COTTAGE GROVE STATE AIRPORT
OBSTRUCTION REMOVAL PROJECT

AIP # 3-41-XXXX-XXX

ENVIRONMENTAL ASSESSMENT

Prepared for:

Oregon Department of Aviation
3040 25th Street SE
Salem, OR 97302

Prepared by:

1020 SW Emkay Drive
Bend, OR 97702
Phone: 541.322.8962

April 2012

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Cottage Grove State Airport Obstruction Removal Project

ENVIRONMENTAL ASSESSMENT

January 2012

Lead Agency: Federal Aviation Administration

Responsible Official: Cayla Morgan, Environmental Protection Specialist
Seattle Airports District Office, Federal Aviation Administration
1601 Lind Ave., Ste. 250
Renton, WA 98055

Airport Owner: Heather Peck, Program Manager
Oregon Department of Aviation
3040 25th St. SE
Salem, OR 97302

Preparer: Erik Huffman, Project Manager
Century West Engineering
1020 SW Emkay Dr., Ste. 100
Bend, OR 97702

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

_____ _____

FAA Approving Official Date

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Summary

The Oregon Department of Aviation proposes to make improvements to the Cottage Grove State Airport. The Federal Aviation Administration (FAA) serves as the lead federal agency for this National Environmental Policy Act (NEPA) evaluation. The Airport is a state-owned general aviation airport that serves as the general airport for the City of Cottage Grove.

The purpose of this project is to comply with FAR Part 77 requirements for airport imaginary surfaces. The project is needed because obstructions (trees) currently penetrate the FAR Part 77 Surfaces and create a potential safety hazard for air navigation.

The Preferred Alternative includes removing trees which penetrate the FAR Part 77 surfaces or have the potential to penetrate those surfaces in the future.

Under the No Action Alternative, the Airport would continue to have obstructions to the FAR Part 77 surfaces, constituting a hazard to air navigation.

The Preferred Alternative would have no long-term adverse impacts on any resources evaluated in the EA. The Preferred Alternative may affect, but is not likely to adversely affect, Chinook salmon because of removal of trees which are considered riparian habitat. It is proposed that this potential impact would be mitigated by planting conifer seedlings at an off-site location downstream. This proposed mitigation would prevent direct adverse effects.

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Appendices

1 PROPOSED ACTION, PURPOSE, AND NEED

1.1 PROPOSED ACTION

1.1.1 Introduction

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, by the U.S. Department of Transportation (DOT), Federal Aviation Administration (FAA) National Environmental Policy Act Implementing Instructions for Airport Actions, Order 5050.4B, April 28,2006, and FAA Environmental Impacts: Policies and Procedures, Order 1050.1E, Change 1, March 20, 2006, and FAA Environmental Desk Reference for Airport Actions, October 2007.

The Oregon Department of Aviation (ODA) proposes to make improvements to the Cottage Grove State Airport (61S) which require submission of an EA. The FAA serves as the lead federal agency for the NEPA evaluation. The Cottage Grove State Airport (Airport) is a state-owned general aviation facility that serves as the general airport for the City of Cottage Grove and surrounding communities.

This EA provides an analysis of two project alternatives, the Preferred Alternative and No Action, to determine whether either would result in significant adverse environmental impacts. Section 1 describes the location and description of the project area and the purpose of and need for the proposed project. Section 2 provides a description of the Preferred and No Action Alternatives. No other alternatives were considered for evaluation. A list of discretionary actions and permits required for project implementation is included in Section 3.

1.1.2 Project Description

Cottage Grove State Airport is located on approximately 68 acres of land and is owned and operated by Oregon Department of Aviation. Construction of the proposed improvements is anticipated to take place in the summer of 2012. The purpose of the proposed project is to improve the safety of operations at the Airport. Major anticipated work items include:

Runway 15 obstruction (tree) removal; and

Runway 33 obstruction (tree) removal.

Surveyed trees that have been determined to be obstructions or potential future obstructions to the Runway 15-33 approach will be cut down. No excavation, grading, filling or road construction is anticipated as part of this work. No impervious surfaces will be constructed as a result of this project.

1.1.3 Project Location

The airport is located 1 mile east of Cottage Grove, Oregon. The airport is accessed by vehicle on East Palmer Avenue via Row River Road, approximately 22 miles south of Eugene, Oregon on Interstate 5. A vicinity map is shown in Appendix A.

The airport is designated as a "General Aviation" airport, accommodating aircraft from Cottage Grove and surrounding communities. Runway 15-33 is lighted and paved with dimensions of 3,188 feet in length and 60 feet in width. The airport also has a parallel taxiway to Runway 15-33 and an aircraft apron/hangar area.

The Oregon Department of Aviation either owns each area in fee simple title or owns easements that allow for the proposed tree cutting. Easements and work areas are shown in Appendix A.

1.2 PURPOSE AND NEED

1.2.1 Project Purpose

The purpose of this project is to comply with FAR Part 77 Imaginary Surfaces for Runways 15 and 33.

FAR Part 77 considers obstructions defined under the standards for imaginary surfaces to be presumed as hazards to air navigation.

Currently, Runways 15 and 33 are not in compliance with FAR Part 77 Imaginary Surface requirements due to the existence of obstructions (trees) penetrating those surfaces.

1.2.2 Project Need

The project is needed because trees penetrate the approach surfaces of Runways 15 and 33. An obstruction survey has been performed to identify the locations and heights of trees within the runway approaches. Figure1 shows the areas that have trees which have been determined to be obstructions. Trees which penetrate, and are anticipated to penetrate, the approach surfaces affect the safety of operations at the airport. The removal of the obstructing trees is necessary to improve safety at the airport.

2 ALTERNATIVES

2.1 PREFERRED ALTERNATIVE

The Preferred Alternative includes the single action of clearing obstructions within the FAR Part 77 imaginary surfaces for Runways 15 and 33. The Preferred Alternative does not include alteration of Airport facilities.

2.1.1 Obstruction Clearing

The Preferred Alternative is to clear the obstructions (trees) that penetrate and are anticipated to penetrate the FAR Part 77 surfaces of Runways 15 and 33. As described in the Biological Assessment prepared by Vigil-Agrimis on December 13, 2011, and included in Appendix B, the obstruction removal will be conducted in such a way that minimizes environmental impacts to the degree practicable. Mitigation will occur in the form of planting coniferous trees nearby. These will be planted at a ratio of two seedlings for each tree removed as part of this project.

2.2 NO ACTION ALTERNATIVE

Under the No Action Alternative, the Airport could not meet FAR Part 77 obstruction requirements for Runways 15 and 33. Therefore, the Airport would continue to be out of compliance with FAA standards for operational safety.

3 DISCRETIONARY ACTIONS AND PERMITS

The proposed project under the Preferred Alternative will require:

- NEPA Finding by the FAA

The proposed Preferred Alternative requires the following permits:

- Miscellaneous Permit from the Oregon Department of Transportation
- Land Use Permit from the City of Cottage Grove

4 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES

4.1 CONTROVERSY

No controversy has arisen concerning the proposed project at the Cottage Grove State Airport. There has been no documented opposition to the project by any of the Federal, State, or local government agencies contacted. There have been no persons who have indicated opposition to the project. The Oregon Department of Aviation also has acquired deeded easements from each affected property owner for the specific purpose of removing tree obstructions.

The No Action Alternative will not create controversy on environmental grounds.

The Preferred Alternative is not highly controversial on environmental grounds.

4.2 AIR QUALITY

At time of writing, the Oregon Department of Environmental Quality (ODEQ) lists two communities within Lane County as nonattainment areas for the six National Ambient Air Quality Standards (NAAQS) air pollutants. These are the Eugene/Springfield area and Oakridge. Cottage Grove is not listed as a nonattainment area with the ODEQ.

The No Action Alternative would have no air quality impacts.

As it does not include construction of any new structures or surfaces, the Preferred Alternative would not cause significant air quality effects or cause levels of pollution that would exceed NAAQS. The removal of trees within the approach surfaces and safety areas of Runways 15 and 33 would have no

long term air quality impacts. Movement around the site by the contractor may cause a temporary increase in dust which will be addressed in the construction documents.

4.3 COASTAL RESOURCES

Congress enacted the Coastal Barrier Resources Act of 1982 (Public Law 97-348) to address the problems caused by coastal barrier development. Congress reauthorized and expanded the act in 1990 and 2000. The act designates various undeveloped coastal barrier islands as ineligible for most federal expenditures and financial assistance that might support development, including flood insurance. The USFWS manages the program. There are no Coastal Barrier Resources in the state of Oregon according to the USFWS.

The federal Coastal Zone Management Act of 1972 (CZMA) places responsibility with the states to develop land and water use programs to protect coastal zone resources. The CZMA requires that federal development projects and activities directly affecting the coastal zone be consistent with approved state management programs. The Oregon Coastal Management Program applies to the area defined by the Washington border on the north and the California border on the south, and the crest of the coastal mountain range seaward to the extent of state jurisdiction as recognized by federal law. The Cottage Grove Airport is east of the coastal mountain range and not within the Oregon Coastal Management Zone. Therefore, the CZMA does not apply to the proposed project.

4.4 COMPATIBLE LAND USE

The area of potential impact for this project lies partially within Lane County and partially within the City of Cottage Grove. According to County correspondence, included as Appendix C, from the County in September 2010, Lane County will not require a land use permit for this project. According to City staff correspondence from October 2009, the City will require a land use permit for this project. The City indicated that the action is likely to be approved. The Oregon Department of Aviation is currently in the process of submitting a land use application to the City of Cottage Grove. Any land use requirements will be incorporated into project design documents.

The No Action Alternative would not alter any existing land uses, land use designations, nor require any land use action.

The proposed Preferred Alternatives would occur on the portion of the Airport property zoned Airport Operations (AO). The project would be permitted outright in the AO. The Preferred Alternative would not alter any existing land uses, land use designations, nor require a land use action.

4.5 CONSTRUCTION IMPACTS

Oregon DEQ construction impact regulations pertain to dust control, on-site rock crushing, and asbestos pipe disposal during construction. Asbestos pipe is unlikely to be encountered. Rock crushing will not be necessary. Compliant dust control measures will be described in the erosion control portion of the construction plans and specifications.

The No Action Alternative will not create construction impacts.

The Preferred Alternative will not create environmental concerns related to construction impacts.

4.6 SECTION 4(f)

Section 4(f) Lands are publicly owned lands, used for public parks or wilderness areas that are protected from development. There are no Section 4(f) Lands within a one-mile radius of the Airport.

The No Action Alternative would not affect any Section 4(f) lands.

The Preferred Alternative would not impact any publicly owned parks or recreation resources.

4.7 FARMLANDS

The No Action Alternative would not have any impact on farmlands.

The area of potential impact for this project does not include any lands used as farmland, therefore, no farmlands are impacted by the Preferred Alternative.

4.8 FEDERALLY LISTED AND ENDANGERED SPECIES

According to the Vigil-Agrimis Biological Assessment included in Appendix B, the project area is not defined as critical habitat for any listed species. However, the USFWS and NOAA Fisheries list the Upper Willamette River Chinook salmon as a threatened species that potentially exists within Lane County. The Biological Assessment states that spawning may occur outside of the Action Area for this project.

The No Action Alternative would have no impact on federally listed and endangered species.

The Preferred Alternative is not expected to result in direct take of Upper Willamette River Chinook salmon because no work will occur below the Ordinary High Water (OHW) mark of the Row River. Indirect effects are anticipated to be minimal.

Mitigation measures are anticipated to include riparian plantings approximately 0.5 miles downstream of the project site.

The FAA presented a February 14, 2012, Determination of Effect for the project to the National Marine Fisheries Service (NMFS). A March 21, 2012, Letter of Concurrence (Refer to NMFS Number 2012/00551) from the NMFS concluded that the proposed project is not likely to adversely affect Upper Willamette River Chinook salmon. This correspondence is included in Appendix B.

4.9 ESSENTIAL FISH HABITAT

The following information is summarized from the Biological Assessment prepared by Vigil-Agrimis on December 13, 2011, and included in Appendix B.

The No Action Alternative would have no impact on the aquatic habitat surrounding the Airport.

The Preferred Alternative is to remove tree vegetation that penetrates or is anticipated to penetrate approach surfaces. Tree removal will cause temporary disruption to terrestrial habitat. According the Vigil-Agrimis Biological Assessment, the Preferred Alternative will have the following short term impacts:

reduction of the input of detritus into the stream; reduction in shading; and reduction in potential large wood recruitment.

Mitigation would include seeding and planting of native herbaceous and woody vegetation that would improve upon the current habitat condition. This will take place approximately 0.5 miles downstream.

The FAA presented a February 14, 2012, Determination of Effect for the project to the National Marine Fisheries Service (NMFS). A March 21, 2012, Letter of Concurrence (Refer to NMFS Number 2012/00551) from the NMFS concluded that the proposed project would not adversely affect Essential Fish Habitat. This correspondence is included in Appendix B.

4.10 MIGRATORY BIRD ACT

The U.S. Army Corps of Engineers and the Oregon Department of State Lands were contacted via telephone on October 1 and October 2, 2009, respectively. Those agencies both reported that there are no records of protected nesting sites in the project area. This correspondence is noted in the Environmental Technical Memorandum.

A site reconnaissance was performed by Vigil-Agrimis, Inc. at the Cottage Grove State Airport on August 12, 2009. The resulting technical memorandum, included as Appendix D, states that no great blue heron rookeries or other large raptor nest (such as bald eagle, red-tail hawk, or osprey) were found in the marked trees, and these species were not seen on the day of the site visit. Construction documents will specify a construction time beginning after bird nesting season, after September 1st.

The No Action Alternative would not affect migratory bird species.

The Preferred Alternative, with construction beginning after September 1st, would not affect migratory bird species.

4.11 FLOODPLAINS

FEMA flood insurance rate maps (FIRM) show portions of the project site designated as Zone AE, which means those portions are within the 100-year floodplain. FIRMs for the area are included as Appendix E.

The No Action Alternative will not affect floodplain dynamics.

The Preferred Alternative will not impact characteristics of the floodplain because no facilities or surfaces are being constructed and tree stumps will not be removed.

4.12 SOLID WASTE IMPACTS

The No Action Alternative would have no impact on solid waste.

The Preferred Alternative would produce felled trees and woody debris on site. However, the tree stems and woody debris will remain on site as habitat and will not contribute to any solid waste impact.

4.14 HAZARDOUS MATERIALS

The No Action Alternative would not impact any hazardous material sites.

There are no hazardous material sites within the proposed work area. Therefore, the Preferred Alternative would not impact any hazardous material sites.

4.15 HISTORIC, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

The No Action Alternative would not impact any historic, architectural, archaeological, or cultural resources.

The Final Environmental Assessment for the Cottage Grove Airport Runway 15/33 RSA Compliance, prepared by David Evans and Associates, Inc., on May 15, 2008, (DEA 2008) included a Cultural Resources Survey prepared by Archaeological Investigations Northwest, Inc. (AINW, 2007). According to these documents, no cultural resources or archaeological sites have been recorded within one mile of the project area.

According to DEA 2008, there are no resources listed on the National Historic Register in or near the project area. There are also no resources eligible to be listed on the National Historic Register in the project area.

As quoted from the 2007 AINW Cultural Resources Survey, “Based on the negative findings of the archeological survey performed by AINW, the Preferred Alternative would have no impact on archeological, historical and cultural resources of significance in the project area. No mitigation measures are necessary. It is possible that some undetected archaeological resources may be present within the project area .. To ensure compliance with relevant state and federal requirements, should evidence of archaeological or historical resources be encountered during construction, all ground-disturbing activity near the find(s) should be halted immediately and the SHPO promptly notified If evidence of human remains or Indian burials is encountered during the development, all ground-disturbing activity near the find(s) should be halted immediately and the SHPO, the Oregon State Police, the Lane County Medical Examiner, and the appropriate tribes should be notified. In accordance with Section I 06 of the National Historic Preservation Act, FAA sent a letter on February 4, 2008 to SHPO, the Confederated Tribes of Grand Ronde Community of Oregon, and the Confederated Tribes of Siletz inviting them to participate in consultation on the EA The Cultural Resources Survey for the project was enclosed. On February 12, 2008, SHPO replied with a written concurrence SHPO" agree[s] that the project will have no effect on any known cultural resources. No further archaeological research is needed with this project."” The 2007 AINW Cultural Resources Survey is included as Appendix F in this report.

Based on these previous findings produced for a project in the same location, the Preferred Alternative would have no impact on archaeological, historical, and cultural resources of significance in the project area.

4.16 LIGHT EMISSION AND VISUAL EFFECTS

The No Action Alternative would have no impact on lighting systems or light emissions from the Airport. Under the No Action Alternative, no tree removal would occur.

The Preferred Alternative does not include any modifications to existing lighting and systems at the Airport. No night construction is anticipated that would require temporary lighting. The Preferred Alternative would have no significant light emissions or visual impacts.

4.17 NATURAL RESOURCES, ENERGY SUPPLIES, AND SUSTAINABLE DESIGN

Maintenance and operation of the Airport requires use of fuel and for aircraft and maintenance vehicles and electricity for lights.

The No Action Alternative would not require any additional fuel or energy for operation and maintenance of the Airport. The No Action Alternative would not require any construction energy or resources.

The Preferred Alternative would not increase the number of aircraft, nor change the type of aircraft using the Airport in the long term. Therefore there would be no measurable effect on local supplies of energy or natural resources. Maintenance of the runway, taxiway, apron, and other Airport facilities would continue to use the same amount of energy and resources as under existing conditions.

There would no measurable impacts on supplies of energy or natural resources, therefore no mitigation measures are necessary.

4.18 NOISE

Normal airport activities, such as takeoffs and landings, and traffic on all roadways surrounding and accessing the Airport, are the primary existing noise sources within the Airport vicinity.

The No Action Alternative would not create any additional adverse noise impacts.

The Preferred Alternative would not change the numbers or types of aircraft operations or equipment used at the Airport. The Preferred Alternative would not have any long-term adverse impact on noise; therefore, mitigation measures are not necessary. Construction impacts are described in the Construction Impacts section.

4.19 SECONDARY (INDUCED) IMPACTS

The No Action Alternative would create no secondary (induced) impacts.

The Preferred Alternative only addresses the issue of safety and will not otherwise affect the economy or the community. No secondary (induced) impacts are expected from the project.

4.21 SOCIOECONOMIC IMPACTS AND ENVIRONMENTAL JUSTICE

The No Action Alternative would not create any additional adverse noise impacts.

The Preferred Alternative would not require the relocation of residents or businesses. The project will not result in a change in population patterns or growth. No adverse socio-economic impacts are expected. No minority or low-income populations would be adversely or disproportionately affected by this project.

