years old (USFWS 2012).

Presence in the Action Area: Occupied marbled murrelet breeding behavior (flight at canopy height) was observed on Weyerhaeuser land south of SE 98th Street on parcel ID 12-11-05-00-00802-00 during 2021 protocol surveys (Weyerhaeuser 2021) (**Figures 7 and 8**). Based on guidance from the USFWS, adjacent or contiguous habitat that is similar in structure is also considered occupied habitat. Consequently, adjacent forested habitat on Steel String property (parcel IDs 12-11-05-00-00803-00; 12-11-05-CB-00200-00, and 12-11-05-CB-00700-00) is considered contiguous habitat.

Northern Spotted Owl

Northern spotted owls primarily utilize late successional mature and old-growth forests with large diameter coniferous trees, snags, downed wood, and a closed canopy with multiple canopy layers for nesting and roosting (Davis et al. 2016). Foraging habitat for northern spotted owls is similar but may not contain suitable nesting structures to support successful breeding pairs (Sovern et al. 2015). The range of this species is from southwestern British Columbia through western Washington, western Oregon, and the Klamath Mountains and Coast Ranges of northwestern California south to San Francisco Bay (55 FR 26114).

The northern spotted owl is a nocturnal owl species and resident of structurally complex forests. It prefers late successional mature and old-growth forest or forests with old-growth characteristics. Preferred nesting and roosting habitats include a multi-story forest containing a diversity of tree species, moderate to dense canopy cover (>60 percent) dominated by large trees with a high incidence of cavities or broken tops, sufficient open space below the canopy for flight, and an accumulation of woody debris on the ground (USFWS 2011).

Northern spotted owls usually nest in tree and snag cavities or in broken tops of large trees. They less frequently nest in mistletoe clumps and abandoned raptor and raven nests (Zeiner et al. 1990). Northern spotted owl are territorial, although home ranges of adjacent pairs can overlap. The size of the home range varies with geography and availability of prey species.

Northern spotted owl will feed on a variety of prey items, including small mammals, birds, amphibians, reptiles, and insects (Zeiner et al. 1990; USFWS 2011). Foraging habitat for northern spotted owl is similar to nesting and roosting habitat but may not contain suitable nesting structures to support successful breeding pairs (Sovern et al. 2015).

The northern spotted owl is a long-lived species, with a long reproductive life span. It is monogamous, but pairs do not necessarily breed every year. Breeding generally begins at two to five years of age. Following courtship, breeding may start as early as mid-February, and the female typically lays one to four eggs by late-March or April. The male delivers food to the female and the young while the female is brooding. Juvenile owls fledge in late-May or June; however, they still depend on food provided by their parents until about September (Zeiner et al. 1990; USFWS 2011).

Presence in the Action Area: There are no documented occurrences of northern spotted owl in or near the action area (ORBIC 2019). Weyerhaeuser surveyed for northern spotted owls according to protocol in the spring and summer of 2021 on parcel ID 12-11-05-00-00802-00 (the same parcel where marbled murrelets were detected), but no northern spotted owls were seen or heard (Hane, personal communication, 2021).

Pacific Marten

The Pacific marten is a medium-sized, solitary carnivore related to weasels, minks, otters, and fishers (85 FR 63806). Pacific martens are territorial and dominant males will maintain home ranges that encompass one or more female's home ranges. Male home ranges are larger than female home ranges and can cover 0.8 to 10.5 mi.^{2} (512 to 6,720 acres) (WDFW 2021). Pacific martens are primarily carnivorous and prey on small mammals, birds, insects, but also consume berries and other fruits depending on availability. Pacific martens generally select older forest stands that are structurally complex (e.g., late-successional, old growth, large-conifer, mature, late-seral). These forests generally have multiple canopy layers, snags and other decay elements, dense understory, and have a biologically complex structure and composition. Small patches of forest are in less suitable for the Pacific marten because their primary predator, the bobcat, is more abundant fragmented forests than large unbroken tracks (86 FR 58831).

Den sites most often consist of large diameter trees (live or dead) with cavities, but may also include hollow logs, crevices under rocks, log piles, and squirrel nests (86 FR 58831). Pacific martens breed in the summer, bearing one to five young (WDFW 2021). Young are independent by late summer. According to a Northern California study, the denning season for coastal martens extends from mid-April to mid-September (Delheimer, et al. 2021).

Presence in the Action Area: There are no documented occurrences of Pacific marten in or near the action area (ORBIC 2019). The nearest population of Pacific marten is anticipated to occur in the Siuslaw

National Forest over two miles east of the southern project boundary. The Siuslaw National Forest is proposed critical habitat for the Pacific marten and is considered the northernmost distribution of coastal martens in Oregon (86 FR 58831).

Analysis of Effects of the Action

Direct Effects

No direct effects are anticipated to occur to either marbled murrelets, northern spotted owls, or Pacific martens because trees are proposed to be removed from occupied/contiguous habitat after September 14 and before February 1 when no breeding birds or denning Pacific martens would be present. Marbled murrelets generally nest from mid-April to mid-September (September 15), northern spotted owl generally breed from February 1 through August 31, and the denning season for Pacific marten generally extends from mid-April to mid-September (September 15).

The action area includes the area surrounding the project that would be subject to increased noise from construction equipment and activities during project work. The area of potential noise disturbance was determined for the project using noise analysis from USFWS (2020) entitled, "*Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California.*" Inputs for the noise analysis were based on the following:

- Ambient daytime noise levels adjacent to occupied/contiguous marbled murrelet habitat and potential suitable northern spotted owl habitat is considered to be "low" or 61–70 decibels (dB), which includes sounds from residences located along SE Cedar Street.

- The loudest piece of equipment anticipated for the project (and the associated average maximum sound level at 50 feet) is likely to be a logging truck (97 dB) categorized as a "very high" action-generated sound level. Obstruction removal would occur during daylight hours.

Using Table 1 from USFWS (2020) (reproduced below), the disturbance distance for construction equipment generating "very high" sound levels is 250 meters or 825 feet—i.e., logging truck activity within 825 feet of nesting activity is expected to result in "take" of marbled murrelets or northern spotted owls. However, the nearest logging truck activity that may occur in the vicinity of occupied/contiguous marbled murrelet habitat and potential northern spotted owl and Pacific marten habitat during the breeding season would be over 1,000 feet away along SE 98th Street or near the Seal Rock water tower **(Figure 7**). No logging or tree removal is proposed to occur near potential nesting/denning habitat during the combined marbled murrelet, northern spotted owl and Pacific marten breeding/denning season (February 1 – September 15).

Table 1. Estimated disturbance distance (in feet) due to elevated action-generated sound levels affecting the northern spotted owl and marbled murrelet, by sound level.

Existing (Ambient) Pre-Project Sound Level (dB) [1, 2]	Anticipated Action-Generated Sound Level (dB) [2, 3]			
	Moderate (71-80)	High (81-90)	Very High (91-100)	Extreme (101-110)
"Natural Ambient" [4] (< = 50)	50 (165)[5,6]	150 (500)	400 (1,320)	400 (1,320)
Very Low (51-60)	0	100 (330)	250 (825)	400 (1,320)
Low (61-70)	0	50 (165)	250 (825)	400 (1,320)
Moderate (71-80)	0	50 (165)	100 (330)	400 (1,320)
High (81-90)	0	50 (165)	50 (165)	150 (500)

Source: USFWS (2020). Disturbance distances are presented in meters and (feet).

Indirect Effects

Habitat modification or tree removal is proposed to affect approximately three acres of occupied and contiguous marbled murrelet habitat (see Table 1), which is also considered potential suitable northern spotted owl and Pacific marten habitat. Tree removal in occupied/contiguous habitat would affect two percent of the surrounding suitable forest (approximately 140 acres) and is not expected to adversely impair the ability of marbled murrelets, northern spotted owl or Pacific marten to reproduce in the area. Several mature trees with large limbs and sufficient canopy cover will remain in the Thiel Creek riparian zone and in areas outside of the FAA regulated airspace that could provide suitable habitat for these species that depend on late successional forests.

Noise generated from the project would likely be from chainsaws, backhoes, dozers, or logging trucks. These noise sources would occur more than 1,000 feet away from occupied/contiguous marbled murrelet and potential northern spotted owl and Pacific marten habitat and are anticipated to have minimal impacts. Refer to the section on construction noise analysis for more details.

The wooded areas north of the Airport where obstruction removal is proposed do no provide suitable habitat for the marbled murrelet, the northern spotted owl or Pacific marten. These areas lack late successional mature and old-growth forest structural characteristics and are close to human disturbances and large openings that reduce the suitability of the forest because of the ability of competitors/predators (i.e., barred owls, red-tailed hawks, bobcats etc.) to readily access potential nests.

Effects from Interrelated and Interdependent Actions

An interdependent activity is an activity that has no independent utility apart from the proposed project. An interrelated activity is an activity that is part of a larger action and depends on the larger action for its justification.

The proposed project consists of removing tall trees from regulated airspace to maintain safe conditions for landing aircraft and is not part of a larger action or series of actions that depend on the obstruction removal. Effects from activities associated with the various elements of the project, including construction staging and access, are considered in the direct and indirect effects analyses for this BA.

Cumulative Effects

Cumulative effects are those effects of future state or private activities, not involving federal activities, that are reasonably certain to occur within the action area of the federal action subject to consultation (50 CFR 402.02).

The City of Newport's Capital Improvement Plan (CIP) for fiscal years 2021-2022 to 2026-2027 was reviewed to determine potential future projects within the action area, which is effectively limited to the City-owned Airport property for the purposes of this consultation. The CIP does not identify any projects planned for the Airport, either federal or non-federal.

Finding of Effect

The following effect determinations for listed species and critical habitat are made for the Newport Airport Obstruction Removal Project:

Marbled Murrelet, Northern Spotted Owl, and Pacific Marten: **May Affect, Not Likely to Adversely Affect (NLAA).**

Critical Habitat: **No Effect.**

The following justifications are provided for these determinations for all three species:

- Tree removal is not proposed in designated or proposed critical habitat for the marbled murrelet, northern spotted owl or Pacific marten.
- Tree removal in occupied/contiguous habitat (as shown on **Figures 7 and 8**) would occur outside of the combined marbled murrelet, northern spotted owl and Pacific marten breeding/denning season (February 1 to September 15) to avoid the potential for take.
- Tree removal in occupied/contiguous habitat would occur during daylight hours (i.e., not at dawn or dusk).
- Obstruction removal that may occur prior to September 15 in areas north of Thiel Creek off of SE 98th Street or near the Seal Rock water tower (both > 1,000 feet from occupied/contiguous habitat) are anticipated to have minimal noise impacts due to the distance from potential marbled murrelet and northern spotted owl nesting and Pacific marten denning areas.
- Tree removal would be limited in scope and scale affecting just under three acres (2.74 acres), or two percent of the occupied and contiguous habitat patch (totaling approximately 140 acres) outlined on **Figures 7 and 8**.

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Appendix A
Figures

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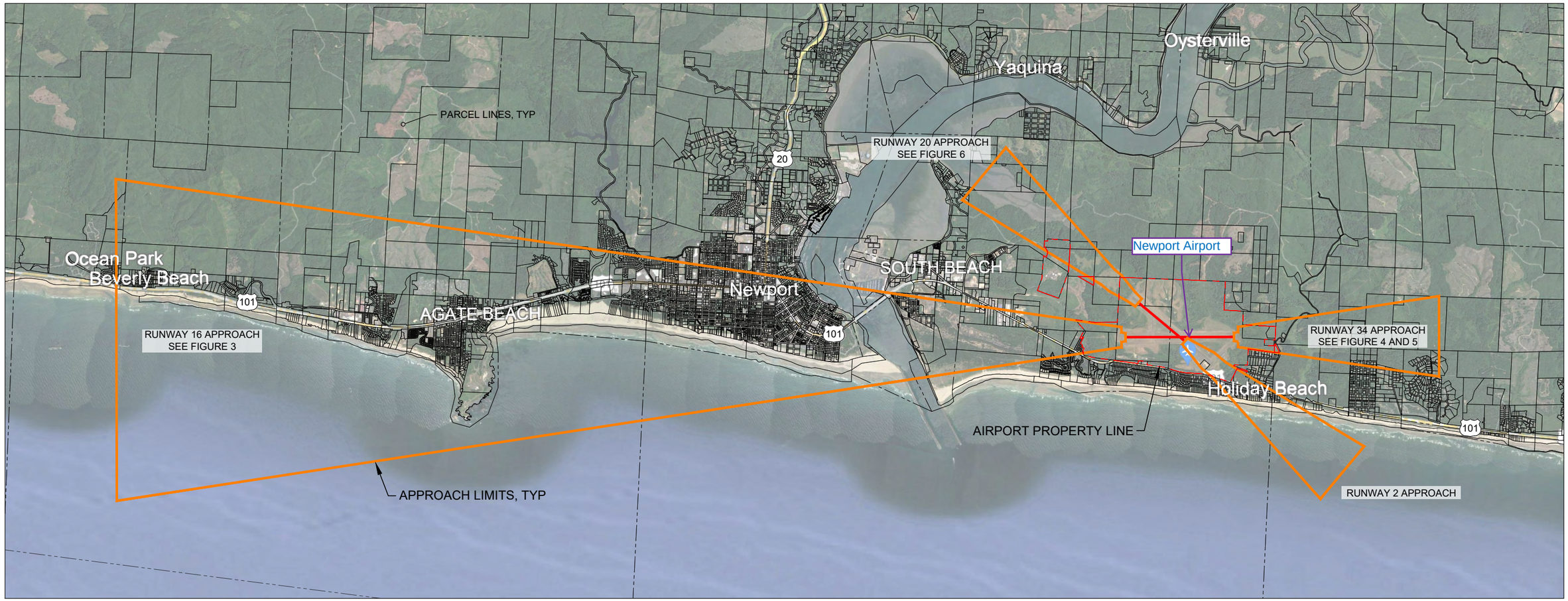
NORTH

0 2500 5000

SCALE IN FEET



PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

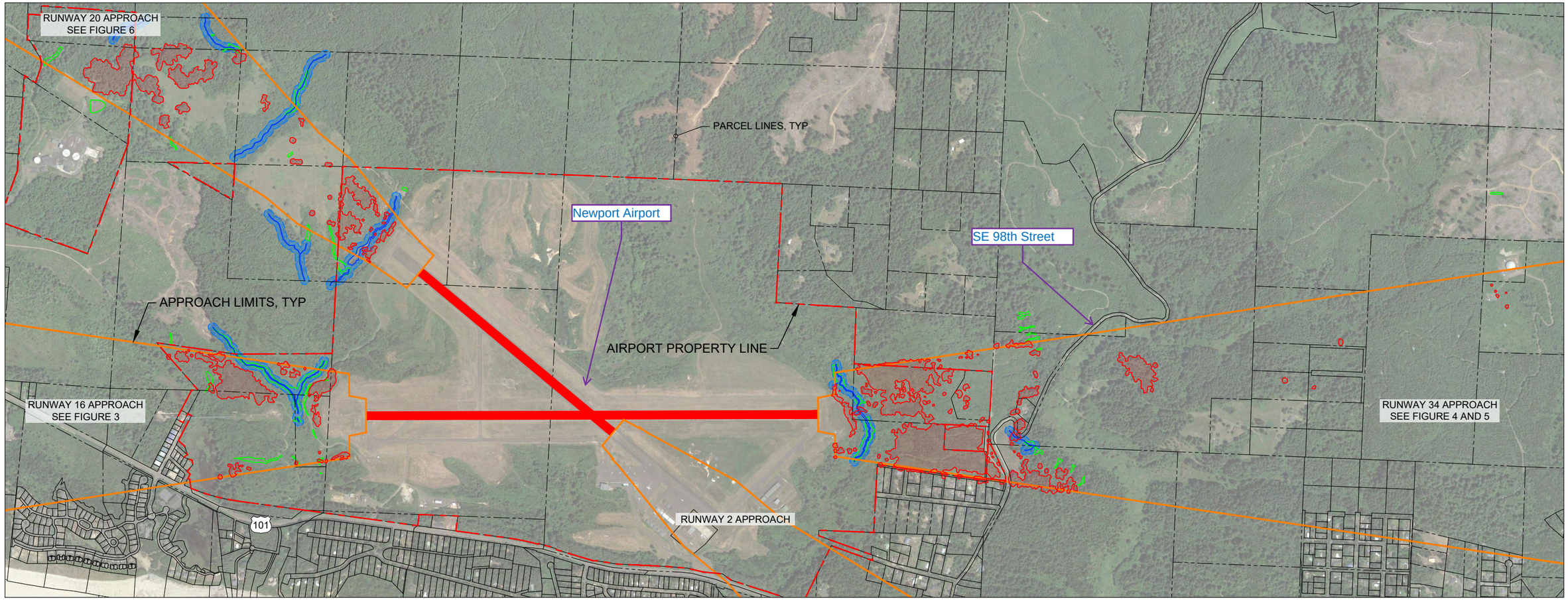
NEWPORT MUNICIPAL AIRPORT APPROACH AREAS

Figure 1 DEC 2021

NORTH

0 600 1200

SCALE IN FEET



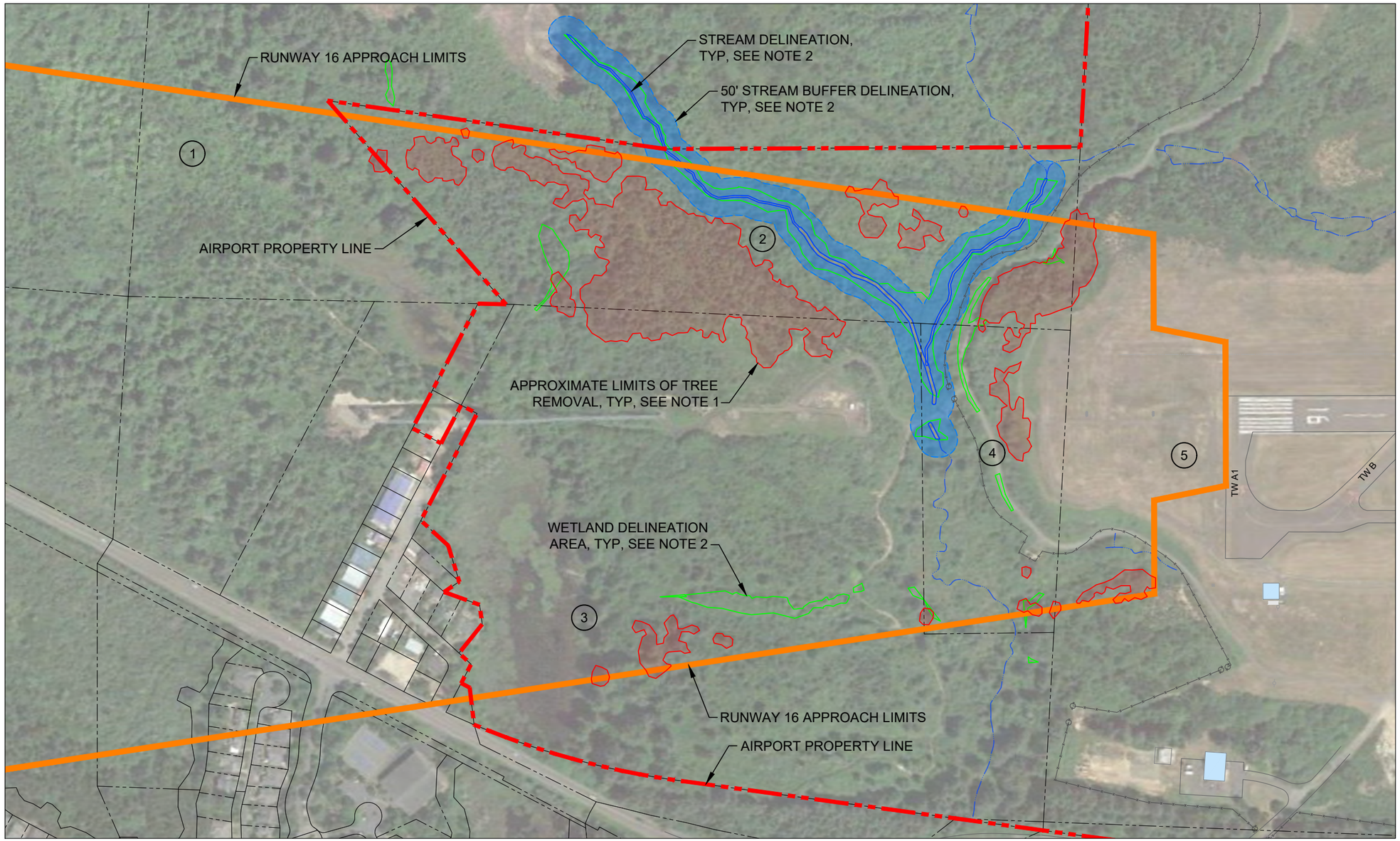
PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

OBSTRUCTION REMOVAL PLAN

Figure 2 DEC 2021



NORTH

0 150 300

SCALE IN FEET

TAG	PARCEL ID	OWNER	TREE REMOVAL
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2	11-11-29-00-00400-00	CITY OF NEWPORT	5.81 AC
3	11-11-29-00-01402-00	CITY OF NEWPORT	1.70 AC
4	11-11-29-00-01401-00	CITY OF NEWPORT	0.50 AC
5	11-11-29-00-01100-00	CITY OF NEWPORT	0.45 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.
2. STREAM, BUFFERS AND WETLAND AREAS PROVIDED BY ESA, DATED OCT 19, 2021.

