

# AURORA STATE AIRPORT



## AIRPORT MASTER PLAN - PAC MEETING #1

### MEETING SUMMARY

**Date:** Tuesday, November 16, 2021  
**Time:** 3:00-5:00 pm  
**Location:** Zoom Webinar

### In Attendance

#### PAC Members Present

Roger Kaye, *1000 Friends of Oregon*  
Ted Millar, *AABC/TLM Holdings*  
Bruce Bennett, *Aurora Airport Improvement Association*  
Ken Ivey, *Aurora Butteville Barlow Community Planning Organization*  
Bill Graupp, *Aurora CTE, Inc*  
Steve Switzer, *Charbonneau Country Club*  
Brian Asher, *City of Aurora*  
Chris Neamtzu, *City of Wilsonville*  
Commissioner Tootie Smith, *Clackamas County*  
Rob Roedts, *Columbia Helicopters*  
Bob Buchanan, *Alternate, Columbia Helicopters*  
Cheryl Pouley, *Confederated Tribes of the Grand Ronde Community of Oregon*  
Matt Williams, *Deer Creek Estates HOA*  
Ben Williams, *Friends of French Prairie*  
Ben Clayton, *Life Flight Network*  
Tristan Dorian, *Lynx Aviation*  
Matt Lawyer, *Alternate, Marion County*  
Tony Beach, *Oregon Dept of Aviation*  
Naomi Zwerdling, *Oregon Dept of Transportation*  
Matt Crall, *Oregon Dept of Land Conservation and Development*  
Nicole Mardell, *Alternate, Oregon Dept of Land Conservation and Development*

Bill Martin, *Oregon Office of Emergency Management*

Sarah Puls, *Alternate, Oregon Office of Emergency Management*

Tony Helbling, *Positive Aurora Airport Management*

Jody Christensen, *Regional Solutions*

Rian Johnson, *Vans Aircraft*

David Waggoner, *Willamette Aviation*

Patrick Donaldson, *Wilsonville Chamber of Commerce*

Kevin Ferrasci O'Malley, *Alternate, Wilsonville Chamber of Commerce*

#### PAC Members Absent

Raul Suarez, *Aurora Air Traffic Control*

Scott Archer, *City of Canby*

Robert Kentta, *Confederated Tribes of Siletz Indians*

Christian Nauer, *Confederated Tribes of Warm Springs Reservation of Oregon*

Robert Fournier, *Helicopter Transport Service*

Commissioner Danielle Bethell, *Marion County*

Mary Anne Cooper, *Oregon Farm Bureau*

#### Agency Representatives

Sarah Lucas, *ODA*

Heather Peck, *ODA*

Seth Thompson, *ODA*

Benjamin Mello, *FAA*

Betty Stansbury, *ODA*

Kate Key, *FAA*

**Staff and Consultants**

Matt Rogers, *Century West*  
David Miller, *Century West*  
Mike Dane, *Century West*  
Samantha Peterson, *Century West*  
Mark Steele, *Century West*  
Brandy Steffen, *JLA Public Involvement*  
Tracie Heidt, *JLA Public Involvement*

**Audience / Members of the Public**

Loraine Crouch  
Robert Zakian  
Aron Faegre  
F Caughlin  
Austin Barnes  
Ron Looney  
Lisa Brice  
Bruce Bergman  
Jake Jacobs  
Otto Horvath  
Cheryl van Grunsven  
Greg Leo  
jging  
Joe Mollahan  
James Pererson  
Kathryn Kelley  
n cs  
Jason Paolo  
Mark Ottenad  
Bill Horton  
Jon Denney  
James Kirby  
Joyce Williams  
Tom Herzog  
Greg Drew

Wayne Richards  
Todd Williams  
Linette Dobbins  
John Wilson  
Council President Hensley  
Jake Farrens  
Richard VanGrunsven  
Leticia Martinez de Cervantes  
Dr John  
David Carlson  
Joseph Schaefer  
Dan Fricke  
John Rachor  
Frank Vedack  
Mark Steele  
Tyler Meskers  
Derek Holland  
Barbara Jacobson  
Jan Gagnon Zakian  
Neal White  
Patricia Allen-Sleeman  
Mayor Julie Fitzgerald  
Josh Pruzek  
Maurice Gunderson  
Prateek Vasudev  
Loita Colebank  
City Councilor Charlotte Lehan  
Tom Maletis  
Carolyn Lee  
Richard  
Eric Winston  
Trevor Conroy  
Greg Strecker  
Betty Ann Arrasmith

**Overview**

The meeting goals were to introduce the project, understand the role/expectations for the PAC, prepare for upcoming meetings, and to receive public input.

## Welcome and Introductions

**Brandy Steffen, JLA Public Involvement**, welcomed everyone to the meeting and reviewed the agenda and basic Zoom meeting tips. **Sarah Lucas introduced Oregon Department of Aviation (ODA)** staff and the consultant teams. **Matt Rogers, Century West**, introduced the subconsultants that are involved with the project. Brandy posted a poll question asking if members had concerns about the fact that the meeting was being recorded. There were no concerns. Brandy introduced the PAC members and then posted an icebreaker poll question on the screen to see how people were doing, using a weather metaphor as a gauge.

## Meeting Process Roles and Responsibilities

Brandy clarified the PAC's roles, reviewed the meeting guidelines and ground rules and described her role as facilitator. She explained the decision-making process, noting the PAC is an advisory group; a sounding board that will review information and provide feedback but not make a recommendation because ODA staff are the final decision-making body. She stated that the project team will gather all PAC members' viewpoints, consider them, and include them in the meeting summary notes.

Brandy said ODA is committed to a fair and transparent public process. There will be many opportunities for the public's questions and comments during future open houses and interviews. The public is always welcome to attend PAC meetings and at each meeting there will be a 15-minute period for verbal comments.

Brandy polled the members to see if they needed any clarification on the agenda, decision-making process, or public involvement and to make sure they understood the protocols/ground rules.

## History and Master Plan Overview

**David Miller, Century West**, gave a history of the Aurora State Airport from the 1940s through current times. He provided parameters for the project. The Master Plan is a facility plan that follows the requirements set by the Federal Aviation Administration (FAA). The goal is to provide a framework for a cost-effective improvement of airport facilities in response to aviation demands. He explained that the 20-year planning horizon was divided into three periods: short-term, intermediate-term and long-term and gave an existing conditions overview. He shared the 18-month project schedule, noting there would be seven PAC meetings and four open houses (although the schedule is subject to change).

Brandy posted a poll to see if anyone had clarifying questions. Two said they would ask their questions in the chat and six people indicated that they might follow up with her later.

## PAC Questions and Comments

Brandy opened up a PAC question and comment session, in which committee members could ask questions about the master plan, give general comments about the information presented, list some goals they would like the plan to accomplish, and share their local expertise and airport knowledge. Full comments, along with responses are provided in the table at the end of the document.