4.22 WATER QUALITY

The No Action Alternative would not have any impact on water quality.

The Preferred Alternative is exempt from a National Pollutant Discharge Elimination System permit as a silvicultural activity under 40 CFR 122.3(e). The Preferred Alternative will not produce significant impacts to ground water, surface water bodies, public water supply systems, or violate federal or state water quality standards.

4.23 WETLANDS

The No Action Alternative would not have any impact on wetlands.

A site reconnaissance was performed by Vigil-Agrimis, Inc. at the Cottage Grove State Airport on August 12, 2009. Wetland areas were identified within the project site but those areas were not delineated. Appendices B and D describe in detail the findings of environmental reconnaissance.

The U.S. Army Corps of Engineers was contacted via telephone on October 1, 2009. According to the Corps, tree removal is allowed in wetlands provided that disturbance to the ground is only temporary. Trees can be topped or cut down, but stumps cannot be removed. Construction documents for this project will eliminate ground disturbance by prohibiting the removal of stumps. The Preferred Alternative will not significantly impact wetland areas.

4.24 WILD AND SCENIC RIVERS

The Row River flows adjacent to the project and it is not designated as a wild and scenic river by any federal agency. The No Action Alternative would not impact any Wild or Scenic River.

The Preferred Alternative would not impact any Wild or Scenic River.

4.25 CUMULATIVE IMPACTS

Cumulative effects are defined as the effects of the proposed action when added to impacts due to past, present, and reasonably foreseeable future public or private actions.

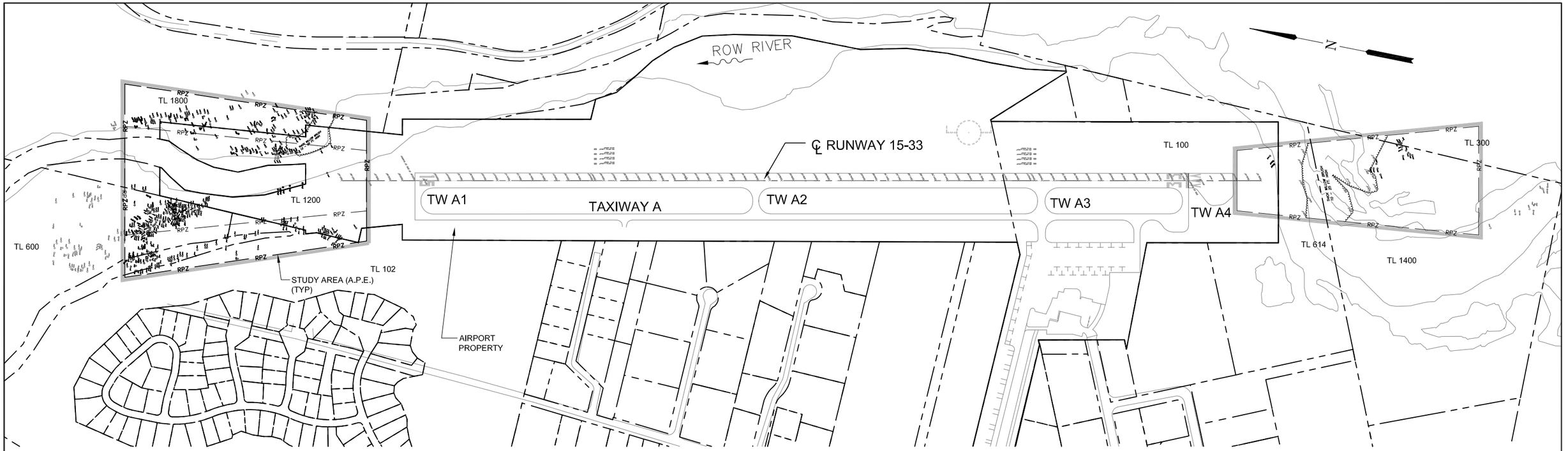
The No Action Alternative would not contribute to any cumulative impacts.

Based upon the finding of ‘no impacts’ for the Preferred Alternative, there will be no cumulative impacts when evaluated with regard to projects of the past, present or in the reasonably foreseeable future.

APPENDICES

APPENDIX A

PROJECT FIGURES



PLAN
1"=200'

200 0 200 400
SCALE OF FEET
SCALE: 1"=200'

LEGEND

- ROW RIVER
- WILLOW PATCH LINE
- EDGE OF EXISTING ROAD
- STUDY AREA/ AREA OF POTENTIAL EFFECT (A.P.E.)
- RPZ — EXISTING RUNWAY PROTECTION ZONE
- RPZ — PROPOSED RUNWAY PROTECTION ZONE
- RUNWAY CENTERLINE
- 600 — EXISTING TREE (WITHIN STUDY AREA)
- 610 — EXISTING TREE (ADJACENT TO STUDY AREA)
- TL 9077 — TAX LOT NUMBER
- +315.47 — SPOT ELEVATION
- PROPERTY LINE
- AIRPORT PROPERTY LINE

OREGON DEPARTMENT OF AVIATION

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING.
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

NO.	DATE	BY	APPR	REVISIONS

CENTURY WEST
ENGINEERING CORPORATION
1020 Emkay Drive, Suite 100 | Bend, Oregon 97702
(541) 322-8962 | (541) 382-2423 fax
www.centurywest.com

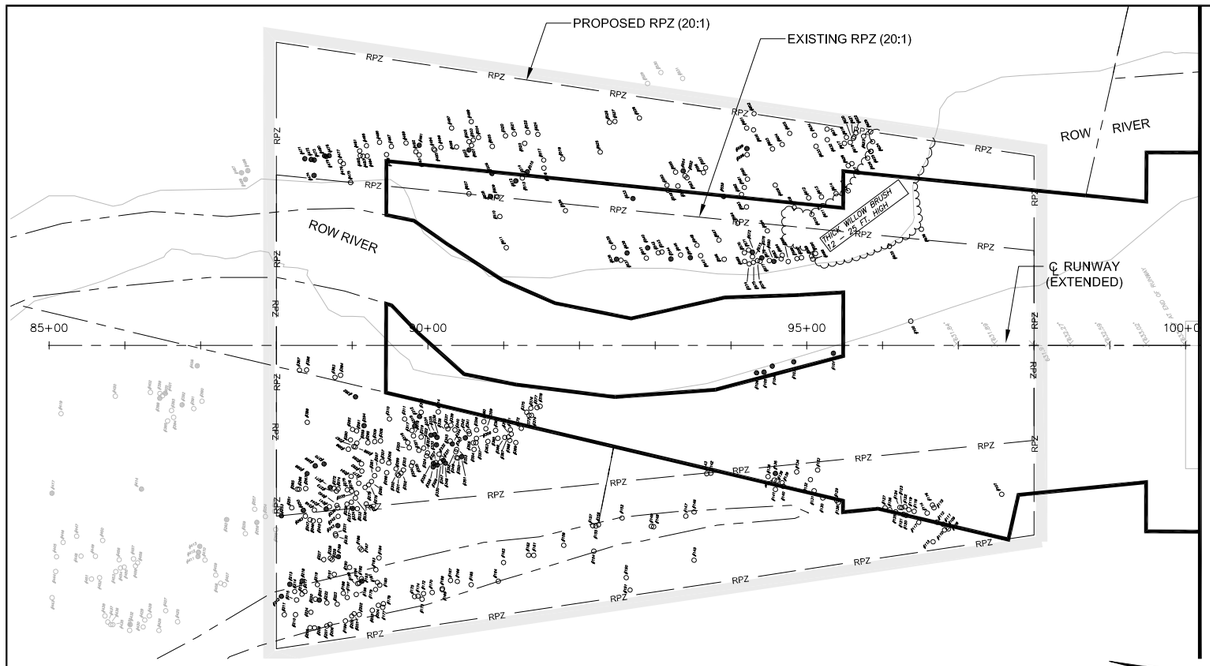
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SCALE:
EJH	JJB	JNR	AS SHOWN
DATE: JUNE 2009		PROJECT NO: 40097.034.01	

OREGON DEPARTMENT OF AVIATION
COTTAGE GROVE STATE AIRPORT
RUNWAY 15-33 APPROACH STUDY

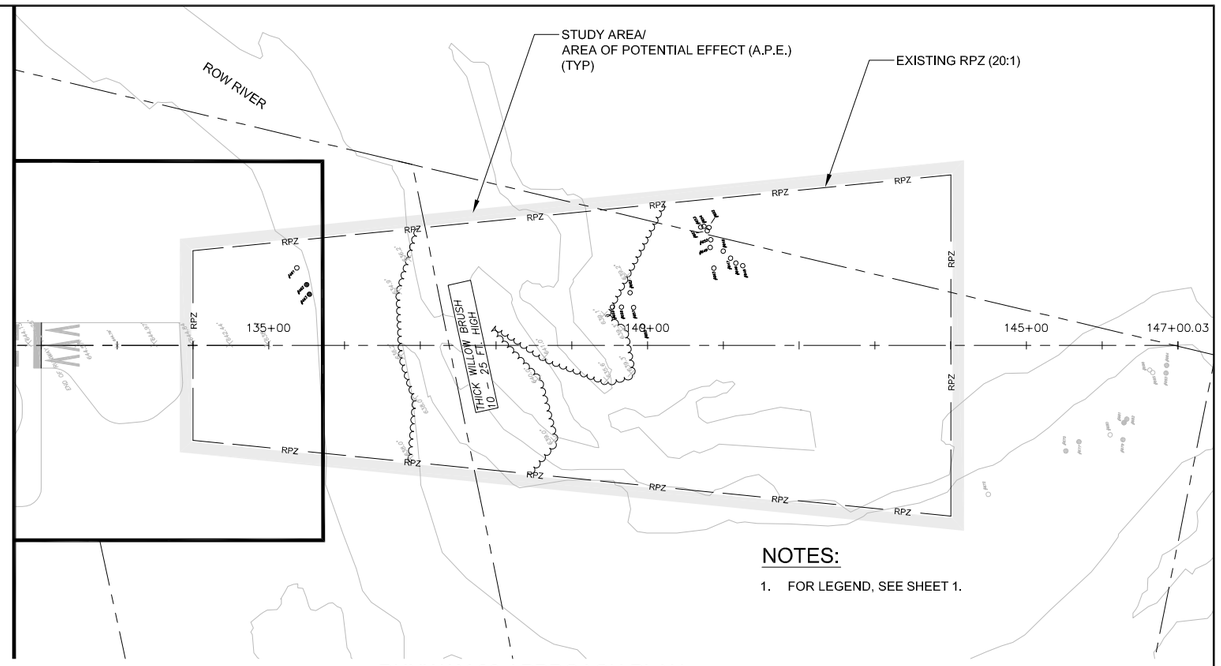
SITE PLAN

DRAWING NO. 2

SHEET NO. 2 OF 3



RUNWAY 15 APPROACH PLAN
1"=100'



RUNWAY 33 APPROACH PLAN
1"=100'

NOTES:

1. FOR LEGEND, SEE SHEET 1.

N

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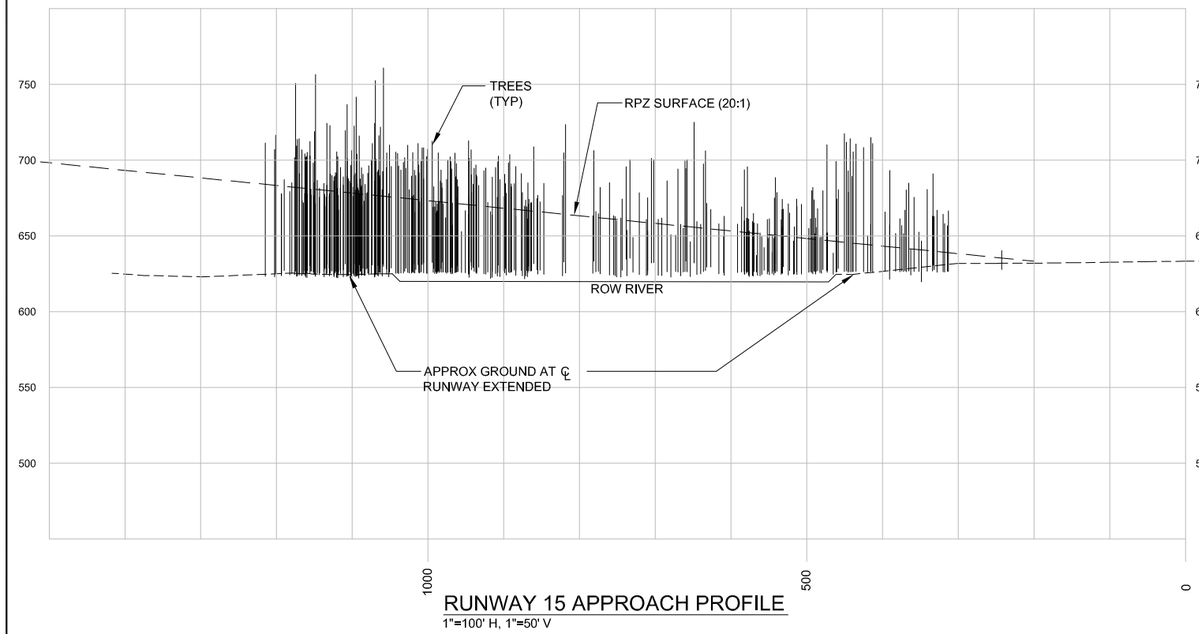
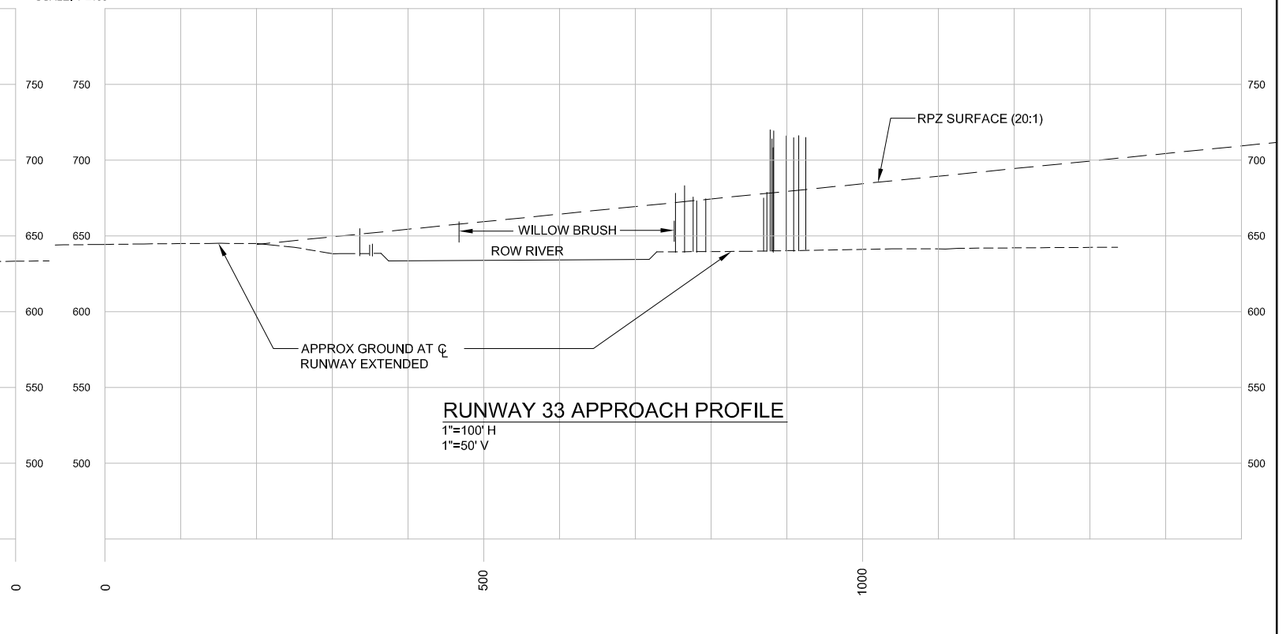
SCALE OF FEET
SCALE: 1"=100'



RUNWAY 15 APPROACH PROFILE
1"=100' H, 1"=50' V



RUNWAY 33 APPROACH PROFILE
1"=100' H
1"=50' V

OREGON DEPARTMENT OF AVIATION

VERIFY SCALES
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NO.	DATE	BY	APPR	REVISIONS

CENTURY WEST
ENGINEERING CORPORATION
1020 Emkay Drive, Suite 100 | Bend, Oregon 97702
(541) 322-8962 | (541) 382-2423 fax
www.centurywest.com

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SCALE:
EJH	JJB	JNR	AS SHOWN
DATE: JUNE 2009		PROJECT NO: 40097.034.01	

OREGON DEPARTMENT OF AVIATION
COTTAGE GROVE STATE AIRPORT
RUNWAY 15-33 APPROACH STUDY

RUNWAY 15-33 APPROACH PLAN AND PROFILE

DRAWING NO. 3

SHEET NO. 3 OF 3

APPENDIX B

DETERMINATION OF EFFECT CORRESPONDENCE AND BIOLOGICAL ASSESSMENT

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to NMFS No:
2012/00551

March 21, 2012

Cayla Morgan
Federal Aviation Administration
1601 Lind Avenue SW, Ste. 250
Renton, Washington 98055-4056

Re: Endangered Species Act Section 7 Letter of Concurrence and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Cottage Grove Airport Runway Safety Improvement Project along the Row River (HUC# 170900020105), Lane County, Oregon

Dear Ms. Morgan:

On February 21, 2012, the National Marine Fisheries Service (NMFS) received your request for a written concurrence that the effects of the Cottage Grove Airport Runway Safety Improvement Project that the Federal Aviation Administration (FAA) proposes to fund and administer are not likely to adversely affect (NLAA) Upper Willamette River (UWR) Chinook salmon (*Oncorhynchus tshawytscha*) or their critical habitat under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.[1] The NMFS reviewed the proposed action for potential effects to the listed species and critical habitat you requested and concluded that the action is NLAA UWR Chinook salmon and their critical habitat.

NMFS also reviewed the proposed action for potential effects on EFH designated under the MSA, including conservation measures and any determination that you made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation.[2] In this case, NMFS concluded that the action would not adversely affect EFH. Thus, consultation under the MSA is not required for this action.

This letter is in compliance with section 515 of the Treasury and General Government Appropriations Act of 2001 (Data Quality Act) (44 U.S.C. 3504 (d) (1) and 3516), and underwent pre-dissemination review using standards for utility, integrity and objectivity.

[1] Memorandum from D. Robert Lohn, Regional Administrator, to ESA Consultation Biologists (guidance on informal consultation and preparation of letters of concurrence) (January 30, 2006).

[2] Memorandum from William T. Hogarth, Acting Administrator for Fisheries, to Regional Administrators (national finding for use of Endangered Species Act section 7 consultation process to complete essential fish habitat consultations) (February 28, 2001).