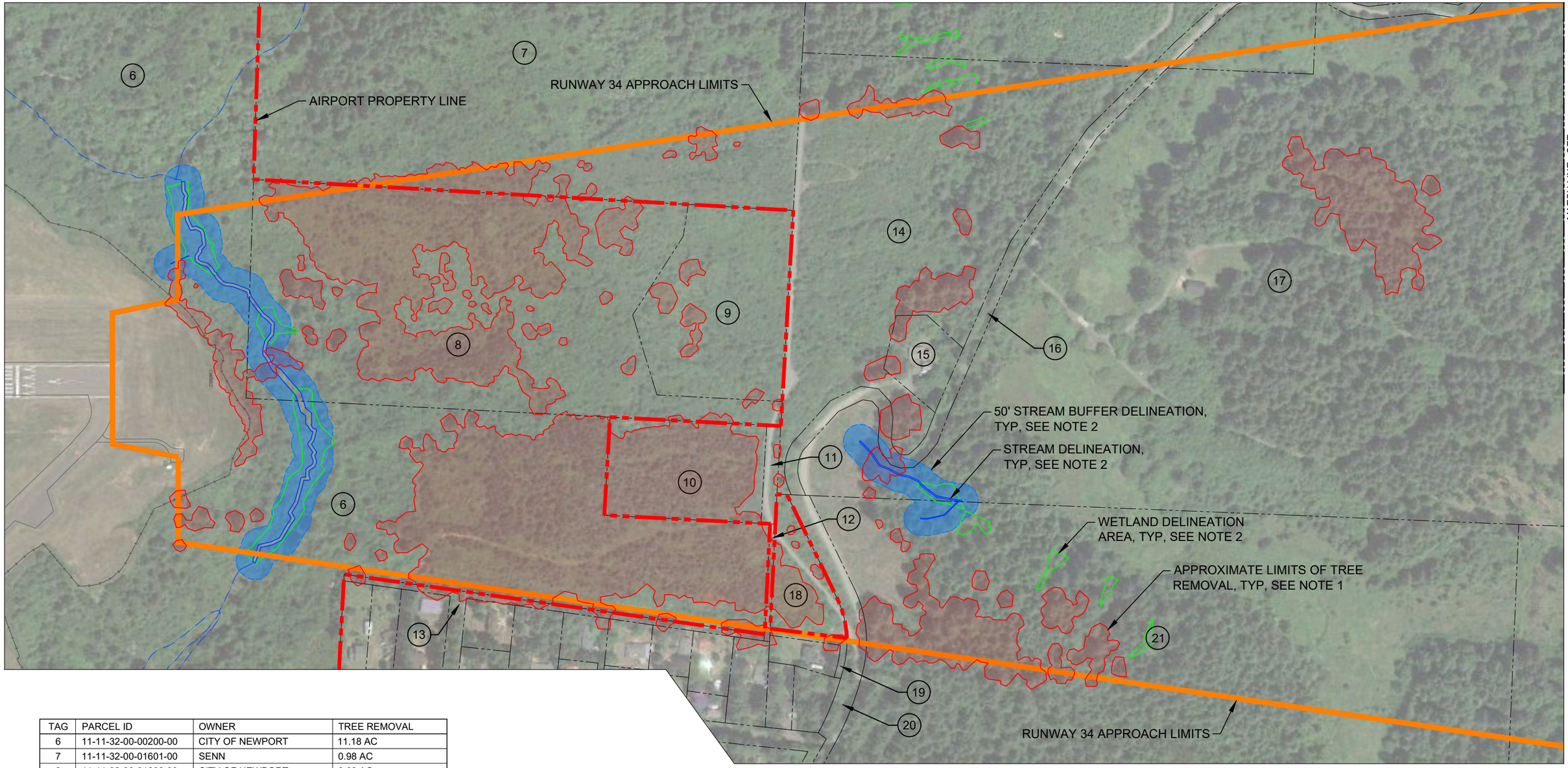
PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

RUNWAY 16 APPROACH

Figure 3 DEC 2021



TAG	PARCEL ID	OWNER	TREE REMOVAL
6	11-11-32-00-00200-00	CITY OF NEWPORT	11.18 AC
7	11-11-32-00-01601-00	SENN	0.98 AC
8	11-11-32-00-01602-00	CITY OF NEWPORT	8.68 AC
9	11-11-32-00-01604-00	CITY OF NEWPORT	0.38 AC
10	11-11-32-00-00201-00	STATE OF OREGON	2.80 AC
11	11-11-32-00-01603-00	FERRIS	0.03 AC
12	11-11-32-00-01600-00	LINCOLN COUNTY	0.09 AC
13	11-11-32-CC-0ROAD-00	ROW	0.50 AC
14	12-11-05-00-00800-00	STEEL STRING INC	1.50 AC
15	12-11-05-00-00600-00	STEEL STRING INC	0.11 AC
16	12-11-05-00-0ROAD-00	ROW	0.10 AC
17	12-11-05-00-00803-00	STEEL STRING INC	2.55 AC
18	12-11-06-00-00100-00	CITY OF NEWPORT	0.53 AC
19	12-11-06-00-00200-00	WATTS	0.06 AC
20	12-11-06-00-0ROAD-01	ROW	0.08 AC
21	12-11-06-00-00600-00	STEEL STRING INC	3.03 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.
2. STREAM, BUFFERS AND WETLAND AREAS PROVIDED BY ESA, DATED OCT 19, 2021.

PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

NORTH

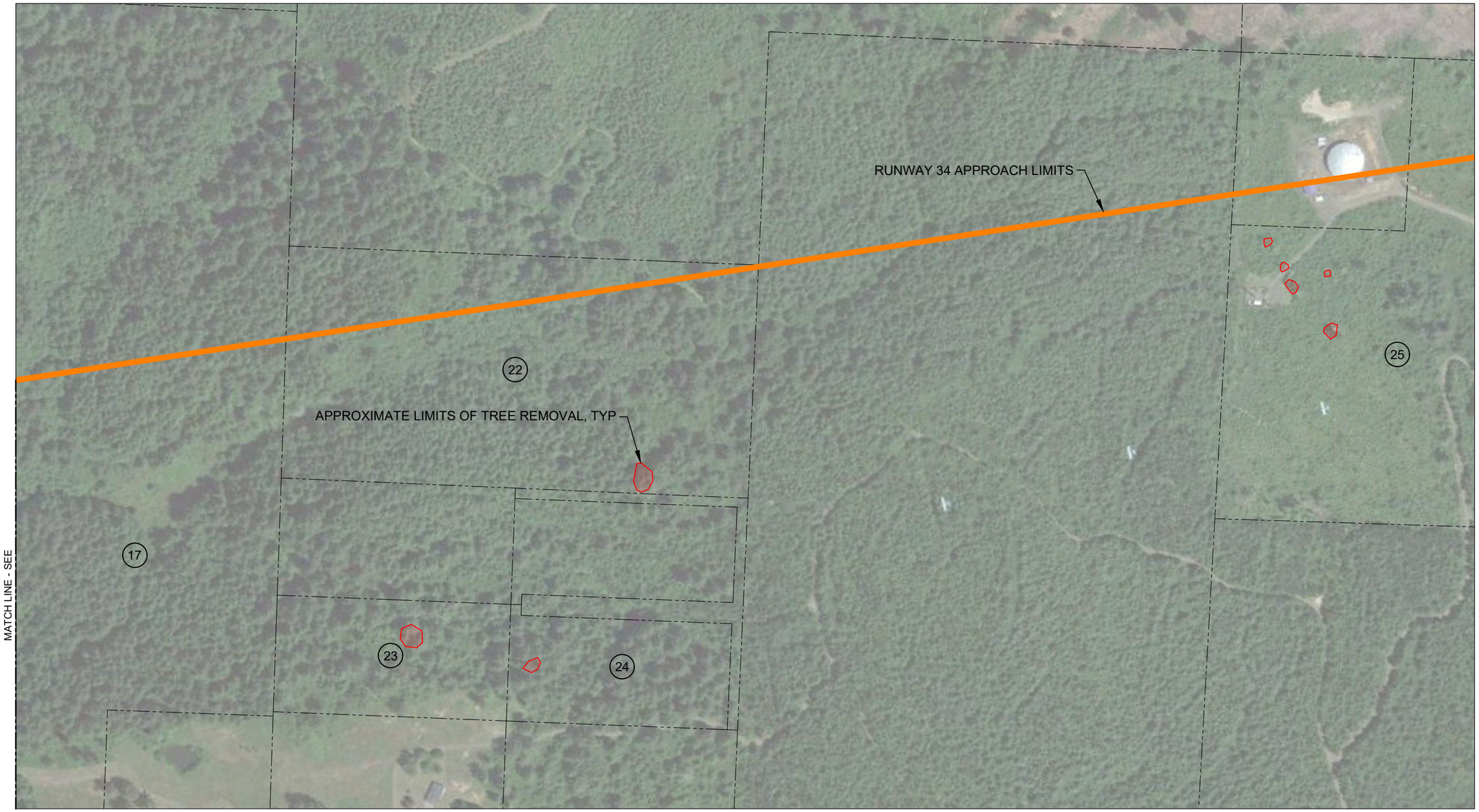
0 150 300
SCALE IN FEET

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

RUNWAY 34 APPROACH (North)

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

Figure 4 DEC 2021



TAG	PARCEL ID	OWNER	TREE REMOVAL
17	12-11-05-00-00803-00	STEEL STRING INC	2.55 AC
22	12-11-05-00-00802-00	WEYERHAEUSER CO	0.08 AC
23	12-11-05-CB-00200-00	STEEL STRING INC	0.08 AC
24	12-11-05-CB-00700-00	STEEL STRING INC	0.03 AC
25	12-11-00-00-03400-00	EMERY INVESTMENTS INC	0.08 AC

PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

NORTH

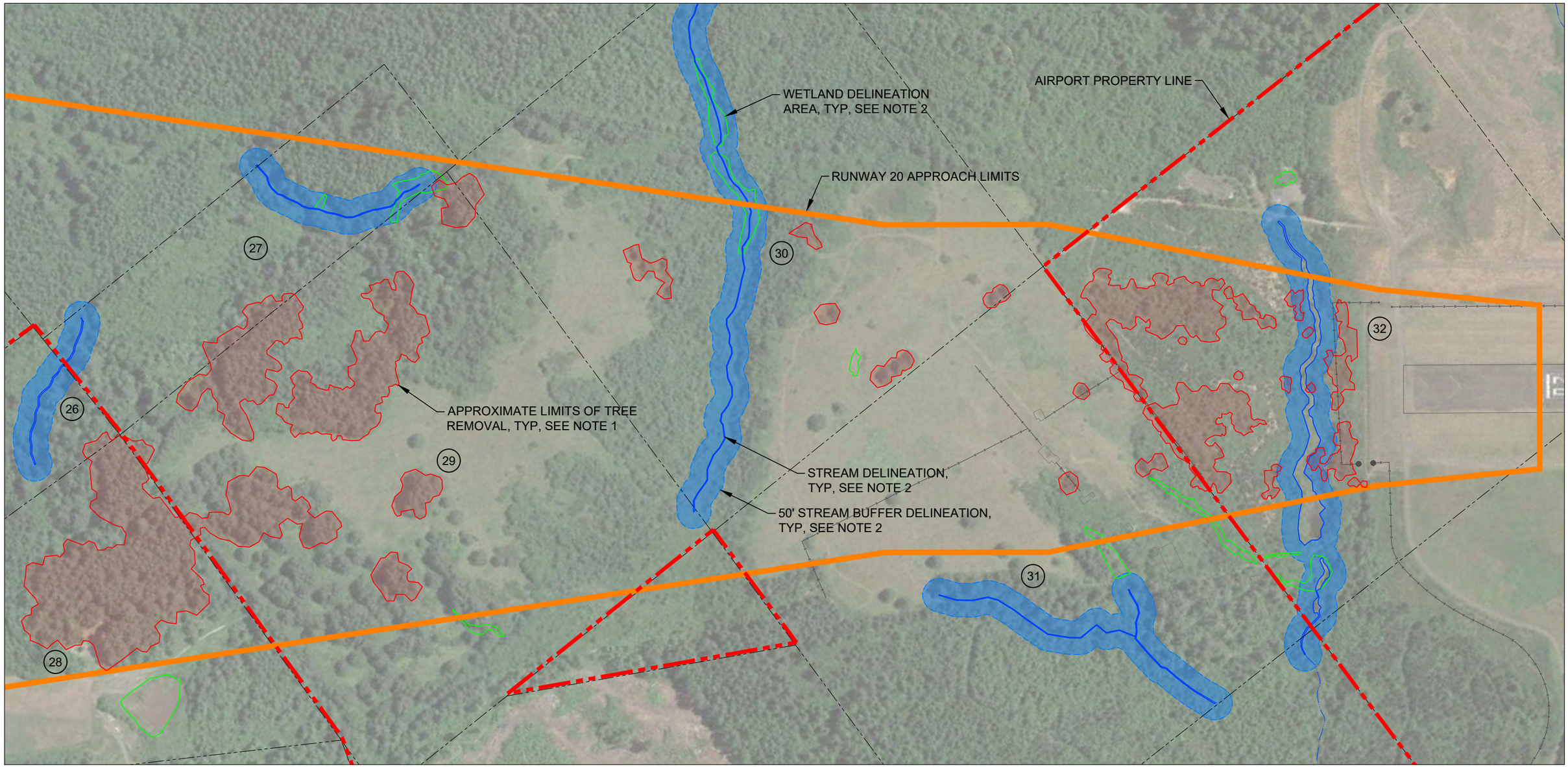
0 150 300
SCALE IN FEET

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

RUNWAY 34 APPROACH (South)

Figure 5 DEC 2021

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043



TAG	PARCEL ID	OWNER	TREE REMOVAL
26	11-11-21-00-01600-00	CITY OF NEWPORT	0.06 AC
27	11-11-28-00-00700-00	HALL	0.25 AC
28	11-11-20-00-02700-00	CITY OF NEWPORT	4.80 AC
29	11-11-29-00-00100-00	HALL	5.90 AC
30	11-11-29-00-00600-00	HALL	0.72 AC
31	11-11-29-00-00500-00	HALL	0.54 AC
32	11-11-29-00-01000-00	CITY OF NEWPORT	3.70 AC

NOTES:

1. LIMITS OF TREE REMOVAL SHOWN OUTSIDE OF STUDY AREA REPRESENT CANOPIES OF TREES TO BE REMOVED.
2. STREAM, BUFFERS AND WETLAND AREAS PROVIDED BY ESA, DATED OCT 19, 2021.

PRELIMINARY
NOT FOR CONSTRUCTION
12/02/2021

NORTH

0 150 300

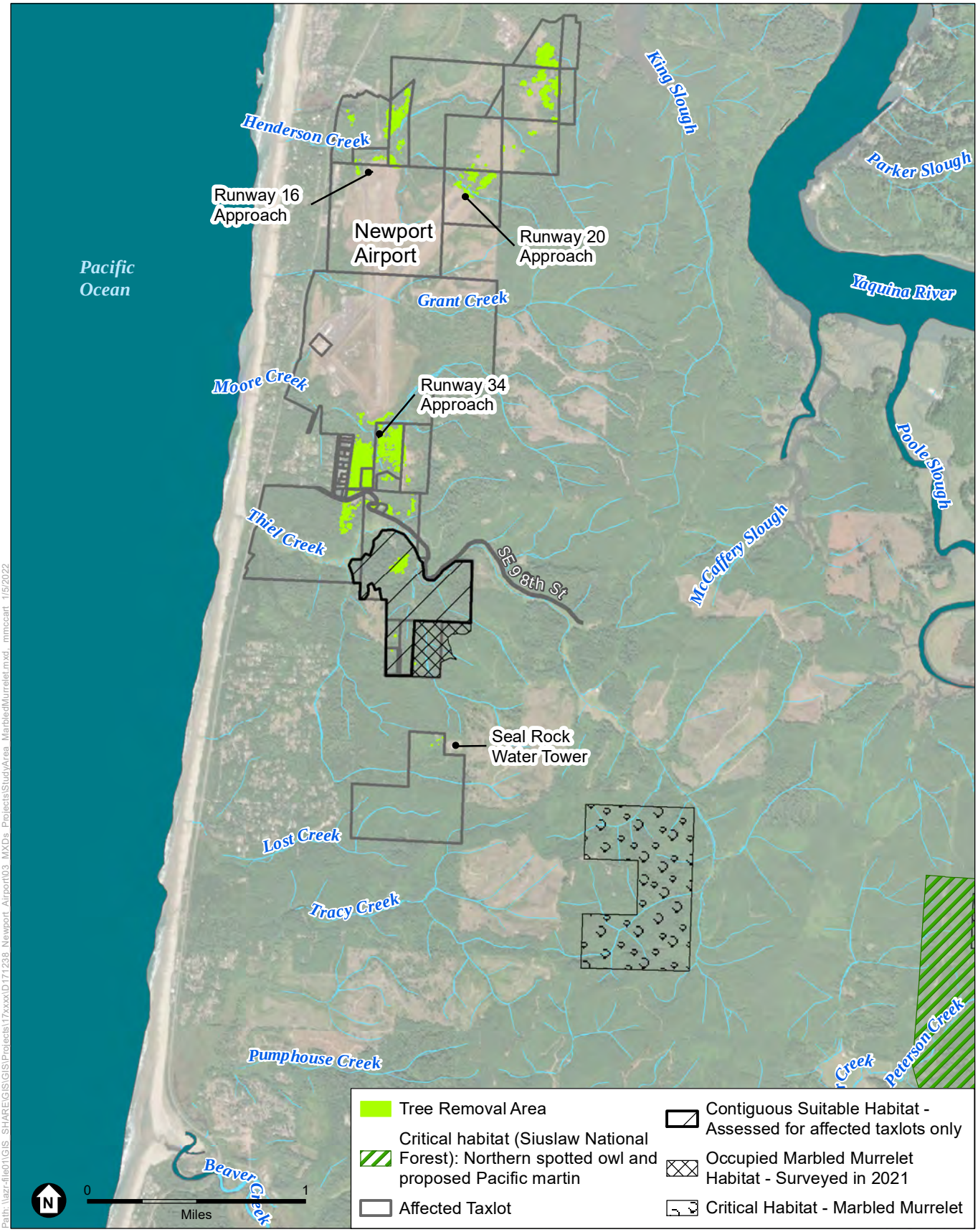
SCALE IN FEET

NEWPORT MUNICIPAL AIRPORT
APPROACH OBSTRUCTION REMOVAL

RUNWAY 20 APPROACH

PRECISION APPROACH ENGINEERING
5125 Southwest Hout Street
Corvallis, OR 97333
541•754•0043

Figure 6 DEC 2021



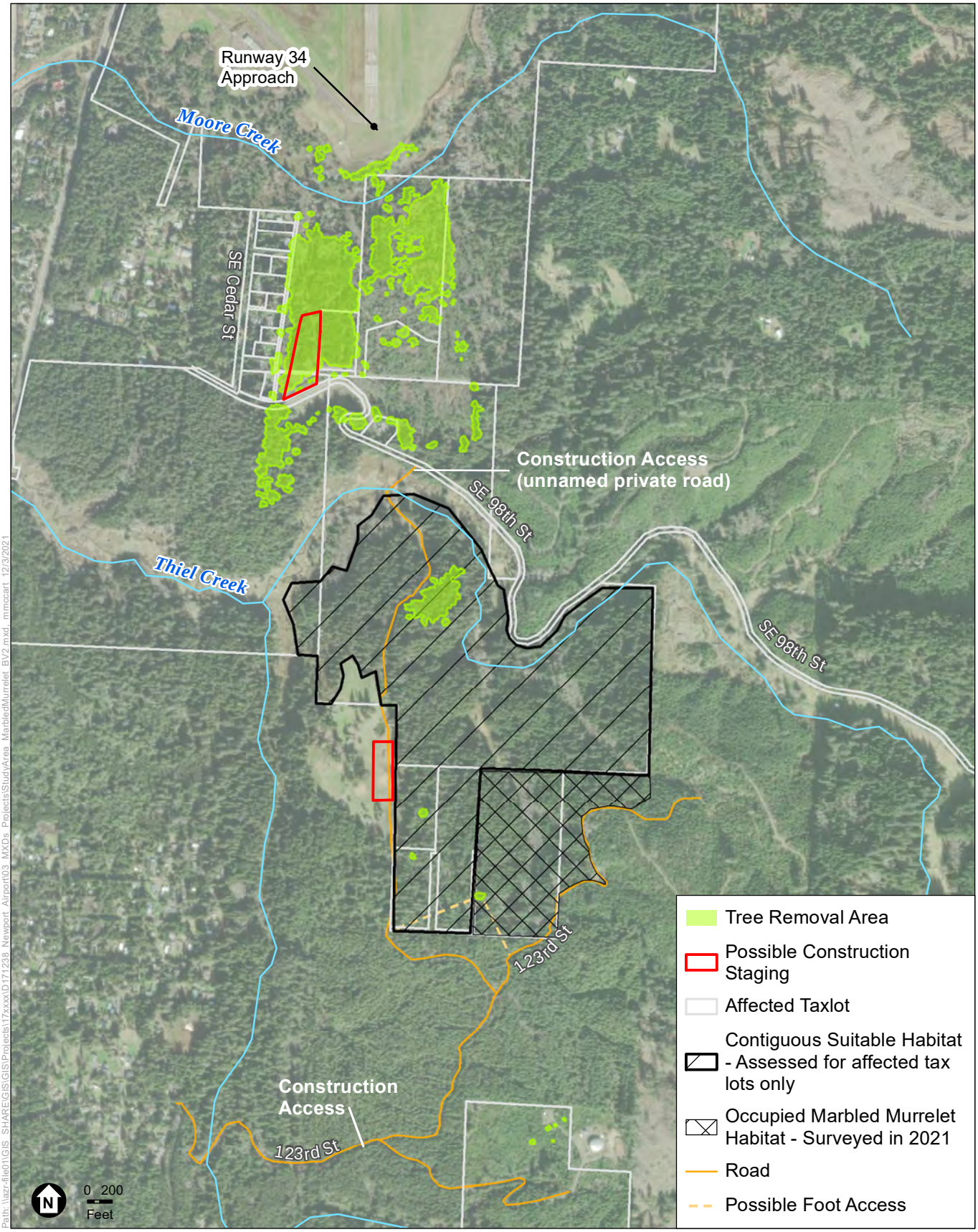
Path: \\azr-file01\GIS_SHARE\GIS\Projects\17xxxx\D171238_Newport_Airport\03_MXDs_Projects\StudyArea_MarbledMurrelet.mxd_mmccart_1/5/2022

SOURCE: ESRI, 2020; Weyerhaeuser, 2021; Precision Approach Engineering, 2019

Newport Airport Obstruction Removal Phase 2

Figure 7
Study Area Overview and Critical Habitat

ESA



SOURCE: ESRI, 2020; Weyerhaeuser, 2021; Precision Approach Engineering, 2019

Newport Airport Obstruction Removal Phase 2

Figure 8
Construction Access and Staging

ESA

Appendix B
USFWS Species List

ESA

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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: November 11, 2021
Consultation Code: 01EOFW00-2022-SLI-0095
Event Code: 01EOFW00-2022-E-00244
Project Name: Newport Airport Obstruction Removal Project

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.