## Public Comments

Brandy opened the meeting up to public members in attendance that wanted to provide verbal comments to the PAC and reminded everyone that written comments would be collected anytime through the project website. Four people provided comments, which are listed in the tables below along with responses to their questions.

ODA only endorses/supports data and statements that are released from this study and posted to the project website. All other statements by members of the Planning Advisory Committee and public are personal opinions. Other documents may not be endorsed by the ODA because they are out of date, unless otherwise noted.

## Next Steps

Brandy thanked everyone for coming and said the recording of the meeting and Power Point Presentation slides would be posted on the website within the next couple of days.

The meeting summary will be posted to the project website in about two weeks and will include all questions and responses, even to those questions that were asked in the chat and weren't answered today. We will also email the PAC members the meeting summary. Brandy advised members to send the team any other questions they might have in the coming days and announced that the second PAC meeting will be scheduled in the future, but it is anticipated for January/February 2022.

Sarah, Heather, and David all thanked the PAC and members of the public for coming and Brandy closed the meeting.

## Questions/Comments and Responses Related to the Meeting Topics

Name	Affiliation	Question/Comment	Response
David Waggoner	Willamette Aviation	Will any elements of last master plan be added to this one?	Past studies are being reviewed for historical reference. This Airport Master Plan (AMP) Project will include a comprehensive evaluation of existing conditions, evaluation of compliance with current FAA standards, and development of alternatives to address forecasted activity at the airport.
Ben Williams	Friends of French Prairie (FOFP)	A Master Plan that actually takes into account the local communities and neighborhoods and the airport impacts upon them!	Maintaining a transparent and thorough process that involves listening to and understanding all comments from the public, surrounding neighbors, and PAC members is a critical component of this AMP Project. ODA will utilize comments in an advisory manner, as applicable to the FAA-approved Scope of Work (SOW) and in accordance with best practices of airport operations management.
Ted Millar	AABC/TLM Holdings	I have been part of the airport for 20-some years and the state of Oregon is making emergency preparedness a major priority in	To clarify, the scope of work approved by the FAA for this master plan doesn't include any resiliency scope, so a future special study might address this, but it

		<p>the case of major disasters, such as earthquakes and fires. The state study indicates that within the first 90 days of an earthquake, the emergency response is going to have to be by air. The Aurora Airport was one of 12 airports designated as an emergency response location. Geo technical studies show that in case of a major earthquake, this airport won't be affected by the liquification like PDX, Hillsboro and McMinnville. He said we already have control towers with all of the emergency preparedness companies located here, such as Columbia Helicopters, Helicopter Transport, Wilson Construction, etc. He thinks it's important that this airport gets special attention because of its capabilities.</p>	<p>is not part of this specific process. Thank you for sharing.</p>
<p>Roger Kaye</p>	<p>1000 Friends of Oregon</p>	<p>I have questions about the scope of work document they all received in advance but wanted to wait until today to ask his questions. The scope of work identified a lot of particulars that are not identified here in this first meeting. Everyone should look at it and see how this process fits within the scope. He had concerns about certain statements made in the scope of work and wanted them addressed by ODA. He wondered if the scope of work was part of this process.</p>	<p>Yes, the scope of work came via email to all committee members in October as part of the packet, and if you didn't receive it, please email Sarah Lucas.</p>
<p>Bruce Bennett</p>	<p>Aurora Airport Improvement Association (AAIA)</p>	<p>Have been on the airport field for 47 years straight and that it was important to keep everything in perspective. He said the runway lengthening safety improvement that has been planned since 1976 has been hugely exaggerated and it is important to keep in perspective that Aurora will never be a long runway, but it should be normal anyway. In the state of Oregon, 30 airports are longer than this one, and only 4 are busier. He said the prior master plan would put Aurora Airport at number 11,</p>	<p>Comment noted; no response required.</p>

Aurora State Airport Master Plan - PAC Meeting

		and that was a reasonable target.	
Bruce Bennett	Aurora Airport Improvement Association (AAIA)	Safety improvements that have been delayed for decades are paramount based on my 43 years operation here and lifetime in the Aviation industry.	Comment noted; no response required.
Bruce Bennett	Aurora Airport Improvement Association (AAIA)	Wanted to clarify for the non-pilots in the group that the original runway length requirements for the airport in 1943 were okay. The regulations were that the runway needed to be long enough for an airplane to take off; but today, for safety reasons, the requirements are for take off plus a landing. It is critical that the length is adequate. One of Bruce's best friends died in an accident due to insufficient runway length. Looks can be deceiving on a runway, he said.	Century West will be looking at that. FAA has strict runway length minimum standards.
Naomi Zwerdling	Oregon Department of Transportation	What are the approval processes with land use and transportation? Does ODOT and City go through approval processes?	Marion County is the governing jurisdiction for the Aurora State Airport. Once the AMP is complete there will be a separate process for any Comprehensive Plan amendment or Transportation System Plan (TSP) updates, as required by Marion County. The processes that will be followed are set by Marion County's requirements.
Brian Asher	Mayor, City of Aurora	Will the local community utilities, noise, fire protection needs be addressed in the master plan	Yes. This master plan will include an analysis of noise exposure both for the current traffic and forecast periods. We will go over an inventory of some of the utilities that exist at the airport so you can be more familiar with what the airport's needs are for water, other resources and fire protection.
Ben Williams	FOFP	Also, for the record, we have no knowledge that there was any public notice or comment period for the Scope of Work (SOW) before it was approved and awarded. In other words, this PAC has no input about the SOW.	This AMP is a Federal Aviation Administration (FAA) Airport Improvement Program (AIP) funded project. SOW development and approval is an FAA process. For all projects funded by the FAA AIP, the FAA works directly with airport owners/sponsors to determine and approve the SOW in accordance with the FAA's requirements.