Consultation History
On February 21, 2012, NMFS received your request for informal consultation regarding the subject project. That request contained all the information NMFS needed to assess the impacts potential to listed species in the action area.

A complete record of this consultation is on file at the Oregon State Habitat Office in Portland, Oregon.

Description of the Proposed Action and the Action Area
The FAA is proposing to improve safety for airplane landings by removing or topping 371 trees (primarily black cottonwood) on 9 acres of land adjacent to the Row River near Cottage Grove in Lane County, Oregon. Trees cut within 20 feet of the riverbank will be left on site and stumps left in place. Trees cut outside of 20 feet will be chipped. To mitigate for the lost trees, 742 conifers will be planted on a 71-acre site 0.5 miles north of the 9-acre impact area. No in-water work will be conducted. To minimize potential impacts proposed conservation measures include:

- Only hand tools will be used to fell trees.
- Existing roads will be used to access the area wherever possible.
- All equipment will be cleaned and inspected prior to arriving at the project site.
- No grading or skidding will occur.
- Tree stumps will remain in place.
- A spill prevention and control plan will be prepared and implemented (if necessary). Containment materials will be available at all times at the site.
- Refueling of any equipment will occur a minimum of 100 feet from the top of the streambank.

Action Area
'Action area' means 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). For purposes of this consultation, the action area is the 9-acre site (located at river mile 2 of the Row River) where trees will be removed and the 71-acre parcel 0.5 miles downstream from the removal site.

Effects of the Action
For purposes of the ESA, "effects of the action" means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is NLAA listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial.[3] Beneficial effects are contemporaneous positive effects without any adverse effects to the species. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

[3] U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1998. Endangered Species Act Consultation Handbook: Procedures for Conducting Section 7 Consultations and Conferences. March, 1998. Final. p. 3-12.

The effects of the proposed action are reasonably likely to include increased stream temperature and stream turbidity, and decreased large wood recruitment. Based on the information provided by the FAA and developed during informal consultation, NMFS concludes that the negative effects of the proposed action are discountable or insignificant, and therefore concurs with the FAA determination that the proposed Runway Safety Improvement Project is NLAA UWR Chinook salmon. This conclusion for effects on UWR Chinook salmon was reached for the following reasons:

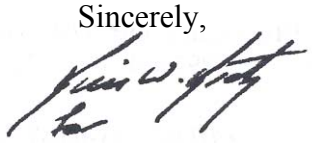
- There will be no in-water work, thus there would be no direct impact to Chinook salmon.
- The removal of trees would allow for some warming of the river. However, the upstream dam has a larger impact on temperature in the system and the small area of tree removal would not result in a measurable increase in stream temperature.
- The planting of additional trees would over time (several decades) result in an increased delivery of large wood in to the system beyond what is currently occurring. The conifers proposed as mitigation would also yield a better quality of large wood for habitat processes, since they last longer than cottonwoods in the aquatic environment.
- The cottonwoods that are felled within the 20-foot buffer would be left on site where they will be readily available for delivery to the stream during high water events, thereby increasing large wood delivery into the system.
- No excavation, grading, filling or road construction would occur. Therefore, no increased turbidity in the stream is expected.

Conclusion
Therefore, NMFS is reasonably certain the identified effects from the tree removal is discountable or insignificant and therefore NLAA for both UWR Chinook salmon and their designated critical habitat.

Reinitiation of Consultation
Reinitiation of consultation is required and shall be requested by the Federal agency**,** or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) 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) 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 this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

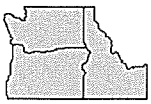
Please direct questions regarding this letter to Ben Meyer, Branch Chief of the Willamette/Lower Columbia River Branch of the Oregon State Habitat Office, at 503.230.5425.

Sincerely,



William W. Stelle, Jr.
Regional Administrator

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



**Airports Division
Northwest Mountain Region
Seattle Airports District Office**
1601 Lind Avenue, S. W., Suite 250
Renton, Washington 98055-4056

February 14, 2012

Ben Meyer
Branch Chief
Willamette Basin Habitat Branch
National Marine Fisheries Service
1201 N.E. Lloyd Blvd., Suite 1100
Portland, OR 97232

Dear Mr. Meyer:

Cottage Grove State Airport – Runway Safety Area Improvement Project
Biological Assessment (BA) – Determination of Effect

The Oregon Department of Aviation has hired Vigil Agrimis to prepare the aforementioned document to evaluate the potential impacts on the following species:

- Upper Willamette River Chinook salmon *(Oncorhynchus tshawytcha)*
- Upper Willamette River Steelhead *(Oncorhynchus mykiss)*
- Oregon chub *(Oregonichtys crameri)*
- Bull trout *(Salrelinus confluentus)*
- Canada lynx
- Marbled Murrelet *(Brachyamphus marmoratus)*
- Western Snowy Plover *(Charadrius alexandrinus nivosus)*
- Northern Spotted Owl *(Strix occidentalis caurina)*
- Fender's Blue Butterfly *(Icaricia icariodes fender)*
- Oregon's Silverspot Butterfly *(Speyeriazerene Hippolyta)*
- Willamette Daisy *(Erigeron decumbens var. decumbens)*
- Bradshaw's Lomatium *(Lomatium bradshawii)*
- Kincaids's lupine *(Lupinus sulphureus ss/ Kincaidii)*

In accordance with Section 7(c) of the Endangered Species Act and Section 303(a) (7) of the Magnuson-Stevens Act, we hereby request your written concurrence with our Determination of Effect which is enclosed along with the BA.

Please do not hesitate to contact me at (425) 227-2653 should you have any questions or wish to discuss anything in more detail.

Sincerely,

Cayla D. Morgan
Environmental Protection Specialist

Cc: Aaron Ketch, ODOT
Erik Huffman, Century West Engineering

Department of Transportation
Federal Aviation Administration

Determination of Effect
Cottage Grove Airport – Runway Safety Improvement Project
Cottage Grove, Oregon

Proposed Action: The proposed action is necessary to bring the approach surfaces for Runways 15 and 33 into compliance with Federal Aviation Regulation Part 77 Objects Affecting Navigable Airspace requirements. This will involve the removal of trees that have been surveyed and found to penetrate the FAR Part 77 approach surfaces.

An Environmental Assessment (EA) pursuant to the National Environmental Policy Act is also being prepared for this project.

Biological Assessment: In accordance with Section 7 of the Endangered Species Act, a Biological Assessment (BA) has been prepared to determine the effect of the project on the following species under the Endangered Species Act, of 1973 as amended.

- Upper Willamette River Chinook salmon *(Oncorhynchus tshawytcha)*
- Upper Willamette River Steelhead *(Oncorhynchus mykiss)*
- Oregon chub *(Oregonichtys crameri)*
- Bull trout *(Salrelinus confluentus)*
- Canada lynx
- Marbled murrelet *(Brachyramphus marmoratus)*
- Western snowy plover *Charadrius alexandrimus nivosus)*
- Northern Spotted Owl *(Strix occidentalis caurina)*
- Fenders Blue Butterfly *(Icaricia icariodes fenderi)*
- Oregon's Silverspot Butterfly *(Speyeriazerene hippolyta)*
- Willamette Daisy *(Erigeron decumbens* var. *decumbens)*
- Bradshaw's Lomatium *(Lomatium bradshawii)*
- Kincaid's Lupine *(Lupinus sulphureus var. kincaidii)*

Coordination: The BA was prepared to satisfy the requirements of Section 7(c) of the Endangered Species Act of 1973, as amended and Section 303 (a) (7) of the Magnuson-Stevens Act. This Determination of Effect is being forwarded to the National Marine Fisheries Service for further evaluation.

Biological Impacts on Listed Species: The proposed project will have no effect on the three plant species, the Upper Willamette River Steelhead, Oregon chub, Bull trout, Canada lynx, Marbled murrelet, Western snowy plover, Northern Spotted Owl, Fender's Blue Butterfly or Oregon's Silverspot Butterfly because there is either no evidence of occurrence or potential habitat in the action area. The project May Affect, but is Not Likely to Adversely Affect the Chinook salmon for reasons outlined in Section VI of the BA.

Essential Fish Habitat (EFH) Impacts: Regarding EFH, the project is not expected to result in any long-term reduction in quantity or quality of EFH, a finding of will not adversely affect EFH for Pacific salmon is made. The full evaluation for EFH can be found in Appendix B of the BA.

Prepared by: Cayla Morgan, Environmental Specialist, Seattle Airports District Office, Federal Aviation Administration. February 14, 2012.

Biological Assessment

Oregon Department of Aviation

Cottage Grove Runway Safety Improvement Project

Project Proponent: Oregon Department of Aviation

Federal Action Agency: Federal Aviation Administration

Funding Provided by Federal Aviation Administration

Prepared by:

VIGIL AGRIMIS
design professionals

819 SE Morrison Street Suite 310

Portland, Oregon 97214

December 13, 2011

Revised January 30, 2012

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I. BACKGROUND / HISTORY

A. PROJECT HISTORY

Cottage Grove State Airport (Airport) is located on approximately 68 acres of land and is owned and operated by Oregon Department of Aviation. The Airport is located east of Interstate 5 (I-5), along the Row River in unincorporated Lane County, Oregon. The City of Cottage Grove borders the Airport on the west. The Airport is accessed by vehicle on East Palmer Avenue via Row River Road.

The Airport is designated by Lane County Comprehensive Plan as a "General Aviation" airport, accommodating aircraft from Cottage Grove and surrounding communities. The Airport consists of a runway, parallel taxiway, an aircraft apron and a collection of private hangers. Runway 15-33 is lighted and paved with dimensions of 3,188 feet in length and 60 feet in width.

The purpose of the proposed project is to improve the safety of operations at the Airport. The project involves the removal of trees that have been surveyed and found to penetrate the FAR Part 77 approach surfaces for Runways 15 and 33 within the runway protection zone. Trees to be removed are shown on the site plans in **Appendix A.**

B. DISCUSSION OF FEDERAL ACTION AND LEGAL AUTHORITY / AGENCY DISCRETION

Funding and administration of this project is provided by Federal Aviation Administration (FAA). An Environmental Assessment is being prepared for this project to fulfill FAA National Environmental Policy Act requirements. No other federal permits are anticipated for this project.

To date, there have been no discussions or meetings with NOAA Fisheries (NMFS) or US Fish and Wildlife Service (USFWS) about this project. We are unaware of any previous Endangered Species Act consultations regarding this project. This Biological Assessment, prepared by Vigil-Agrimis, Inc. for Century West (project engineers), addresses the proposed action in compliance with Section 7 of the ESA, as amended.

C. FEDERAL ACTION HISTORY

In 2008, two other projects occurred on the Row River in the vicinity of the Airport: one at the Airport and the other 7 miles upstream at the Dorena Dam. NOAA Fisheries issued Biological Opinions for both projects and are summarized below. No other federal action projects are known to have occurred on the Row River in the vicinity of the Airport since then.

Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Cottage Grove Airport Bank Stabilization Project, Row River (HUC 170900020105), Lane County, Oregon (NMFS Reference number

2008/00957). The formal consultation for the Cottage Grove State Airport Bank Stabilization Project considered the effect of the project on Upper Willamette River (UWR) Chinook salmon *(Oncorhynchus tshawytscha*). No other listed species were expected to occur in the action area. NMFS concluded that a very small proportion of the total number of UWR Chinook salmon individuals would be affected by the adverse effects of the action because the distribution of the effects is limited to only a few hundred feet of stream in an area that is already in relatively poor condition, during a time when the fewest number of fish are likely to be present, and the duration of those effects will extend to a few months or years. Some of the fish that would be exposed to additional stress caused primarily by capture and release and, habitat and substrate degradation would be physically injured or killed. The number of fish affected will be too few to produce any observable effect at the population scale and, because the proposed action will not have any affect at the population scale, the proposed action is not likely to appreciably reduce the survival and recovery of this species. Therefore, NMFS concluded the action would not jeopardize UWR Chinook salmon. NMFS also concluded that proposed action would have the following adverse effects on Essential Fish Habitat (EFH) designated for Pacific Coast salmon: (1) Moderate increase in turbidity during and after construction; and (2) Short-term simplification of stream habitat. Two conservation measures were added as conditions under the Incidental Take Statement to avoid, mitigate, or offset the impact of the proposed action on EFH.

Endangered Species Act Section 7 Consultation: Final Biological Opinion on the Dorena Lake Dam Hydroelectric Project (No. 11945-001) application for an original license. NMFS Consultation F/NWR/2006/04982. The formal consultation for the Dorena Lake Dam Hydroelectric Project application for an original license considered the effect of the project on UWR Chinook salmon. No other species were expected to occur in the action area. NMFS concluded the action was not likely to jeopardize UWR Chinook salmon nor cause adverse modification or destruction of designated critical habitat for this species. In summary, it was determined that the Proposed Action would result in some negative effects to UWR Chinook salmon. Adverse impacts would likely include: (1) short-term behavioral effects caused by increases in suspended sediment and turbidity in the Row River downstream of the dam during project construction; (2) the potential for small incremental increases in accumulation of mercury compounds in body tissues caused by suspension of mercury in the water column during construction and infrequent maintenance operations; (3) injury, mortality, or spawning delay of adult fish caused by attraction to turbine outflow and relatively high velocities through the tailrace barrier screen. NMFS anticipated some minor adverse impacts to EFH. To minimize these adverse effects to EFH, FERC was required to implement and monitor the terms and conditions in the incidental take statement.

II. Description of the Action and Action Area

A. Description of the Project Activities

The purpose of the proposed project is to improve the safety of operations at the Airport. The project involves the removal of trees that have been surveyed and found to penetrate the FAR Part 77 approach surfaces for Runways 15 and 33 within the runway protection zone. Trees to be removed are shown on the site plans in **Appendix A.**

A total of 371 trees have been identified as penetrating the approach surfaces: 340 trees on the north end; and 31 trees are on the south end. Trees within 20' of the top of the bank of the Row River and within wetland areas will be cut down at ground level and left in place. Trees over 20' from top of bank and outside of wetland areas will be cut and the logs chipped. Trees cut down will be cut at ground level and stumps will remain undisturbed in the ground.

Construction of the proposed improvements is expected to take place between September 1, 2012, and March 1, 2013. The delineation of wetland areas and the 20 foot buffer from the top of bank will be completed during the design phase of the project and those areas will be included on the design drawings and contract documents. These boundaries will also be flagged in the field. No mechanized equipment other than hand tools (chain saws) will be allowed within wetland areas or within 20' of the top of the bank.

Willow trees will generally be excluded from topping and/or cutting activities due to their limited potential for future vertical growth. Only individual willow stems that penetrate the approach surface will be removed. At this time, no willow trees are identified for removal.

To mitigate for tree removal, conifer seedlings will be planted on property owned by the Oregon Department of Transportation. The 71-acre property is located on the Row River, about 0.5 miles north of where trees will be removed. Trees will be planted at a ratio of two conifer seedlings per one obstruction tree cut down.

No excavation, grading, filling or road construction is anticipated as part of this work. No impervious surfaces will be constructed as a result of this project. No work below the Ordinary High Water (OHW) mark of the Row River will be needed.

B. Description of Proposed Conservation Measures

The project includes the following conservations measures:

- No in-water work will be required.
- Tree removal will occur between September 1 and March 1.
- Contractor will use only hand tools to fall or top trees. Equipment will be limited to that with the least adverse effects on the environment (e.g., minimally sized, rubber tires), use

existing roadways and travel paths of access whenever possible, and only accesses riparian areas within the upstream and downstream limits of construction.

- All equipment to be used for construction activities shall be cleaned and inspected prior to arriving at the project site, to ensure no potentially hazardous materials are exposed, no leaks are present and the equipment is functioning properly.
- Fallen trees within 20 feet of the top of the bank of the Row River and within wetland areas will remain in place and stumps will not be removed.
- No grading or skidding will occur.
- Tree stumps will remain in place.
- All trees will be accessed by foot.
- The contractor shall prepare a Spill Prevention, Control and Countermeasures (SPCC) Plan prior to beginning construction. The SPCC Plan shall identify the appropriate spill containment materials, which will be available at the project site at all times.
- In order to eliminate or minimize the likelihood of accidental spills from vehicle and equipment cleaning, maintenance, refueling, and fuel storage, these activities take place a minimum of 100 feet from the top of any streambank or wetland and incorporate all necessary industry standards (e.g biodegradable or non-toxic hydraulic fluid, under carriage containment for stationary equipment).
- A Temporary Erosion and Sedimentation Control (TESC) plan will be developed and implemented as directed by the project engineer.

C. Project Area´ and ´Action Area´ Defined

The action area is at river mile 2 on the Row River within the 170900020105 - 6th field Hydrologic Unit Code (HUC). The legal location of the Airport is Township 20 South, Range 3 West, and sections 22 and 27, Willamette Meridian. The Action Area also includes a 72-acre parcel owned by ODOT (Tax Lot 2003220000600), located about 0.5 miles downstream of the Airport, where trees will be planted for mitigation. In defining the Action Area for this project, the effects of construction noise and potential areas of increased turbidity resulting from tree removal were analyzed. For noise, the Action Area includes a quarter mile radius around the project area. The action area consists of the section of the Row River beginning at the upper end of the project site and extending 100 feet downstream from the lower end of the project.

The Project Area for the tree removal project is shown on the site plans in **Appendix A** and includes areas that might be temporarily disturbed for access and staging areas.

The project is not expected to cause an increase in turbidity, because there will be very little ground disturbing activities and proper erosion control measures will be installed to prevent sediment from

entering the Row River. Topped trees within 20 feet of the top of the bank of the Row River will remain where they fall. No stumps will be removed and no grading will occur. All trees will be accessed by foot. Therefore, ground disturbing activities and expected turbidity would be the same as the project foot print.

Approximately 356 trees will be removed over a 9 acre area. The area affected by the project includes the riparian area of Row River, both upstream and downstream of the airport property (approximately 4.5 acres on both the north (downstream) and south (upstream) ends. To compensate for the tree removal, 742 conifers will be planted on 72 acres along the Row River, about .05 mile downstream.

D. Interdependent and Interrelated Actions

This is a single and complete safety improvement project. It will neither be associated with interrelated actions nor enable interdependent actions. The project involves the removal of trees that have been surveyed and found to penetrate the FAR Part 77 approach surfaces for Runways 15 and 33 within the runway protection zone.

III. Status of Species and Critical Habitat

Species lists were obtained from the USFWS website on November 21, 2011 (website revised November 1, 2007) and from the NOAA Fisheries website on November 21, 2011. StreamNet (StreamNet 2009, accessed November 21, 2011) was used to determine which fish utilize the Project Area on Row River. Species listed under the Federal ESA addressed in this Letter of No Effect are displayed in **Table 1**.