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). 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).

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

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

Project Summary

Consultation Code: 01EOFW00-2022-SLI-0095
Event Code: Some(01EOFW00-2022-E-00244)
Project Name: Newport Airport Obstruction Removal Project
Project Type: TRANSPORTATION
Project Description: The City of Newport (City) proposes to remove obstructions from Federal Air Regulations (FAR) Part 77 airspace approach surfaces at the Newport Municipal Airport (Airport) to improve the safety of aircraft operations. Data gathered from evaluating the Airport Geographic Information System Survey as part of the Master Plan Update conducted in 2018 identified obstructions in the protected airspace. A LiDAR survey (Quantum Spatial, Inc. 2019) confirmed numerous obstructions (trees) penetrating the protected airspace.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.57426325,-124.05783486009176,14z

Counties: Lincoln County, Oregon

Endangered Species Act Species

There is a total of 8 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[1], 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.

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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.

Mammals

NAME	STATUS
Pacific Marten, Coastal Distinct Population Segment *Martes caurina* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/9081	Threatened

Birds

NAME	STATUS
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

Reptiles

NAME	STATUS
Leatherback Sea Turtle *Dermochelys coriacea* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1493	Endangered
Loggerhead Sea Turtle *Caretta caretta* Population: North Pacific Ocean DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1110	Endangered
Olive Ridley Sea Turtle *Lepidochelys olivacea* Population: Wherever found, except when listed as endangered under 50 CFR 224.101 No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1513	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

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

Appendix B. Service concurrence with findings with regard to effects to the northern spotted owl and coastal marten.

As detailed in the Consultation History section of this Biological Opinion, on January 7, 2022, the Service received a letter from the Federal Aviation Administration (FAA) requesting informal consultation on the proposed Newport Municipal Airport Obstruction Removal project and concurrence with their determination that the project may affect but is not likely to adversely affect the marbled murrelet, northern spotted owl, and coastal DPS of the Pacific marten (coastal marten). Based on information indicating that marbled murrelet occupancy had been documented within the action area and that potential nesting habitat was slated for removal as a part of the project, the Service determined that concurrence with a finding of "not likely to adversely affect" for the marbled murrelet was not appropriate; this resulted in formal consultation for this species and ultimately the development of this Biological Opinion. Further examination of the facts with regard to the potential effects of the proposed project on the northern spotted owl and coastal marten have led the Service to concur with the FAA's determination that the proposed project may affect, but is not likely to adversely affect, these species. Here we provide the rationale for this determination; we refer the reader to the BA for this project (Appendix A) and the Overview of the Project in the Biological Opinion for the marbled murrelet for a description of the proposed project and the action area relevant to this discussion.

In brief, because northern spotted owls and coastal martens may use habitat similar to that often selected by marbled murrelets for nesting (generally structurally complex forests with large trees and old-growth characteristics), to be conservative we assumed that the 140-acre forest patch of habitat that is considered occupied or potential habitat for the marbled murrelet within the action area might also provide potential habitat for the northern spotted owl or coastal marten. Importantly, the habitat needs of these species are generally much broader than those of marbled murrelets, which use forested habitats only for breeding behaviors; as a consequence, although not optimal, marbled murrelets may be able to make use of relatively small forest patches in proximity to the marine environment as long as they provide the requisite nesting structures. Northern spotted owls and coastal martens, by contrast, used forested habitats for all of their life history needs, including not only breeding but also foraging, shelter, dispersal, and other activities. As a consequence, a greater range of habitat characteristics must be present for habitat to be considered suitable for the northern spotted owl or coastal marten.

Northern spotted owl

According to the BA (Appendix A, p. 11), there are no documented occurrences of northern spotted owl in or near the action area (citing to ORBIC 2019). We additionally queried the database of northern spotted owl occurrences for the state, maintained by Oregon State University, and determined that there are no records of northern spotted owls within a minimum of 2 miles from the action area (Ackers in litt., 2022). Surveys for northern spotted owls were completed according to protocol in the spring and summer of 2021 on the Weyerhauser property, parcel ID 12-11-05-00-00802-00 (the same parcel where marbled murrelets were detected), but no northern spotted owls were seen or heard. Although this provides useful information, Service

protocol requires a minimum of 2 years of consecutive surveys to protocol to begin to assess northern spotted owl activity in an area (USFWS 2012, p. 22). Therefore, the single year's worth of survey on the Weyerhauser parcel is not in and of itself sufficient to determine whether northern spotted owls were present However, it is reasonably certain the area does not contain a sufficient amount of nesting/roosting habitat to support any resident northern spotted owl (see habitat discussion below).

As noted above, the presence of marbled murrelets in the same parcel implied that this area could potentially provide suitable habitat for northern spotted owls, as the two species share many similar habitat requirements (large trees with structural complexity usually associated with older forests, multiple canopy layers, canopy closure, etc.). Northern spotted owls have more diverse habitat needs, however, as resident owls must fulfill all of their life history requirements (nesting, roosting, foraging, and dispersal) within the landscape, whereas marbled murrelets require forested habitats only for essential breeding behaviors and have very specific requirements for suitable nest structures.

As described in the Biological Opinion, most of the action area is highly fragmented forest or industrial timberlands and in close proximity to residences and areas of high human activity and would not be considered potential habitat for northern spotted owls (see, e.g., Exhibit 5 of the BA and discussion on p. 7, Appendix A). We considered the140-acre patch occupied by marbled murrelets as likely the only place within the action area that might provide possible roosting, foraging, or dispersal habitat; there was no indication of large trees with deformities in this area (large cavities, broken tops, mistletoe infections, and other evidence of decadence) and no large snags that might be associated with nesting habitat.

As described in the Biological Opinion's Project Overview, within the 140-acre patch a total of approximately 3 acres of tall vegetation is slated for removal; most of this is in one contiguous patch of forest (approximately 2.55 acres). There are a few individual trees separately identified for removal that make up the total of approximately 3 acres. Northern spotted owls generally require larger blocks of habitat than marbled murrelets: a spotted owl nest patch is considered to be an area at least 70 acres in size centered in contiguous habitat around a potential nest tree, and core areas are composed of at least 500 acres of habitat where spotted owls would nest, roost, forage, and raise young (USFWS 2011, p. C-15). We did not observe any trees within the 140-acre patch of potential habitat that appeared to provide suitable nest cavities or other structures that would most likely be utilized by northern spotted owls within the Coast Range. Furthermore, barred owls have been observed in the area (S. Hartung, in litt.) and are known to displace northern spotted owls. Finally, the highly fragmented and isolated nature of the forested habitat patches and scarcity of habitat with old-growth characteristics indicate there is insufficient habitat within or in proximity to the action area to support resident northern spotted owls.

To evaluate this last point, we conducted a GIS exercise using the LiDAR data available for the action area. Although we did not have data available for stand age, we used tree height as a proxy, assuming taller trees were likely to be older and larger and would be most likely to provide the structural characteristics required for a nesting (territorial resident) northern spotted

owl. We would expect such trees to be on the order of at least 100 to 150 feet tall. We used the 140-acre occupied/contiguous patch of forest identified for marbled murrelets as our focal area (Figure 1 of the Biological Opinion) and evaluated the forest cover within a 0.25-mile and a 1-mile radius. The results indicate that there is not sufficient habitat to support resident northern spotted owls within the action area, nor is there sufficient habitat in proximity to the presumed 140-acre patch of potential habitat to support northern spotted owls (Figure C-1). The results indicate that the vast majority of the forested landscape within this area is younger forest less than 100 feet in height (Table C-1) Within a 0.25-mile radius only 9.4% of the forest is in the 100 to 150-foot height class and 0.2% is more than 150 feet in height; within the 1-mile radius, 4.2% of the forest is in the 100- to 150-foot height class and 0.1% is more than 150 feet.

Stands less than 100-feet tall could potentially serve as northern spotted owl dispersal habitat. Stands 100 to 150 feet tall could serve either as dispersal or low-quality forage habitat with no or negligible amounts of nesting attributes. None of the stands within the area we evaluated would likely support northern spotted owl nesting at the stand scale based on tree height. However, the analytical assumption is that the aforementioned 140-acre stand of murrelet habitat would be suitable for northern spotted owl roosting, foraging, or dispersal, if any northern spotted owls are present.

Based on all of this information and considering the landscape context, we expect it is highly unlikely that resident or nesting northern spotted owls occur within the action area. Although the area may provide habitat that could support northern spotted owls dispersing through the area or perhaps roosting or foraging on occasion, the combination of poor habitat quality, fragmentation, isolation, and presence of barred owls makes it unlikely that a northern spotted owl would remain in the area for any length of time.

Table C-1. Evaluation of canopy height as a proxy for tree size and age in the area surrounding the 140-acre patch of occupied/potential marbled murrelet habitat within the action area

	Percent of forest cover	
Canopy Height Class	*w/in 0.25 mile*	*w/in 1 mile*
0 – 50 feet	64.0	68.3
50 – 100 feet	26.4	27.3
100-150 feet	9.4	4.2
> 150 feet	0.2	0.1

We do not anticipate the project will have adverse effects on resident or nesting northern spotted owls because there is most likely insufficient habitat in or near the action area to support a resident single or a nesting pair and there is no evidence of northern spotted owls occurring in or in proximity to the action area. In addition, all tree removal activities in the portion of the action area that would be most likely to be occupied by northern spotted owls will be conducted outside of the northern spotted owl nesting season (February 1 through August 31). No trees with cavities or structures suitable for nesting by northern spotted owls were observed within the area of potential habitat and our analysis of LiDAR imagery indicates it is unlikely that such trees

exist with the area of analysis. For all of these reasons, we do not expect resident single owls or nesting owls to be exposed to any of the project activities, nor do we expect tree removal to affect nesting habitat for northern spotted owls. Although the planned tree removals within the 140-acre are of potential habitat could result in the removal of some possible foraging, roosting, or dispersal habitat that could possibly be used on occasion by northern spotted owls, there is no shortage of those habitat types in the area, such that the very small areas proposed for removal would have only insignificant effects on any owls that might be present. If any northern spotted owls should happen to be present when tree removal activities are taking place, the most likely effect of the proposed action would be temporary displacement of the birds, which would merely relocate in response to activity. Furthermore, any effects from owls moving in response to noise disturbance from tree removal would likely be insignificant given the current level of noise occurring from aircraft traffic using Runway 34.

Based upon the information provided in your BA dated January 2022, and our analysis of the proposed project, we concur with the FAA's determination that the proposed action may affect, but is not likely to adversely affect the northern spotted owl for the following reasons:

1. No known northern spotted owl sites would be affected by the action;
2. Based on habitat conditions and a high amount of ambient noise from the airport, the action area likely does not support enough nesting, roosting, or foraging habitat to support any resident single or nesting pair of northern spotted owls. If any resident or breeding northern spotted owls are present in the action area, the removal of up to 3 acres of nesting/roosting/foraging habitat would not adversely affect northern spotted owl residency or breeding within any site territory;
3. The planned removal of fewer than 3 acres of trees that could possibly serve as dispersal and/or low-quality roosting/foraging habitat will have negligible impact on the availability of these habitat types in the action area. This small amount of habitat removal would not create a strong filter or barrier to any landscape dispersal of northern spotted owl individuals; and
4. Direct effects, if any northern spotted owl individuals should be present within the action area, would most likely be limited to minor disturbance and temporary displacement of birds; no nesting birds would be affected since all tree removal activities in the area of potential habitat for northern spotted owls will be limited to the non-breeding season.

All potential effects are insignificant. There is no designated critical habitat in the action area, so none will be affected.

References Cited

USFWS (U.S. Fish and Wildlife Service). 2011. Revised Recovery Plan for the Northern Spotted Owl (*Strix occidentalis caurina*). U.S. Fish and Wildlife Service, Portland, Oregon. 258+pp.

USFWS (U.S. Fish and Wildlife Service). 2012. Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted Owls. Revision January 9, 2012. U.S. Fish and Wildlife Service, Portland, Oregon. 42 pp.

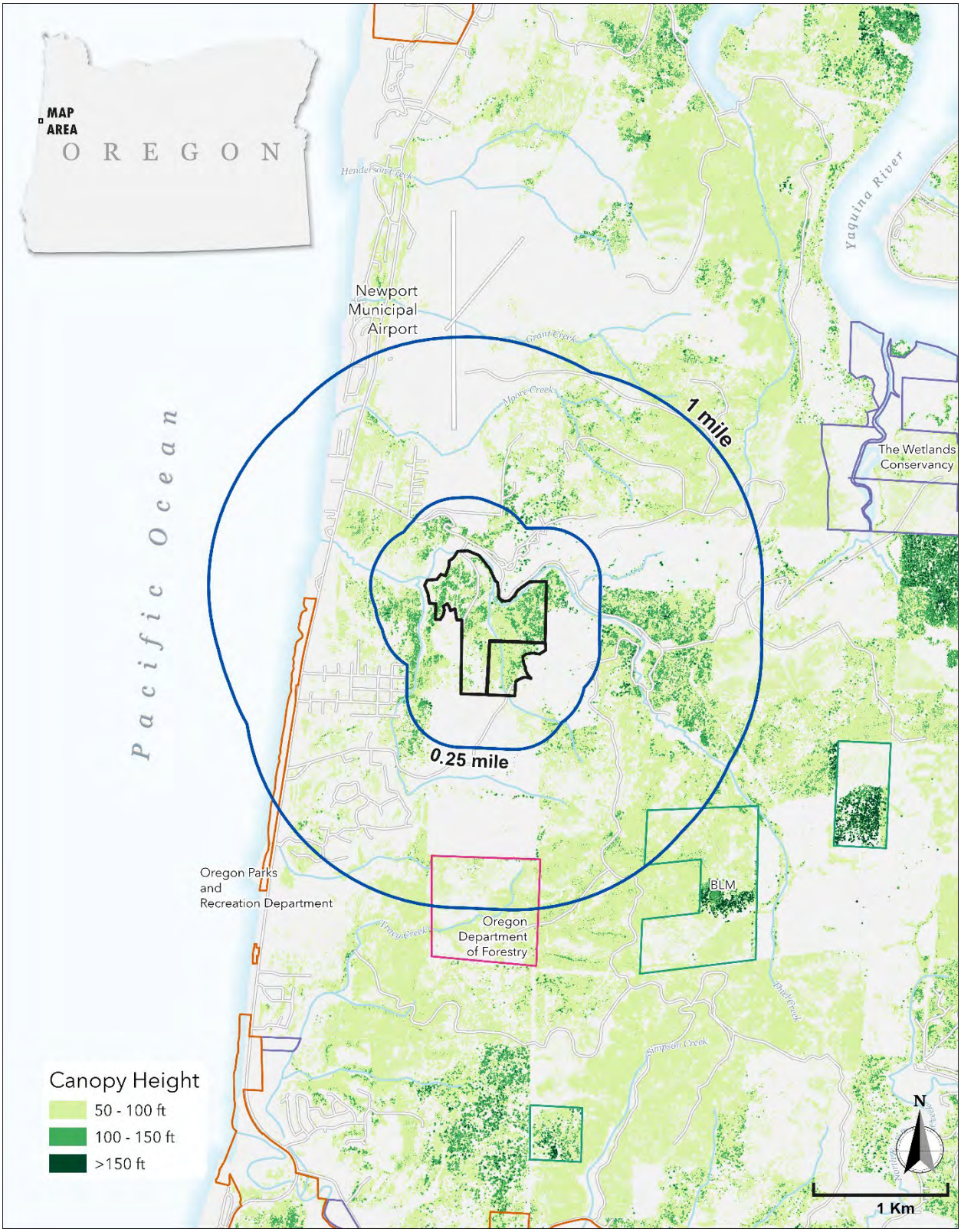

Figure C-2. *Analysis of canopy height classes in 0.25-mile and 1-mile radii surrounding the 140-acre patch of occupied/potential habitat for marbled murrelets within the action area. This patch of occupied/potential habitat for the marbled murrelet is presumed to also represent the most likely potential habitat for northern spotted owls within the action area as well.*

Coastal Marten

According to the BA (Appendix A, p. 11), there are no documented occurrences of coastal marten in or near the action area (citing to ORBIC 2019). We additionally checked our database of known coastal marten occurrences and did not find any within or in proximity to the action area (USFWS 2022, unpublished data). The nearest known marten occurrence is a roadkill that was documented prior to 1996, and this was more than 5 km (3 mi) to the north across the Yaquina River and Bay, which is a significant impediment to movement of martens. The nearest recent documented occurrence of a coastal marten is from 2017 in the Siuslaw National Forest more than 16 km (10 mi) east of the southern project boundary (Figure C-3). The project area is not in proximity to an Extant Population Area (EPA) of marten (USFWS 2018, pp. 74-80), nor is it in proximity to proposed critical habitat for the coastal marten (USFWS 2021).

Coastal martens generally utilize older forest stands that are structurally complex and have multiple canopy layers, a dense understory, and snags or other decadent elements such as tree cavities or dead and downed wood that can serve as den sites. Suitable habitat is described as forest stands in old-growth or late-mature seral stages with a wide range of tree sizes, including trees with large diameter and height; deep, dense tree canopies with multiple canopy layers and irregular tree crowns; high numbers of snags, including large diameter snags; and abundant down wood, including large logs, ideally in a variety of decay stages. In addition, martens favor areas with a dense, spatially extensive shrub layer, particularly of ericaceous species such as salal, huckleberry, or rhododendron. Habitat that provides for movement between home ranges may have lesser representation of these characteristics but still provide sufficient forage and ocver from predators to allow a marten to traverse the landscape to areas of higher quality habitat. Highly fragmented forests are not suitable for coastal martens, as it greatly increases the risk of predation from their primary predator, the bobcat, which thrives in such fragmented forests.

As described in the Biological Opinion, most of the action area is highly fragmented forest or industrial timberlands and in close proximity to residences and areas of high human activity and would not be considered potential habitat for coastal martens (see, e.g., Exhibit 5 of the BA and discussion on p. 7, Appendix A). Although the BA describes the 140-acre patch of forest that is considered occupied/potential habitat for marbled murrelets as potential habitat for coastal marten as well, we find it unlikely that any of the forest within the action area supports coastal marten. The forest is highly fragmented and most of it is entirely lacking in the complex forest structure and decay elements (tree cavities, dead or downed wood) and extensive dense shrubby understory required by martens. Based on all of these considerations, we find it highly unlikely that resident martens would be expected within the action area.

It is possible that an occasional marten could traverse the action area, dispersing from the Siuslaw National Forest population. A distance of 16 km (10 mi) is within the travel capabilities of a marten. However, the combination of poor habitat quality, fragmentation, isolation, and proximity to human activity makes it unlikely that a coastal marten would remain in the area for any length of time. The project area is not included within nor in close proximity to any area identified as either a coastal marten habitat core or a least-cost corridor for movement of coastal martens (Schrott and Shinn 2020, pp. 38-39).

We do not anticipate the project will have adverse effects on breeding coastal martens because the action area does not provide habitat of sufficient quality to support denning or long-term occupancy, and there are no known observations of coastal martens in or near the action area. In the highly unlikely case that any martens should be present, all tree removal activities in the portion of the action area that would be most likely to be occupied by coastal martens will be conducted outside of the denning season (mid-April to mid-September). No snags or trees with cavities or other structures or downed wood suitable for denning by martens were observed within the area of potential habitat. Some dense shrub cover exists within the portion of the area considered to be potential habitat, which could serve as suitable dispersal habitat. Only a few single trees are identified for removal in this area, such that the possible dispersal function of this habitat would not be adversely affected, as it would still provide sufficient cover and forage for any dispersing martens. The single area of contiguous clearing, where up to 3 acres of smaller diameter trees will be removed, is lacking both the complex forest and decay elements and the dense shrubby understory required by martens, and would serve only as marginal dispersal habitat such that the removal of this small area of forest would not substantially reduce the amount of such habitat available to martens in the project area. For all of these reasons, we do not expect breeding coastal martens to be exposed to any of the project activities, nor do we expect tree removal to affect denning habitat for coastal marten. If any dispersing coastal martens should happen to be present when tree removal activities are taking place, the most likely short-term effect of the proposed action would be to redirect the movements of the animal in response to the activity. In the long term, the tree removals proposed would not affect the quality of the project area as potential dispersal habitat.