Aurora State Airport Master Plan - PAC Meeting

Bill Graupp	Aurora CTE, Inc.	Added Goal: Account for future enhancements in aviation technology, including fuel/power and navigation technology, and changes to transportation standards (e-based technology).	ODA and the Consultant Team will address these issues, in accordance with the SOW.
Ken Ivey	Aurora Butteville Barlow Community Planning Organization	In the introduction packet, page 4 of Frequently Asked Questions refers to a "previous planning studies". Where can we access those studies?	The Project Website's resource page will be updated with any and all prior studies that may be deemed necessary and helpful for this project. Previous studies are currently available on ODA's website.
Ben Williams	FOFP	According to the State Geology Dept. the south end of the runway is subject to liquefaction and will disintegrate in a major earthquake!	Please feel free to provide the technical studies and evaluations to which you are referring. No new geotechnical studies are included in the SOW of this project.
Patrick Donaldson	Wilsonville Chamber of Commerce	I look forward to whatever plan is submitted because it seems so comprehensive. From the Chamber's perspective, the ability for people to work at the airport and go back to their homes and further the economy and have a safe work environment that they can return to is essential. He said it's important for the committee to bring forth all their ideas and documents they have questions about (such as liquification in the event of an earthquake) and we can independently look at the veracity of them and if they are contemporary.	We will review existing and past engineering studies that have been done on the runway, current pavement strength data, and other data. That will definitely be in our review of the inventory and incorporated into future planning for facility improvements. We will look at what information is available so we can understand current conditions. We will not be doing direct Geotech investigations with this work. We will review current studies done by professional engineers on the subject of liquification and review any additional documents that are available, as well.
Tony Helbling	Positive Aurora Airport Management	His group is focused on respectful operations of the aircraft and the airport in conjunction with their neighbors. He has worked with ODA in the past and done outreach. Their members, Bruce Bennett, for example, have worked with Charbonneau and others to get some of the routes in and out of the airport changed. John Wilson worked hard on the VFR routes for voluntary noise complaints. Tony is glad this is moving forward. His group wants to operate safely and respectfully of their neighbors.	Comment noted; no response required.

Aurora State Airport Master Plan - PAC Meeting

Tristan Dorian	Lynx Aviation	Agrees with Tony. Lynx has some big priorities as an FBO network. Items such as maintaining an efficient and sustainable site for operation, taxi way widening and weight limitations are important to them and their operation.	Comment noted; no response required.
Tristan Dorian	Lynx Aviation	Will CFR-Part 139 categorization of UAO likely be included in this master plan, bringing minimum security/safety standards and AOA (Airport Operating Area)?	No. For clarification, 14 CFR Part 139 requires FAA to issue airport operating certificates to airports that: <ul style="list-style-type: none"> <li>• Serve schedule and unscheduled air carrier aircraft with more than 30 seats;</li> <li>• Serve scheduled air carrier operations in aircraft with more than 9 seats but less than 31 seats; and</li> <li>• The FAA Administrator requires to have a certificate.</li> </ul> Certification is not an objective of this AMP or ODA.
Tristan Dorian	Lynx Aviation	Tristan Dorian wanted to circle back on the 139 piece. He recognizes it is not an immediate priority but because Aurora Airport is in the Portland metro area, it would bring a lot of economic benefit and efficiency in minimal standards for safety and security for the airport. He said this is a huge priority for them, their customers, base tenants and everyone on this call. Because it seemed like a logical step in the journey for Aurora, he wanted to challenge why Part 139 is not a priority item.	Comment noted.  The goal is to operate at the highest level of safety. The Aurora Airport implements as many of the components of 139 as we can, but those components that require certification are less feasible to achieve.  NOTE: 139 is a FAR (Federal Aviation Regulation) for commercial service airports and lays out a set of safety and security measures.
Bruce Bennett	AAIA	Ben's information is outdated and inaccurate, I'll provide correct information.	Please feel free to provide the technical studies and evaluations to which you are referring. No new geotechnical studies are included in the SOW of this project.
Tony Helbling	Positive Aurora Airport Management (PAAM)	The claim the south end of the runway will disintegrate is inaccurate. New geotechnical studies show differently.	Please feel free to provide the technical studies and evaluations to which you are referring. No new geotechnical studies are included in the SOW of this project.
Chris Neamtzu	City of Wilsonville	Is it a goal of this AMP process to comply with Oregon land use and public process goals?	Yes. ODA will complete the AMP in compliance with the Department of Land Conservation and Development's (DLCD) State Agency Coordination (SAC) Program. Compliance with



			<p>Oregon's Statewide Planning Program is a core requirement of the SAC Program. The ODA will ensure the Aurora State Airport AMP is completed in accordance with ORS 187.180; OAR 660-30 &amp; 31.</p> <p>Oregon's Statewide Planning Program also emphasizes the importance of public involvement, which is a key component of the SAC Program. Accordingly, the ODA has established a Planning Advisory Committee (PAC) that includes members from all affected Federal, State, Local Special Districts, and Interested Parties. The PAC will meet up to nine times throughout the 18-month Aurora State Airport AMP project timeline. All PAC meetings are open to the public.</p>
Tristan Dorian	Lynx Aviation	Just to make sure it's on record - weight limitation from 45,000lbs dual to 110,000lbs and taxiway widening to 50ft is a huge priority for this process.	Comment noted; no response required.
Chris Neamtzu	City of Wilsonville	Want to recommend ODA (Oregon Department of Agriculture) and DEQ (Oregon Department of Environmental Quality) as entities that warrant seats at the table.	Comment noted. All project information for this AMP will be readily available to all state, federal and local agencies and jurisdictions. ODA works with DEQ and Agriculture, as required, on all Capital Improvement Projects.
Ken Ivey	Aurora Butteville Barlow Community Planning Organization	Will you be sending out contact information for the hosts?	Contact information was shared in the presentation and is available on the project website.
Bruce Bennett	AAIA	Great points to strengthen the runway and widen the taxiway Tristan, somehow that was mistakenly communicated as "commercial service" use. So that will need to be sorted out.	The AMP will address current (existing) conditions and future facility requirements.
Wayne Richards	FOFP	I wonder about the airport operational count? Predications from 2012 were extremely high compared to actual use. Pilots need landing strip that is long enough to take off and land. Are they allowed to take off?	In the AMP forecasting effort, a variety of contributing factors, as well as the validated count of based aircraft, will be reviewed. The answer to that question will be studied in the aeronautical activity forecasting effort and the resulting facility requirements analysis.
Steven Benson and Lisa Brice	--	I live at Daydream Ranch near Charbonneau. Why aren't we represented on the committee because we are most impacted	You will be added to the mailing list, and it is recommended you reach out to a PAC member that represents your

		by the noise? We live in the City of Wilsonville.	area (City of Wilsonville and/or Clackamas County).
Lori Crouch	--	I live across street on Highway 551 in sunset estates. What is a noise contour and I wonder what noise volume this project will add? Will there be a wall added?	The AMP will develop noise contours (which are a representation of the average noise level) for both the existing and forecasted airport geometry and operations. More information on this item will be available as the project progresses.
"n cs" Nancy	--	I'm a neighbor and it used to be very peaceful and nice but now it feels like warzone with noise volume of 105 decibels. Expanding the airport can't make it better. What will be done to address that? I would like representation of the neighbors on the PAC. Didn't receive a note about this meeting.	<p>Postcards were mailed to residents and property owners within 1,000 feet of the airport. Additionally, notice was printed in multiple papers and sent via GovDelivery email to those signed up for that service. All future meetings will be noticed in the same manner.</p> <p>PAC meetings are open to the public and allow comment opportunities, as well as providing opportunities to connect with PAC members. It is too early to talk about outcomes of the AMP, as the process is just beginning.</p> <p><b>Brian Asher</b> commented in the chat: "If you let Nancy know, I will be an ear for her area."</p>