There is no designated Critical Habitat for any species within the Action Area.

Table 1. ESA Species Listed on the USFWS and NOAA Fisheries Species Lists That Could Potential Occur in Lane County

Species Common Name (*Scientific Name*)	Federal Endangered Species Act Status (i.e., Endangered, Threatened, Proposed)	Actual Occurrence in Action Area
Upper Willamette River Chinook salmon (*Oncorhynchus tshawytscha*) ESU.	Threatened. Critical habitat has been designated for this species, but not within the project area.	Rearing and migration. Spawning may occur outside of the Action Area.
Upper Willamette River Steelhead (*Oncorhynchus mykiss*) ESU	Threatened	None. Action Area upstream of this ESU.
Oregon chub (*Oregonichtys crameri*)	Endangered	None. No potential habitat. Closest known population is over 2 miles downstream in the Coast Fork Willamette River
Bull trout (*Salrelinus confluentus)*	Threatened	None. No potential habitat.
Northern spotted owl (*Strix occidentalis caurina*);	Threatened. Critical habitat has been designated for this species, but not within the project area	None. No potential habitat.

Species Common Name (*Scientific Name*)	Federal Endangered Species Act Status (i.e., Endangered, Threatened, Proposed)	Actual Occurrence in Action Area
Marbled murrelet (*Brachyramphus marmoratus*)	Threatened. Critical habitat has been designated for this species, but not within the project area	None. No potential habitat.
Western snowy plover (*Charadrius alexandrimus nivosus*)	Threatened	None. No potential habitat.
Canada lynx	Threatened	None. No potential habitat.
Fender's Blue Butterfly (*Icaricia icarioides*)	Endangered	No evidence of occurrence
Oregon Silverspot Butterfly (*Speyeriazerene hippolyta*)	Threatened	No evidence of occurrence
Willamette Daisy (*Erigeron decumbens var. decumbens*)	Endangered	No evidence of occurrence
Kincaid's Lupine (*Lupinus sulphureus var. kincaidii*)	Threatened	No evidence of occurrence
Bradshaw's Lomatium (*Lomatium bradshawii)*	Endangered	No evidence of occurrence

Chinook Salmon, UWR ESU. The species includes all naturally-spawned populations of spring-run Chinook salmon in the Clackamas River and in the Willamette River, and its tributaries, above Willamette Falls, Oregon, and progeny of seven artificial propagation programs. The UWR Chinook salmon within the Row River are predominately of hatchery origin and do not represent a historical population. Nevertheless, the Row River provides juvenile rearing habitat and spawning habitat for the few adults that may enter the system. The number of adults and juveniles that use the Action Area are very low and although these fish will reproduce in upstream spawning sites they do not constitute a self-sustaining population (Myers 2006). Overall, the viability risk to UWR Chinook salmon is very high. The major factors limiting recovery of UWR Chinook salmon identified by NMFS include lost/degraded floodplain connectivity and lowland stream habitat, degraded water quality, high water temperature, reduced streamflow, and reduced access to spawning/rearing habitat (NMFS 2006).

Steelhead, UWR ESU. The action area lies within the Willamette River basin, but is actually upstream of the upper Willamette River ESU for steelhead trout as defined by NMFS (NMFS 2007). Therefore, this project will have no effect on UWR steelhead ESU. This species is not addressed further in this BA.

Bull Trout. These species have not been reported in the action area (NMFS 2007), and has not been included in proposed critical habitat. Therefore, this project will have no effect on bull trout. This species is not addressed further in this BA.

Oregon chub. Suitable habitat for Oregon chub consists of side channels and oxbows with low flow velocity, silty substrate, and aquatic vegetation (USFWS 1993). No such habitat occurs in the action area, which has coarse gravel and cobble substrate exposed to scouring flows. Therefore, this project will have no effect on Oregon chub. This species is not addressed further in this BA..

Northern Spotted Owl and Marbled Murrelet. Both of these species require large blocks of old-growth or mature forest with old-growth elements (Thomas 1990). No such habitat occurs in the action area. Therefore, this project will have no effect on northern spotted owls or marbled murrelets. These two species is not addressed further in this BA.

Western snowy plover. The action area is far removed from the beach and dune habitat used by snowy plovers (USFWS 1994). Therefore, the project will have no effect on western snowy plovers. This species is not addressed further in this BA.

Canada lynx. The lynx is a medium-sized cat with long legs, large, well-furred paws, long tufts on the ears, and a short, black-tipped tail. The distribution of lynx in North America is closely associated with the distribution of North American boreal forest (USFWS 2000). The range of lynx populations extends south from the classic boreal forest zone into the subalpine forest of the western United States, and the boreal/hardwood forest ecotone in the eastern United States. Within these general forest types, lynx are most likely to persist in areas that receive deep snow and have high-density populations of snowshoe hares, the principal prey of lynx. No such habitat occurs in the action area. Therefore, this project will have no effect on Canada lynx and this species is not addressed further in this BA.

Fenders Blue Butterfly. The Fender's blue butterfly is closely associated with Kincaid's lupine, a plant this listed as threatened. The butterfly relies on the lupine as a food source during its caterpillar life stage. Both species are associated with remnants of the native upland prairies that once occupied Oregon's Willamette Valley but have been largely displaced by agriculture (USFWS 2000). Currently, Fender's blue butterflies are known to occur at 32 sites in Yamhill, Polk, Benton, and Lane counties in Oregon (USFWS 2000). No remnant native prairie or Kincaid's lupine are present in the action, so no suitable habitat for Fender's blue butterfly appears to be present. Therefore, this project will have no effect on Fenders blue butterfly. This species is not addressed further in this BA.

Oregon Silverspot Butterfly. The Oregon silverspot butterfly requires one of three types of grasslands: coastal salt spray meadows, stabilized dunes, or montaine meadows (Black and Vaughan 2005). The action area is far removed from any of these habitats. Therefore the project will have no effect to Oregon silverspot butterflies. This species is not addressed further in this BA.

Willamette Daisy. The primary habitat for Willamette daisy is native wetland prairies where flooding creates anaerobic and strongly reduced soil conditions. These species generally flowers in June and July (USFWS 2000). When the Willamette daisy was proposed for listing, it was known to occupy 28 sites scattered within Polk, Marion, Linn, Benton, and Lane counties, Oregon. A wetland inspection for the airport was conducted in 2008 and of the Action Area in 2010. No wetlands that would be suitable habitat for Willamette Daisy were identified. There is no documented occurrence of Willamette daisy on or near the site. Therefore the proposed project would have no effect on Willamette daisy. This species is not addressed further in this BA.

Kincaid's Lupine. Kincaid's lupine is generally found in the Willamette Valley native upland prairie sites that are characterized by heavier soils and mesic to slightly xeric soil moisture levels (USFWS 2000). Currently, Kincaid's lupine are known to occupy 51 sites throughout the Willamette Valley and one site within southern Washington. No native upland prairie habitat occurs at the Cottage Grove Airport action area and none have been observed on the site during project site studies. This species is not addressed further in this BA.

Bradshaw's Lomatium. Suitable habitat consists of wet, seasonally flooded prairies and grasslands around creeks and small rivers. Because there is no suitable habitat for this species at the project site, no plants were observed on-site, and the closest known occurrence is over 20 miles from the project, Bradshaw's lomatium is not further addressed in this BA.

IV. Environmental Baseline

The Coast Fork Willamette River watershed is comprised of 426,000 acres, 82% of it forest land (mostly private) and 14% crop land. Cottage Grove, Goshen and Creswell are the largest cities. Approximately 35,600 residents live in the basin. Primary resource concerns are poor water quality, deteriorating aquatic habitat and increasing development pressure. There are 587 stream miles in the basin and 20% are on the Oregon Department of Environmental Quality list of water quality limited streams - 303d – for temperature concerns. Only 5% of the stream miles are currently utilized by salmonids. Adjudicated surface water rights for irrigation use 2% of yearly average stream flow and 12% of flows during irrigation season (NRCS 2006).

Within the action area, the Row River is moderately channelized and is partially connected to riparian areas and floodplains. Floodplains are present, yet poorly functioning. Water quality is fair, with periodically and seasonally high levels of turbidity; seasonally warm water temperatures; and moderate levels of toxic chemicals. The USACE operates Dorena Dam (about 5 miles upstream) to maintain minimum flows of 190 cubic feet per second (cfs) from February 1 through June 30, 100 cfs from July 1 through October 30, and outflow equal to inflow (except during major flood events) from November 1 through January 31 (NMFS 2008b). Therefore, temperature and water quality in the Row River is more affected and regulated by the dam operation and use of the reservoir.

The Row River contains a simple habitat structure consisting of fairly uniform gravel bed, forming glide habitat units. The stream is shallow and wider than typical channel form upstream or downstream of the action area. The streambanks are eroding in areas. The riparian areas lack structure and are moderately covered with woody vegetation, mostly of deciduous species such as Oregon black cottonwood, Oregon ash, and willows. Large woody vegetation has been previously removed from the project site in compliance with airport regulations.

The airport itself is vegetated only with grasses and forbs and is maintained as a closely-mown lawn in compliance with airport safety standards. A narrow band of shrubs occurs along the Row River on the Airport property. The RPZ on the north end is vegetated with a single-strata of Oregon black cottonwoods that does

provide a closed canopy. The south RPZ includes a lower bench vegetated by shrub-layer willows that extends about 20 feet out into the stream channel.

V. EFFECTS OF ACTION

A. EFFECTS ON THE ENVIRONMENTAL SETTING

The NMFS document titled *Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996) presents an approach for evaluating effects to salmonids by using a standardized Matrix of Pathways and Indicators. This matrix provides a tool for summarizing important environmental factors relating to salmonids and habitat and evaluating action effects at the watershed scale.

A modified version of the NMFS matrix is presented in **Table 2** below. This table documents the anticipated effects of the proposed project at the project action area scale for the standard pathways and indicators, as applicable.

Table 2. Effects on the Environmental Baseline

Pathways/Indicators	Effects of the Action
Water Quality	
Sediment/Turbidity	The project will not result in a change in sedimentation or turbidity in the Row River. Trees to be removed will be accessed by foot and fallen using hand tools. No in-water work will be performed, and no ground disturbing activities will occur within 20' of the top of bank. The project will result in minimal ground disturbance activities beyond 20', where logs will be chipped. Ground disturbance will be limited to the area immediately around the tree that is being removed. Long-term project effects from sediment/turbidity are not expected with the proposed tree removal.
Chemical Contamination/Nutrients	The presence of construction equipment on-site increases the short-term potential for hazardous material releases of motor oil, hydraulic fluid, fuel, etc. The risks for releases to waterways will be minimized by siting construction equipment storage as far from waterways as is practicable and by establishing requirements for the contractor to monitor and maintain equipment and be ready to respond to any chemical releases. Only hand tools will be used and trees will be accessed by foot. The contractor will be required to prepare a SPCC Plan to document such procedures.

Pathways/Indicators	Effects of the Action
Temperature	The proposed project will require the removal of riparian vegetation on 9 acres along the Row River. The majority of the 371 trees scheduled for removal are located along the north end of the runway approach. Trees within 20 feet of the top of bank have the greatest opportunity to provide shade to the Row River. Thirty-two trees within 20 feet of the top of bank will be removed. Removal of trees within riparian areas can influence water temperature. However, temperature and water quality in the Row River is more affected and regulated by the dam operation and use of the reservoir (NMFS 2008b). To compensate for tree removal, 742 conifer trees will be planted on 72-acres along the Row River, 0.5 miles downstream. The proposed riparian plantings should maintain or improve on-site shading of the Row River and associated floodplain in the long-term. Although mature trees will be removed, it will not significantly reduce stream shading (temperature control). Once mature, the vegetation will help moderate stream temperatures.
Habitat Access	
Physical Barriers	The proposed project will not involve the creation or removal of fish passage barriers within the Row River.
Habitat Elements	
Pool Frequency	The proposed project will not affect pool frequency in the Row River.
Pool Quality	The proposed project will not affect pool quality in the Row River.
Off-Channel Habitat	The proposed project will not affect off-channel habitat in the Row River.
Refugia	The proposed project will not affect refugia in this reach of the Row River.
Substrate	No work will occur below the OHW, therefore the substrate to the Row River will not be disturbed. The project will not result in a change in sedimentation or turbidity in the Row River. No in-water work will be performed. The project will result in minimal ground disturbance activities. Ground disturbance will be limited to the area immediately around the tree that is being removed.

Pathways/Indicators	Effects of the Action
Large Woody Debris	Surveyed trees that have been determined to be obstructions or potential future obstructions to the Runway 15-33 approach will cut down and left in place. A total of 371 trees have been identified as penetrating the approach surfaces. Removal of vegetation within the riparian area of the Row River will cause temporary impacts by reducing invertebrate populations, reducing cover habitat at higher flows, and reducing floodplain roughness during times of coinciding high-water events and upstream adult migration. The removal of vegetation from the streambank will reduce the input of detritus into the steam, reduce shading, and reduce the potential large wood recruitment. These effects are expected to be limited to the short term in areas where riparian impacts will be temporary. Project revegetation includes seeding and planting native herbaceous and woody vegetation that would improve upon the current simplified habitat condition. All disturbed areas will be treated with erosion control measures. To compensate for tree removal, 742 conifer trees will be planted on 72 acres along the Row River about 0.5 miles downstream. There will be a temporal effect as the trees (in the mitigation area) and shrubs mature, and the loss will delay the recovery of large wood recruitment. Once mature, these trees will provide a source for large wood.
Channel Condition/Dynamics	
Width/Depth Ratio	The width/depth ratio of the Row River below OHW will not be altered by the proposed project.
Streambank Condition	Streambanks above the OHW level of the Row River maybe be more susceptible to erosion immediately following vegetation removal. Not removing the stump and root wad will help maintain streambank stability and control erosion. The short-term susceptibility to erosion will be managed through the use of erosion control measures. Bank stability over the long-term will be maintained with the establishment of the proposed native vegetation.
Floodplain Connectivity	Floodplain connectivity will not be affected by the proposed project.
Flow/Hydrology	
Change in Peak/Base Flows	The proposed project will not add any new impervious surfaces to the basin. The proposed project will not cause a change in peak or base flow rates.
Increase in Drainage Network	The proposed project will not increase or decrease the drainage network.
Watershed Conditions	
Road Density and Location	The proposed project will not affect road density or location.
Disturbance History	The surrounding area has been disturbed in the past by agricultural uses and moderate urban uses (golf course and the development of the airport).

Pathways/Indicators	Effects of the Action
Riparian Reserves	The project involves removing 356 trees from the site. This includes 32 trees within 20 feet of the top of bank of the Row River. The proposed planting plan involves seeding the area where trees are removed and planting a 72-acre site downstream with approximately 742 trees. Although mature trees will be removed, it will not significantly reduce stream shading (temperature control). Potential effects associated with long-term vegetation removal, such as reduced organic matter input and increased erosion, will be avoided through the prompt re-establishment of vegetation in the mitigation area. Areas where trees will be removed will be seeded a native mix of appropriate herbs and low-growing shrubs. There will be a temporal effect as the trees (in the mitigation area) and shrubs mature, and the loss will delay the recovery of large wood recruitment. Once mature, the vegetation will help moderate stream temperatures, provide organic matter inputs to streams for energy, provide sediment control, improve bank stabilization, and increase stream complexity.

B. EFFECTS ON SPECIES AND CRITICAL HABITAT

i. Direct Effects

The proposed project is not expected to result in direct take of UWR Chinook because Chinook because no work will occur below the OHW of the Row River. The number of adults and juveniles that use the Action Area are very low and although these fish will reproduce in upstream spawning sites they do not constitute a self-sustaining population (Myers 2006).

ii. Indirect Effects

Changes in Sedimentation/Turbidity

The project will not result in a change in sedimentation or turbidity in the Row River. No in-water work will be performed, and no ground disturbing activities will occur within 20 feet of the top of bank. Additionally, the project does not include excavation, grading, filling or road construction, and no impervious surfaces will be constructed. Implementation of conservation measures in Section II.B and design criteria will prevent erosion or other water quality impacts.

Location/Extent–The project will result in minimal ground disturbance activities. Ground disturbance will be limited to the area immediately around the tree that is being removed. No ground disturbance will occur within 20 feet of the top of bank.

Duration/Frequency– Tree removal is planned for September 1, 2012.

Vegetation Removal

Surveyed trees that have been determined to be obstructions or potential future obstructions to the Runway 15-33 approach will be either topped or cut down and left in place. A total of 371 trees have been identified as penetrating the approach surfaces.

Removal of vegetation will cause temporary impacts by reducing invertebrate populations, reducing cover habitat at higher flows, and reducing floodplain roughness during times of coinciding high-water events and upstream adult migration. These effects are expected to be limited to the short term in areas where riparian impacts will be temporary.

The removal of vegetation from the streambank will have the following short term impacts:

- Reduction of the input of detritus into the steam,
- Reduction in shading, and
- Reduction in potential large wood recruitment.

Project revegetation includes seeding and planting native herbaceous and woody vegetation that would improve upon the current simplified habitat condition. All disturbed areas will be treated with erosion control measures. To compensate for tree removal, 7142conifer trees will be planted on 72 acres along the Row River about 0.5 miles downstream.

Although mature trees will be removed, it will not significantly reduce stream shading (temperature control). Potential effects associated with long-term vegetation removal, such as reduced organic matter input and increased erosion, will be avoided through the prompt re-establishment of vegetation in the mitigation area. Areas where trees will be removed will be seeded a native mix of appropriate herbs and low-growing shrubs. There will be a temporal effect as the trees (in the mitigation area) and shrubs mature, and the loss will delay the recovery of large wood recruitment. Once mature, the vegetation will help moderate stream temperatures, provide organic matter inputs to streams for energy, provide sediment control, improve bank stabilization, and increase stream complexity.

***Location/Extent*–**Trees will be removed from 9 acres along the Row River. Most of the area disturbed is a monoculture of black cottonwoods, with no ground or shrub layer. Trees will be planted on 72-acres along the Row River.

***Duration/Frequency*–**There will be some temporary removal of riparian vegetation which could result in increased opportunity for warmer water temperatures during the hot summer months; however, increased turbidity during in-water work could also cause increased water temperatures. Long-term effects to temperature are not expected because the action includes riparian plantings which should maintain current water temperatures over the long term.

Hazardous Materials

The presence of vehicles and construction equipment at the project site will increase the *potential* for petroleum product releases to the Row River. A number of conservation measures will be implemented to minimize this potential, and the contractor for this project will be required to prepare a SPCC Plan to further document appropriate pollution control practices and ensure their implementation. The implementation of these measures should prevent any significant impacts to the Row River. Assuming the minimization measures and practices are employed, hazardous material releases to the stream should not occur and should not be expected to adversely affect aquatic species.