Based upon the information provided in your BA dated January 2022, and our analysis of the proposed project, we concur with the FAA's determination that the proposed action may affect, but is not likely to adversely affect the coastal marten for the following reasons:

1. No known coastal martens would be affected by the action;
2. Based on poor quality habitat conditions, the highly fragmented nature of the habitat, and a high amount of ambient noise from the airport, the action area does not provide habitat of sufficient quality to support resident or denning martens. In the unlikely event that any resident or denning martens are present in the action area, the removal of up to 3 acres of marginal quality habitat would not affect marten usage of the area;
3. The planned removal of fewer than 3 acres of trees that could possibly serve as dispersal or marginal habitat for martens will have negligible impact on the availability of these habitat types in the action area. This small amount of habitat removal would not serve as a strong filter or barrier to any landscape dispersal of coastal marten individuals; and
4. All tree removal activities in the area that is considered closest to potential habitat for coastal marten will take place outside of the denning season;
5. Direct effects, in the unlikely case that coastal martens are present within the action area, would most likely be limited to minor disturbance and altered movements in response to activity; no denning martens would be affected since all tree removal

activities in the area of potential habitat for coastal martens will be limited to outside the denning season.

All potential effects are insignificant. There is no designated critical habitat in the action area, so none will be affected.

References Cited

Schrott, G.R., and J. Shinn. 2020. A Landscape Connectivity Analysis for the Coastal Marten (*Martes caurina humboldtensis*). U.S. Fish and Wildlife Service, Arcata, California. 123 pp.

USFWS (U.S. Fish and Wildlife Service). 2018. Species status assessment report for the coastal marten (*Martes caurina humboldtensis*), Version 1.1. June 2018. Arcata, California. 132 pp.

USFWS (U.S. Fish and Wildlife Service). 2021. Designation of critical habitat for the coastal distinct population segment of the Pacific marten: proposed rule. Federal Register 86:58831-58858.

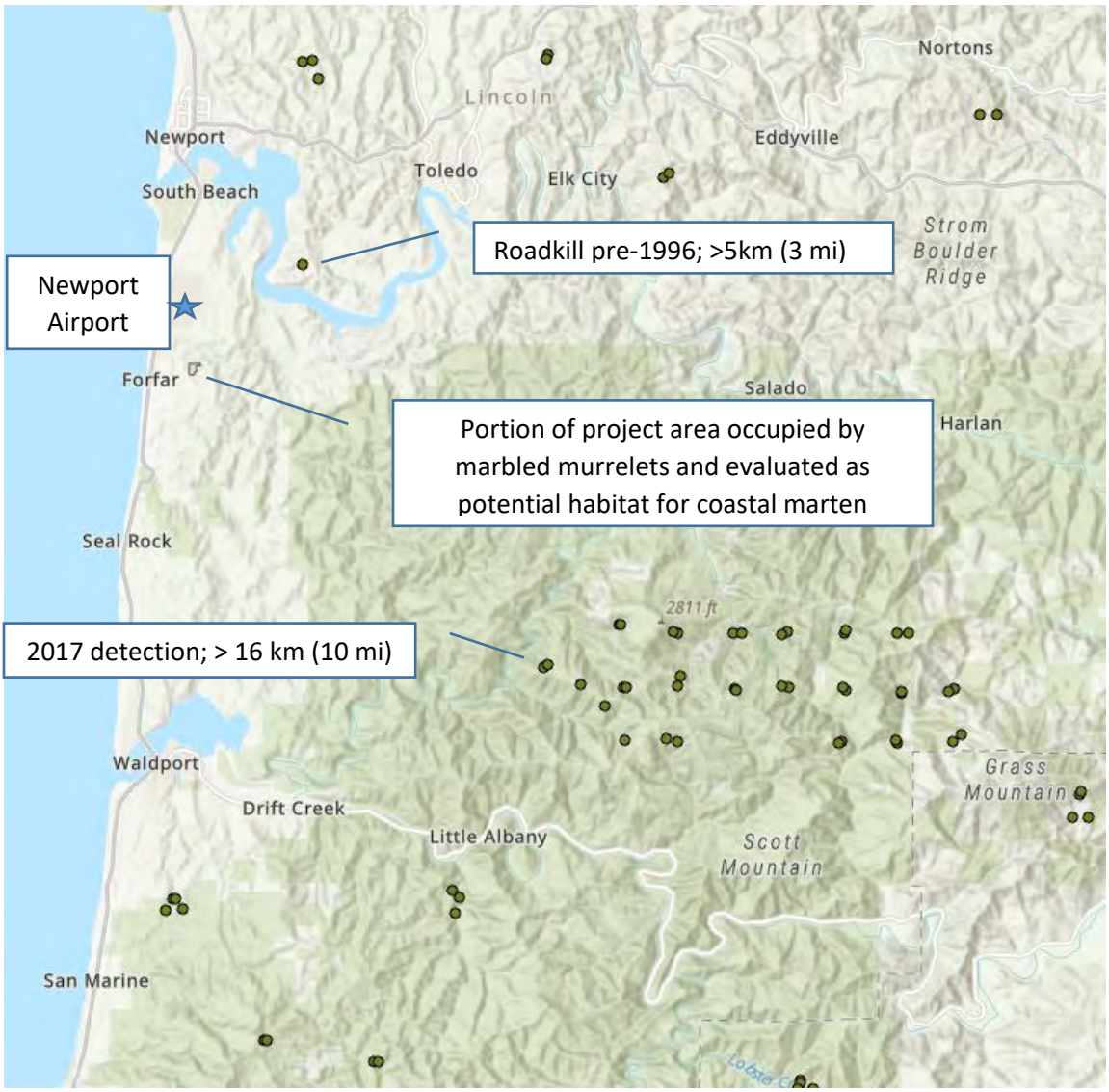

Figure C-3. Marten occurrences in general vicinity of Newport Municipal Airport and area identified as occupied by marbled murrelets in particular (evaluated here as potential habitat for coastal marten). All relatively recent (post-1996) detections south of Yaquina Bay and River are more than 16 km (10 mi) from the proposed project area. Marten detection data from unpublished USFWS database (K. Moriarty) dated April 2022.

This concludes informal consultation pursuant to section 7(a)(2) of the Endangered Species Act for the northern spotted owl and coastal marten. As provided in 50 CFR 402.16, reinitiation of consultation is required and shall be requested by the Federal action agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (1) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in our concurrence; or (3) If a new species is listed or critical habitat designated that may be affected by the identified action.

Appendix C. Status of the marbled murrelet.

STATUS OF THE SPECIES - MARBLED MURRELET

Species Description

The murrelet is a small diving seabird that nests mainly in coniferous forests and forages in near-shore marine habitats. Males and females have sooty-brown upperparts with dark bars. Underparts are light, mottled brown. Winter adults have brownish-gray upperparts and white scapulars. The plumage of fledged young is similar to that of adults in winter. Chicks are downy and tan colored with dark speckling.

Legal Status

The murrelet was listed as a threatened species on September 28, 1992, in Washington, Oregon, and northern California (USDI FWS 1992). Since the species' listing, the U.S. Fish and Wildlife Service (Service) has completed three 5-yr status reviews of the species: September 2004 (USDI FWS 2004), June 2009 (USDI FWS 2009), and May 2019 (USDI FWS 2019). The 2004 5-year review determined that the California, Oregon, and Washington distinct population segment of the murrelet did not meet the criteria outlined in the Service's 1996 Distinct Population Segment (DPS) policy (USDI FWS and NOAA 1996, USDI FWS 2004). However, the 2009 5-year review concluded the 2004 analysis of the DPS question was based on a flawed assumption regarding discreteness at the international border with Canada, and that the three-state population did, in fact, constitute a valid DPS (USDI FWS 2009, pp. 3-12). In 2010, the Service denied a petition to delist the marbled murrelet, and the U.S. Court of Appeals for the D.C. Circuit upheld the Service's decision. The most recent 5-year status review was completed in May 2019. This review did not propose changes to the listing status but noted that a change in listing status could be warranted if continued trends of manmade and natural threats continue at current or increased levels (USDI FWS 2019). The legal status of the murrelet remains unchanged from the original designation.

Life history

Murrelets produce one egg per nest and usually only nest once a year, however re-nesting has been documented after nest failure. Nests are not built, but rather the egg is placed in a small depression or cup made in moss or other debris on the limb. Incubation lasts about 30 days, and chicks fledge after about 28 days after hatching. Both sexes incubate the egg in alternating 24-hour shifts. The chick is fed up to eight times daily, and is usually fed only one fish at a time. The young are semi-precocial, capable of walking but not leaving the nest. Fledglings fly directly from the nest to the ocean. If a fledgling is grounded before reaching the ocean, they usually die from predation or dehydration, as murrelets need to take off from an elevated site to obtain flight.

Ecology/Habitat Characteristics

Murrelets spend most of their life in the marine environment, but use old-growth forests for nesting. Courtship, foraging, loafing, molting, and preening occur in near-shore marine waters. Throughout their range, murrelets are opportunistic feeders and utilize prey of diverse sizes and species. They feed primarily on fish and invertebrates in near-shore marine waters although they have also been detected on rivers and inland lakes.

In their terrestrial environment, the presence of platforms (large branches or deformities) used for nesting is the most important characteristic of their nesting habitat. Murrelet habitat use during the breeding season is positively associated with the presence and abundance of mature and old-growth forests, large core areas of old-growth, low amounts of edge habitat, reduced habitat fragmentation, proximity to the marine environment, and forests that are increasing in stand age and height. Additional information on murrelet taxonomy, biology, and ecology can be found in Ralph et al. (1995), McShane et al. (2004), and Piatt et al. (2007).

Aquatic Habitat Use

Birds occur off shore in Conservation Zones 1-6 year round and also occur in small numbers off southern California in the winter. Murrelets are usually found within 5 miles (8 km) from shore, and in water less than 60 meters deep (Ainley et al. 1995; Burger 1995; Strachan et al. 1995; Nelson 1997; Day and Nigro 2000; Raphael et al. 2007a). In general, birds occur closer to shore in exposed coastal areas and farther offshore in protected coastal areas (Nelson 1997). Courtship, foraging, loafing, molting, and preening occur in marine waters.

Murrelets are wing-propelled pursuit divers that forage both during the day and at night (Carter and Sealy 1986; Henkel et al. 2003; Kuletz 2005). Murrelets can make substantial changes in foraging sites within the breeding season, but many birds routinely forage in the same general areas and at productive foraging sites, as evidenced by repeated use over a period of time throughout the breeding season (Carter and Sealy 1990, Whitworth et al. 2000; Becker 2001; Hull et al. 2001; Mason et al. 2002; Piatt et al. 2007). Murrelets are also known to forage in freshwater lakes (Nelson 1997). Activity patterns and foraging locations are influenced by biological and physical processes that concentrate prey, such as weather, climate, time of day, season, light intensity, up-wellings, tidal rips, narrow passages between island, shallow banks, and kelp (*Nereocystis* spp.) beds (Ainley et al. 1995; Burger 1995; Strong et al. 1995; Speckman 1996; Nelson 1997).

Juveniles are generally found closer to shore than adults (Beissinger 1995) and forage without the assistance of adults (Strachan et al. 1995). Kuletz and Piatt (1999) found that in Alaska, juvenile murrelets congregated in kelp beds. Kelp beds are often associated with productive waters and may provide protection from avian predators (Kuletz and Piatt 1999). McAllister (in Strachan et al. 1995) found that juveniles were more common within 328 feet (100 m) of shorelines, particularly where bull kelp was present.

Within the area of use, murrelets usually concentrate feedings in shallow, near-shore water less than 98 feet (30 m) deep (Huff et al. 2006), but are thought to be able to dive up to depths of 157 feet (47 m) (Mathews and Burger 1998). During the non-breeding season, murrelets disperse and can be found farther from shore (Strachan et al. 1995). Although little information is available outside of the nesting season, limited information on winter distribution also suggests they do move further offshore (Strachan et al. 1995, p. 247). In areas with protective waters, there may be a general opportunistic shift from exposed outer coasts into more protected waters during the winter (Nelson 1997); for example, many murrelets breeding on the exposed outer coast of Vancouver Island appear to congregate in the more sheltered waters within the Puget Sound and the Strait of Georgia in fall and winter (Burger 1995). In many areas, murrelets also undertake occasional trips to inland nesting habitat during the winter months (Carter and Erickson 1992).

Throughout the listed range, murrelets do not appear to disperse long distances, indicating they are year-round residents (McShane et al. 2004).

Throughout their range, murrelets are opportunistic feeders and utilize prey of diverse sizes and species. They feed primarily on fish and invertebrates in marine waters although they have also been detected on rivers and inland lakes (Carter and Sealy 1986; USDI FWS 1992). In general, small schooling fish and large pelagic crustaceans are the main prey items. Pacific sand lance (*Ammodytes hexapterus*), northern anchovy (*Engraulis mordax*), immature Pacific herring (*Clupea harengus*), capelin (*Mallotus villosus*), Pacific sardine (*Sardinops sagax*), juvenile rockfishes (*Sebastas* spp.), and surf smelt (*Osmeridae*) are the most common fish species taken. Squid (*Loligo* spp.), euphausiids, mysid shrimp, and large pelagic amphipods are the main invertebrate prey. Murrelets are able to shift their diet throughout the year and over years in response to prey availability (Becker et al. 2007). However, long-term adjustment to less energetically-rich prey resources (such as invertebrates) appears to be partly responsible for poor murrelet reproduction in California (Becker and Beissinger 2006).

Breeding adults exercise more specific foraging strategies when feeding chicks, usually carrying a single, relatively large (relative to body size) energy-rich fish to their chicks (Burkett 1995; Nelson 1997), primarily around dawn and dusk (Nelson 1997, Kuletz 2005). Freshwater prey appears to be important to some individuals during several weeks in summer and may facilitate more frequent chick feedings, especially for those that nest far inland (Hobson 1990). Becker et al. (2007) found murrelet reproductive success in California was strongly correlated with the abundance of mid-trophic level prey (*e.g.*, sand lance, juvenile rockfish) during the breeding and postbreeding seasons. Prey types are not equal in the energy they provide; for example parents delivering fish other than age-1 herring may have to increase deliveries by up to 4.2 times to deliver the same energy value (Kuletz 2005). Therefore, nesting murrelets that are returning to their nest at least once per day must balance the energetic costs of foraging trips with the benefits for themselves and their young. This may result in murrelets preferring to forage in marine areas in close proximity to their nesting habitat. However, if adequate or appropriate foraging resources (*i.e.*, "enough" prey, and/or prey with the optimum nutritional value for themselves or their young) are unavailable in close proximity to their nesting areas, murrelets may be forced to forage at greater distances or to abandon their nests (Huff et al. 2006). Consequently, the distribution and abundance of prey suitable for feeding chicks may greatly influence the overall foraging behavior and location(s) during the nesting season, may affect reproductive success (Becker et al. 2007), and may significantly affect the energy demand on adults by influencing both the foraging time and number of trips inland required to feed nestlings (Kuletz 2005).

Nesting Biology

Incubation is shared by both sexes, and incubation shifts are generally one day, with nest exchanges occurring at dawn (Nelson 1997, Bradley 2002). Hatchlings appear to be brooded by a parent for one or two days and then left alone at the nest for the remainder of the chick period (from hatching until fledging) while both parents spend most of their time foraging at sea. Both parents feed the chick (usually a single fish carried in the bill) and the chick typically receives 1-8 meals per day (mean 3.2) (Nelson 1997). About two-thirds of feedings occur early in the morning, usually before sunrise, and about one-third occur at dusk. Feedings are sometimes scattered throughout the day (Hamer and Nelson 1995a). Chicks fledge 27-40 days after

hatching, at 58-71 percent of adult mass (Nelson 1997). Fledging has seldom been documented, but it typically appears to occur at dusk (Nelson 1997).

Nest Tree Characteristics

Lank et al. (2003) states that murrelets "occur during the breeding season in near-shore waters along the north Pacific coastline from Bristol Bay in Alaska to central California", nesting in single platform trees generally within 20 miles of the coast and older forest stands generally within 50 miles of the coast. Unlike most auks, murrelets nest solitarily on mossy platforms of large branches in old-forest trees (Lank et al. 2003). Suitable murrelet habitat may include contiguous forested areas with conditions that contain potential nesting structure. These forests are generally characterized by large trees greater than 18 inches dbh, multi-storied canopies with moderate canopy closure, sufficient limb size and substrate (moss, duff, etc.) to support nest cups, flight accessibility, and protective cover from ambient conditions and potential avian predators (Manley 1999, Burger 2002, Nelson and Wilson 2002). Over 95 percent of measured nest limbs were ≥15 cm diameter, with limb diameter ranges from 7-74 cm diameter (Burger 2002). Nelson and Wilson (2002) found that all 37 nest cups identified were in trees containing at least seven platforms. All trees in their study were climbed, however, and ground-based estimates of platforms per tree in the study were not analyzed. Lank et al. (2003) emphasizes that murrelets do not select nest sites based on tree species, but rather they select those individual trees that offer suitable nest platforms. Nest cups have been found in deciduous trees, albeit rarely and nest trees may be scattered or clumped throughout a forest stand.

A tree with potential nesting structure in Oregon typically has the following characteristics;

1. It occurs within 50 miles (81 km) of the coast (USDI FWS 1997, p. 32);
2. It is a conifer tree (USDI FWS 1997, p. 18, Burger 2002, p. 39);
3. It is ≥ 19.1 in. (49 cm) (dbh) in diameter and > 107 ft. (33 m) in height (Nelson and Wilson 2002, p 32), although smaller trees have been documented in Alaska (Nelson 1997, p. 30);
4. It has ≥ one platform with the following characteristics
    a. It is ≥ 4 in. (10 cm) wide (Nelson 1997, p. 30);
    b. It has nesting substrate (*e.g.*, moss, epiphytes, duff) (Burger 2002, p. 42; Nelson and Wilson 2002, pp. 24, 100),
    c. It is in the live crown of the tree, either on the tree with nesting structure or on an adjacent tree (how about right after noon., p. 16; Nelson and Wilson 2002, pp. 24,98 & 99);
    d. It is located ≥ 32.5 ft. (9.9 m) above the ground (Nelson and Wilson 2002, p. 28); and
5. It has an access route through the canopy that a murrelet could use to approach and land on the platform (Nelson and Wilson 2002, p. 103). Because access should be viewed from above the canopy and we are assessing habitat from below the canopy, this aspect of nesting habitat may not be visible. Nelson and Wilson (2002, p. vii) suggests assessing access by looking for canopy layering, either natural (streams, gaps) or man-made edges and gaps as measures of access.

Nest Stand Characteristics

Nest stands are typically composed of low elevation conifer species. In California, nest sites have been located in stands containing old-growth redwood and Douglas-fir, while nests in Oregon and Washington have been located in stands dominated by Douglas-fir, western hemlock and Sitka spruce. Murrelets appear to select forest stands greater than 123.6 acres (50 ha) (Burger 2002), but will use small patches of habitat surrounded by larger patches of unsuitable habitat (Nelson and Wilson 2002, p. 104). In surveys of mature or younger second-growth forests in California, murrelets were only found in forests where there were nearby old-growth stands or where residual older trees remained (USDI FWS 1992, Singer et al. 1995).

At the stand level, vertical complexity is correlated with nest sites (Meekins and Hamer 1998, Manley 1999, Waterhouse et al. 2002, Nelson and Wilson 2002), and flight accessibility is probably a necessary component of suitable habitat (Burger 2002). Some studies have shown higher murrelet activity near stands of old-forest blocks over fragmented or unsuitable forest areas (Paton et al. 1992, Rodway et al. 1993, Burger 1995, Deschesne and Smith 1997, Rodway and Regehr 2002), but this correlation may be confounded by ocean conditions, distance inland, elevation, survey bias and disproportionately available habitat. Nelson and Wilson (2002) found that potential nest platforms per acre were a strong correlate for nest stand selection by murrelets in Oregon.

Adjacent forests can contribute to the conservation of the murrelet by reducing the potential for windthrow during storms by providing area buffers and creating a landscape with a higher probability of occupancy by murrelets (USDI FWS 1996, Burger 2001, Meyer et al. 2002, and Raphael et al. 2002). Trees surrounding and within the vicinity of a potential nest tree(s) may provide protection to the nest platform and potentially reduce gradations in microclimate (Chen et al. 1993).

Landscape Characteristics

Studies have determined the characteristics of murrelet nesting habitat at a landscape-scale and the correlation of occupancy using a variety of methods, including predictive models, radio telemetry, audio-visual surveys (Evans Mack et al. 2003), and radar. McShane et al. (2004, p. 4-103) reported, "At the landscape level, areas with evidence of occupancy tended to have higher proportions of large, old-growth forest, larger stands and greater habitat complexity, but distance to the ocean (up to about 37 miles [60 km]) did not seem important." Raphael et al. (2016a, p. 115, in Falxa and Raphael 2016) found that among the factors they investigated, nesting habitat factors (amounts and pattern, large contiguous patches) were the best predictors of murrelet population distribution and trends at sea. Recently, Betts and others (2020, pp. 5-7) found occupancy was correlated with amounts of mature forest, ocean conditions, and distance to the coast. Elevation had a negative association in some studies with murrelet habitat occupancy (Burger 2002). Hamer and Nelson (1995b) sampled 45 nest trees in British Columbia, Washington, Oregon, and California and found the mean elevation to be 1,089 feet (332 m).

Multiple radar studies (*e.g.*, Burger 2001, Cullen 2002, Raphael et al. 2002, Steventon and Holmes 2002) in British Columbia and Washington have shown that radar counts of murrelets are positively associated with total watershed area, increasing amounts of late-seral forests, and with increasing age and height class of associated forests. Murrelet radar counts are also

negatively associated with increasing forest edge and areas of logged and immature forests (McShane et al. 2004). Several studies have concluded that murrelets do not pack into higher densities within remaining habitat when nesting habitat is removed (Burger 2001, Manley et al. 2001, Cullen 2002).