### Additional Questions/Comments and Responses

Name	Affiliation	Question/Comment	Response
Roger Kaye	1000 Friends of Oregon	Will need a video of this presentation before he can evaluate all of this information and asked when the recording will become available.	The recording of this meeting will be posted to the project website in the next few days.
Ben Williams	Friends of French Prairie (FOFP)	Does ODA, JLA and Century West own and operate an embarrassment meter. The PAC members were informed in advance that they are a sounding board but no recommendations will be made by the committee. How are they an "advisory" committee if they won't take advice from the committee, he asked.	Throughout this Aurora State Airport Master Plan Project, ODA is interested in all comments from the public and PAC members. We are committed to a transparent and thorough process. ODA is committed to listening and understanding the comments we receive and utilize the comments in an advisory manner as applicable to the scope of work and in accordance with the best practices of airport operations management. ODA will review and utilize comments as applicable to our requirements as a general aviation airport owner and sponsor, and in compliance with federal grant

Aurora State Airport Master Plan - PAC Meeting

			assurances and Oregon Revised Statutes. ODA will be seeking recommendations from the PAC at various times. All recommendations will be submitted to the Aviation Board.
Matt Williams	Deer Creek Estates HOA	Glad you had this meeting and look forward to the next! Thank you	Comment noted; no response required.
Commissioner Tootie Smith	Clackamas County Board of Commissioners	Happy to be here and listen to the comments	Comment noted; no response required.
Bill Martin	Oregon Office of Emergency Management	Thank you for a most interesting and efficient first meeting. Looking forward to the process.	Comment noted; no response required.
Brian Asher	Mayor, City of Aurora	thank you good meeting	Comment noted; no response required.
Linette Dobbins	--	I own property on Boones Ferry across from south end of airport and changed approaches since last plan and going over their property and home. I received letter about cutting down trees.	Please reach out to Tony Beach, State Airports Manager (contact information on ODA website). The referenced letter was about existing conditions at the airport and is unrelated to this Master Plan Project.
Ben Williams Frank Vedaqk	FOFP	Frank Vedaqk, resident on Lower Boones Ferry Road can't get recognized for Public Comment and asks: 1) How do they plan on forcing residents into the aviation easement regarding the RPZ, and 2) Is ODA accounting for the negative impact on property values there and in the impact area within Deer Creek Estates?	This comment appears to be about a different project. Please Contact Tony Beach for information pertaining to the Aurora State Airport Obstruction Removal Project.

# Mayors of the Aurora State Airport Area Communities

**Aurora**



**Wilsonville**

December 13, 2021

The Honorable Kate Brown, Governor of Oregon  
c/o Staff of the Office of the Governor  
Gina Zejdlik, Chief of Staff  
Amira Streeter, Policy Advisor–Climate, Energy and Transportation  
Annie McColaugh, Director–Federal Affairs  
Jason Miner, Policy Director–Natural Resources  
Leah Horner, Director–Regional Solutions  
Jody Christensen, Mid Valley Regional Solutions Coordinator

*Submitted via email to:*  
*gina.zejdlik@oregon.gov*  
*amira.streeter@oregon.gov*  
*annie.mccolaugh@oregon.gov*  
*jason.miner@oregon.gov*  
*leah.horner@oregon.gov*  
*jody.christensen@oregon.gov*

**RE: Issues of Public Concern with Oregon Department of Aviation’s  
Aurora State Airport Master Planning Process**

Dear Governor Brown:

We write to you as the elected leaders of the communities located in closest proximity to the Aurora State Airport to express our profound disappointment at the Oregon Department of Aviation’s biased handling of the Aurora State Airport Master Planning process. Our communities bear the brunt of impacts of the airport’s operations, and yet the Aviation Department appears to be discounting our concerns and is primarily responsive to vested financial interests at the airport.

This observation is true in general, as Department of Aviation staff and board members indicate meeting constantly with private-sector airport interests, while rarely meeting with local community members, city councilors and staff. Multiple communications from officials at the Cities of Aurora and Wilsonville to the Aviation Department over the past several years are generally ignored and not responded to.

The Cities of Aurora and Wilsonville, along with other Planning Advisory Committee (PAC) members to the Department of Aviation’s Aurora State Airport Master Planning process such as 1000 Friends of Oregon and Friends of French Prairie, seek to raise significant issues of public concern. This federally funded master plan has gotten off to a rocky start in a manner that demonstrates the Department’s apparent bias and inability at providing fair public processes that meet Oregon’s standards for meaningful public engagement.

We are concerned that the Department of Aviation is again making similar mistakes as it did with the 2011 or 2012 Aurora State Airport Master Plan process that both the Oregon Supreme Court and the Oregon Court of Appeals found in 2021 violated Oregon land-use and public-process laws. We request that the Governor’s Office demonstrate decisive leadership that provides confidence to local-government officials that federal and state planning processes are

conducted in a legal and ethical manner above reproach, which at this time appears questionable.

**A primary concern pertains to the extremely lopsided membership composition of the Planning Advisory Committee (PAC).** The Department of Aviation has stacked the Planning Advisory Committee with self-dealing financial interests at the Airport that benefit from taxpayer-funded Airport operations and capital improvements. A review of the PAC membership demonstrates that well over half of the PAC membership is comprised of entities with direct pecuniary interest in furthering airport expansion at taxpayer expense.

The same pro-airport expansion entities are represented multiple times on the PAC. Two associations placed on the PAC are composed of a majority of Airport financial interests:

- The attorney for the Aurora Airport Improvement Association represented at the June 3, 2021, Oregon Aviation Board meeting that most of the businesses at the Aurora State Airport belonged to the Aurora Airport Improvement Association.
- In a similar manner, most of the same airport entities are also members of Positive Aurora Airport Management association, a local airport operations management group.

By all appearances, the process and committee composition has the appearance of a “tick the box” exercise in public involvement. This leaves us to conclude that the outcome is predetermined and that the inevitable result will lead to airport expansion regardless of the impacts on safety, the environment and surrounding infrastructure.

**Another key problem is that the Department of Aviation has omitted two key state agencies as PAC members: Department of Agriculture and Department of Environmental Quality (DEQ).** The Aurora State Airport is located in the heart of the Oregon's best “foundation farmland” of French Prairie, which hosts some of Oregon's foremost traded-sector ag producers, nurseries and food processors. Real-estate speculation and uncontrolled urban-level development—as are occurring at the Aurora State Airport area—are harmful to this prime ag-sector economic cluster. By excluding the Department of Agriculture from the public process, the Department of Aviation continues a trend of excluding parties that may provide valuable information or may question the Aviation agency's objectives.