***Location/Extent*–**Vehicles and equipment will be staged in designated areas.

***Duration/Frequency*–**The potential for equipment leaks or fuel spills will increase during construction. Impact avoidance and minimization measures will minimize the risk, and any spill would be localized and short term.

C. How Conservation Measures Would Eliminate or Reduce the Adverse Effects of the Proposed Action

A number of impact avoidance and minimization measures will be employed to reduce adverse effects of the proposed actions. These conservation measures are listed in Section II.B.

To reduce potential turbidity impacts, the following measures will be employed:

- Contractor will use only hand tools to fall or top trees. Equipment will be limited to that with the least adverse effects on the environment (e.g., minimally sized, rubber tires), use existing roadways and travel paths of access whenever possible, and only accesses riparian areas within the upstream and downstream limits of construction.
- Fallen trees within 20 feet of the top of the bank of the Row River and within wetland areas will remain in place and stumps will not be removed.
- No grading or skidding will occur.
- All trees will be accessed by foot.
- The contractor will implement a TESC plan to control erosion.

The contractor shall prepare a SPCC Plan prior to beginning construction. The SPCC Plan shall identify the appropriate spill containment materials, which will be available at the project site at all times. All equipment to be used for construction activities shall be cleaned and inspected prior to arriving at the project site, to ensure no potentially hazardous materials are exposed, no leaks are present and the equipment is functioning properly. In order to eliminate or minimize the likelihood of accidental spills

from vehicle and equipment cleaning, maintenance, refueling, and fuel storage, these activities take place a minimum of 100 feet from the top of any streambank or wetland and incorporate all necessary industry standards (e.g biodegradable or non-toxic hydraulic fluid, under carriage containment for stationary equipment).

D. Indirect Effects

The operation characteristics of the airport will remain the same. The project involves the removal of trees that have been surveyed and found to penetrate the FAR Part 77 approach surfaces for Runways 15 and 33 within the runway protection zone. Note that the goal is to no longer penetrate those surfaces. Meeting the standards for the Runway Protection Zone is involves keeping that area clear of congregations of people.

E. Effects from Interdependent and Interrelated Actions

No interdependent or interrelated actions have been identified for this project.

F. Effects from On-going Project Activities

The operation characteristics of the airport will remain the same. The project involves the removal of trees that have been surveyed and found to penetrate the FAR Part 77 approach surfaces for Runways 15 and 33 within the runway protection zone.

G. Critical Habitat

No critical habitat for any species has been designated in the Action Area.

H. Use of Best Scientific and Commercially Available Data

This Biological Assessment and supporting documents use the best available information, as referenced in the Literature Cited section. The analysis in this Biological Assessment contains summaries of background information and cites sources. All supporting materials, information, data and analyses are referenced, consistent with standard scientific referencing style.

VI. Effects Determination for Listed Species

Name of Species: Upper Willamette River Chinook salmon ESU

The project **May Affect** this species because of the following reason(s):

- The proposed project will remove 371 mature trees from the riparian area of the Row River. Thirty-two of these trees are within 20' of the top of bank. Factors limiting recovery of UWR Chinook salmon identified by NMFS includes lost/degraded lowland stream habitat and high water temperature (NMFS 2006). Removal of trees within riparian areas contributes to these factors.
- The project will result in short term changes to water quality caused by potential short term increased in turbidity caused by the cutting down of trees.
- Overall, the viability risk to UWR Chinook salmon is very high.

The project May Affect this species, but it is **Not Likely to Adversely Affect** this species for the following reasons:

- No work will occur below the OHW of the Row River.
- The number of adults and juveniles that use the Action Area are very low and although these fish will reproduce in upstream spawning sites they do not constitute a self-sustaining population (Myers 2006).
- To compensate for the removal of 371 trees, 742 conifer trees will be planted on 72-acres along the Row River.
- Potential effects associated with long-term vegetation removal, such as reduced organic matter input and increased erosion, will be avoided through the prompt re-establishment of vegetation in the mitigation area. Areas where trees will be removed will be seeded a native mix of appropriate herbs and low-growing shrubs. There will be a temporal effect as the trees (in the mitigation area) and shrubs mature, and the loss will delay the recovery of large wood recruitment. Once mature, the vegetation will help moderate stream temperatures, provide organic matter inputs to streams for energy, provide sediment control, improve bank stabilization, and increase stream complexity.
- A number of impact avoidance and minimization measures (listed in Section II.B) will be employed to reduce adverse effects of the proposed actions.

VII. Cumulative Effects

According to census numbers, between 1990 and 2000, the population in the Cottage Grove area increased by 1.3% (PSU 2009). The forecast predicts this growth rate to continue. Thus, it is assumed that future private and state development actions will also continue within the action area as population density rises. As the human population in the action area continues to grow, demand for agricultural, commercial, or residential

development is also likely to grow. The effects of new development caused by that demand are likely to further reduce the conservation value of the habitat within the action area. However there are no known specific future activities within the action area that would cause greater effects to a listed species or a designated critical habitat than presently occurs.

VIII. CONCLUSIONS

After reviewing the best available scientific and commercial information regarding the status and biological requirements of the species listed as potentially occurring in the Action Area, the environmental baseline, the effects of the action, and cumulative effects, it is concluded that carrying out the tree cutting along the Row River, as proposed by the FAA, the proposed project may effect, but is unlikely to adversely affect UWR Chinook salmon. These conclusions are based on the following considerations.

No suitable habitat occurs in the project area for Oregon chub, northern spotted owl, marbled murrelet, western snowy plover, brown pelican, Fenders blue butterfly, Oregon silverspot butterfly, golden paintbrush, water howellia, Willamette daisy, Kincaid's lupine, or Bradshaw's lomatium.

The action area is outside of the ESU geographic boundary for UWR steelhead. The action area is outside of the area proposed as critical habitat for bull trout and there are no records of bull trout in the action area.

NMFS identified the primary factors limiting recovery of UWR Chinook salmon as: (1) Lost/degraded floodplain connectivity and lowland stream habitat; (2) degraded water quality; (3) high water temperature; (4) reduced streamflow; and (5) reduced access to spawning/rearing habitat for UWR Chinook salmon (NMFS 2006). Within the Row River, there is no distinct population of UWR Chinook salmon, and for the indicated species as a whole, risk of extinction is very high. Critical habitat is not designated in the action area.

A very small proportion of the total number of UWR Chinook salmon individuals use the Row River, and these fish are predominately of hatchery origin and do not represent a historical population (NMFS 2008b). The proposed action will not cause the lost or degradation to floodplain connectivity and lowland stream habitat. The proposed action will not cause degraded water quality. The proposed action will not reduce streamflows. Finally, the proposed action will not cause does not reduce access to spawning/rearing.

The proposed action will not cause a measurable increase in water temperature. The water temperature in the Row River is more influenced and controlled by the reservoir upstream. The project will remove 371 trees (32 trees within 20' of the top of bank) over a 9 acre area. Most of the trees to be cut (~150 trees) will be over 100 feet from the top of bank. To compensate for the removal of the trees, 742 conifer trees will be planted on a 72-acre parcel owned by ODOT along the Row River. Coniferous saplings will be planted at a ratio of 2:1.

Implementation of conservation measures listed in Section II.B and the design criteria will minimize or prevent erosion or other water quality impacts. Areas where trees will be removed will be accessed by foot, and only hand tools will be used. The distribution of the project effects are limited to about 2,000 linear feet of upland riparian habitat. Over time (10-15 years) the effects of the vegetation management will be recovered.

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APPENDIX A. FIGURES

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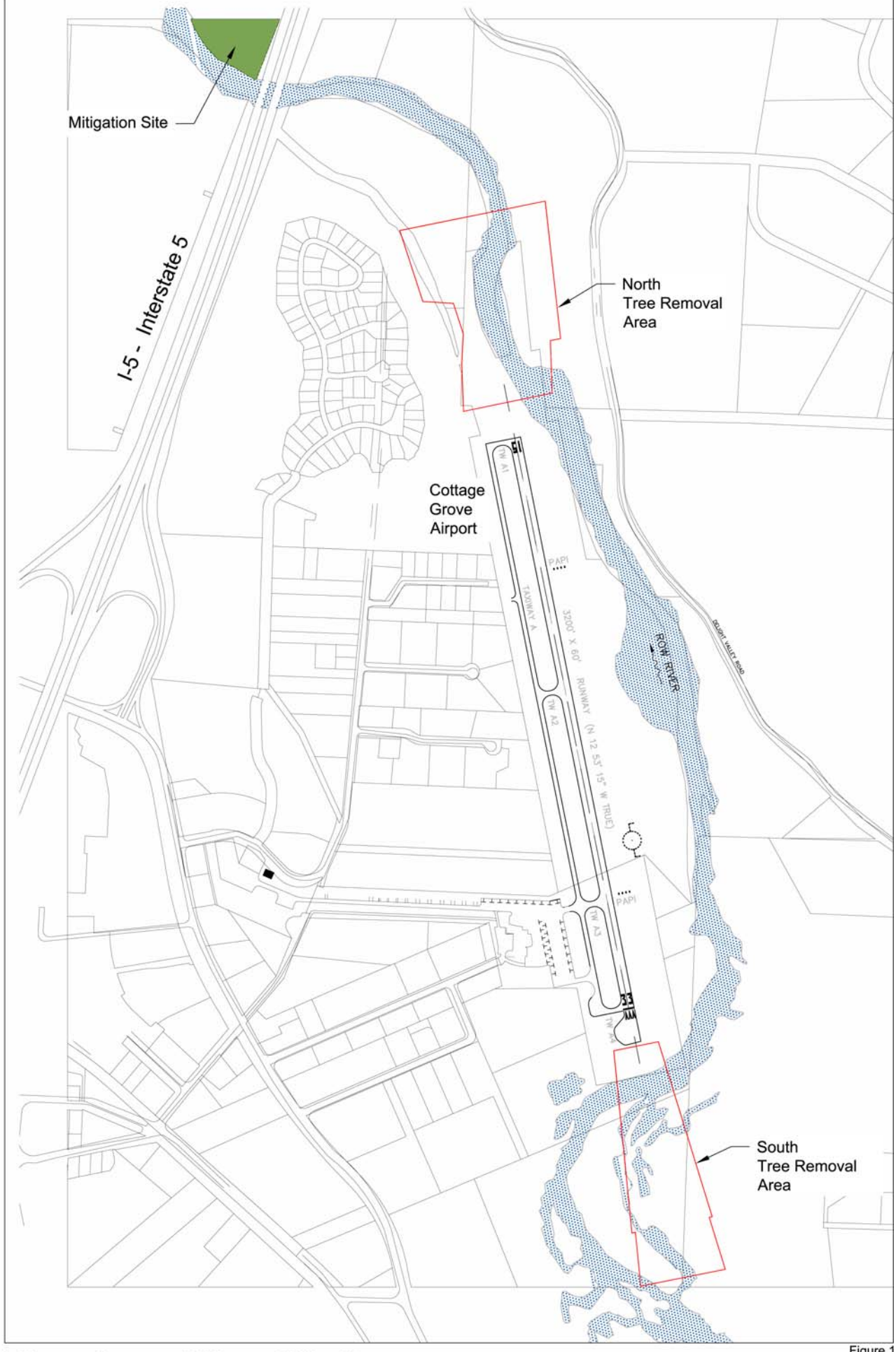

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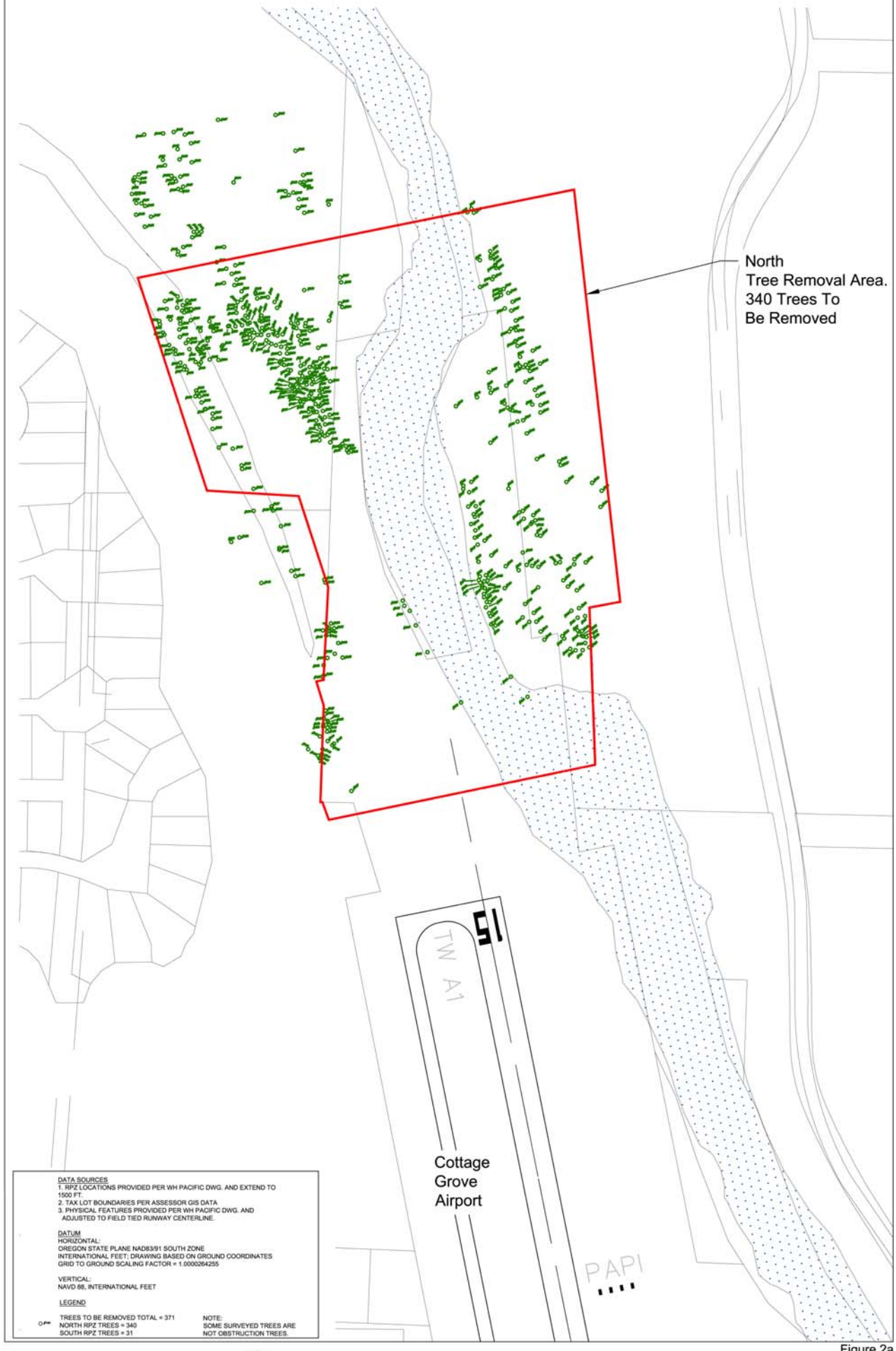
FEET

Figure 1
Location Map
Cottage Grove Airport Runway Safety Area Improvement Project
Lane County, Oregon

VIGIL AGRIMIS
design professionals

DRAFT 1-30-2012



DATA SOURCES
1. RPZ LOCATIONS PROVIDED PER WH PACIFIC DWG. AND EXTEND TO 1500 FT.
2. TAX LOT BOUNDARIES PER ASSESSOR GIS DATA
3. PHYSICAL FEATURES PROVIDED PER WH PACIFIC DWG. AND ADJUSTED TO FIELD TIED RUNWAY CENTERLINE.

DATUM
HORIZONTAL:
OREGON STATE PLANE NAD83/91 SOUTH ZONE
INTERNATIONAL FEET; DRAWING BASED ON GROUND COORDINATES
GRID TO GROUND SCALING FACTOR = 1.0000264255

VERTICAL:
NAVD 88, INTERNATIONAL FEET

LEGEND

TREES TO BE REMOVED TOTAL = 371
NORTH RPZ TREES = 340
SOUTH RPZ TREES = 31

NOTE:
SOME SURVEYED TREES ARE NOT OBSTRUCTION TREES.

0 500' 1,000' 2,000' 4,000' FEET

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Figure 2a
Proposed Action North Runway
Cottage Grove Airport Runway Safety Area Improvement Project
Lane County, Oregon

VIGIL AGRIMIS
design professionals

DRAFT 1-30-2012

Cottage Grove Airport

PAPI

TW A3

TW A4

33

South Tree Removal Area. 31 Trees To Be Removed.

DATA SOURCES
1. RPZ LOCATIONS PROVIDED PER WH PACIFIC DWG. AND EXTEND TO 1500 FT.
2. TAX LOT BOUNDARIES PER ASSESSOR GIS DATA
3. PHYSICAL FEATURES PROVIDED PER WH PACIFIC DWG. AND ADJUSTED TO FIELD TIED RUNWAY CENTERLINE.

DATUM
HORIZONTAL:
OREGON STATE PLANE NAD83/91 SOUTH ZONE
INTERNATIONAL FEET; DRAWING BASED ON GROUND COORDINATES
GRID TO GROUND SCALING FACTOR = 1.0000264255

VERTICAL:
NAVD 88, INTERNATIONAL FEET

LEGEND

TREES TO BE REMOVED TOTAL 371
NORTH RPZ TREES = 340
SOUTH RPZ TREES = 31

NOTE:
SOME SURVEYED TREES ARE NOT OBSTRUCTION TREES.

0 500' 1,000' 2,000' 4,000' FEET

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Figure 2b
Proposed Action South Runway
Cottage Grove Airport Runway Safety Area Improvement Project
Lane County, Oregon

VIGIL AGRIMIS design professionals

APPENDIX B. ESSENTIAL FISH HABITAT

ESSENTIAL FISH HABITAT

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires federal agencies to consult with the National Marine Fisheries Service (NMFS) on activities that may adversely affect Essential Fish Habitat (EFH). The Pacific Fisheries Management Council (PFMC) has designated EFH for the Pacific salmon fishery, federally managed groundfishes, and coastal pelagic fisheries.

Pacific salmon managed under the MSA include Chinook, coho, and Puget Sound pink salmon. EFH for the Pacific coast salmon fishery means those waters and substrate necessary for salmon production needed to support a long-term sustainable salmon fishery and salmon contributions to a healthy ecosystem. Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers and longstanding, naturally-impassable barriers.

The Cottage Grove State Airport (Airport) is is located along the Row River, which is a tributary of the Willamette River. The Row River is accessible toChinook salmon and is thus considered freshwater EFH for Pacific salmon. The Row River Creek is not EFH for federally managed groundfishes or coastal pelagic fisheries.