There is a relationship between proximity of human-modified habitat and increased avian predator abundance. However, increased numbers of avian predators does not always result in increased predation on murrelet nests. For example, Luginbuhl et al. (2001, p. 565) report, in a study using simulated murrelet nests, that "Corvid numbers were poorly correlated with the rate of predation within each forested plot". Luginbuhl et al. (2001, p. 569), conclude, "that using measurements of corvid abundance to assess nest predation risk is not possible at the typical scale of homogenous plots (0.5-1.0 km^2 in our study). Rather this approach should be considered useful only at a broader, landscape scale on the order of 5-50 km^2 (based on the scale of our fragmentation and human-use measures)."

Artificial murrelet nest depredation rates were highest in western conifer forests where stand edges were close to human development (Luginbuhl et al. 2001), and Bradley (2002) found increased corvid densities within three miles of an urban interface, probably due to supplemental feeding opportunities from anthropogenic activities. Golightly et al. (2002) found extremely low reproductive success for murrelets nesting in large old-growth blocks of redwoods in the California Redwoods National and State Parks. Artificially high corvid densities from adjacent urbanization and park Campgrounds are suspected to be a direct cause of the high nesting failure rates for murrelets in the redwoods parks.

If the surrounding landscape has been permanently modified to change the predators' numbers or densities through, for example, agriculture, urbanization, or recreation, and predators are causing unnaturally high nest failures, murrelet reproductive success may remain depressed. Because corvids account for the majority of depredations on murrelet nests and corvid density can increase with human development, corvid predation on murrelet habitat is a primary impact consideration. The threat of predation on murrelet populations (both nests and adults) appears to be greater than previously anticipated (McShane et al. 2004).

Population Dynamics

Current population and distribution of the listed species
Since 2014, the at-sea-surveys moved to an annual every-other zone survey effort, with Conservation Zones 1 and 3 surveyed in even years and zones 2, 4, and 5 surveyed in odd years (Figure MAMU 1). Due to the staggered surveys, the At-sea Monitoring-2021 Summary Report (McIver et al. 2022) reported the range-wide population estimate to be 19,700 in 2020 (Table MAMU 1). The 2021 surveys estimated approximately 3,100 murrelets in Conservation Zone 1 and 8,400 murrelets in Conservation Zone 3 (McIver et al. 2021a, p. 3). Conservation Zone 1 continues to show a declining population (-5.0 annual rate of change) while Conservation Zone 3 continues to show a stable to increasing population (1.5 annual rate of change) (Table MAMU 2). Recovery zones are the functional equivalent of recovery units as defined by Service policy (USDI FWS 1997, p. 115). The 2022 surveys of Conservation Zones 2, 4 and 5 indicate the population in Conservation Zone 2 continues to decline, with a -3.3 annual rate of change, while

Conservation Zone 4 remains the strongest zone with a 2.8 annual rate of change, with 95 percent confidence intervals that do not overlap zero (McIver et al. 2022, Table 5, p. 20).

The data no longer demonstrate a significant murrelet population decline within the range of the NWFP, but the decline is still significant in WA (Table MAMU 2). This lack of a demonstrated NWFP-wide decline may be due to sample size or statistical power of the sampling design (see Table MAMU 1 for confidence intervals). Conservation Zones 3 and 4 support 47 percent of the murrelet population within the U.S. (Table MAMU 3), and consistently have the highest – at-sea densities during the nesting season and have recently continued to have positive annual rates of change. Murrelets continue to occur in the lowest abundance in Conservation Zones 5 and 6.

At-sea surveys are also conducted in Conservation Zone 6, independent of the NWFP Effectiveness Monitoring Program, using similar survey methods. The 2018, marbled murrelet population for Conservation Zone 6 is estimated at about 370 birds (95 percent confidence limit [CL]: 250-546; Felis et al. 2019, p. 7 Table 3, see Table MAMU 4).

Figure MAMU 1. The six geographic areas identified as Conservation Zones in the recovery plan for the murrelet (USDI FWS 1997, p. 114). Critical habitat beyond these mapped areas is considered part of the conservation zone (USDI FWS 1997, p. 127).

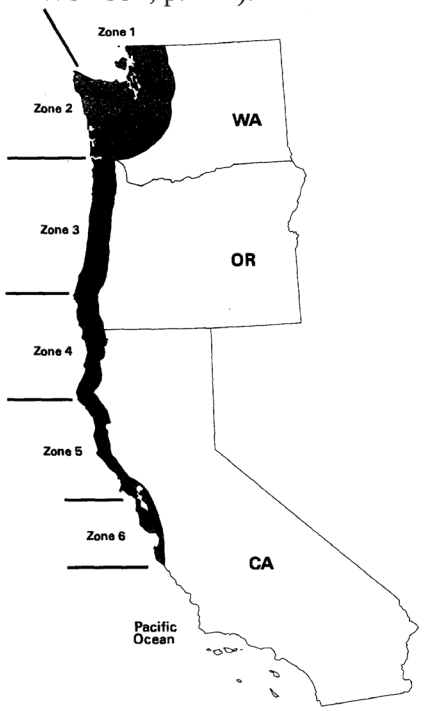

Table MAMU 1. Summary of 2001-2019 marbled murrelet density and abundance estimates (rounded to nearest 100 birds) for Conservation Zones 1-5 combined. Numbers in some years may differ slightly from those in previous summary reports (as indicated by an asterisk [*], as a result of additional data quality reviews performed in 2019. Note that the most recent rangewide estimate is always one year behind the current sampling year because it takes two years to derive estimates when sampling units every other year. (McIver et al. 2022, p. 10, Table 2).

Year	Density (birds/km^2)	Bootstrap Standard Error (birds/km^2)	Coefficient of Variation of Density (%)	Birds	Birds Lower 95% CL	Birds Upper 95% CL
2001*	2.47	0.25	10.1	21,800	17,500	26,100
2002*	2.56	0.31	11.9	22,500	17,300	27,800
2003*	2.60	0.25	9.6	22,800	18,500	27,100
2004	2.46	0.26	10.5	21,600	17,100	26,000
2005	2.30	0.25	10.7	20,200	16,000	24,400
2006	2.09	0.17	8.2	18,300	15,400	21,300
2007	1.97	0.27	13.7	17,300	12,700	22,000
2008	2.06	0.18	8.9	18,100	15,000	21,300
2009	1.96	0.21	10.6	17,200	13,600	20,800
2010	1.89	0.21	11.1	16,600	13,000	20,200
2011	2.50	0.31	12.6	22,000	16,600	27,400
2012	2.40	0.27	11.3	21,100	16,400	25,800
2013	2.24	0.25	11.1	19,700	15,400	23,900
2014*	2.43	0.22	9.1	21,300	17,500	25,100
2015	2.75	0.26	9.5	24,100	19,700	28,600
2016	2.58	0.26	10.0	22,600	18,200	27,100
2017	2.62	0.26	10.1	23,000	18,500	27,600
2018	2.56	0.29	11.4	22,500	17,500	27,600
2019	2.42	0.28	11.5	21,200	16,400	26,000
2020	2.24	0.24	10.9	19,700	15,500	23,900

Table MAMU 2. Estimates of average annual rate of marbled murrelet population change based on at-sea population surveys. Confidence limits are for the estimates of percent annual change. The P-value is based on a 2-tailed test for whether the annual rate of change is less than zero, significant values are shaded in gray. Please note that the period of analysis vary by sampling unit, depending on which year sampling units were last surveyed. (McIver et al. 2022, p. 20 Table 5).

Year	State	Density (murrelets per km^2)	Murrelets		Murrelets 95% CL Lower	Murrelets 95% CL Upper
			Year	State		
Zone 1[1]	2001-2020	-5.0	-7.0	-2.9	0.579	<0.001
Zone 2[2]	2001-2021	-3.3	-6.1	0.4	0.226	0.027
Zone 3[1]	2000-2020	1.5	0.02	3.1	0.175	0.047
Zone 4[2]	2000-2021	2.8	0.9	4.6	0.361	0.005
Zone 5	2000-2021	1.5	−7.7	11.7	0.000	0.726
WA	2001-2020	-4.1	-5.5	-2.8	0.670	<0.001
OR	2000-2020	2.0	0.8	3.2	0.374	0.002
CA	2000-2021	3.9	2.2	5.6	0.515	<0.001
All Zones	2001-2020	0.3	−0.6	1.2	0.000	0.486

[1] Last surveyed in 2020
[2] Last surveyed in 2021

Table MAMU 3. Summary of 2000 to 2019 marbled murrelet density and population size estimates within the NWFP area at the State scale (Periods of analysis: 2001-2021 for Washington, 2000-2020 for Oregon and 2000-2020 for California 2000-2021 (From McIver et al. 2022, pp. 18 - 19, Table 4).

Year	State	Density (murrelets per km2)	Murrelets	Murrelets 95% CL Lower	Murrelets 95% CL Upper	Area (km2)
2001	WA	2.01	10,453	7,057	13,849	5,188
2002	WA	2.29	11,789	7,507	16,071	5,151
2003	WA	2.42	12,467	8,906	16,028	5,149
2004	WA	1.65	8,474	5,625	11,322	5,149
2005	WA	2.05	10,533	7,179	13,887	5,148
2006	WA	1.61	8,280	6,024	10,536	5,148
2007	WA	1.85	9,520	5,946	13,095	5,148
2008	WA	1.29	6,628	4,808	8,448	5,148
2009	WA	1.34	6,886	4,486	9,285	5,148
2010	WA	1.10	5,679	3,840	7,518	5,148
2011	WA	1.63	8,376	5,802	10,950	5,148
2012	WA	1.87	9,629	6,116	13,142	5,148
2013	WA	1.10	5,665	3,217	8,114	5,148
2014	WA	0.97	4,998	3,311	6,686	5,148
2015	WA	1.46	7,494	4,711	10,276	5,148
2016	WA	1.38	7,095	4,060	10,130	5,148
2017	WA	1.16	5,987	3,209	8,765	5,148
2018	WA	1.08	5,551	2,795	8,307	5,148
2019	WA	1.00	5,151	2,958	7,344	5,148
2020	WA	0.87	4,481	2,997	5,965	5,148
2000	OR	3.85	7,983	4,992	10,974	2,071
2001	OR	4.43	9,168	6,537	11,800	2,071
2002	OR	3.64	7,530	4,727	10,332	2,071
2003	OR	3.56	7,380	5,370	9,390	2,075
2004	OR	4.40	9,112	6,833	11,391	2,071
2005	OR	3.36	6,966	4,812	9,121	2,071
2006	OR	3.68	7,617	5,916	9,318	2,071
2007	OR	2.59	5,357	3,332	7,381	2,071
2008	OR	3.64	7,541	5,682	9,400	2,071
2009	OR	3.58	7,423	5,208	9,638	2,071
2010	OR	3.95	8,182	5,743	10,622	2,071
2011	OR	4.05	8,379	5,943	10,816	2,071
2012	OR	3.76	7,780	5,605	9,956	2,071
2013	OR	4.74	9,819	7,195	12,443	2,071
2014	OR	5.50	11,384	8,839	13,930	2,071
2015	OR	5.30	10,975	8,188	13,762	2,071
2016	OR	4.86	10,060	7,541	12,579	2,071
2017	OR	5.29	10,959	8,044	13,874	2,071

2018	OR	5.34	11,063	7,610	14,515	2,071
2019	OR	4.99	10,339	7,070	13,607	2,017
2020	OR	4.69	10,742	7,565	13,919	2,071
2000	CA	2.28	3,571	1,884	5,258	1,566
2001	CA	1.31	2,051	608	3,495	1,566
2002	CA	2.04	3,202	2,181	4,224	1,566
2003	CA	1.9	2,985	1,753	4,217	1,567
2004	CA	2.55	3,986	2,197	5,775	1,566
2005	CA	1.73	2,710	1,896	3,523	1,566
2006	CA	1.56	2,438	1,727	3,149	1,566
2007	CA	1.56	2,440	1,465	3,415	1,566
2008	CA	2.53	3,964	2,802	5,126	1,566
2009	CA	1.87	2,928	1,589	4,268	1,566
2010	CA	1.69	2,644	1,098	4,191	1,566
2011	CA	3.33	5,217	1,962	8,472	1,566
2012	CA	2.24	3,514	1,812	5,216	1,566
2013	CA	2.67	4,178	2,662	5,694	1,566
2014	CA	3.14	4,922	3,410	6,433	1,566
2015	CA	3.62	5,666	3,970	7,361	1,566
2016	CA	3.49	5,469	3,963	6,974	1,566
2017	CA	3.88	6,073	4,415	7,730	1,566
2018	CA	3.77	5,907	4,164	7,650	1,566
2019	CA	3.67	5,741	3,894	7,588	1,566
2020	CA	3.33	5,217	3,669	6,765	1,566
2021	CA	2.47	3,870	2,727	5,014	1,566

Table MAMU 4. Annual at-sea murrelet estimates for surveys drawn in both directions, surveys only drawn from the north, and surveys only drawn from the south, U.S. Fish and Wildlife Service Conservation Zone 6, central California, 1999–2018. (Felis et al. 2019, p. 7 Table 3).

Year	Both directions			North			South		
	N	95% CI	*n*	*N*	95% CI	*n*	*N*	95% CI	*n*
1999		N/A		487	333–713	5		No surveys	
2000		N/A		496	338–728	8		No surveys	
2001	661	556–786	15	637	441–920	8	733	583–922	7
2002	683	561–832	15	628	487–809	9	729	494–1,075	6
2003	699	567–860	12	615	463–815	6	782	570–1,074	6
2004		No surveys			No surveys			No surveys	
2005		No surveys			No surveys			No surveys	
2006		No surveys			No surveys			No surveys	
2007	378	238–518	4	269	109–429	2	488	349–626	2
2008	174	91–256	4	122	61–184	1	225	131–319	3
2009	631	449–885	8	495	232–1,054	4	789	522–1193	4
2010	446	340–585	7	366	240–559	4	560	343–925	3
2011	433	339–553	6	320	225–454	2	452	331–618	4
2012	487	403–588	6	475	373–605	3	501	359–699	3
2013	628	386–1,022	6	439	233–827	3	556	126–2,456	3
2014	438	307–624	9	444	258–765	4	434	231–817	4
2015	243	152–386	9	225	136–370	4	296	159–549	5
2016	657	406–1,063	7	510	358–726	3	720	297–1,747	4
2017	530	384–732	9	413	247–689	4	790	487–1,280	5
2018	370	250–546	9	513	334–788	4	227	112–460	5

The at-sea distribution also exhibits discontinuity within Conservation Zones 1, 2, 5, and 6, where five areas of discontinuity are noted: a segment of the border region between British Columbia, Canada and Washington, southern Puget Sound, WA, Destruction Island, WA to Tillamook Head, OR, Humboldt County, CA to Half Moon Bay, CA, and the entire southern end of the breeding range in the vicinity of Santa Cruz and Monterey Counties, CA (McShane et al. 2004, p. 3-70).

Current Nesting Habitat

The most recent nesting habitat evaluation was published in 2021 for the NWFP's series of 25-year monitoring reviews. Lorenz et al. (2021) assessed habitat changes between 1993 and 2017 through an updated habitat assessment process that re-evaluated the assumptions, methods and reporting as compared to past reviews. The authors applied the current assessment parameters to the data from 1993, so while the results of the 25-year review are not directly comparable to the past years' reports; the changes reported between 1993 and 2017 are accurate. As the interim data is not directly comparable, we retained the information from both the 15-year and 20-year reports in this Status of the Species. A comprehensive discussion of how the 25-year monitoring differed from the 20-year modeling is found on pages 11-17 of the 25-year monitoring report (Lorenz et al. 2021).

Early habitat assessments include McShane et al. (2004, p. 4-2), in which authors reviewed and summarized habitat estimates from 16 sources and estimated the amount of murrelet nesting habitat at 2,223,048 acres distributed throughout Washington, Oregon, and California (McShane et al. 2004, p. 4-5). At that time, Washington State contained almost half of all remaining nesting habitat with an estimated 1,022,695 acres or 48 percent of the total. Approximately 93 percent (2,000,000 acres) were reported to occur on Federal lands (McShane et al. 2004, p. 4-10).

In another effort, Raphael et al. (2006, in Huff et al. 2006) produced two spatial models for the NWFP Effectiveness Monitoring program to predict the amount, location, and distribution of murrelet nesting habitat. Combining vegetation-based maps derived from satellite imagery and prior estimates of habitat on State and private lands from 1994 to 2003, (Raphael et al. 2006, p. 109 in Huff et al. 2006) used a panel of experts to reclassify 22 old-growth forest classes into four classes of murrelet habitat based upon nesting suitability. Referred to as the Expert Judgment Model, the model classifies existing forest structure, based upon percent conifer cover, canopy structure, quadratic mean diameter, and forest patch size, into four classes of suitability 4 for nesting murrelets. Raphael et al. (2006, p. 116-123 in Huff et al. 2006) found that across the murrelet range, most habitat-capable land (52 percent) is unsuitable nesting habitat (Class 1) and 18 percent is classified as Class 4 habitat (highest suitability), with an estimated 41 percent of the Class 4 habitat (1,620,800 acres) occurring on non-Federal lands.

The second habitat model developed by Raphael et al. (2006 in Huff et al. 2006) used the Biomapper Ecological Niche-Factor Analysis methodology developed by Hirzel et al. (2002). The resulting murrelet habitat suitability maps are based on both the physical and vegetative attributes adjacent to known murrelet occupied polygons or nest locations for each NWFP province. The maps provide a range of habitat suitability values, each with acreage estimates. In Washington, 2.1 million acres of habitat were rated with a habitat suitability (HS) greater than 60 and captured 82 percent of the stands documented as occupied, while 440,700 acres of habitat were rated as HS >80 habitat and captured 36 percent of the known occupied stands.

Falxa and Raphael (2016) used habitat modeling to estimate habitat within the NWFP. Because the modeling was improved (updated data, models, and methods) from the previous modeling effort, results, including the 1993 baseline, are different (Falxa and Raphael 2016, p. 85– see Table 46). The habitat analysis output for the 20-year NWFP review divided habitat in to one of four classes, with class 3 and 4 representing "higher suitability" habitat (Falxa and Raphael 2016, p. 54). Lorenz et al. (2021, in entirety), followed a similar approach in the recent NWFP habitat update, with updated GNN and forest disturbance data from the U.S. Forest Service's Laboratory for Applications of Remote Sensing in Ecology. This 25-year monitoring report applied updated parameters for training the models and a slightly reduced edge width for identifying core habitat (Lorenz et al. 2021, pp. 12-13). This report does not describe habitat in the classes used in the previous reports, but instead uses the terminology; "higher probability", "moderate probability", and "lower probability", referring to the likelihood of murrelet occupancy. While the terminology has been updated, the 25-year report classes still correspond with the habitat classifications from previous NWFP monitoring reports, with "higher probability" corresponding with Class 4, "moderate probability" corresponding with Class 3, and "lower probability" corresponding with Classes 1 and 2 (Lorenz et al. 2021, p. 12-13)

Status of Nesting Habitat Lost Since 1992

The Service has determined that the rate of habitat loss has declined since listing, particularly on Federal lands due to implementation of the NWFP (USDI FWS 2004, pp. 11 and 13). Between 1992 and 2003, the estimated loss of suitable murrelet habitat totaled 22,398 acres in Washington, Oregon, and California combined, of which 5,364 acres resulted from timber harvest and 17,034 acres resulted from natural events (McShane et al. 2004, pp. 4-64). Those data primarily represented losses on Federal lands, and did not include data for most private or State lands within the murrelet's range.

Falxa and Raphael (2016, p. 72) used habitat modeling to estimate losses of potential murrelet habitat for the period from 1993 to 2012 on both Federal and non-federal lands within the five Conservation Zones in the NWFP area. They estimated there were 2.53 million acres of potential nesting habitat over all lands in the murrelet's range in Washington, Oregon, and California at the start of the NWFP (1993). Of this, 0.46 million acres were identified as the highest quality habitat. Ninety percent of the 1993 potential nesting habitat on federally-administered lands occurred within reserved-land allocations. Forty one percent of potential nesting habitat occurred on non-federal lands, including 44 percent of the highest quality habitat.

Raphael et al. (2016b, p. 72, in Falxa and Raphael 2016) found a net loss of 12 percent of potential nesting habitat from 1993 to 2012. Loss on Federal lands was about 2 percent of the potential nesting habitat from 1993 to 2012, and on non-federal lands the loss was about 27 percent of the potential nesting habitat from 1993 to 2012. Fire was the major cause of nesting habitat loss on Federal lands since 1993; timber harvest was the primary cause of loss on non-federal lands. Raphael et al. (2016b, p. 37, in Falxa and Raphael 2016) concluded that the NWFP has been successful in conserving murrelet habitat on Federal lands and that losses of habitat on Federal lands will continue due to fires and other disturbance events, but they expect those losses to be exceeded by recovery of currently unsuitable habitat within reserves as forests mature.

Lorenz et al. (2021) completed the NWFP 25-year review including only three habitat classes based on presence and nesting probabilities, compared to the four classes from previous years (as described above), and thus the authors recalculated the 1993 habitat values based on the updated assumptions. They

estimated in 1993 approximately 1.51 million acres of higher probability nesting habitat were available across all lands in NWFP portion of the murrelet's range (p. 28). A majority (approximately 75 percent) of this habitat was on Federally managed lands in reserve land use allocations, but tended to be scattered fragments on the landscape rather than blocks of core habitat (p. 29). Over the 25 years of the plan, the authors note a loss of more than 20,000 acres of high quality habitat across the range (p. 29). This net loss of 1.4 percent of high probability nesting habitat from 1993 to 2017 includes a net loss of 1.8 percent of core habitat (Table MAMU 5 and Table MAMU 6). When reviewed by ownership, acres of high probability nesting habitat on federal and state lands increased by almost 3 percent from 1993 through 2017 but decreased on privately managed lands (p. 30-31). While habitat gains were reported on federal lands, modeling indicates core habitat was lost in Washington and California, and a majority of the increases in high probability habitat occurred in scattered parcels. Modeling indicates an increase in high probability habitat on Oregon's federal lands, primarily in identified reserve LUAs (p. 48). When reviewing changes across the three states in the NWFP, Washington experienced the greatest losses, including on federal lands, while Oregon dominantly indicated gains in the high probability nesting habitat on federal lands (Table MAMU 6). Authors were able to identify the cause of habitat loss in approximately 74 percent of the landscape, with 96 percent attributed to timber harvest (p. 31). On non-federal lands, 99 percent of high probability habitat loss was due to timber harvest (p. 48). Although, authors note that 66 percent of the loss of high probability core habitat was not attributed (p. 31).