We read in the media that the US Environmental Protection Agency (EPA) indicates that 750 Oregon sites could expose residents to 'forever chemicals' of per- and poly-fluorinated substances or PFAS, where growing evidence points to their adverse health effects, including some cancers. In Oregon, the state Department of Environmental Quality (DEQ) is testing locations including the Aurora State Airport for known or suspected PFAS use. Again, the Department of Aviation's exclusion of DEQ demonstrates an on-going pattern of discriminatory conduct.

We understand that the Governor's Office Executive Order 20-04 on Climate Action “Directing State Agencies to Take Actions to Reduce and Regulate Greenhouse Gas Emissions” (GHG)

directs DEQ to develop strategies that “Cap and Reduce Greenhouse Gas Emissions.” We are concerned that representatives of the Governor’s Office appointed to the Oregon Aviation Board and Department of Aviation staff simultaneously are advocating for major expansion of the Aurora State Airport that results in substantial increases in aviation-gas fossil-fuel consumption and GHG emissions, contrary to the Executive Order on Climate Action.

One of the major reasons stated by aviation interests for Aurora State Airport runway extension is to increase the sale of aviation fuel so that a larger class of aircraft may takeoff from the airport with full tanks of gas. We note that the tax on aviation fuel is the primary source of operational revenue for the Department of Aviation. Thus, the Department of Aviation has a direct pecuniary interest in advocating for increased aviation-gas fuel sales that would accompany expansion of the Aurora State Airport, seemingly in direct conflict with the Governor’s Executive Order on Climate Action.

Additionally, DEQ data appears to indicate that the NMPDES (National Pollution Discharge Elimination System) permit for the Department of Aviation’s Aurora State Airport discharge into Mill Creek-Pudding River watershed expired June 30, 2017. We understand that area residents have expressed concerns for surface-water, ground-water and well-water quality due to prospective airport run-off pollutants, unregulated septic systems and potential ground water pollution. Cumulatively, these all appear to be good reasons from the Department of Aviation’s perspective to exclude DEQ from Airport planning efforts.

**The Department of Aviation’s tightly controlled master planning process fails to meet the test for meaningful public engagement.** The Zoom meeting format used by the Department of Aviation does not list or show all participants in the meeting and provide clear labeling of names and affiliations. It is unclear to the public who is attending the meetings and who or what entity that participants represent. At the November 16, 2021, PAC meeting, it was difficult to ascertain from many of the name labels who was attending in what role. Names and affiliations of all PAC members and staff/consultants should be clearly evident.

Additionally, some PAC members were allowed to have two representatives participate in the meeting, while some PAC members were ignored and not allowed to participate in the meeting. These elements indicate a failure of meaningful public process.

The facilitators for the PAC meeting used a series of unscientific “polls” to gauge participants’ thoughts or perspectives; however, it was unclear who was participating — was it PAC members, Aviation staff and consultants, and/or the public? Moreover, the facilitators interpreted the results of the poll that may or may not be an accurate reflection of the participants involved.

The Department of Aviation states that “As the airport sponsor, ODA staff will be the final decision-making authority. They will decide what is included in the Master Plan.” Setting aside the fact that this pronouncement at the start of a “public involvement” process sends a message that is contrary to Oregon’s Statewide Planning Goal Number 1, we believe this is false

information; only the appointed body (*i.e.*, the Oregon Aviation Board) can legally approve a master plan. The failure of the Aviation Board to adopt the 2011 or 2012 Aurora State Airport Master Plan was a centerpiece for the Oregon Supreme Court's affirmation of the Court of Appeal's decision against the Department of Aviation for failure to comply with Oregon law.

During the November 16, 2021, PAC meeting, aviation consultants indicated that they would consider nearby external "outside the fence" proposed urban-level developments in the Airport master-planning process — implying that such proposed developments would favor Airport expansion. However, the consultants gave no indication of reviewing such information in light of Oregon's EFU land-use laws, nor the potential reality of such proposed developments ever actually occurring. Additionally, consultants gave no indication of considering the "negative" aspects of proposed developments outside the Airport, such as increased surface-transportation impacts/traffic congestion and potential mitigation, increased land-speculation harming the ag industry, and increased pollution and environmental impacts.

**The Department of Aviation has allowed and promoted the dissemination of false information about the seismic resilience of the Aurora State Airport.** At the October 6, 2021, Oregon Aviation Board planning session and at the November 16, 2021, PAC meeting, misinformation about the seismic conditions of the Aurora State Airport area was provided without rebuttal. At the October meeting, the Aviation Board had considerable discussion on resilience, and the importance of selling the resilience concept to the public and government officials as a component of building support for state and federal funds for the Aurora State Airport expansion. Aviation Board Chair Meeker indicated a desire to improve "lines of communication" between the Governor's Office and airport businesses to promote resilience.

Contrary to statements that depict the Aurora State Airport as a crucial facility for the projected 9.0 Cascadia Subduction Zone Earthquake, the Aurora State Airport is listed at the lowest-level of Tier 3 airports in the Oregon Resilience Plan. The Tier designations "indicate the priorities for making future investments." In other words, the Department of Aviation is effectively targeting one of the lowest priority airports to prepare for recovery in the Oregon Resilience Plan for potentially one the largest airport capital improvement projects ever planned by the state.

With respect to the airport's ability to withstand a Cascadia Subduction Zone Earthquake, reports by the Oregon Department of Geology and Mineral Industries (DOGAMI) show that the Aurora State Airport is located in an area subject to major potential damage in a projected 9.0 Cascadia Subduction Zone Earthquake. The "Mid/Southern Willamette Valley Geologic Hazards, Earthquake and Landslide Hazard Maps, and Future Earthquake Damage Estimates," DOGAMI publication IMS-24, shows that the Aurora State Airport specifically is located in an area:

- Rated High for Ground Shake Amplification
- Rated High for Amplification Susceptibility
- Rated Moderate to High for Liquefaction Susceptibility

The same deep, fine soils that make the French Prairie area such exemplary foundation farmland also mean these soils are subject to amplification and liquefaction. As a result of such an earthquake, the airport runway would likely be unserviceable for a long period of time (6-12 months) post-earthquake. Rather than allow aircraft to take off or land due to an inoperable runway, the most likely role of the Aurora State Airport will be to accommodate vertical take-off and landing of heavy-lift helicopters with locally-based Columbia Helicopters and Helicopter Transport Services, neither of which require a runway extension to operate.

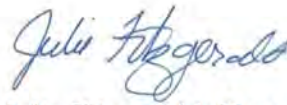
In all of our years of government service, we have never seen a state agency act with such disregard to the concerns of the local communities, and appropriate and fair public process. We request your intervention now to provide for an unbiased process that produces trust-worthy results. We believe that if the Department of Aviation were to comply with—rather than seek to evade—the letter and spirit of Oregon's land-use and public-process laws, judicial intervention to set a course correction would not be a necessary remedy that must be pursued by local governments and concerned citizens.