A. DESCRIPTION OF THE PROPOSED ACTION

The purpose of the proposed project is to improve the safety of operations at the Airport. The project involves the removal of trees that have been surveyed and found to penetrate the FAR Part 77 approach surfaces for Runways 15 and 33 within the runway protection zone. A total of 371 trees have been identified as penetrating the approach surfaces: 340 on the north end; and 31 trees are on the south end. Trees within 20 feet of the top of bank and wetland areas will be cut down at ground level and left in place. Trees over 20 feet from the top of bank and within wetland areas will be cut and the logs chipped. Trees cut down will be cut at ground level and stumps will remain undisturbed in the ground.

Construction of the proposed improvements is expected to take place between September 1, 2012, and March 1, 2013. The delineation of wetland areas and OWH will be completed during the design phase of the project and those areas will be included on the design drawings and contract documents. Boundaries will be flagged in the field. No mechanized equipment other than hand tools (chain saws) will be allowed within wetland areas or within 20’ of the top of bank and wetland areas.

To mitigate for tree removal, conifer seedlings will be planted on property owned by the Oregon Department of Transportation. The 71-acre property is located on the Row River, about 0.5 miles north of where trees will be removed. Trees will be planted at a ratio of two conifer seedlings per one obstruction tree cut down.

No excavation, grading, filling or road construction is anticipated as part of this work. No impervious surfaces will be constructed as a result of this project. No work below the Ordinary High Water (OHW) mark of the Row River will be needed.

In general, project activities that may affect Pacific salmon EFH include the following:

- **Water Quality.** The project will result in minimal ground disturbance activities. Ground disturbance will be limited to the area immediately around the tree that is being removed. .The project will not result in a change in sedimentation or turbidity in the Row River. No in-water work will be performed, and no ground disturbing activities will occur within 20 feet of the OHW. Additionally, the project does not include excavation, grading, filling or road construction, and no impervious surfaces will be constructed. Implementation of Best Management Practices and the design criteria will prevent erosion or other water quality impacts.

- **Vegetation Removal.** Surveyed trees that have been determined to be obstructions or potential future obstructions to the Runway 15-33 approach will be either topped or cut down and left in place. A total of 371 trees have been identified as penetrating the approach surfaces. Removal of vegetation will cause temporary impacts by reducing invertebrate populations, reducing cover habitat at higher flows, and reducing floodplain roughness during times of coinciding high-water events and upstream adult migration. These effects are expected to be limited to the short term in areas where riparian impacts will be temporary.

  The removal of vegetation from the streambank will have the following short term impacts:
  - Reduction of the input of detritus into the steam,
  - Reduction in shading, and
  - Reduction in potential large wood recruitment.

  Project revegetation includes seeding and planting native herbaceous and woody vegetation that would improve upon the current simplified habitat condition. All disturbed areas will be treated with erosion control measures. To compensate for tree removal, 742 conifer trees will be planted on 72 acres along the Row River about 0.5 miles downstream.

  Although mature trees will be removed, it will not significantly reduce stream shading (temperature control). Potential effects associated with long-term vegetation removal, such as reduced organic matter input and increased erosion, will be avoided through the prompt re-establishment of vegetation in the mitigation area. Areas where trees will be removed will be seeded a native mix of appropriate herbs and low-growing shrubs. There will be a temporal effect as the trees (in the mitigation area) and shrubs mature, and the loss will delay the recovery of large wood recruitment. Once mature, the vegetation will help moderate stream temperatures, provide organic matter inputs to streams for energy, provide sediment control, improve bank stabilization, and increase stream complexity.

Hazardous Materials. The presence of vehicles and construction equipment at the project site will increase the *potential* for petroleum product releases to the Row River. A number of conservation measures will be implemented to minimize this potential, and the contractor for this project will be required to prepare a SPCC Plan to further document appropriate pollution control practices and ensure their implementation. The implementation of these measures should prevent any significant impacts to the Row River. Assuming the minimization measures and practices are employed, hazardous material releases to the stream should not occur and should not be expected to adversely affect aquatic species.

B. Effects of the Proposed Action

The effects of the proposed action are described in the Biological Assessment (Section V. Effects of the Action). This Section which includes a modified version of the NMFS matrix of pathways and indicators from the documented title *Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996). The completed matrix in Section V presents an analysis of project effects on environmental factors relating to salmonids and habitat. This analysis of effects to the NMFS standard pathways and indicators is directly applicable to Pacific salmon EFH.

In general, possible short-term adverse effects to EFH include removal of riparian vegetation, loss of large wood recruitment, and potential temporary degradation of water quality in the action area due to tree removal.

The UWR Chinook salmon within the Row River are predominately of hatchery origin and do not represent a historical population. Nevertheless, the Row River provides juvenile rearing habitat and spawning habitat for the few adults that may enter the system. The number of adults and juveniles that use the Action Area are very low and although these fish will reproduce in upstream spawning sites they do not constitute a self-sustaining population (Myers 2006). Overall, the viability risk to UWR Chinook salmon is very high. The major factors limiting recovery of UWR Chinook salmon identified by NMFS include lost/degraded floodplain connectivity and lowland stream habitat, degraded water quality, high water temperature, reduced streamflow, and reduced access to spawning/rearing habitat (NMFS 2006).

C. Proposed Conservation Measures

The following list summarizes the measures that will be employed as part of this project to avoid and minimize impacts to the environment and EFH.

- No in-water work will be required.
- Tree removal will occur between September 1 and March 1.

- Contractor will use only hand tools to fall or top trees. Equipment will be limited to that with the least adverse effects on the environment (e.g., minimally sized, rubber tires), use existing roadways and travel paths of access whenever possible, and only accesses riparian areas within the upstream and downstream limits of construction.
- All equipment to be used for construction activities shall be cleaned and inspected prior to arriving at the project site, to ensure no potentially hazardous materials are exposed, no leaks are present and the equipment is functioning properly.
- Fallen trees within 20 feet of the top of the bank of the Row River and within wetland areas will remain in place and stumps will not be removed.
- No grading or skidding will occur.
- Tree stumps will remain in place.
- All trees will be accessed by foot.
- The contractor shall prepare a Spill Prevention, Control and Countermeasures (SPCC) Plan prior to beginning construction. The SPCC Plan shall identify the appropriate spill containment materials, which will be available at the project site at all times.
- In order to eliminate or minimize the likelihood of accidental spills from vehicle and equipment cleaning, maintenance, refueling, and fuel storage, these activities take place a minimum of 100 feet from the top of any streambank or wetland and incorporate all necessary industry standards (e.g biodegradable or non-toxic hydraulic fluid, under carriage containment for stationary equipment).
- A Temporary Erosion and Sedimentation Control (TESC) plan will be developed and implemented as directed by the project engineer.

D. CONCLUSIONS

The proposed tree removal at the Airport does not involve work below the OHW level of the Row River. A very small proportion of the total number of UWR Chinook salmon individuals use the Row River, and these fish are predominately of hatchery origin and do not represent a historical population (NMFS 2008b). The proposed action will not cause the lost or degradation to floodplain connectivity and lowland stream habitat. The proposed action will not cause degraded water quality. The proposed action will not reduce streamflows. Finally, the proposed action will not cause does not reduce access to spawning/rearing.

The proposed action will not cause a measurable increase in water temperature. The water temperature in the Row River is more influenced and controlled by the reservoir upstream. The project will remove 356 trees (32 trees within 20’ of the top of bank) over a 9 acre area. Most of the trees to be cut (~150 trees)

will be over 100 feet from the top of bank. To compensate for the removal of the trees, 742 conifer trees will be planted on a 72-acre parcel owned by ODOT along the Row River. Coniferous saplings will be planted at a ratio of 2:1.

Implementation of the conservation measures listed in Section II.B and the design criteria will prevent erosion or other water quality impacts. Areas where trees will be removed will be accessed by foot, and only hand tools will be used. The distribution of the project effects are limited to about 2,000 linear feet of upland riparian habitat. Over time (10-15 years) the effects of the vegetation management will be recovered.

Based on the fact that the project is not expected to result in any long-term reduction in quantity or quality of EFH, a finding of will not adversely affect EFH for Pacific salmon is made.

APPENDIX C

LANE COUNTY COMMUNICATION

Erik J. Huffman

From: BALDWIN Cameron W (PW) [Cameron.BALDWIN@co.lane.or.us]
Sent: Tuesday, September 28, 2010 10:34 AM
To: Erik J. Huffman
Subject: RE: Cottage Grove Airport
Attachments: image001.jpg; image003.jpg; image004.png

Hey Erik,
We have determined that you will not need a county land use permit for your project at the Cottage Grove Airport. If you have any further questions, please feel free to contact me.

Best Regards,
Cameron

From: Erik J. Huffman [mailto:ehuffman@CenturyWest.com]
Sent: Friday, September 24, 2010 4:09 PM
To: BALDWIN Cameron W (PW)
Subject: RE: Cottage Grove Airport

Hi Cameron, Thanks a lot for looking it over. If you need any more info, just let me know. Have a great weekend. -Erik

CENTURY WEST
ENGINEERING CORPORATION

Erik Huffman, PE, PLS, CWRE, LEED AP | Project Engineer
Bend Office I 1020 SW Emkay Drive, Suite 100 I Bend, OR 97702
541.322.8962 I 541.382.2423 (Fax) I ehuffman@centurywest.com
www.centurywest.com

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From: BALDWIN Cameron W (PW) [mailto:Cameron.BALDWIN@co.lane.or.us]
Sent: Friday, September 24, 2010 4:07 PM
To: Erik J. Huffman
Subject: RE: Cottage Grove Airport

Hey Erik,
It's Cameron with Lane County again. I was able to look at your submittal and I know that a land use permitted is not required by Lane County for the work proposed on the same side of the river as the airport. Since the other side of the river is outside of the Urban Growth Boundary, the rules are a lot different and I am still going to double check on that portion of the project for you.

Best Regards,
Cameron

From: Erik J. Huffman [mailto:ehuffman@CenturyWest.com]
Sent: Friday, September 24, 2010 9:52 AM
To: BALDWIN Cameron W (PW)
Subject: Cottage Grove Airport

Hi Cameron,

I've attached an exhibit for the Cottage Grove Airport. It shows the property line and it also shows the obstruction easements. The tree obstructions were individually surveyed and are shown with small symbols.

Most of the obstructions are on the north side. They are almost all cottonwoods.

There are only a handful of obstruction trees on the south side.

If there's anything I can clarify, just let me know.

Thanks a lot.

Have a great day,

Erik

CENTURY WEST
ENGINEERING CORPORATION

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www.centurywest.com

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APPENDIX D

ENVIRONMENTAL TECHNICAL MEMORANDUM

VIGIL AGRIMIS
design professionals

To: Eric Huffman

From: Susan Cunningham

Date: October 23, 2009

Subject: Cottage Grove Airport Runway Safety Area Improvement Project

The Cottage Grove State Airport (Airport) is located east of Interstate 5 (I-5), at the interchange with Row River Road and the Cottage Grove Connector (to OR 99), in unincorporated Lane County, Oregon. The City of Cottage Grove borders the Airport on the west. The legal location of the Airport is Township 20 South, Range 3 West, and sections 22 and 27, Willamette Meridian.

Several trees are obstructing the 20:1 approaches for Runway 15-33 at the Airport. These trees are slated for removal. The purpose of this memorandum is to summarize any environmental regulations that would need to be address for the removal of these trees.

A site reconnaissance of the trees to be removed was conducted on August 12, 2009. Most of the trees to be removed are either Oregon black cottonwood (*Populus balsamifera [trichocarpa*]) or Oregon ash (*Fraxinus latifolia*). No great blue heron rookeries or other large raptor nest (such as bald eagle, red-tail hawk, or osprey) were found in the marked trees, and these species were not seen on the day of the site visit. There are no records of protected nesting sites in the project area (Kiryuta and Dean pers comm).

Local Regulation

The Airport property is within the Cottage Grove urban growth boundary (UGB), but outside of the Cottage Grove City Limits. It is in Lane County jurisdiction. The Airport property is designated Airport Operations District (AO) and Airport Safety Combining Zone (AS). The AO zone is intended for aviation and aviation dependent or supporting activities. In addition, the AO District is intended to provide areas for certain open space uses for airfield grounds maintenance and as a buffer to minimize potential dangers from, and conflicts with, the use of aircraft. The AS zone is intended to safeguard land uses adjacent to the airport from noise and hazards associated with airport operations and to protect airports current and future uses.

There are two parcels adjacent to the Airport within the city limits. One northwest of the airport is zoned Commercial Tourist Limited (CTL) and is a golf course. The other is zoned Heavy industrial (M2). Tree removal is identified to occur on the CTL zoned parcel. Trees that have a caliper of 8 inches or larger are considered "significant vegetation" and are protected under Section 3.2.200 of the City Code, which states, "significant trees, shall be retained to minimize the risk of erosion, landslide, and stormwater runoff." Removal or topping of these trees will require land use approval from the City, and possible mitigation.

The remaining adjacent parcels are in Lane County jurisdiction. The parcels to the north are designated Exclusive Farm Use (EFU). The adjoining parcels across the Row River are zoned Rural Residential (east) and Rural Public Facilities (south).

The Row River is a Class 1 stream according to the Lane County Rural Comprehensive Plan, and are regulated under Section 16.253 of the County Code. The purpose of the Riparian Regulations is to implement the Goal 5 Flora and Fauna policies and the Goal 6 Water Resources policies of the Lane County Rural Comprehensive Plan. Lands zoned EFU and Rural Residential are subject to this Code section. Land zone AO and AS are not. Class 1 streams have a 100 foot riparian setback that extends landward from the ordinary high water mark. According to the code, removal of existing vegetation from within the riparian setback area cannot exceed the shoreline linear frontage and square footage limitations calculated as follows:

1. The maximum allowable removal for lots having frontage of 200 feet or less in length along a Class I stream shall not exceed 50 linear feet along the shoreline and an area not greater than 5,000 square feet within the riparian setback area.

2. The maximum allowable removal for any lot having frontage of more than 200 feet but less than 400 feet in length along a Class I stream shall not exceed 25 percent of the total linear footage along the shoreline, and an area not greater than 25 percent of the total square footage of the entire area within the riparian setback area.

3. The maximum allowable removal for any lot having frontage 400 feet or greater in length along a Class I stream shall not exceed 100 linear feet along the shoreline of the Class I stream or 10,000 square feet within the riparian setback area.

Exceeding these tree removal threshold would require land use approval by Lane County.

State Regulation

Some of the trees marked to be removed are in wetlands and along the Row River. In Oregon, wetlands and rivers are protected under the Oregon Removal-Fill law. The primary goal of these regulations is to avoid and minimize impact to Oregon's waters where possible and compensate (or mitigate) where impacts cannot be avoided. The Removal-Fill Law is, administered by the Department of State Lands, is the most common state requirement for projects in wetlands or waterways. It often serves as the venue for coordinating your project's other state water-related permitting and review requirements.

The Row River is also designated by DSL as Essential salmonid habtitat. Essential salmonid habitat is defined as the habitat necessary to prevent the depletion of native salmon species (chum, sockeye, Chinook and Coho salmon, and steelhead and cutthroat trout) during their life history stages of spawning and rearing. The designation applies only to those species that have been listed as "Sensitive, Threatened or Endangered" by a state or federal authority.

Activities exempt from Removal-Fill law include Non-motorized activities affecting less than one cubic yard per individual site, and cumulatively not more than five cubic yards within a designated essential salmonid habitat segment in a single year. According to DSL, tree removal is allowed in wetlands and Essential salmonid habitat provided there is no ground alteration. Trees can be topped or cut down, but stumps cannot be removed. If more than 50 cubic yards is disturbed, a Removal-Fill Permit would be required from DSL (Kiryuta per. comm.).

Federal Regulation

In many cases, proposed activities in wetlands or waterways in Oregon will additionally require a permit from the federal government under the Clean Water Act (called the "Section 404 permit") or the Rivers and Harbors Act (called the "Section 10 Permit"). The federal permitting program is administered by the U.S. Army Corps of Engineers (Corps). According to the Corps, tree removal is allowed in wetlands provided that disturbance to the ground is only temporary. Trees can be topped or cut down, but stumps cannot be removed. Logs can be yarded out provided that ground conditions are placed back to existing conditions (Dean per. comm.).

References

City of Cottage Grove Zoning Code. http://www.cottagegrove.org/commdev/devcode.html

City of Cottage Grove Comprehensive Plan.
http://www.cottagegrove.org/commdev/plans/Comprehensive_Plan_Update.pdf

Dean, Benny. US Army Corps of Engineers Regulatory Compliance Manger for Lane County. Personal Communications 1 October 2009.

Kiryuta, Gloria. Department of State Lands Resource Coordinator for Lane County. Persona Communications 2 October 2009.