Lorenz et al. (2021) caution comparing absolute habitat estimates of this report to previous versions, as modeling parameters change from report to report. Readers are encouraged review the habitat trends reported in each iteration. Trends in the 25-year report indicate an increase in higher probably core habitat in Oregon, which contrasts with the results of previous reports (Raphael et al. 2016). The authors reviewed this trend change and determined it is entirely attributable to the GNN data, which were determined to be more accurate than GNN data used in previous iterations (Lorenz et al. 2021, pp. 50-51).

Table MAMU 5. Distribution of murrelet nesting habitat on all lands, by habitat suitability class, for the baseline period (1993) and final year of analysis (2017). Table from Lorenz et al. (2021 p. 28, Table 7).

	1993			2017		
State/landowner	Lower probability	Moderate probability	Higher probability	Lower probability	Moderate probability	Higher probability
Washington						
Federal reserved	1,327,727	1,016,831	709,216	1,287,155	1,064,228	702,392
Federal nonreserved	306,865	101,086	38,268	275,401	131,177	39,641
Federal total	1,634,592	1,117,917	747,484	1,562,556	1,195,405	742,033
State	1,246,994	290,022	109,907	1,277,591	274,532	94,800
Other landowners	4,995,937	563,834	142,627	5,231,260	371,990	99,147
Total	7,877,523	1,971,773	1,000,018	8,071,407	1,841,927	935,980
Oregon						
Federal reserved	1,572,290	169,986	248,182	1,472,982	243,721	273,755
Federal nonreserved	403,251	27,630	27,859	365,324	55,144	38,272
Federal total	1,975,541	197,616	276,041	1,838,306	298,865	312,027
State	537,229	101,217	56,539	449,922	163,971	81,092
Other landowners	3,116,361	210,315	138,640	3,114,679	226,070	124,567
Total	5,629,131	509,148	471,220	5,402,907	688,906	517,686
California						
Federal reserved	764,231	7,841	11,377	765,883	6,367	11,200
Federal nonreserved	217,260	234	461	217,222	260	473
Federal total	981,491	8,075	11,838	983,105	6,627	11,673
State	164,909	7,346	20,295	166,055	6,253	20,242
Other landowners	2,015,236	31,145	9,707	2,026,379	23,059	6,649
Total	3,161,636	46,566	41,840	3,175,539	35,939	38,564
Plan area total						
Federal reserved	3,664,248	1,194,658	968,775	3,526,020	1,314,316	987,347
Federal nonreserved	927,376	128,950	66,588	857,947	186,581	78,386
Federal total	4,591,624	1,323,608	1,035,363	4,383,967	1,500,897	1,065,733
State	1,949,132	398,585	186,741	1,893,568	444,756	196,144
Other landowners	10,127,534	805,294	290,974	10,372,318	621,119	230,353
Total	16,668,290	2,527,487	1,513,078	16,649,853	2,566,772	1,492,230

Table MAMU 6. Net changes in acres of higher probability nesting habitat and core, edge, and scatter between 1993 and 2017 by State and landowner (Lorenz et al. 2021, p. 32, Table 10).

State/landowner	Higher probability nesting habitat	Core	Edge	Scatter
Washington				
Federal reserved	-6,824	-2,585	-3,683	-556
Federal nonreserved	1,373	0	37	1,336
Federal total	-5,451	-2,585	-3,646	780
State	-15,107	-128	-762	-14,217
Other landowners	-43,480	-437	-1,725	-41,318
Total	-64,038	-3,150	-6,133	-54,755
Oregon				
Federal reserved	25,573	656	2,251	22,665
Federal nonreserved	10,413	254	848	9,310
Federal total	35,986	910	3,099	31,975
State	24,553	830	1,857	21,866
Other landowners	-14,073	-1,072	-3,651	-9,347
Total	46,466	668	1,305	44,494
California				
Federal reserved	-177	-6	2	-174
Federal nonreserved	12	0	-6	18
Federal total	-165	-6	-4	-156
State	-53	-18	31	-66
Other landowners	-3,058	-16	-122	-2,920
Total	-3,276	-40	-95	-3,142
Plan area total				
Federal reserved	18,572	-1,935	-1,430	21,935
Federal nonreserved	11,798	254	879	10,664
Federal total	30,370	-1,681	-551	32,599
State	9,403	684	1,126	7,583
Other landowners	-60,621	-1,525	-5,498	-53,585
Total	-20,848	-2,522	-4,923	-13,403

Note: Color gradient indicates the percentile rank among all values in the analysis area and is bounded by the maximum (green) and minimum (red).

Consulted on effects that impact suitable habitat rangewide from October 1, 2003 to March 9, 2022, are summarized in Table MAMU 7. The Service has consulted on the removal of 123,969 acres of nesting habitat acres have been 'removed' in association with consultations. This is a substantial increase (just under 100,000 acres) over the last two years, and is directly associated to recent, long-term, HCP consultations in Washington and Oregon. Habitat effects reported in the tracking database have not increased measurably during that time.

Table MAMU 7. Aggregate results of all suitable habitat (acres) affected as determined by section 7 consultation for the marbled murrelet; summary of effects by Conservation Zone and habitat type from October 1, 2003 to Present (from USDI FWS Tracking and Integrated Logging System database).

Table A: Aggregate Results of All Suitable Habitat (Acres) Affected by Section 7 Consultation for the Marbled Murrelet; Summary of Effects By Conservation Zone and Habitat Type From October 1st, 2003 to Present.

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Conservation Zone[1]	Authorized Habitat Effects[2]		Reported Habitat Effects[2]	
	Stands[3]	Remnants[4]	Stands[3]	Remnants[4]
Puget Sound	-24,356	0	-1	0
Western Washington	-17,583	0	-12	0
Outside CZ Area in WA	0	0	0	0
Oregon Coast Range	-65,761	-2,671	-2,924	-1,608
Siskiyou Coast Range	-16,193	-271	-5,184	-187
Outside CZ Area in OR	-36	-3	0	0
Mendocino	0	0	0	0
Santa Cruz Mountains	0	0	0	0
Outside CZ Area in CA	0	0	0	0
Total	**-123,929**	**-2,945**	**-8,121**	**-1,795**

Notes:

1. Conservation Zones (CZ) six zones were established by the 1997 Recovery Plan to guide terrestrial and marine management planning and monitoring for the Marbled Murrelet. *Marbled Murrelet Recovery Plan, September, 1997*
2. Habitat includes all known occupied sites, as well as other suitable habitat, though it is not necessarily occupied. Importantly, there is no single definition of suitable habitat, though the Marbled Murrelet Effectiveness Monitoring Module is in the process. Some useable working definitions include the Primary Constituent Elements as defined in the Critical Habitat Final Rule, or the criteria used for Washington State by Raphael et al. (Condor 104:331-342).
3. Stand: A patch of older forest in an area with potential platform trees.
4. Remnants: A residual/remnant stand is an area with scattered potential platform trees within a younger forest that lacks, overall, the structures for marbled murrelet nesting.

Historical status and distribution

Murrelet abundance during the early 1990s in Washington, Oregon, and California was estimated at 18,550 to 32,000 birds (Ralph et al. 1995).

The historical breeding range of the murrelet extends from Bristol Bay, Alaska, south to the Aleutian Archipelago, northeast to Cook Inlet, Kodiak Island, Kenai Peninsula and Prince William Sound, south coastally throughout the Alexander Archipelago of Alaska, and through British Columbia, Washington, Oregon, to northern Monterey Bay in central California. Birds winter throughout the breeding range and also occur in small numbers off southern California.

At the time of listing, the distribution of active nests in nesting habitat was described as non-continuous (USDI FWS 1997, p. 14). The at-sea extent of the species currently encompasses an area similar in size to the species' historic distribution, but with the extremely low density of murrelets in Conservation Zone 5, and the small population in Conservation Zone 6, the southern end of the murrelet distribution is sparsely populated compared to Conservation Zones 1-4 (Table 42).

Population structure
Murrelets are long-lived seabirds that spend most of their life in the marine environment, with breeding adult birds, usually age 3 or greater, annually nesting in the forest canopy of mature and old-growth forests from about March 24 through September 15. Murrelets have a naturally low reproductive rate, with pair's reproduction limited to one young per year.

Recovery Zones
The Recovery Plan identified six Conservation Zones (Figure 11) throughout the listed range of the species: Puget Sound (Conservation inland zone 1), Western Washington Coast Range (Conservation inland zone 2), Oregon Coast Range (Conservation Zone 3), Siskiyou Coast Range (Conservation Zone 4), Mendocino (Conservation Zone 5), and Santa Cruz Mountains (Conservation Zone 6). Recovery zones are the functional equivalent of recovery units as defined by Service policy (USDI FWS 1997, p. 115). Conservation Zones 3 and the northern part of 4 occur in Oregon and these conservation zones includes all lands within 35 miles of the coast and any lands designated as critical habitat beyond 35 miles of the coast (USDI FWS 1997, p. 127).

Reproductive estimates
Generally, estimates of murrelet fecundity are directed at measures of breeding success, either from direct assessments of nest success in the terrestrial environment, marine counts of hatch-year birds, or computer models. Telemetry estimates are typically preferred over marine counts for estimating breeding success due to fewer biases (McShane et al. 2004, p. 3-2). However, because of the challenges of conducting telemetry studies, estimating murrelet reproductive rates with an index of reproduction, referred to as the juvenile ratio (Ŕ), continues to be important, despite the debate over use of this index (see discussion in Beissinger and Peery 2007, p. 296).

Although difficult to obtain, nest success rates are available from telemetry studies conducted in California (Hebert and Golightly 2006; Peery et al. 2004) and Washington (Bloxton and Raphael 2006). In northwestern Washington, Bloxton and Raphael (2005, p. 5) documented a nest success rate of 0.20 (2 chicks fledging from 10 nest starts). In central California, murrelet nest success is 0.16 (Peery et al. 2004, p. 1098) and in northern California it is 0.31 to 0.56 (Hebert and Golightly 2006, p. 95). No studies or published reports from Oregon are available.

Unadjusted and adjusted values for annual estimates of murrelet juvenile ratios at sea suggest extremely low breeding success in all parts of the listed range, including Conservation Zone 4 (mean ratio for 2000-2011 of 0.046, range 0.01 to 0.1, CCR 2012, p. 11), northern California (0.003 to 0.029 - Long et al. 2008, pp. 18-19; CCR 2012, p. 11), central California (0.035 and 0.032 - Beissinger and Peery 2007, pp. 299, 300), and in Oregon (0.0254 - 0.0598 - CCR 2008, p. 13). Estimates for Ŕ (adjusted) in the San Juan Islands in Washington have been below 0.15 every year since surveys began in 1995, with three of those years below 0.05 (Raphael et al. 2007b, p. 16).

These current estimates of Ŕ are assumed to be below the level necessary to maintain or increase the murrelet population within the listed range. Demographic modeling suggests murrelet population stability requires a minimum reproductive rate of 0.2 to 0.3 chicks per pair per year (Beissinger and Peery 2007, p. 302; USDI FWS 1997, p. B-35; Beissinger 1995, p. 390). The estimates for Ŕ discussed above from individual studies, as well as Ŕ estimates for the listed range (0.02 to 0.13) are all below the lowest estimated Ŕ value (0.2) identified as required for population stability (Beissinger and Peery 2007, p. 302).

The current estimates for Ŕ also appear to be well below what may have occurred prior to the murrelet population decline. Beissinger and Peery (2007, p. 298) performed a comparative analysis using historic data from 29 bird species to predict the historic Ŕ for murrelets in central California, resulting in an estimate of 0.27 (95 percent CI: 0.15 - 0.65). Therefore, the best available scientific information of current murrelet fecundity from model predictions, and from juvenile ratios and trend analyses based on population survey data appear to align well; both indicate that the murrelet reproductive rate is generally insufficient to maintain stable population numbers throughout all or portions of the species' listed range.

Status and Distribution

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Rangewide Trend, Population

There are two general approaches that researchers use to assess murrelet population trend: at-sea surveys and population modeling based on demographic data. In general, the Service assigns greater weight to population trend and status information derived from at-sea surveys than estimates derived from population models because survey information generally provides more reliable estimates of trend and abundance.

The annual rate of population change for all NWFP zones between 2000 and 2019 was 0.5 percent, based on at-sea surveys (McIver et al. 2021a, p. 20 and Table MAMU 2). However, these results are inconclusive because the confidence interval for the rate of population change overlap zero.

The lack of a conclusive trend in murrelet populations described above is different from previous reports. Previously, Miller et al. (2012) reported that the murrelet population was declining throughout its range (estimated at 29 percent decline for the listed population from 2001 to 2010). The annual population decline during 2001 to 2010 was 3.7 percent. It is unknown what is driving recent population levels. According to Falxa et al. (2016, p. 29, in Falxa and Raphael 2016) the increase in the murrelet population between 2011 and 2018 is too rapid, particularly in Conservation Zone 4, to be attributable to habitat change because nesting habitat takes many decades to several centuries to develop and is too slow a process to account for the rate of population change. Data does suggest that the habitat loss is likely contributing to variation in trends across the listed range of the murrelet (Falxa et al. 2016, p. 26, in Falxa and Raphael

2016). However, Lorenz et al. (2021, p. 48) found a positive relationship between habitat gains and population estimates in Oregon and California, but included that these relationships may be altered by at-sea changes and are not necessarily habitat driven. McIver et al. (2021b, p. 28), suggested that factors; local recruitment, abnormal adult presence on the water or a combination of factors, may be influencing the increase in the at-sea survey numbers for Conservation Zone 4. Authors describe how abnormal adult presence may be influenced by altered timing of nesting, increased numbers of non-breeding adults, or an influx of non-breeding adults from neighboring conservation zones. Additional research is necessary to decern the magnitude to which these variations in at-sea movements may influence the bi-annual survey results (p. 30).

Population Models

Prior to the use of survey data to estimate trend, demographic models were more heavily relied upon to generate predictions of trends and extinction probabilities for the murrelet population (Beissinger 1995; Cam et al. 2003; McShane et al. 2004; USDI FWS 1997). However, murrelet population models remain useful because they provide insights into the demographic parameters and environmental factors that govern population stability and future extinction risk, including stochastic factors that may alter survival, reproductive, and immigration/emigration rates.

In a report developed for the 5-year Status Review of the Murrelet in Washington, Oregon, and California (McShane et al. 2004, pp. 3-27 to 3-60), computer models were used to forecast 40-year murrelet population trends. A series of female-only, multi-aged, discrete-time stochastic Leslie Matrix population models were developed for each conservation zone to forecast decadal population trends over a 40-year period and extinction probabilities beyond 40 years (to 2100). The authors incorporated available demographic parameters (Table MAMU 8) for each conservation zone to describe population trends and evaluate extinction probabilities (McShane et al. 2004, p. 3-49).

McShane et al. (2004) used mark-recapture studies conducted in British Columbia by Cam et al. (2003) and Bradley et al. (2004) to estimate annual adult survival and telemetry studies or at-sea survey data to estimate fecundity. Model outputs predicted 3.1 to 4.6 percent mean annual rates of population decline per decade the first 20 years of model simulations in murrelet Conservation Zones 1 through 5 (McShane et al. 2004, p. 3-52). Simulations for all zone populations predicted declines during the 20 to 40-year forecast, with mean annual rates of 2.1 to 6.2 percent decline per decade (McShane et al. 2004, p. 3-52). These reported rates of decline are similar to the estimates of 4 to 7 percent per year decline reported in the Recovery Plan (USDI FWS 1997, p. 5).

Table MAMU 8. Murrelet demographic parameter values based on four studies all using Leslie Matrix models.

Demographic Parameter	Beissinger 1995	Beissinger and Nur 1997*	Beissinger and Peery (2007)	McShane et al. 2004
Juvenile Ratio (Ŕ)	0.10367	0.124 or 0.131	0.089	0.02 - 0.09
Annual Fecundity	0.11848	0.124 or 0.131	0.06-0.12	-
Nest Success	-	-	0.16-0.43	0.38 - 0.54
Maturation	3	3	3	2 - 5
Estimated Adult Survivorship	85 % – 90%	85 % – 88 %	82 % - 90 %	83 % – 92 %

*In USDI FWS (1997).

McShane et al. (2004, pp. 3-54 to 3-60) modeled population extinction probabilities beyond 40 years under different scenarios for immigration and mortality risk from oil spills and gill nets. Modeled results forecast different times and probabilities for local extirpations, with an extinction risk of 16 percent and mean population size of 45 individuals in 100 years in the listed range of the species (McShane et al. 2004, pp. 3-58).

Reason for Listing-Threats

When the murrelet was listed under the Endangered Species Act (USDI FWS 1992) and threats summarized in the Recovery Plan (USDI FWS 1997, pp. 43-76), several anthropogenic threats were identified as having caused the dramatic decline in the species:

- habitat destruction and modification in the terrestrial environment from timber harvest and human development caused a severe reduction in the amount of nesting habitat;
- unnaturally high levels of predation resulting from forest "edge effects";
- the existing regulatory mechanisms, such as land management plans (in 1992), were considered inadequate to ensure protection of the remaining nesting habitat and reestablishment of future nesting habitat; and
- manmade factors such as mortality from oil spills and entanglement in fishing nets used in gill-net fisheries.

There have been changes in the levels of these threats since the 1992 listing (USDI FWS 2004, pp. 11-12; USDI FWS 2009, pp. 27-67). The regulatory mechanisms implemented since 1992 that affect land management in Washington, Oregon, and California (for example, the NWFP) and new gill-netting regulations in northern California and Washington have reduced the threats to murrelets (USDI FWS 2004, pp. 11-12). The levels for the other threats identified in 1992 listing (USDI FWS 1992) including the loss of nesting habitat, predation rates, and mortality risks from oil spills and gill net fisheries (despite the regulatory changes) remained unchanged following the FWS's 2004, 5-year, rangewide status review for the murrelet (USDI FWS 2004, pp. 11-12). However, the continued downward population trends found Washington, combined with the species' continued vulnerability from a broad range of threats across its entire listed range are recognized as a serious concern for the species (USDI FWS 2019, p. 64-65).

New Threats

New threats identified in the FWS's 2009, 5-year review for the murrelet (USDI FWS 2009, pp. 27-67) include:

- Habitat destruction, modification, or curtailment of the marine environmental conditions necessary to support murrelets due to:
  - elevated levels of polychlorinated biphenyls in murrelet prey species;
  - changes in prey abundance and availability;
  - changes in prey quality;
  - harmful algal blooms that produce biotoxins leading to domoic acid and paralytic shellfish poisoning that have caused murrelet mortality; and
  - climate change in the Pacific Northwest.

- Manmade factors that affect the continued existence of the species include:
  - derelict fishing gear leading to mortality from entanglement;
  - energy development projects (wave, tidal, and on-shore wind energy projects) leading to mortality; and

- disturbance in the marine environment (from exposures to lethal and sub-lethal levels of high underwater sound pressures caused by pile-driving, underwater detonations, and potential disturbance from high vessel traffic; particularly a factor in Washington state).

The 2019 5-year review did not describe new threats from this list but did reference new information on increasing at risk of mortality in trawling gear, but that the scope and severity of the threat to murrelets of entanglement in derelict fishing gear has not changed (USDI FWS 2019, p. 64).

There is growing evidence that recent climate change has impacted a wide range of ecological systems (Stenseth et al. 2002; Walther et al. 2002; Ådahl et al. 2006; Karl et al. 2009; Moritz et al. 2012; Westerling et al. 2011, p. S459; Marlon et al. 2012, p. E541). Climate change, combined with effects from past management practices, is exacerbating changes in forest ecosystem processes and dynamics to a greater degree than originally anticipated under the NWFP. Environmental variation affects all wildlife populations; however, climate change presents new challenges as systems may change beyond historical ranges of variability. In some areas, changes in weather and climate may result in major shifts in vegetation communities that can persist in particular regions. See MAMU Table 9 for causes of habitat loss based on analysis in the most recent NWFP review (Lorenz et al. 2021, p. 33, Table 11). While Oregon, and the NWFP analysis area, has had an increase in higher suitability habitat overall, it is primarily in scattered patches. California's habitat is reported as fairly stable; however, available sources do not include habitat lost from the 2020 fires in Conservation Zone 5.

The 2019 5-year review concluded that climate change could exacerbate the impacts of continued nesting habitat loss and fragmentation (USDI FWS 2019, p. 64) and will affect the environmental baseline for murrelets and other listed species. Although it appears likely that the murrelet will be adversely affected by long-term consequences of climate change, we are not able to specifically quantify the magnitude of effects to the species (USDI FWS 2009, p. 34). The threats present in both the marine and terrestrial environments collectively comprise a suite of environmental stressors that, individually or through interaction, have likely disrupted or impaired behaviors which are essential to the reproduction or survival of individuals. When combined with the species naturally low reproductive rate, these stressors have led to declines in murrelet abundance, distribution, and reproduction at the population scale within the listed range.

Detailed discussions of the above-mentioned threats, life-history, biology, and status of the murrelet are presented in the Federal Register, listing the murrelet as a threatened species (USDI FWS 1992); the Recovery Plan, Ecology and Conservation of the Murrelet (Ralph et al. 1995); the final rule designating murrelet critical habitat (USDI FWS 1996); the Evaluation Report in the 5-Year Status Review of the Murrelet in Washington, Oregon, and California (McShane et al. 2004); the 2004,2009, and 2019 5-year Reviews for the Murrelet (USDI FWS 2004; USDI FWS 2009; USDI FWS 2019), and the final rule revising critical habitat for the murrelet (USDI FWS 2011]).