Again, we appreciate your time and consideration of these important issues, and we look forward to your response. Thank you.

Sincerely,



Brian Asher, Mayor  
City of Aurora



Julie Fitzgerald, Mayor  
City of Wilsonville

Enc:

- Letter from Cities of Aurora and Wilsonville to Sen. Lee Beyer and Rep. Susan McLain, Co-Chairs Joint Committee on Transportation, RE Request for Public Hearing on HB 2497 – Proposed Legislation to Create Transparent Public Process for State Aviation Department Agency Communications and Coordination with Local Governments and Communities on Aurora State Airport Issues of Concern, March 11, 2021
- Aurora State Airport in Relation to The Oregon Resilience Plan and DOGAMI Earthquake Susceptibility Maps – 2019

cc: Oregon Aviation Board  
Senator Ron Wyden  
Senator Jeff Merkley  
Congressman Kurt Schrader  
Congresswoman Suzanne Bonamici  
House Speaker Tina Kotek  
Senate President Peter Courtney  
Representative Susan McLain (HD 29)  
Representative Courtney Neron (HD 26)  
Representative Christine Drazan (HD 39)  
Senator Bill Kenemer (SD 20)  
Metro Council President Lynn Peterson  
Metro Councilor Garrett Rosenthal

Clackamas County Board of County  
Commissioners  
Marion County Board of County  
Commissioners  
FAA Mountain Region staff  
Heather Fernuik, Director  
Chris Schaffer, Planning & Programming  
Manager  
Warren Ferrell (Acting) Manager, Seattle  
Airports District Office





March 11, 2021

Senator Lee Beyer, Co-Chair  
Representative Susan McLain, Co-Chair  
Joint Committee on Transportation  
Oregon Legislative Assembly

*Sen.LeeBeyer@oregonlegislature.gov*  
*Rep.SusanMcLain@oregonlegislature.gov*  
*patrick.h.brennan@oregonlegislature.gov*

**RE: Request for Public Hearing on HB 2497 – Proposed Legislation to Create Transparent Public Process for State Aviation Department Agency Communications and Coordination with Local Governments and Communities on Aurora State Airport Issues of Concern**

Dear Co-Chairs Beyer and McLain and Members of the Committee:

We are writing to you as the elected leaders of two cities each located near the Aurora State Airport to request your support this legislative session in resolving a decade's-long controversy between the Oregon Department of Aviation (ODA) and our communities regarding the agency's uncooperative attitude with respect to the Aurora State Airport Master Plan and management of the airport.

At the request of the Aurora and Wilsonville City Councils, Representative Courtney Neron (HD-26) has introduced HB 2497 as a "process bill" that does not dictate predetermined results. Rather, the proposed legislation creates an open transparent, public process to establish formal channels of intergovernmental communication and coordination between the state Aviation agency and directly impacted local governments, which has been sorely lacking over the past 10 years.

We believe that ODA circumvented Oregon public-process laws regarding the purported adoption of the *2012 Aurora State Airport Master Plan*. Ever since we began disputing what we view as an illegal process, the state agency has been virtually unresponsive to our local communities. We are alarmed about the agency's efforts to promote increasingly urbanized levels of activity in unincorporated county territory of high-value EFU farmland without inviting meaningful public input and without supporting public infrastructure — all contrary to Oregon Goals for citizen-involvement and land-use planning. The PSU Oregon Solutions' *Aurora State Airport Assessment Report* commissioned by the legislature in 2018 found a host of agency management troubles, improper influence and poor public engagement and communications problems regarding ODA's operations and planning at the Aurora State Airport.

HB 2497 also provides for updating the controversial *2012 Aurora State Airport Master Plan* that has been the subject of significant community concern and litigation, conducting a much-needed environmental assessment of current airport pollution levels, and planning for eventual annexation of the airport by the City of Aurora to provide municipal governance and urban services.

**We respectfully request that the Joint Committee on Transportation provide a public-hearing opportunity for HB 2497 as a way to prepare a roadmap forward for resolving the 10-year-long Aurora State Airport conflict between the state agency and local communities.** To date, *the only open public forum* on ODA's efforts to expand the Aurora State Airport was held by the Wilsonville City Council in November 2018 that drew 200 attendees.

Sincerely,

Brian Asher, Mayor  
*Mayor@ci.aurora.or.us*

Julie Fitzgerald, Mayor  
*Mayor@ci.wilsonville.or.us*

cc: Senate President Peter Courtney; House Speaker Tina Kotek; Gina Zejdlik, Governor's Chief of Staff

# The Oregon Resilience Plan

**Reducing Risk and Improving Recovery  
for the Next Cascadia Earthquake and Tsunami**

Report to the  
77<sup>th</sup> Legislative Assembly

from  
Oregon Seismic Safety Policy  
Advisory Commission (OSSPAC)



Salem, Oregon  
February 2013

## Air Transportation

The state of Oregon has an extensive aviation system that provides valuable transportation options for the public, ranging from small airports in remote regions of the state to large commercial service airports. Ninety-seven public-use airports provide support to the economic health and vitality of Oregon and contribute to the quality of life for its citizens and visitors.

- Fifty-seven public-use airports are partially supported by FAA and included in the National Plan of Integrated Airport System (NPIAS).
- Sixteen public-use airports are either owned by other municipalities or are privately owned.
- Over 400 private airports and landing strips are located within Oregon.

The 2007 Oregon Aviation Plan established five categories of airports, based on the definitions outlined within the National Plan of Integrated Airports System (NPIAS), the design criteria outlined by the Airport Reference Code (ARC), and the facilities inventory.

### CATEGORY I: COMMERCIAL SERVICE AIRPORTS

These airports support some level of scheduled commercial airline service in addition to a full range of general aviation aircraft. This includes both domestic and international destinations.

### CATEGORY II: URBAN GENERAL AVIATION AIRPORTS

These airports support all general aviation aircraft and accommodate corporate aviation activity including business jets, helicopters, and other general aviation activity. The primary users are business related and service a large geographic region, or they experience high levels of general aviation activity.

### CATEGORY III: REGIONAL GENERAL AVIATION AIRPORTS

These airports support most twin and single engine aircraft, may accommodate occasional business jets, and support regional transportation needs.

### CATEGORY IV: LOCAL GENERAL AVIATION AIRPORTS

These airports primarily support single engine, general aviation aircraft, but are capable of accommodating smaller twin-engine general aviation aircraft. They also support local air transportation needs and special use aviation activities.

### CATEGORY V: REMOTE ACCESS AND EMERGENCY SERVICE AIRPORTS

These airports primarily support single-engine, general aviation aircraft, special use aviation activities, and access to remote areas; or they provide emergency service access.