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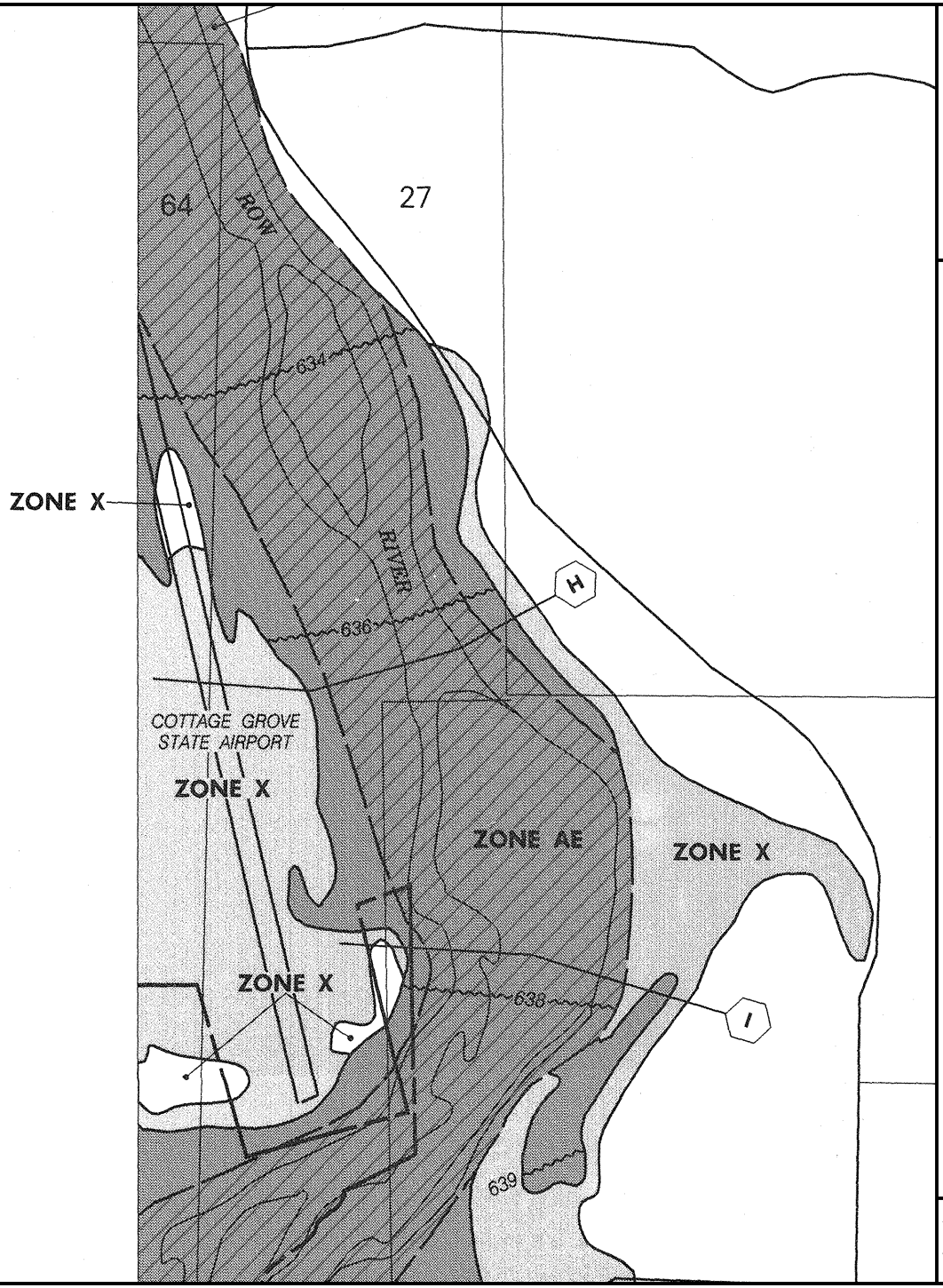
http://www.lanecounty.org/Planning/documents/Comp_Plan_Policies.pdf

Lane County Zoning Code. http://www.lanecounty.org/LaneCode/default.htm

APPENDIX E

FEMA FLOOD MAPS



APPROXIMATE SCALE IN FEET

500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

LANE COUNTY,
OREGON AND
INCORPORATED AREAS

PANEL 2092 OF 2975

(SEE MAP INDEX FOR PANELS NOT PRINTED)

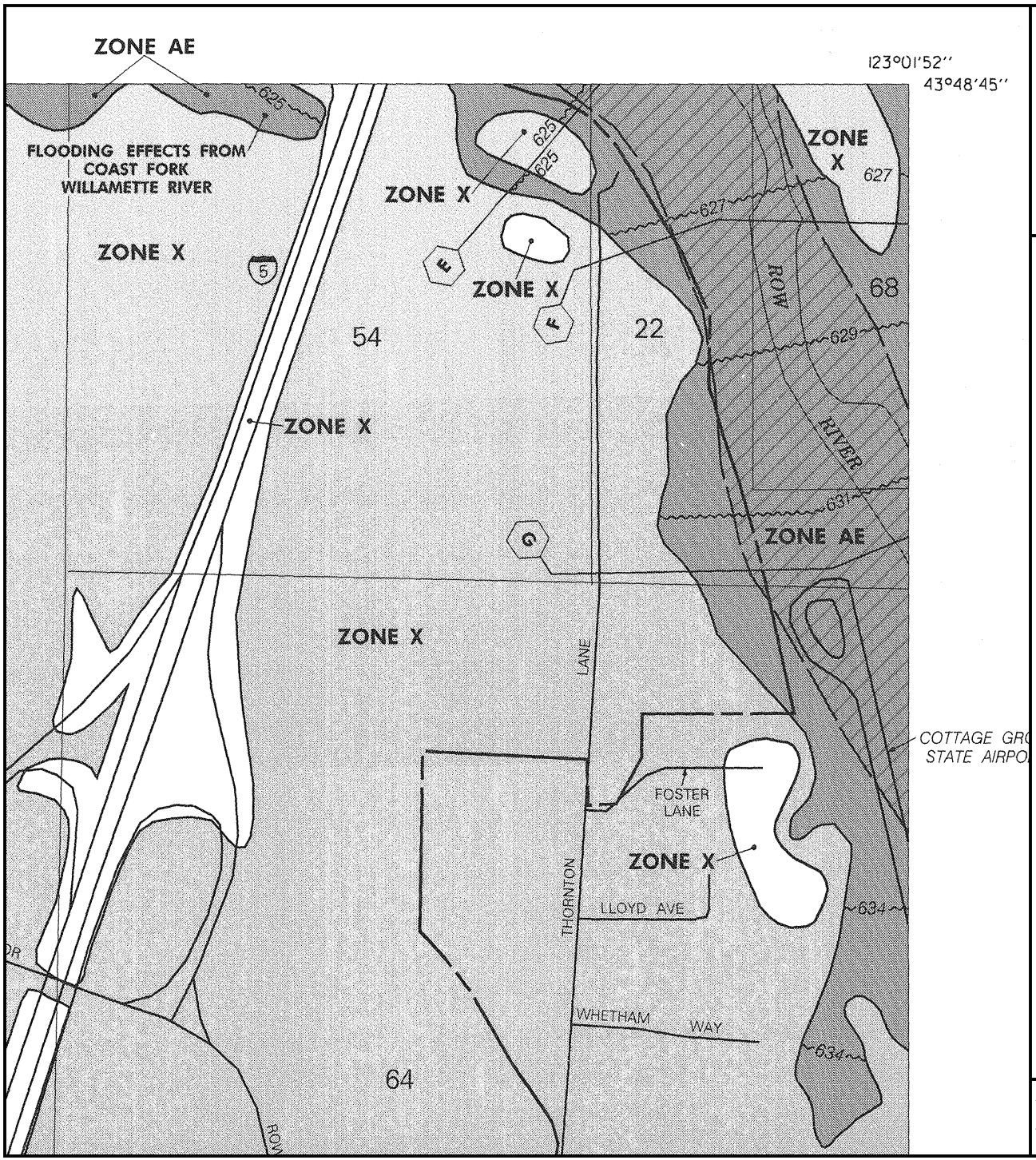
CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
COTTAGE GROVE, CITY OF	410120	2092	F
LANE COUNTY, UNINCORPORATED AREAS	415591	2092	F

MAP NUMBER
41039C2092 F

EFFECTIVE DATE:
JUNE 2, 1999

Federal Emergency Management Agency



APPROXIMATE SCALE IN FEET

500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

LANE COUNTY,
OREGON AND
INCORPORATED AREAS

PANEL 2091 OF 2975

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
COTTAGE GROVE, CITY OF	410120	2091	F
LANE COUNTY, UNINCORPORATED AREAS	415591	2091	F

MAP NUMBER
41039C2091 F

EFFECTIVE DATE:
JUNE 2, 1999

Federal Emergency Management Agency

APPENDIX F

2007 CULTURAL RESOURCES SURVEY

Findings: (-)
County: Lane
Township: 20 South
Range: 3 West
Section: 27
USGS Quadrangle: *Cottage Grove, Oreg.* 7.5-minute, 1984
Type: Cultural Resources Survey
Project Acres: 1
Field Notes Location: AINW

CULTURAL RESOURCE SURVEY OF THE COTTAGE GROVE STATE AIRPORT RUNWAY 15-33 RSA, FENCE, SECURITY LIGHTING IMPROVEMENTS, AND BANK PROTECTION PROJECT, LANE COUNTY, OREGON

Prepared for
David Evans and Associates, Inc.
Corvallis, Oregon

December 20, 2007

REPORT NO. 2054

Archaeological Investigations Northwest, Inc.
2632 SE 162nd Ave. • Portland, OR • 97236 Phone 503 761-6605 • Fax 503 761-6620

CULTURAL RESOURCE SURVEY OF THE COTTAGE GROVE STATE AIRPORT RUNWAY 15-33 RSA, FENCE, SECURITY LIGHTING IMPROVEMENTS, AND BANK PROTECTION PROJECT, LANE COUNTY, OREGON

PROJECT SITE:	Cottage Grove State Airport Improvements
LOCATION:	NE ¼ and SE ¼ of NE ¼ of Section 27; NE ¼ of SE ¼ of Section 27; Township 20 South, Range 3 West, Willamette Meridian
USGS QUAD:	*Cottage Grove, Oreg.*, 7.5', 1984
COUNTY:	Lane
CITY:	Cottage Grove
TYPE:	Pedestrian Survey
PROJECT/ AREA SURVEYED:	Approximately 1 Acre
FINDINGS:	No archaeological sites or artifacts were found during the pedestrian survey.
PREPARERS:	Brian G. Buchanan, M.A., and John L. Fagan, Ph.D., R.P.A.

INTRODUCTION

The Cottage Grove State Airport (also known as Jim Wright Field) is a small public airport located approximately 1 6 kilometers (km) (1 mile [mi]) east of the city of Cottage Grove, Oregon (Figure 1). The airport is primarily used for general aviation. Archaeological Investigations Northwest, Inc., (AINW) was subcontracted through David Evans and Associates, Inc., (DEA) to conduct a literature search and a pedestrian survey of the Cottage Grove State Airport Runway 15-33 RSA Bank Protection project and associated improvements. One of the survey areas was located along the west bank of the Row River adjacent to the north end of Runway 15-33. This area requires bank stabilization to protect the airport and halt future erosion of the Runway Safety Area (RSA) by the river. A separate survey area was along the southern boundary of the runway, measuring approximately 15 by 46 meters (m) (50 by 150 feet [ft]) (Figure 1). The contractor plans minor grading for this area.

ENVIRONMENTAL SETTING

The Cottage Grove State Airport is located in the southern portion of the Willamette Valley. The Willamette Valley is approximately 32 km (20 mi) wide and 161 km (100 mi) long (Aikens 1993:191) and extends from Cottage Grove in the south to the Columbia River in the north. The valley is bordered by the Coast Range to the west and the Cascade Range to the east (Baldwin 1964; Orr et al. 1992). The valley is characterized by low relief terrain ranging in elevation from 15 to 137 m (50 to 450 ft) (Balster and Parsons 1968). Miocene flood basalts

from the Columbia River Basalt Group are overlain by up to 500 m (1,650 ft) of Neogene and Quaternary fill (O'Connor et al. 2001; Orr et al. 1992). The fill has accumulated from the adjacent mountain ranges and from the Columbia River during the Missoula floods. A reduced energy flow through the Columbia River near Rainier, Oregon, resulted in back flooding into the Willamette Valley. The floods deposited the top 100 m (330 ft) of sediments at the end of the Pleistocene during the last 40 flood events (McDowell 1991; Orr and Orr 1996). The flood-derived soils of the Willamette Valley are known as the Willamette formation.

Only one soil type was mapped within the project area. *Fluvents, nearly level,* are deep, well drained to poorly drained soils found on islands and low flood plains. These soils were formed in recently deposited sediments and contain a fluctuating water table. The soil survey states that the soils can be silty, sandy, or gravelly (Patching 1987).

CULTURAL CONTEXT

The literature review and records search showed that the Willamette Valley was used extensively by Native Americans during ethnographic and prehistoric times. The indigenous people of the southern portion of the Willamette valley were divided between multiple small, independent groups who shared a spoken language belonging to the Kalapuyan family (Aikens 1993:183). The project area is located within the traditional territory of the Winefelly band of the Kalyapuyans. They were recorded as one of the bands that signed the Dayton Treaty of 1855 (Zenk 1990:553). The Winefelly were located within the Middle Fork Willamette River basin.

Kalapuyan society contained many small groups that practiced local autonomy in governance. Neither major chiefs nor any well-defined elite class apparently existed within the Willamette Valley (Aikens 1993:187). The Kalapuyans lived in permanent villages during the winter, but lived in transitory camps during the drier months of the year (Zenk 1990:548). The permanent villages were comprised of multifamily households living in semi-subterranean, rectangular plank houses (Zenk 1990:549). The Kalapuyan groups' subsistence was primarily based upon camas (*Camassia quamash*), the bulb of which was roasted, dried, and often pressed into cakes (Zenk 1990:547). The Kalaypuyan peoples used various other resources including wapato, tarweed, hazelnuts, and berries along with birds, small mammals, deer, elk, black bear, lampreys, and grasshoppers. Salmon was not a major food source of the Kalapuyan, in contrast to most of the indigenous population of the Pacific Northwest (Zenk 1990).

Few additional details are known of the Kalapuyan societies because of the introduction of European diseases in the Northwest during the late 1700s and 1800s (Aikens 1993:187). An epidemic of smallpox struck the lower Columbia River and Willamette Valley regions in the 1770s, with an estimated mortality rate of 30 to 35% (Boyd 1990). Subsequent epidemics of smallpox, malaria, measles, and other diseases in the early nineteenth century decimated Native populations, reducing them by 75 to 90% of their pre-contact numbers (Boyd 1990). As Euroamerican settlement of the area increased by the early 1850s, surviving native groups signed a series of treaties in which they ceded ownership of most of their traditional lands to the U.S. government. The descendents of the Kalaypuyans are now a part of the Confederated Tribes of the Grand Ronde Community.

Although the Lewis and Clark expedition did not reach this inland location, explorers do mention the "Cal-lah-po-e-wah nation" as living along the "Multnomah (Willamette) river" (Thwaites 1905:6:118-119). It is likely that the explorers were referring to the groups that were later described as the Kalapuyans. "The first recorded meeting between Kalapuyans and

Euroamericans took place in 1812 when fur traders from Astoria, lead by Donald McKenzie, visited the Willamette Valley" (Minor et al. 1982:71). By the 1830s, some of the first settlers and the first missionaries had arrived in the Willamette Valley and established permanent settlements.

Beginning in 1841, a massive migration of Americans crossed the continent on the Oregon Trail, generally departing from Missouri and crossing to The Dalles, where they then traveled down the Columbia River for the last leg of the journey (after 1846, the Barlow Road offered an alternative route over the Cascade Range). Lane County was officially created on January 29, 1851, by the territorial legislature. The county was named after General Joseph Lane, who arrived in Oregon in 1849 and later served as the first territorial governor, a congressman, and a senator (McArthur 1992:491)

According to the 1856 General Land Office (GLO) map of Township 20 South, Range 3 West, the project area was located within a "Level Prairie" which was situated on the edge of a riparian forest. This prairie matches descriptions of early Euroamerican travelers in the region. These travelers indicated prairies and parklands were found throughout the Willamette Valley due to fires deliberately set by the Native Kalapuyans. These fires maintained an open landscape for the promotion of annual grasses and the movements of game (Aikens 1993:188). The 1860 GLO map shows that portions of the project area were located within 320 acres attributed to John Partin.

The Genealogical Material in Oregon Donation Land Claims, Vol. 3, notes a John Parton who settled a land claim in Lane County. While spelled differently then the John Partin noted on the GLO map, there is a high probability of it being the same man. Parton was born in Howard County, Missouri in 1818 and arrived in Oregon in 1852. He settled his land claim in October 1853, and married Mary J., from Michigan, in 1851 (Genealogical Forum of Portland, Oregon 1986).

The city of Cottage Grove is located west of the airport. The first post office was established east of the present site of Creswell on March 3, 1855. The initial postmaster, G. C. Pearce, named the post office Cottage Grove (McArthur 1993:208). In the late 1860s, the post office was moved to the present location of Cottage Grove. Cottage Grove was incorporated in 1887, and currently is the third largest city in Lane County (behind Eugene and Springfield, respectively).

BACKGROUND RESEARCH

A literature search and records review was conducted for the project area. Records from the State Historic Preservation Office (SHPO) and historic-period GLO maps from the Bureau of Land Management (BLM) were reviewed to identify known prehistoric or historic-period cultural resources. Other historic-period maps and published secondary sources, on file at AINW, were examined to determine the likelihood of cultural resources within the project area. The literature review and records search indicates that no previous archaeological survey work has been done within the current project boundaries.

No cultural resources or archaeological sites have been recorded within 1.6 km (1 mi) of the project area. Eight archaeological surveys have been completed within 1.6 km (1 mi) of the project area. Six of these were conducted by the Oregon State Museum of Anthropology (OSMA) for the replacement or repair of bridges and overpasses along the I-5 corridor to the west of the project area (O'Neill 2004; Cabebe 2005a, 2005b, 2005c, 2005d, 2005e). An earlier survey by OSMA was conducted in 1981 around a proposed water line located to the south of

the current project area (Connolly 1981). Heritage Research Associates, Inc., conducted a survey of three bridges for the I-5 Row River Bridges Replacement project in 2003 (Musil 2003). None of the eight archeological surveys within 1.6 km (1 mi) of the project area found any cultural materials.

One archaeological site was recorded approximately 1.9 km (1.21 mi) [redacted] of the project area. [redacted] The density of the material at the site was noted as apparently very low [redacted] (Southard 1979)

PEDESTRIAN FIELD SURVEY METHODS AND FINDINGS

On December 4, 2007, AINW supervising archaeologist Brian G. Buchanan, M.A., and Alex Atkins, B.A., archaeologist, conducted a pedestrian survey of the Cottage Grove State Airport Runway 15-33 RSA Bank Protection project area (Photo 1). The bank protection area was located northeast of the runway's location and measured approximately 152 m (500 ft) long and 15 m (50 ft) wide (Photo 2). A separate survey area, approximately 15 by 46 m (50 by 150 ft), extended south from the southern boundary of the runway (Figure 2).

The entirety of the bank protection area was surveyed using transects spaced no more than 5 m (16 ft) apart. Ground surface visibility was poor due to a ground covering of mowed grasses. Special attention was paid to rodent back dirt piles and other areas where there was some degree of visibility of mineral soil. The bank was covered in blackberry brambles and other thick vegetation (Photo 3). No artifacts were observed during the survey of the bank protection project area.

During the survey, large, medium, and small rocks that were angular and rounded were seen in areas of good mineral soil visibility. These types of rocks are not typical of the *Fluvents, nearly level* soils that are mapped for the project area (Photo 4). Portions of the ground surface against the bank were mounded and rolling. Both the mounding and the presence of different varieties and sizes of rock suggest that this area was disturbed at some point in the past. This disturbance could be related to the construction of the airport or to past attempts to stabilize the bank.

An area extending 15 m (50 ft) south of the southern end of the runway was also surveyed using transects spaced no more than 5 m (16 ft) apart (Photo 5) (Figure 2). Visibility of the ground surface was poor due to vegetation of mowed grasses. The survey area south of the runway appeared artificially raised above the surrounding landscape. Because of its proximity to the runway it is safe to assume that this portion of the project area was disturbed during the construction of the runway, raising it above the surrounding area. No additional archaeological work is recommended for the area 15 m (50 ft) south of the runway.