Table MAMU 9. Attribution of gross loss (acres) of higher probability nest and core habitat from 1993 to 2017 by state and landowner (Lorenz et al. 2021, p. 33, Table 11).

	Higher probability nesting habitat					Core habitat				
State/landowner	Timber harvest	Wildfire	Insect damage	Other	Unattributable loss	Timber harvest	Wildfire	Insect damage	Other	Unattributable loss
Washington										
Federal reserved	2,417	2,895	113	2,787	20,447	339	537	2	407	4,889
Federal nonreserved	687	27	1	1	1,556	7	0	0	0	115
Federal total	3,103	2,923	114	2,788	22,003	346	537	2	407	5,005
State	21,383	2	137	2	5,518	180	0	0	0	201
Other landowners	49,857	92	415	17	5,916	525	0	3	2	117
Total	74,343	3,017	666	2,807	33,436	1,051	537	6	409	5,323
Oregon										
Federal reserved	1,774	38	2	30	12,788	111	0	0	3	1,098
Federal nonreserved	1,052	0	0	1	1,760	13	0	0	0	54
Federal total	2,826	38	2	31	14,548	124	0	0	3	1,152
State	10,331		10		3,034	121	0	0	0	115
Other landowners	65,492	39	137	0	5,023	1,310	0	2	0	178
Total	78,650	77	149	31	22,606	1,554	0	2	3	1,445
California										
Federal reserved	14	238	1	14	193	1	12	0	0	34
Federal nonreserved	0	0	0	0	4	0	0	0	0	0
Federal total	14	238	1	14	197	1	12	0	0	34
State	147	1	0	0	274	5	0	0	0	49
Other landowners	2,683	5	3	0	767	6	0	0	0	11
Total	2,844	244	4	14	1,238	12	12	0	0	94
Plan area total										
Federal reserved	4,205	3,172	116	2,831	33,429	451	549	2	410	6,022
Federal nonreserved	1,739	28	2	2	3,319	20	0	0	0	170
Federal total	5,944	3,199	117	2,833	36,748	471	549	2	410	6,191
State	31,860	3	148	2	8,825	306	0	0	0	365
Other landowners	118,032	136	555	17	11,707	1,841	0	5	2	306
Total	155,836	3,338	820	2,852	57,280	2,618	549	8	412	6,862

Conservation

Needs

Reestablishing an abundant supply of high-quality murrelet nesting habitat is a vital conservation need given the extensive habitat removal during the 20th century. However, there are other conservation imperatives. Foremost among the conservation needs are those in the marine and terrestrial environments to increase murrelet fecundity by increasing the number of breeding adults, improving murrelet nest success (due to low nestling survival and low fledging rates), and reducing anthropogenic stressors that reduce individual fitness or lead to mortality.

The overall reproductive success (fecundity) of murrelets is directly influenced by nest predation rates (reducing nestling survival rates) in the terrestrial environment and an abundant supply of high-quality prey in the marine environment during the breeding season (improving potential nestling survival and fledging rates). Anthropogenic stressors affecting murrelet fitness and survival in the marine environment are associated with commercial and tribal gillnets, derelict fishing gear, oil spills, and high underwater sound pressure (energy) levels generated by pile-driving and underwater detonations (that can be lethal or reduce individual fitness).

General criteria for murrelet recovery (delisting) were established at the inception of the Plan and they have not been met. More specific delisting criteria are expected in the future to address population, demographic, and habitat based recovery criteria (USDI FWS 1997, pp. 114-115). The general criteria include:

- documenting stable or increasing population trends in population size, density, and productivity in four of the six Conservation Zones for a 10-year period; and
- implementing management and monitoring strategies in the marine and terrestrial environments to ensure protection of murrelets for at least 50 years.

Thus, in addition to habitat protection, increasing murrelet reproductive success and reducing the frequency, magnitude, or duration of any anthropogenic stressor that directly or indirectly affects murrelet fitness or survival in the marine and terrestrial environments are the priority conservation needs of the species. The Service estimates recovery of the murrelet will require at least 50 years (USDI FWS 1997, pp. vi and 10). The recent 5-year review determined that if reproductive success continues to be too low to sustain the population, the observed population trends continue to decline significantly, and manmade and natural threats continue at current or increased levels, then a change in listing status to endangered may be warranted in the future (USDI FWS 2019, p. 65).

Recovery Plan

The Marbled Murrelet Recovery Plan outlines the conservation strategy with both short- and long-term objectives. The Plan places special emphasis on the terrestrial environment for habitat-based recovery actions due to nesting occurring in inland forests.

In the short-term, specific actions identified as necessary to stabilize the population include protecting occupied habitat and minimizing the loss of unoccupied but suitable habitat (USDI FWS 1997, p. 119). Specific actions include maintaining large blocks of suitable habitat, maintaining and enhancing buffer habitat, decreasing risks of nesting habitat loss due to fire and windthrow, reducing predation, and minimizing disturbance. The designation of critical habitat also contributes towards the initial objective of stabilizing the population size through the

maintenance and protection of occupied habitat and minimizing the loss of unoccupied but suitable habitat.

Long-term conservation needs identified in the Plan include:

- increasing productivity (abundance, the ratio of juveniles to adults, and nest success) and population size;
- increasing the amount (stand size and number of stands), quality, and distribution of suitable nesting habitat;
- protecting and improving the quality of the marine environment; and
- reducing or eliminating threats to survivorship by reducing predation in the terrestrial environment and anthropogenic sources of mortality at sea.

Conservation Zone 3 Recovery objectives: Murrelet occupied sites along the western portion of the Tillamook State Forest are especially important to maintaining well distributed murrelet populations. The murrelet recovery plan states that efforts should focus on maintaining these occupied sites, minimizing the loss of unoccupied but suitable habitat, and decreasing the time for development of new habitat. Relatively few known occupied sites occur north of the Tillamook State Forest. Recovery efforts should be directed at restoring some of the north-south distribution of murrelet populations and habitat in this Zone. Murrelet sites along the western portion of the Tillamook State Forest are especially important to maintaining well-distributed murrelet populations. Maintaining suitable and occupied murrelet habitat on the Elliot State Forest, Tillamook State Forest, Siuslaw NF, and BLM-administered forests is an essential component for the stabilization and recovery of murrelets (USDI FWS 1997, p. 127).

Conservation Zone 4 Recovery Objectives: Recovery actions in Zone 4 should be focused on preventing the loss of occupied nesting habitat, minimizing the loss of unoccupied but suitable habitat, and decreasing the time for development of new suitable habitat. Much murrelet nesting habitat is found in state and national parks that receive considerable recreational use. The need to maintain high quality murrelet terrestrial habitat should be considered in planning any modifications to state or national parks for recreational purposes. Both highway and campground construction, including picnic areas, parking lots, and visitors centers, could present threats to the murrelet through loss of habitat, nest disturbance, and/or increasing potential predation from corvids associated with human activities such as Steller's jays and crows. Implementing appropriate garbage/trash disposal may help decrease potential predator populations in high human use areas such as county, state and national parks. Zone 4 has large blocks of suitable habitat critical to the three-state murrelet population recovery over the next 100 years. However, the amount of suitable habitat protected in parks is probably not sufficient by itself to guarantee long-term survival of murrelets in this Zone. On the other hand, a considerable amount of habitat is preserved in parks such that survival may be more likely in this Zone than in several other Zones. Private lands at the southern end of this Zone are important for maintaining the current distribution of the species. There is already a considerable gap in distribution between this area and the central California population in Zone 6. Efforts should be implemented to, at a minimum, not expand the current distribution gap (USDI FWS 1997, p. 128).

NWFP Protections

On Federal lands under the NWFP surveys are required for all timber sales that remove murrelet habitat. If habitat outside of mapped Late-Successional Reserves (LSRs) is found to be used by murrelets, then the habitat and recruitment habitat (within 25 years) within a 0.5-mile radius of the occupied behavior is designated as a new LSR. Timber harvest within LSRs is designed to

benefit the development of late-successional conditions, which should improve future conditions of murrelet nesting habitat. Designated LSRs not only protect habitat currently suitable to murrelets (whether occupied or not), but will also develop future suitable habitat in large blocks.

Western Oregon RMP Protections

The Bureau of Land Management's (BLM) Wildlife Resource Program's Management Direction for murrelets provides some protection for murrelets. The extent to which the protective measures are applied within the action area is directed by the LUAs and distance from the ocean (inland zone 1 or 2). As described in its biological opinion for the RMP, the Service found that overall, the plan would provide for the survival and recovery of the murrelet. There was an expected immediate net gain of 79,500 acres to the reserve system including a gain of 48,182 acres of murrelet nesting habitat, about half of which was considered high-quality murrelet nesting habitat that would be added to the BLM's reserve system. An important provision required the incorporation of all occupied murrelet sites known at the time of implementation within the Late-successional Reserves (LSRs). Additionally, future sites discovered outside of LSRs in inland zone 1 and future sites discovered within Riparian Reserves within inland zone 2 will have the LUAs updated to LSR to protect the occupied stand. Proposed actions would significantly minimize habitat modification by applying protective measures to activities in all land allocations (LUAs) in inland zone 1 and to activities in the late-successional and riparian LUAs in inland zone 2. Nest disturbance will be minimized by applying protective measures to activities in all LUAs in inland zone 1 and to activities in the reserve LUAs in inland zone 2 to allow for undisrupted murrelets nesting. Future activities are expected to impact murrelet nest sites in zone 2 (35- 50 miles from the coast) within the harvest land base and the district designated reserve LUAs (all of which will be subject to their own, future consultation), but the overall protections and management of murrelet habitat and sites are expected to result in an increase in the murrelet population within BLM lands and within the action area over time (USDI FWS 2016a, p. 284).

Tree Removal

Terrestrial habitat for murrelets has both a local and landscape aspect. At the local level a forest stand with branch platforms can provide nesting structure with minimal requirements for the murrelet, although we know murrelets are more likely to occur where there is large contiguous blocks of late-successional or old growth habitat on the landscape (Falxa and Raphael 2016, pp. 113-114). This patch of forested area can be either late-successional or old growth habitat with wide branches or younger trees with mistletoe infections or other deformities that form a platform wide enough for a nest. Murrelets use a wide variety of forest stands although they all must contain nesting structure.

There can be short and/or long-term potential effects associated with habitat modification. Thinning to increase growth rates and crowns by reducing competition for the retained trees can make currently unsuitable nest trees and trees of marginal habitat quality become nest trees sooner than without treatment. These types of thinning treatments also encourage currently suitable trees to maintain full crowns and branch development, and to create holes and gaps in the canopy that allow murrelets better access into tree crowns.

A 300-600 foot buffer from occupied or unsurveyed murrelet nesting habitat is recommended in the murrelet recovery plan as a short-term conservation action to stabilize and increase the population (USDI FWS 1997, p. 140). The part of an adjacent stand which lacks nesting structure, but supports an adjacent stand or individual trees with murrelet nesting structure is

referred to as buffer habitat. Thinning of buffer habitat may also affect murrelets by impacting the buffering habitat's ability to provide for windthrow during storms, provide a microclimate that supports moss growth, and/or provides a stands with low usage by murrelet nest predators. These effects are expected to be minimal if treatments are designed to: 1) minimize potential windthrow; 2) microclimate changes; and 3) minimize change that would increase stand usage by murrelet predators.

Predation by jays may increase when berry production and, potentially, insects increase in adjacent lands. The increase is likely due to the increased forage time spent by Steller's jays, (*Cyanocitta stelleri*) in the open areas. The following is from Zharikov et al. (2006, p. 117):

> "Populations of potential nest predators rarely increase in forest landscapes managed for timber, in contrast to forests adjacent to human settlements or agricultural fields (Henske et al. 2001). This is because local predator populations will increase only if fragmentation produces a concurrent increase in the amount of their staple food supply (*e.g.*, berries) and/or breeding habitat (Marzluff and Restani 1999; Raphael et al. 2002). In this study area clear-cutting is not associated with development of human habitation or agricultural fields. It is thus unlikely that recent forest fragmentation could create anthropogenic sources of food. At the same time, clear-cutting may have decreased the amount of nesting habitat for such known adult and nest predators of murrelets as the northern goshawk (*Accipiter gentilis*), common raven (*Corvus corax*) and gray jay (*Perisores canadiensis*) and thus lower their abundance in recently logged areas (Raphael et al.2002). However, as clearcuts overgrow and berry producing shrubs become established there (Nielsen et al. 2004), their usage by nest predators may increase Steller's jay, *Cyanocitta stelleri*, (Raphael et al. 2002), explaining the lower breeding success closer to old (fuzzy-edge) clearcuts."

Disturbance

The effects to murrelets from disturbance are largely unknown, although effects such as increased energetic expenditure, elevated stress levels, and susceptibility to predation have been documented in other wildlife and are assumed to effect murrelets, as well. For these reasons disturbance is considered a threat to the species (McShane et al. 2004) although summary studies on effects of disturbance have not documented any nest failure, abandonment, or chick mortality directly attributed to noise disturbance (Singer et al. 1995, Hamer and Nelson 1998, Golightly et al. 2002).

During the critical nesting period (Table MAMU 10), noise and visual disturbance associated with habitat modification projects may disturb adult or juvenile murrelets. Murrelet reactions to noise, smoke and/or temporary increases in predation due to human presence at or in the immediate vicinity of murrelets could potentially include one or more of the following: a nesting adult flushes and leaves the eggs exposed to predation, an adult aborts a feeding attempt potentially reducing the fitness of the young, or a juvenile prematurely fledges potentially reducing the fitness due to having sub-optimal energy reserves or flight ability before leaving the nest. A murrelet that may be disturbed when it flies into the stands for other reasons than nest exchange or feeding young is presumably capable of moving away from disturbance without a significant disruption of its behavior. Murrelets feed at sea and only rely on forest habitat for nesting.

Table MAMU 10. Breeding period used to determine potential effects in this consultation.

Species	Breeding Period	Critical Breeding Period
Murrelet	April 1 – September 15	April 1 – August 5

Therefore, forest management or other forest activities during the murrelet breeding season (April 1 – September 15) may affect murrelets that are nesting. Current disturbance and disruption distances by common sources have been summarized in Table MAMU 9. Disruption is a subset of disturbance, to indicate the subset of disturbance that may adversely affect murrelets due to the greater impacts when closer to nesting murrelets.

In the late breeding period (August 6 – September 15), potential effects from disturbance decline because all breeding murrelets have establishing a nest, most are finished incubating and either have completed nesting (about half of the chicks have fledged) (Hamer et al. 2003) or adult murrelets are still feeding the chick. Adults still tending their young in the late breeding period are heavily invested in chick-rearing, and it is during the crepuscular periods, which we define as two hours after sunrise and two hours before sunset, when most food deliveries to the young are made. When disruption events are limited to during the day and outside the crepuscular periods (which will be referred to as daily timing restrictions), the likelihood of nest abandonment or significant alteration of breeding success in the late breeding period is minimized because disruption will not occur during the periods of the majority of food deliveries to the chick plus the percent of young that have fledge is increasing every day. Therefore, the likelihood of injury by annoying the adult murrelets to such an extent as to significantly disrupt normal behavior patterns, which includes, but are not limited to, breeding, feeding or sheltering is not reasonably certain to occur in the late breeding period with daily timing restrictions and are considered insignificant effects (excluding activities that cause physical injury or mortality; *e.g.*, blasting and helicopter hovering, Table MAMU 11).

Although disruption distances in Table MAMU 11 are based on the interpretation of the best available information, the exact distance where different types of noise, smoke and/or temporary increases in predation due to human presence may disrupt breeding, including feeding young, are difficult to predict and can be influenced by a multitude of factors. Site-specific information (*e.g.*, topographic features, project length or frequency of disturbance to an area) could factor into the severity of anticipated effects. The potential for noise or human intrusion activities to create the likelihood of injury to murrelets is also dependent on the background or baseline levels in the environment. In areas that are continually exposed to higher ambient noise or human presence levels (*e.g.*, areas near well-traveled roads, Campgrounds), murrelets are likely less susceptible to small potential increases in disturbances because they are acclimated to such activities. Murrelets do occur in areas near human activities and may habituate to certain levels of noise or human presence.

For disruption of murrelet behavior to occur as a result of disturbance (noise, smoke and/or temporary increases in predation due to human presence) caused by a proposed action, the effects and the murrelet(s) must be in proximity to one another during the murrelet nesting season (see Table MAMU 11).

Table MAMU 11. Disturbance and disruption distances for murrelets during the breeding period from the edge of unsurveyed or known occupied stand or nest structure in younger stands.

Disturbance Source	Disturbance Distances During the Breeding Period (Apr 1 – Sep 15)	Disruption Distances During the Breeding Period (Apr 1 – Sep 15)	Disruption Distances with daily timing restrictions *, unless noted otherwise (Aug 6 – Sep 15)
Light maintenance of roads, Campgrounds, and administrative facilities	≤ 0.25 mile	N/A[1]	N/A[1] no daily timing restrictions required
Log hauling on open roads	≤ 0.25 mile	N/A[1]	N/A[1] no daily timing restrictions required
Chainsaws (includes felling hazard/danger trees)	≤ 0.25 mile	≤ 110 yards[2]	N/A
Heavy equipment for road construction, road repairs, bridge construction, culvert replacements, etc.	≤ 0.25 mile	≤ 110 yards[2]	N/A
Pile-driving (steel H piles, pipe piles) Rock Crushing and Screening Equipment	≤ 0.25 mile	≤ 120 yards[3]	N/A
Blasting	≤ 1 mile	≤ 0.25 mile[3]	≤ 0.25 mile[3]
** Helicopter: Chinook 47d (described as a large helicopter in the rest of this document)	≤ 0.5 mile	≤ 265 yards[5]	≤ 100 yards[6] (hovering only)
** Helicopter: Boeing Vertol 107, Sikorsky S-64 (SkyCrane)	≤ 0.25 mile	≤ 150 yards[7]	≤ 50 yards[6] (hovering only)
** Helicopters: K-MAX, Bell 206 L4, Hughes 500	≤ 0.25 mile	≤ 110 yards[8]	≤ 50 yards[6] (hovering only)
** Small fixed-wing aircraft (Cessna 185, etc.)	≤ 0.25 mile	≤ 110 yards	N/A
Tree Climbing	≤ 110 yards	≤ 110 yards[9]	N/A
Burning (prescribed fires, pile burning)	≤ 1 mile	≤ 0.25 mile[10]	N/A
Example: Chainsaws are being used adjacent to a murrelet occupied stand during the period of April 1 to September 15, less than 110 yards from the stand. In this scenario (within the disruption distance), murrelets could be disrupted to the point of likely adversely affecting the murrelets or their young. However if the chainsaws were being used further than 110 yards away from the occupied stand during the same time period (within the .25 mile disturbance distance, but beyond the 110 yard disruption distance), this chainsaw use would only slightly disturb murrelets, not disrupt their normal behavior. In this case, the chainsaw use is not likely to adversely affect the murrelets because of the further distance the chainsaw use is away from them.			

Table MAMU 11 Footnotes:

1. N/A = not applicable. We anticipate that the few murrelets that select nest sites in close proximity to open roads either are undisturbed by or habituate to the normal range of sounds and activities associated with these roads (Hamer and Nelson 1998, p. 21).
2. Based on recommendations from murrelet researchers that advised buffers of greater than 100 meters to reduce potential noise and visual disturbance to murrelets (Hamer and Nelson 1998, p. 13, USDI FWS 2012, p. 10).
3. Impulsive sound associated with blasts and pile-driving is highly variable and potentially injurious at close distances. We selected a 0.25-mile radius around blast sites as a disruption distance based on observed prairie falcon flush responses to blasting noise at distances of 0.3 – 0.6 miles from blast sites (Holthuijzen et al. 1990, p. 273). We have conservatively chosen a distance threshold of 120 yards for impact pile-driving and rock-crushing operations to avoid potential hearing loss effects and to account for significant behavioral responses (*e.g.*, flushing) from exposure to continuous sounds from impact pile driving.
4. Exposure to peak sound levels that are >140 dBA are likely to cause injury in the form of hearing loss in birds (Dooling and Popper 2007, pp. 23-24). We have conservatively selected 100 yards as an injury threshold distance based on sound levels from experimental blasts reported by Holthuijzen et al. (1990, p. 272), which documented peak sound levels from small blasts at 138 – 146 dBA at a distance of 100 m (110 yards).
5. Based on an estimated 92 dBA sound-contour (approximately 265 yards) for the Chinook 47d (Newman et al. 1984, Table D.1).
6. Because murrelet chicks are present at the nest until they fledge, they are vulnerable to direct injury or mortality from flying debris caused by intense rotor wash directly under a hovering helicopter. Rotor-wash from large helicopters is expected to be disruptive at any time during the nesting season due the potential for flying debris and shaking of trees located directly under a hovering helicopter. Hovering rotor-wash distance is based on a 300-ft radius rotor-wash zone for large helicopters hovering at < 500 above ground level (from WCB 2005, p. 2 – logging safety guidelines). We reduced the hovering helicopter rotor-wash zone to a 50-yard radius for all other helicopters based on the smaller rotor-span for all other ships.
7. Based on an estimated 92 dBA sound contour from sound data for the Boeing Vertol 107 the presented in the San Dimas Helicopter Logging Noise Report (USFS 2008, chapters 5, 6).
8. Based on Delaney et al. (1999, p. 74), which concluded that a buffer of 105 m (115) yards for helicopter overflights would eliminate flush responses from military helicopter overflights. The estimated 92 dBA sound contours for these helicopters is less than 110 yards (*e.g.*, K-MAX (100 feet) (USFS 2008, chapters 5, 6), and Bell 206 (85-89 dBA at 100 m)(Grubb et al. 2010, p. 1277).
9. Based on recommendations from murrelet researchers that advised buffers of greater than 100 meters to reduce potential noise and visual disturbance to murrelets (Hamer and Nelson 1998, p. 13, USDI FWS 2012, p. 10).
10. Based on recommendations presented in Smoke Effects to Northern Spotted Owls (USDI FWS 2008, p. 4).