The following list identifies airports within each category that have the potential to maintain or quickly restore operational functions after a major earthquake. The Transportation Task Group arranged these 29 airports into a tier system to indicate the priorities for making future investments. Tier 1 (T1) is comprised of the essential airports that will allow access to major population centers and areas

considered vital for both rescue operations and economic restoration. Tier 2 (T2) is a larger network of airports that provide access to most rural areas and will be needed to restore major commercial operations. Tier 3 (T3) airports will provide economic and commercial restoration to the entire region after a Cascadia subduction zone event. ←

Category I	Category II	Category III	Category IV	Category V
*Redmond (T1)	Scappoose (T2)	Tillamook (T2)	Mulino State (T3)	Independence State (T3)
PDX (T1)	Troutdale (T3)	Roseburg (T1)	Albany (T3)	Siletz Bay State (T2)
Salem (T1)	Hillsboro (T2)	Bandon State (T2)	Lebanon (T3)	Cape Blanco State (T2)
Eugene (T1)	Portland Heliport (T3)	Grants Pass (T3)	Florence (T3)	
Rogue Valley Medford (T1)	Aurora State (T3) ←		Creswell (T3)	
Klamath Falls (T1)	McMinnville (T3)		Cottage Grove State (T3)	
	Newport (T2)		Myrtle Creek (T3)	
	Corvallis (T3)		Brookings (T2)	

\*Primary emergency response airport for FEMA Region X: Redmond municipal airport, centrally located in central Oregon, is ideally situated to be the primary FEMA emergency response airport.


Figure 5.16: Oregon Airports (Source: Oregon Department of Aviation)

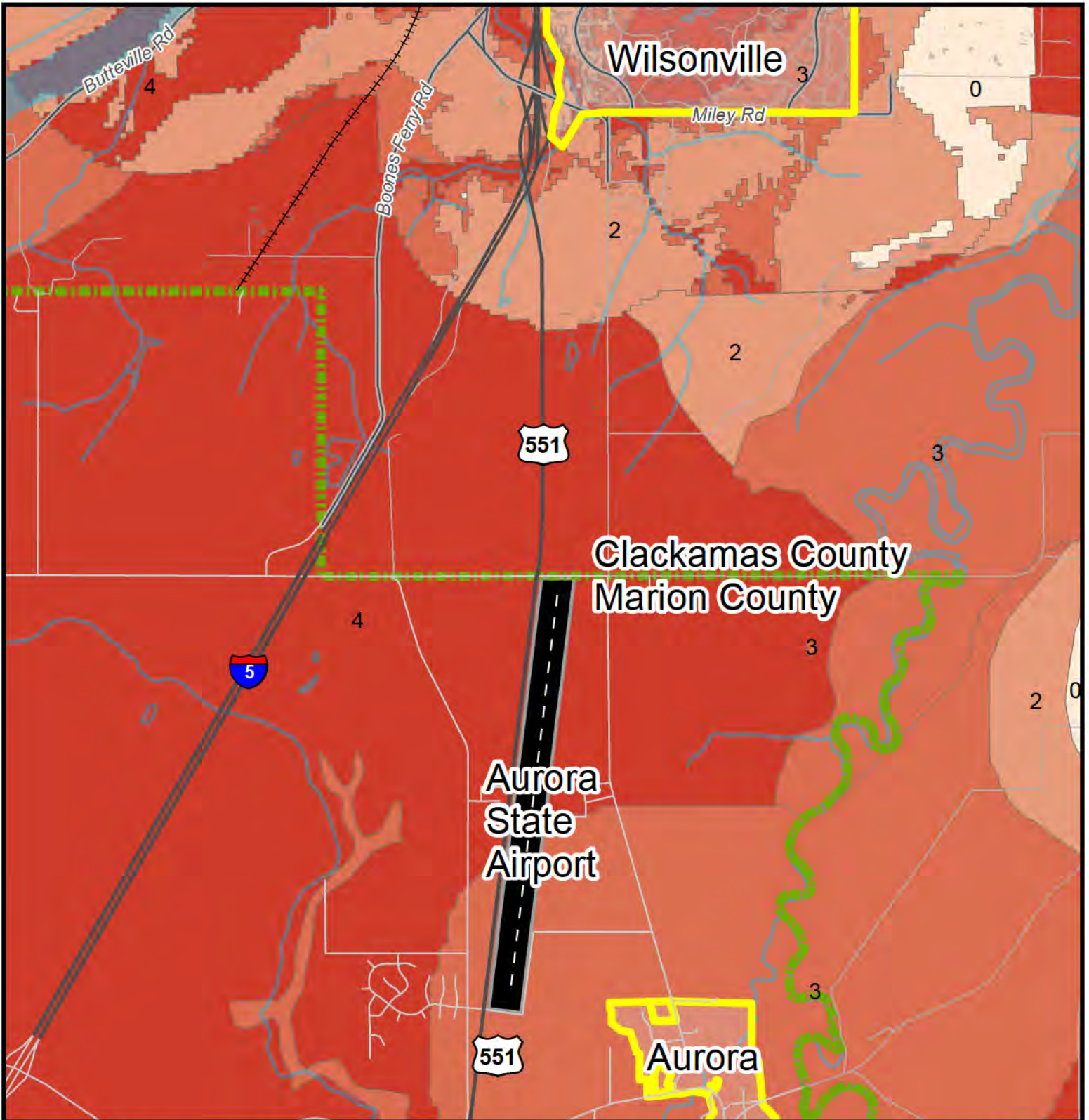
The Portland International Airport (PDX) is one of Oregon’s vital transportation network links. As the state’s major airport, PDX will play a key role in re-establishing our economy by facilitating the movement of people, goods, and services after a major statewide emergency event. Other airports in Oregon will also play a vital role during the post-disaster emergency response and initial recovery phase. During the emergency response, for example, displaced residents, injured people, and the elderly may need to be evacuated by means of airports; and airports will also provide a staging area for needed supplies (such as water, food, medical supplies, and materials for temporary housing). Until highway and rail transportation can be fully restored, air transportation, along with ships off the coast, will be the lifelines for Oregon’s citizens.