After the pedestrian survey was completed, additional study areas were added to the project (Figure 2). The additional areas included a small buffer around the future placement of a chain link fence and security lighting. The fence would surround the access road and hangars. The future alignment of the fence and the path of the underground security lighting were not surveyed. The fence posts will be drilled with a shallow auger and the electrical line trench will be excavated with a ditch witch. Given these minor construction impacts to potential archaeological sites within work areas for the fence and the security lighting, impacts to these resources, if present, would be minimal.

SUMMARY AND RECOMMENDATIONS

On December 3, 2007, AINW completed a cultural resource literature search and a pedestrian archaeological survey of the proposed Cottage Grove State Airport 15-33 RSA Bank Protection project area. This included the bank protection area at the north end of the runway, and a small area south of southern end of the airport runway. During the survey, no archaeological sites or artifacts were found.

The majority of the surveyed areas contained mowed grasses that limited the visibility of mineral soil. Rocks of various sizes that were not naturally located within the project area were noted in the bank protection area. Both surveyed areas at the north and south ends of the runway contained areas that appeared to be artificially altered from the surrounding landscape. Based on the results of the background research and the pedestrian survey, no additional archaeological work is recommended for these areas due to previous ground disturbance.

The proposed alignment of a chain link fence surrounding the airport hangars, access roads, and runway, and the alignment of a proposed underground electrical line were not surveyed. However, because the impact of the construction of the fence and buried electrical line will be minimal, an additional survey is not recommended.

It is possible that some undetected archaeological resources may be present within the project area. To ensure compliance with relevant state and federal requirements, should evidence of archaeological or historical resources be encountered during construction, all ground-disturbing activity near the find(s) should be halted immediately and the SHPO promptly notified. If evidence of human remains or Indian burials is encountered during the development, all ground-disturbing activity near the find(s) should be halted immediately and the SHPO, the Oregon State Police, the Lane County Medical Examiner, and the appropriate tribes should be notified.

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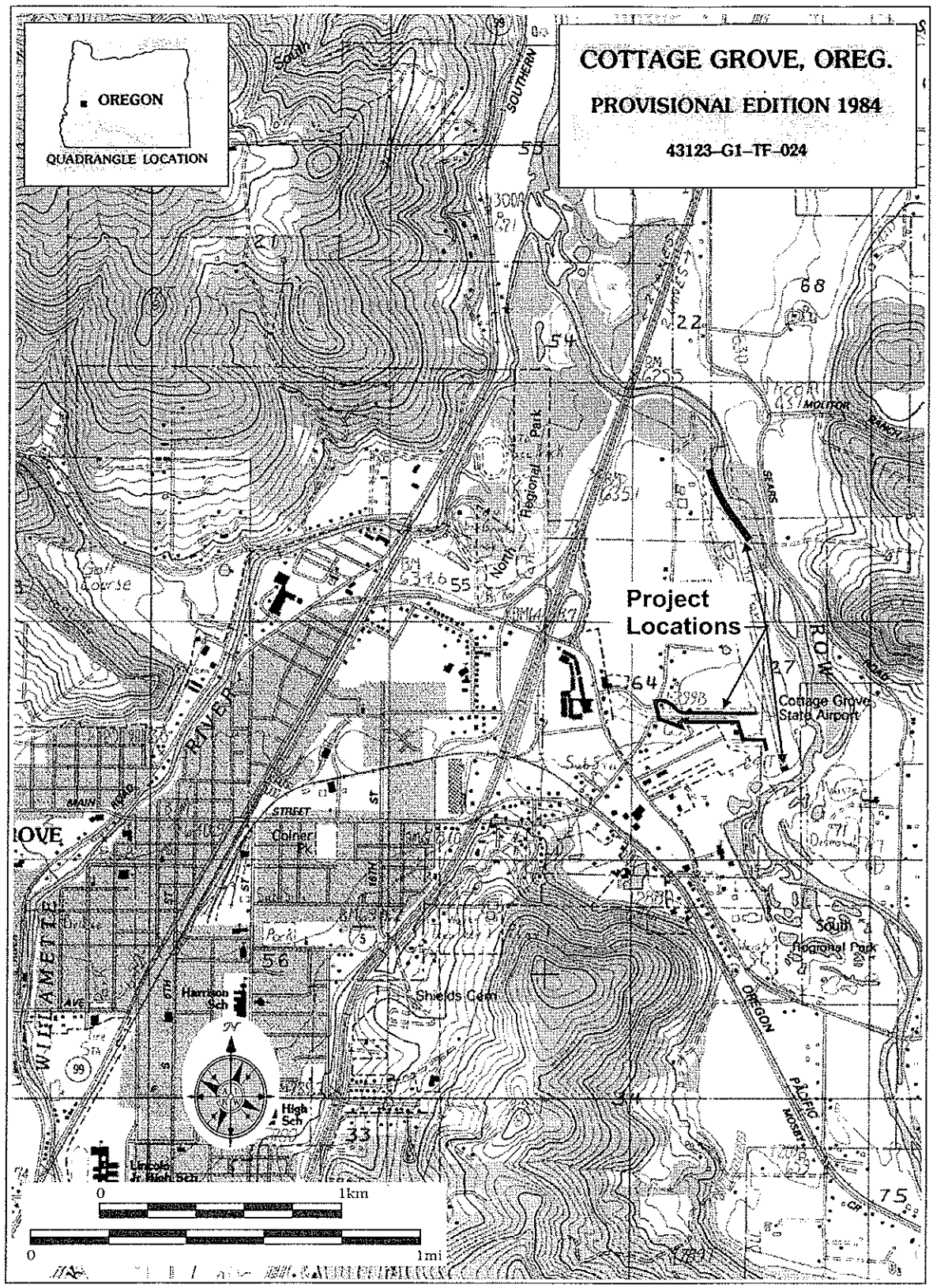

Figure 1 Cottage Grove State Airport project location

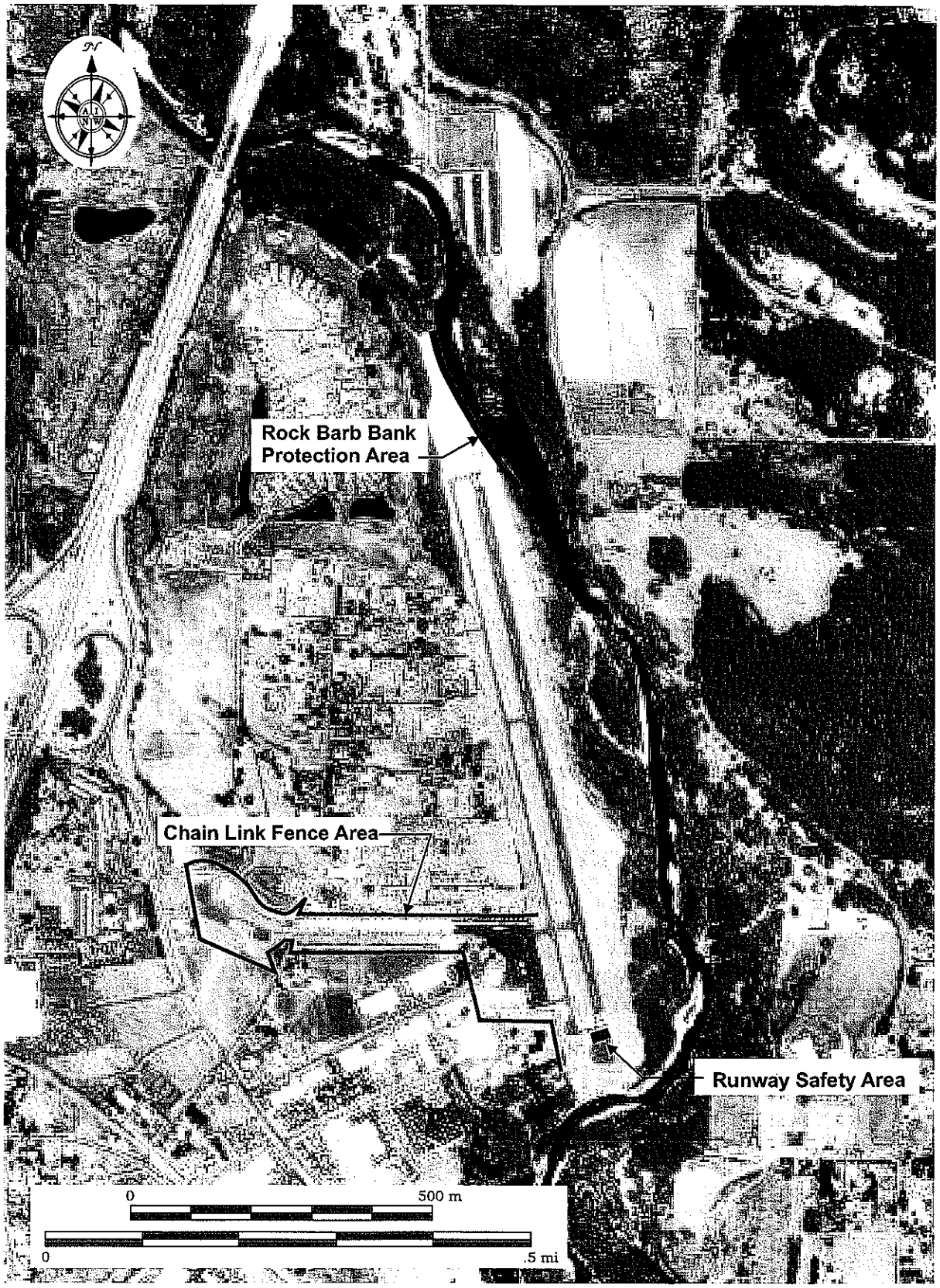

Figure 2. Cottage Grove State Airport project areas shown on 2000 aerial photograph.

Photo 1. Overview of the Cottage Grove State Airport/Jim Wright Field. The view is to the north.

Photo 2. Overview of the bank protection area, showing the Runway Safety Area and the Row River. The view is to the north.

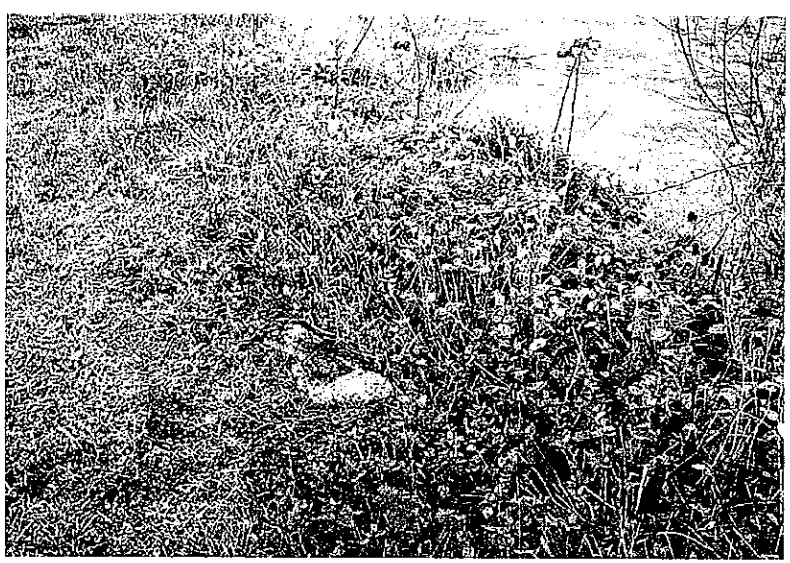

Photo 3. Overview of the west bank of the Row River showing the dense vegetation. The view is to the north.

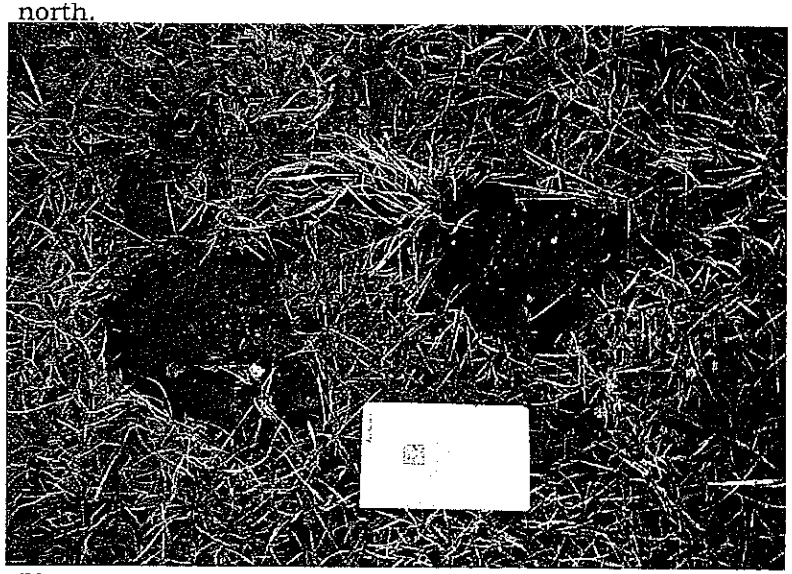

Photo 4. An example of a rock that is not natural to the mapped soil within the project area. The view is to the east.

Photo 5. Survey area south of the runway. The view is to the east.

Photo 6. Overview showing the elevation difference between the survey area south of the runway and the surrounding landscape. The survey area is in the foreground of the photo, and the view is to the southwest.

U.S. Department
of Transportation
Federal Aviation
Administration

Seattle Airports District Office
1601 Lind Avenue, S.W., Suite 250
Renton, Washington 98055-4056

February 4, 2008

Mr. Dennis Griffin
Lead Archaeologist
Oregon State Historic Preservation Office
725 Summer Street, N.E., Suite C
Salem, OR 97301

Dear Mr. Griffin:

The Federal Aviation Administration (FAA) in accordance with Section 106 of the National Historic Preservation Act of 1966 and implementing regulations 36 CFR Part 800 would like to invite you to participate in consultation for the proposed improvements at the Cottage Grove Airport.

Please find a Cultural Resource Survey with this letter. The Cultural Resource Survey, prepared by Archaeological Investigation Northwest, Inc. found that "no historic properties will be affected" by the proposed improvements.

We would like your concurrence with the aforementioned finding. If you have questions or comments, please do not hesitate to contact me at (425) 227-2653.

Sincerely,

Cayla D. Morgan
Environmental Protection Specialist
Seattle Airports District Office

cc: Gigi Cooper, David Evans and Associates
Robert Kentta, Confederated Tribes of the Siletz
Eirik Thorsgard, Confederated Tribes of the Grand Ronde Community of Oregon

(1) Enclosure

U.S. Department
of Transportation
Federal Aviation
Administration

Seattle Airports District Office
1601 Lind Avenue, S.W., Suite 250
Renton, Washington 98055-4056

February 4, 2008

Mr. Robert Kentta
Cultural Resource Manager
Confederated Tribes of the Siletz
P.O. Box 549
Siletz, OR 97347

Dear Mr. Kentta:

The Federal Aviation Administration (FAA) in accordance with Section 106 of the National Historic Preservation Act of 1966 and implementing regulations 36 CFR Part 800 would like to invite you to participate in consultation for the proposed improvements at the Cottage Grove Airport. We are also initiating this consultation in accordance with Executive Order 13175, Consultation and Coordination with Indian and Tribal Governments and FAA Order 1210.20, American Indian and Alaska Native Tribal Consultation Policy and Procedures.

Please find a Cultural Resource Survey with this letter. The Cultural Resource Survey, prepared by Archaeological Investigation Northwest, Inc. found that "no historic properties will be affected" by the proposed improvements.

We would like your concurrence with the aforementioned finding. If you have questions or comments, please do not hesitate to contact me at (425) 227-2653.

Sincerely,

Cayla D. Morgan
Environmental Protection Specialist
Seattle Airports District Office

cc: Gigi Cooper, David Evans and Associates
Eirik Thorsgard, Confederated Tribes of the Grand Ronde Community of Oregon
Dennis Griffin, Oregon State Historic Preservation Office

(1) Enclosure

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

Seattle Airports District Office
1601 Lind Avenue, S.W., Suite 250
Renton, Washington 98055-4056

February 4, 2008

Mr. Eirik Thorsgard
Cultural Resource Manager
Confederated Tribes of the Grande Ronde Community of Oregon
9615 Grand Ronde Road
Grand Ronde, OR 97347

Dear Mr. Thorsgard:

The Federal Aviation Administration (FAA) in accordance with Section 106 of the National Historic Preservation Act of 1966 and implementing regulations 36 CFR Part 800 would like to invite you to participate in consultation for the proposed improvements at the Cottage Grove Airport. We are also initiating this consultation in accordance with Executive Order 13175, Consultation and Coordination with Indian and Tribal Governments and FAA Order 1210.20, American Indian and Alaska Native Tribal Consultation Policy and Procedures.

Please find a Cultural Resource Survey with this letter. The Cultural Resource Survey, prepared by Archaeological Investigation Northwest, Inc. found that "no historic properties will be affected" by the proposed improvements.

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Sincerely,

Cayla D. Morgan
Environmental Protection Specialist
Seattle Airports District Office

cc: Gigi Cooper, David Evans and Associates
Robert Kentta, Confederated Tribes of the Siletz
Dennis Griffin, Oregon State Historic Preservation Office

(1) Enclosure

Oregon
Theodore R. Kulongoski, Governor

Parks and Recreation Department
State Historic Preservation Office
725 Summer St. NE, Suite C
Salem, OR 97301-1266
(503) 986-0707
FAX (503) 986-0793
www.hcd.state.or.us

OREGON STATE PARKS — Nature HISTORY Discovery

2/12/2008

Ms. Cayla Morgan
FAA Seattle Airports Dist Office
1601 Lind Ave SW Ste 250
Renton, WA 98055-4056

RE: SHPO Case No. 08-0280
Cottage Grove State Airport Runway 15-33 RSA Improv Proj
20S 3W 27, Cottage Grove, Lane County

Dear Cayla:

Our office recently received your report about the project referenced above. I have reviewed your report (SHPO# 21655) and agree that the project will have no affect on any known cultural resources. No further archaeological research is needed with this project. As an aside, I think the report name is a bit misleading. No survey was conducted at either the fence or Security Lighting Improvements portion of the project as suggested in the report title.

Please be aware, however, that if during development activities you or your staff encounters any cultural material (i.e., historic or prehistoric), all activities should cease immediately and an archaeologist should be contacted to evaluate the discovery. Under state law (ORS 358.905-955) it is a Class B misdemeanor to impact an archaeological site on public or private land in Oregon. Impacts to Native American graves and cultural items are considered a Class C felony (ORS 97.740-760). If you have any questions regarding any future discovery or my letter, feel free to contact our office at your convenience.

Dennis Griffin

Dennis Griffin, Ph.D., RPA
State Archaeologist
(503) 986-0674
dennis.griffin@state.or.us