* Daily timing restrictions: Activities would not begin until two hours after sunrise and would end two hours before sunset.

**Aircraft normally use above ground level (AGL) as a unit of measure. For instance, to not cause a disruption by medium and small helicopters during the late breeding season, the AGL would be 350 feet. 350 feet AGL would account for 200 foot tall trees that murrelets would be occupying plus the 50 yards disruption distance.

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APPENDIX F

Response to Comments

ENVIRONMENTAL ASSESSMENT

Newport Municipal Airport Obstruction Removal

Comment	Response
Comments Made Public Meeting Held April 19, 2022	
Overall concerns about proposed conservation/mitigation measures that will be implemented, and what assurances do they have and who will be responsible for implementation.	The conservation and mitigation measures will be conditions of the construction grant issued by FAA. These measures will be included in the construction specifications and the contract with the contractor selected to remove the trees. The City will have a construction inspector that will be responsible for overseeing the contractor and ensuring that the measures are followed and complied with.
Fire threat due to slash piles if they are left on city-owned property off Runway 34.	Section 3.12 of the EA includes the following mitigation measure: On tax lots 11-11-32-00-00200, 11-11-32-00-01604, and 11-11-32-00-00201, slash piles will be chipped or removed.
Security threat – after trees are removed, the neighbor's property will be more visible to people trespassing on city-owned property off Runway 34. How do we prevent people from camping or entering property? Last time trees were removed in this area it became a popular motorcycle riding area.	Temporary access roads will be blocked or gated after construction is complete and the property will be signed no trespassing, with a sign similar to the two examples below.  
Stumps on private properties should be removed.	Tree removal on private property will be addressed with the individual property owner when gaining permission or the avigation easement.
Need a vegetation management plan, simply erosion control and inter-planting is not going to prevent alders and shore pines from becoming established and growing >20 feet tall.	The airport will develop an overall vegetation management plan as part of design. The vegetation management plan will incorporate the proposed conservation and mitigation measures. After tree removal, soils would be stabilized with an appropriate seed mix (which may include sterile grass or a native upland forest herbaceous mix) immediately after tree removal and inter-planted by the next growing season with native shrubs or short-statured trees such as vine maple, red-osier dogwood, cascara, and Douglas hawthorn (i.e., if trees are removed in the late summer/early fall, soil stabilization would occur that same fall, and inter-planting would be accomplished the following spring).
Risks to private property from runoff and drainage.	During design, runoff and drainage patterns will be evaluated to determine if design measures are needed to prevent stormwater erosion from flowing onto adjacent properties during construction.
Liability if property is damaged from tree removal.	The City Manager stated that the City's standard liability insurance will cover any property damage.

Comment	Response
Who will oversee the contractor?	The City will have a construction inspector that will be responsible for overseeing the contractor and ensuring that the measures are followed and complied with.
Will there be another public meeting once individual trees are identified?	The City will meet with individual property owners to discuss individual trees that have been identified as an obstruction to be removed on their property and to obtain approval to access their property to remove the tree.
Will truck traffic exacerbate the slump on Hwy 101 at Moore Creek?	The amount of truck traffic needed for the tree removal would be a fraction of the Average Daily Traffic on Highway 101. It is not anticipated that the small amount of truck traffic would have any measurable effect on the condition of Highway 101.
Joan Schroeder, email dated April 18, 2022	
This Draft Assessment, from what I understand, is lacking specific location of obstructions (trees) near my property that have been selected to be removed. Your maps on this matter are inconsistent by highlighting clumps on one map and then obscuring areas on another, specifically of trees on or crossing over private property lines. Clearly the Environmental impact will be immense to adjacent property as well, and that has not been addressed (that I can find in this draft)	The tree removal polygons displayed in the figures in the Draft Environmental Assessment are consistent in all figures. The figures show tree removal areas and not individual trees. During the design phase of the project, individual trees to be removed will be surveyed and marked. The Draft Environmental Assessment evaluated the direct and indirect effects of tree removal to natural and social environmental categories. No significant impacts were identified as a result of the tree removal.
I live on county land (not City) in the residential area on SE 98th Street off Cedar St. in South Beach.	It is acknowledged that Joan Schroeder lives outside city limits.
Specifically my concern: Clarity. Which trees exactly will be removed,	During the design phase of the project, individual trees to be removed will be surveyed and marked.

Comment	Response
… and who will be responsible for all damage done to my land either directly (felling trees) or the aftermath, by destruction of soil (water runoff /erosion to my property), as well as for the final removal of tree debris near or on my property? In addition, who is responsible for the replanting and soil stabilization as outlined in your draft? Names please. How do you plan to protect adjacent private property, on county land, impacted by your old growth tree removal? I do not find that addressed in your draft. Again, who holds the responsibility monetarily and otherwise?	The City of Newport will be responsible and liable for the project and all private property affected, regardless of if the project is in inside the city limits or in the county. The conservation and mitigation measures listed in Section 3.12 of the EA will be included in the construction specifications and the contract with the contractor selected to remove the trees. The City will have a construction inspector that will be responsible for overseeing the contractor and ensuring that the measures are followed and complied with.
I am awaiting a hard copy of this Assessment that I can study in more detail. I am not as easy with reading on the computer as holding written material and maps in my hands. I should have a hard copy this week.	A hard copy of the Draft Environmental Assessment and Appendices was provided to Joan Schroeder at the public meeting on April 19, 2022.
Joan Schroeder, letter addressed to Fish and Wildlife Service dated April 22, 2022	
The Newport Airport, in attempting to address its own monetary deficit in maintaining a clear approach for their runways, seemed to shift their focus into private and residential land that has old growth trees, as justification (?) for additional funding to remove more obstacles outside of their own property's imminent problem. This comes at a very heavy cost to our dwindling Old Growth Forests and protected species ... if true.	The approach surface extends beyond the property the City owns. The approach surface is a trapezoidal shape that extends away from the runway. It rises at a specific slope, and flares wider the further away from the runway threshold. The approach surface for Runway 34 is a non-precision instrument approach surface that rises at a slope of 34:1 and is 1,000 feet wide at the beginning and flares to a width of 3,500 feet at a distance of 10,000 feet.
It is readily apparent in looking at the areas on the Lidar maps (in the Draft), that the airport's property approaches, on airport property, are the problem, and this is where the "obstructions" need to be removed to be in compliance.	As seen on the LiDAR and AGIS survey data, there are several obstructions that penetrate into the approach and threshold siting surfaces that are located on private property.

Comment	Response
As part of the impacted private homeowner facing this City over reach, I have been involved in the City Airport public meetings on this issue. My residential neighborhood is not part of the City of Newport.	The City of Newport will be responsible and liable for the project and all private property affected, regardless of if the project is in inside the city limits or in the county.
I attended the April 19, 2022 Draft EA Public Review meeting at Newport City Hall. In the invitation letter it was directly stated "Many of the trees to be removed are located off airport property, on surrounding parcels" They refer to obstructions as "Tall Trees" which are old growth on private lands.	Obstructions are objects, in this case trees, that penetrate into the approach and threshold siting surfaces. Several of the identified obstructions are located on private property.
During the course of the presentation Ms. Cunningham stated that their mitigation measures will insure that the impact to present endangered/threatened species, in the project area, would be reduced or even nonexistent.	Mitigation and conservation measures contained in the Draft EA minimize or reduce the effects to below a significant level as defined in FAA Order 1050.1F.
When Ms. Cunningham reviewed the Biological Assessment (Appendix A) on the Endangered and Threatened Species (and wetland), she stated any clear cut impact would likely not adversely affect the protected species. At that point I became very concerned. I find it very hard to believe that clear cuts, especially of old growth trees and disruption /destruction of terrain, would not adversely affect protected habitats. I was not aware of the already recognized protected threatened species that surrounded me in my geographic area ... this was now a new concern.	The Draft Environmental Assessment evaluated the direct and indirect effects of tree removal to biological resources including threatened and endangered species. A Biological Assessment was prepared to analyze the effects on fish and wildlife species and consultation with the federal and state resource agencies was conducted prior to and during the environmental analysis process (Appendix A of the EA). No significant impacts were identified as a result of the tree removal.
"Approximately 3 acres need to be removed from habitat occupied Marbled Murrelet habitat and potential suitable Northern Spotted Owl and Pacific Marten, south of the airport ... " This area (as I understand the report) is not on Newport Airport property, but on private property, in old growth forested area.	As identified in the Biological Assessment, the occupied/contiguous habitat is owned by Weyerhaeuser (parcel ID 12-11-05-00-00802-00) and Steel String (parcel IDs 12-11-05-00-00803-00; 12-11-05-CB-00200-00, and 12-11-05-CB-00700-00)

Comment	Response
1. No tree removal is proposed in occupied/contiguous habitat (as shown in figures 7 and 8) during the combined marbled Murrelet , Northern Owl, and Pacific Marten breeding/denning season (Feb.1 to September 15)" this continues for your reference, stating no clear cut will be before 8:00am or after 5:00pm for these (nocturnal threatened species), and so on. I understand none of the protected species migrate, so they live in their natural habitat year round.	As stated in the Biological Assessment, no direct effects are anticipated to occur to either marbled murrelets, northern spotted owls, or Pacific martens because trees are proposed to be removed from occupied/contiguous habitat after September 14 and before February 1 when no breeding birds or denning Pacific martens would be present. There would be 3 acres of suitable habitat that would be lost. Tree removal in occupied/contiguous habitat would affect two percent of the surrounding suitable forest (approximately 140 acres); this habitat loss is not expected to adversely impair the ability of marbled murrelets, northern spotted owl or Pacific marten to reproduce in the area.
Seems to me if you destroy the actual habitat of an endangered/threatened species or even indirectly by disturbing the surrounding area by clearcutting, that it goes against the very Protection Act to protect them. Am I wrong?	The USFWS concluded that the proposed action is likely to adversely affect the marbled murrelet, but that the adverse effects will not definitively rise to the level of incidental take of individuals of the species and will not jeopardize the species. The Biological Opinion issued by the USFWS is included as Appendix E of the EA.
Additionally, I see some of the studies referenced in this Draft, were done by Weyerhaeuser, who some could argue have a conflict of interest, especially in the dwindling availability of old growth trees to harvest these days ... and the increasing monetary value of these trees.	Surveys conducted by Weyerhaeuser were done to the USFWS survey protocol.
I was shocked by the notion that the impact to protect protected species habitat, from old growth clear-cut, could actually be "avoided or minimized" in a clear cut, in sensitive areas, and I asked Ms. Cunningham if a Professional Zoologist, or Wildlife Biologist/ Conservationist, has made the determination that by clear cutting endangered species habitats, that the species is not harmed? She said yes, that you (Michele Zwartjes) had made that determination and that you were now reviewing the Draft for your final approval.	In the Biological Opinion issued by the USFWS (page 12), they conclude there is little likelihood that edge effects resulting from the proposed action will be noticeably different from the current condition, and have determined that the potential adverse effects of increased nest predation as a result of edge effects or fragmentation as a consequence of the project will be insignificant to the marbled murrelet. However, there will be an indirect adverse effect to marbled murrelets because the number of potentially suitable trees available for future nesting will be reduced through habitat modification as a result of the project.

Comment	Response
I am interested if there is a current report by a professional, for the purpose of this report, actually going out to the proposed destruction areas to establish if and where the endangered/threaten species habitat are located, to ensure the safety of the protected species?	On February 10, 2022, Michele Zwartjes of USFWS and Sarah Hartung of ESA visited the Weyerhauser and Steel String parcels identified as occupied or contiguous/potential habitat and more specifically visited each area where obstruction trees are slated for removal on those properties. Based upon this visit, they determined that some of the large trees identified for removal display characteristics consistent with potential marbled murrelet nest trees (i.e., horizontal, large diameter branches high in the canopy and with sufficient cover to serve as nest platforms). They also determined that other trees with similar characteristics would remain in the area following the removal of individual obstruction trees, thus potential nest trees would remain after completion of the project. On March 4, 2022, Michele Zwartjes and Kevin Maurice of the Service again visited both the Weyerhauser and Steel String properties. Visual assessment made during this site visit confirmed that the forested areas on these properties have characteristics of possible roosting and/or foraging habitat for the northern spotted owl, but there was no obvious nesting habitat present (i.e., decadent trees with cavities). Furthermore, this visit raised questions as to whether the relatively small size of the contiguous forested habitats available surrounded by younger second-growth and residential development would provide a sufficiently large area of habitat suitable to support resident spotted owls.
I see on the enclosed Draft maps areas highlighted as populated by the protected Marbled Murrelletts, Spotted Owls and Martens. Ms. Cunningham stated these areas were located 0.6 miles away, in this dense forest, from their proposed clear cut.	There is no designated critical habitat for the marbled murrelet or northern spotted owl, and no proposed critical habitat for coastal marten will be affected by the proposed project.

Comment	Response
I asked at the meeting, exactly which old growth trees, on private land (not owned by the airport) would be clear cut and how many were near this Endangered/Threatened Species protected area? Ms. Cunningham stated that they would not know the exact trees until the "Construction Phase of the project" begins. Evidently, at this point, they are only going on the LiDAR report of 2018 that does not highlight specific trees. I can only assume that contracted forest/ Timber cruiser will go into the area looking for the biggest, most profitable tree. Perhaps these individual do not have a keen or professional eye, or interest in protected species (once this draft is approved?) Who is to know?	The LiDAR survey identified individual penetrations into the approach and threshold siting surfaces. It is not known if these penetrations were just one tree or several trees. It was determined that in order to assess the impacts, that all vegetation within the defined polygon would be removed. During the design phase of the project, individual trees to be removed will be surveyed and marked.
The neighbors in attendance at this public Draft meeting, asked for a meeting with the Contractor before they begin cutting. I am not sure this request will be honored. The airport director seemed more interested in our agreement to a 14 day notice to the clear cut, rather than identifying old growth trees on private property that have been selected. Perhaps I'm wrong. We will see.	The City will meet with individual property owners to discuss individual trees that have been identified as an obstruction to be removed on their property and to obtain approval to access their property to remove the tree.

Comment	Response
Again, it begs the question, if this Draft Report is approved, how will we know if the Endangered/ Threatened Species are being protected, when we don't know which/where old growth trees are, and how many are selected to be destroyed?	Most of the vegetation identified for removal (60 acres) occurs within areas that are not considered suitable habitat for marbled murrelets, northern spotted owls, or coastal marten, as they are either developed, cleared, or highly fragmented areas of primarily young second-growth forest. In addition, these areas are not considered potential suitable habitat due to lack of complex forest structure, lack of dense understory or multiple canopy layers, habitat fragmentation, and close proximity to human activity. Parcel ID 12-11-05-00-00802-00, owned by Weyerhauser and adjacent contiguous forest that is similar in structure on property owned by Steel String, Inc. (Parcel IDs 12-11-05-00-00803-00; 12-11-05-CB-00200-00; and 12-11-05-CB-00700-00) is considered occupied/potential habitat. Collectively this area represents a patch of forest approximately 140 acres in size and is separated from surrounding forest patches by residential areas, industrial timberlands, or meadows and clearings. Within this 140-acre patch, a total of approximately 3 acres of tall vegetation is slated for removal; most of this is in one contiguous patch of forest (approximately 2.55 acres) of potential habitat on Silver String property. In addition, there are a few individual trees separately identified for removal that occur both within the parcel where marbled murrelet occupied behaviors were observed on Weyerhauser lands and in potential habitat on Silver String lands. The 2.55-acre patch of forest that is slated for removal appears to represent marginal habitat, as it exhibits little structural complexity, there were no observable suitable nest structures, the trees were too small to provide suitable nesting platforms, and the forest lacked multiple canopy layers.
The report states 60 acres are slated to be clear cut, which includes wetlands, old growth, and Protected Species Habitat. And yet the public doesn't know which trees, and how many will be destroyed.	The figures in the Draft EA show the location and extent of tree/vegetation clearing and Chapter 3 describes the impacts to wetlands and fish and wildlife habitats. During the design phase, individual trees will be surveyed and marked.
The Construction crew in the 1990's, clearing runway 34, were loggers. No professionals, and they literally had to be stopped by one of my neighbors, when they entered her private property, from taking her old growth giant Spruce. They were literally clear cutting everything in sight, everything that was worth anything.	Individual trees will be surveyed and marked. After design is complete (the individual trees are identified) and the contractor is selected, the City will hold a pre-construction meeting so the public can meet the contractor and discuss tree removal techniques. The City will have a construction inspector that will be responsible for overseeing the contractor and ensuring that the measures are followed and complied with.

Comment	Response
I wonder who is going to ensure that all of the Mitigation measures (Avoidance, Minimization and Conservation Measure) to protect Wetlands, Endangered /Threatened Species, is actually followed. Who is the independent watch dog? Who can insure the compliance with the protected species act?	The conservation and mitigation measures will be included in the construction specifications and the contract with the contractor selected to remove the trees. The City will have a construction inspector that will be responsible for overseeing the contractor and ensuring that the measures are followed and complied with.
With dwindling precious old growth forest and wet lands, please direct me to the agency that is charged with protecting all of these concerns.	Species and designated critical habitat listed under the Endangered Species Act are under the jurisdiction of the US Fish and Wildlife Service or National Marine Fisheries Service. Wetlands and waters of the US/State are under the jurisdiction of the US Army Corps of Engineers and the Oregon Department of State Lands. Private property needs to comply with the local (city of county) development code and comprehensive plan.

I strongly ask that you contain the airport to its already established and owned (albeit poorly maintained runway approaches) with FAA height compliance, and protect the old growth and interdependent , protected species /habitats on privately owned lands ... from irreparable destruction.	The USFWS can only make a jeopardy determination to species or critical habitat listed under the Endangered Species Act. This is made by evaluating the consequences of the proposed Federal action in the context of a species' current rangewide status, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the species in the wild. Within the 140-acre patch of occupied/potential habitat for marbled murrelets, there are four areas slated for tree removal that could potentially further add to forest fragmentation and edge effects. Three of these areas are areas in which a single or only a few individual trees are identified for removal. Trees in two of the areas are already on the forest edge and represent suboptimal potential nest sites due to their current vulnerability to nest predators. Removal of these trees thus would not result in any increase in forest openness or edge effects. Only the individual tree(s) identified for removal on the Weyerhauser property are within the forest interior. Visual inspection of this area concluded there is one or possibly several trees identified for removal suggests that the relatively small opening that would be created as a result is unlikely to be any different than would be experienced through natural processes such as windthrow and would not create a significant opening in the canopy. Finally, the 2.55-acre patch slated for removal will result in the removal of a contiguous stand of trees within marginal habitat that is already situated on a forest edge, as it occurs along the access road to the structures on the Steel String property and in close proximity to surrounding meadows. Following clearing, the new boundary (edge) will be greater than 197 feet (60 meters) distant from any known potentially suitable nest trees, thus the clearing of this patch will not result in a reduction of any core, higher probability nesting habitat that may exist within the identified 140-acre block of occupied and contiguous potential habitat within the action area. The USFWS considered the following factors: the few individual trees to be removed in three areas already occur within the forest edge; the opening that will result from removing one to a few individual trees in the forest interior will be so small as to be relatively indistinguishable from natural openings in the canopy; the 2.55 acres of forest to be cleared within the area of potential habitat is of marginal quality and already occurs along the forest edge in a highly fragmented landscape; and the clearing of this patch will not result in a new forest edge within a distance that is likely to provide increased predator access to potentially suitable nest trees. Based on all of these considerations, they conclude there is little likelihood that edge effects resulting from the

Comment	Response
	proposed action will be noticeably different from the current condition, and have determined that the potential adverse effects of increased nest predation as a result of edge effects or fragmentation as a consequence of the project will be insignificant to the marbled murrelet. However, there will be an indirect adverse effect to marbled murrelets because the number of potentially suitable trees available for future nesting will be reduced through habitat modification as a result of the project. There is no foreseeable mortality or injury to individuals of the species as it is not anticipated individuals will be present outside of the nesting season when activities will occur within the occupied/potential habitat area.
Joan Schroeder, email comment received by Lance Vanderbeck dated May 6, 2022	
I have an addendum with concerns regarding the photograph and description of my home and property (found and used in this same Draft, page 24 and 25 of the Cultural Resource Assessment). It is notable to me and others, that not all of my neighbor's properties (that do border your runway 34), are even mentioned in this Draft, and their homes have not been photographed or described in detail in your public report. Why is that, when surely their property will be greatly impacted by a clear cut actually bordering their yards? Mine does not, and yet I am there in detail in your Draft. Again, clearly, why include my private home and property in your public report, when I did not give permission for access, and my property does not border the runway, and as of Oct. 2021, I was informed my property was no longer in your tree destruction plan? What's up?	The study area for the Cultural Resources Assessment included a one-mile radius around obstructions in the protected airspace of both the approach and departure surfaces, including construction staging areas and access routes. Since this technical study was performed, the City and FAA decided the Proposed Action would remove obstructions in the approach and threshold siting surfaces to eliminate the most critical obstructions while substantially reducing the number of affected properties. In the Cultural Resources Assessment, buildings that were of historic-age (older than 50-years) we evaluated, as required under Section 106, to determine if there would be impacts to historic resources. A total of eight privately owned homes (including Joan Schroeder's) were identified as being older than 50-years and thus evaluated. Pictures of Joan Schroeder's house and property were taken from the public right-of-way.