## Oregon Transportation Resiliency Status

**\*Key to the Table**

<i>TARGETS TO ACHIEVE DIFFERENT LEVELS OF RECOVERY:</i>										
<b>Minimal:</b> (A minimum level of service is restored, primarily for the use of emergency responders, repair crews, and vehicles transporting food and other critical supplies.)										<b>R</b>
<b>Functional:</b> (Although service is not yet restored to full capacity, it is sufficient to get the economy moving again— e.g. some truck/freight traffic can be accommodated. There may be fewer lanes in use, some weight restrictions, and lower speed limits.)										<b>Y</b>
<b>Operational:</b> (Restoration is up to 90% of capacity: A full level of service has been restored and is sufficient to allow people to commute to school and to work.)										<b>G</b>
ESTIMATED TIME FOR RECOVERY TO <b>60%</b> OPERATIONAL GIVEN CURRENT CONDITIONS:										<b>S</b>
ESTIMATED TIME FOR RECOVERY TO <b>90%</b> OPERATIONAL GIVEN CURRENT CONDITIONS:										<b>X</b>
Comparison of Target States and Estimated Time for Recovery										
<i>Infrastructure Facilities</i>	<i>Event Occurs</i>	<i>0 – 24 hours</i>	<i>1 – 3 days</i>	<i>3 – 7 days</i>	<i>1 – 4 weeks</i>	<i>1 – 3 months</i>	<i>3 – 6 months</i>	<i>6 – 12 months</i>	<i>1 – 3 years</i>	<i>3+ years</i>
<b>Central Oregon Zone</b>										
<b>► OREGON STATE HIGHWAY SYSTEM</b>										
<b>State Highway System - Tier 1 SLR <sup>1)</sup></b>										
Roadways			R	Y	G			S	X	
Bridges			R	Y	G/S		X			
Landslides			R	Y	G			S	X	
<b>State Highway System - Tier 2 SLR</b>										
Roadways			R		Y	G			S	X
Bridges			R		Y	G/S		X		
Landslides			R		Y	G		S	X	
<b>State Highway System - Tier 3 SLR</b>										
Roadways				R		Y	G		S	X
Bridges				R		Y	G/S		X	
Landslides				R		Y	G		S	X
<b>State Highway System - Other Routes</b>										
Roadways					R		Y	G	S	X
Bridges					R		Y	G	S	X
Landslides					R		Y	G	S	X
<b>► AIRPORTS &amp; AIR TRANSPORTATION</b>										
<b>Tier I - Oregon Airports System</b>										
Redmond Municipal Roberts Field Airport - FEMA		R	S		Y	G	X			
Klamath Falls Airport		R	S		Y	G	X			
FAA Facility			R	Y	G					
<b>► OREGON RAIL TRANSPORTATION</b>										
<b>UPRR</b>										
CA/OR State Line to Bieber Line Jct. (Klamath Falls)			Y	G	S	X				

Infrastructure Facilities	Event Occurs	0-24 hours	1-3 days	3-7 days	1-4 weeks	1-3 months	3-6 months	6-12 months	1-3 years	3+ years
Bieber Ln Jct. (Klamath Falls) to Chemult (Shared)			Y	G	S	X				
Chemult to Eugene					Y	G	S	X		
<b>BNSF</b>										
CA/OR State Line to Bieber Line Jct. (Klamath Falls)		G	S	X						
Chemult to Redmond		G	S	X						
Redmond to O.T. Jct. (connection with UP at Columbia)			Y	G	S	X				
<b>► OREGON PUBLIC TRANSIT</b>										
Admin & Maintenance Facilities <sup>2)</sup>						R	Y	G	S	X
Local Area Paratransit On-Demand Service (critical)				R	Y	S	G	X		
Local Area Paratransit On-Demand Service (full)						R	Y	G	S	X
Local Roadway Fixed Route Service (emergency)				R	Y	S	G	X		
Local Roadway Fixed Route Service (regular)						R	Y	G	S	X
Intercity & Commuter Bus <sup>4)</sup>						R	Y	G	S	X
<b>Willamette Valley Zone</b>										
<b>► OREGON STATE HIGHWAY SYSTEM</b>										
<b>State Highway System - Tier 1 SLR <sup>1)</sup></b>			R	Y	G			S	X	
Roadways			R	Y	G		S	X		
Bridges			R	Y	G			S	X	
Landslides			R	Y	G			S	X	
<b>State Highway System - Tier 2 SLR</b>			R		Y	G		S	X	
Roadways			R		Y	G	S	X		
Bridges			R		Y	G		S	X	
Landslides			R		Y	G		S	X	
<b>State Highway System - Tier 3 SLR</b>				R		Y	G	S	X	
Roadways				R		Y	G	S	X	
Bridges				R		Y	G	S	X	
Landslides				R		Y	G	S	X	
<b>State Highway System - Other Routes</b>					R		Y	G	S	X
Roadways					R		Y	G	S	X
Bridges					R		Y	G	S	X
Landslides					R		Y	G	S	X
<b>► AIRPORTS &amp; AIR TRANSPORTATION <sup>5)</sup></b>										
<b>Tier I - Oregon Airports System</b>										
Portland International Airport (PDX) (Tier 1)		R			Y	S		G	X	
Salem McNary Field		R			Y	S		G	X	
Eugene Mahlon Sweet Filed		R			Y	S		G	X	
Rogue Valley International Medford		R			Y	S		G	X	
Roseburg Regional Airport		R			Y	S		G	X	
<b>Tier III Oregon General Aviation Airport System</b>										
Troutdale			R		S	Y		G		X
Portland Heliport			R		S	Y		G		X
→ Aurora State			R		S	Y		G		X
McMinnville Municipal			R		S	Y		G		X
Corvallis			R		S	Y		G		X



**The City of Wilsonville, Oregon**  
 Clackamas and Washington Counties



**Aurora State  
 Airport Area  
 Earthquake  
 Liquefaction  
 Susceptibility**



M:\projects\2018\100918\_Liq\Liq.mxd

*Summary: This map shows liquefaction susceptibility for Oregon calculated following the methods of FEMA's 2011 HAZUS-MH MR4 technical manual. The map was prepared in support of a series of ground motion and ground failure maps for a scenario Magnitude 9.0 Cascadia Subduction Earthquake developed by the Oregon Department of Geology and Mineral Industries. The scenario maps were prepared for the Oregon Seismic Safety Policy Advisory Commission for its use in preparing a report to the 77th Oregon Legislative Assembly entitled "The Oregon Resilience Plan; Reducing Risk and Improving Recovery for the Next Cascadia Earthquake and Tsunami".*



**OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
INTERPRETIVE MAP SERIES 24**

GEOLOGIC HAZARDS, EARTHQUAKE AND LANDSLIDE HAZARD MAPS, AND FUTURE EARTHQUAKE DAMAGE ESTIMATES FOR SIX COUNTIES IN THE MID/SOUTHERN WILLAMETTE VALLEY INCLUDING YAMHILL, MARION, POLK, BENTON, LINN, AND LANE COUNTIES AND THE CITY OF ALBANY, OREGON

**APPENDIX E:  
MARION COUNTY**

**CRUSTAL EARTHQUAKE SCENARIO**

Scenario Details  
Ground Motion Map

**SUBDUCTION ZONE EARTHQUAKE SCENARIO**

Scenario Details  
Ground Motion Map

**GEOLOGIC HAZARD MAPS**

Relative Ground-Shaking Amplification Susceptibility Map  
Relative Liquefaction Hazard Susceptibility Map  
Relative Earthquake-induced Landslide Susceptibility Map  
Identified Landslide Areas Map

**HAZUS-MH GLOBAL REPORT FOR CRUSTAL SCENARIO**

**HAZUS-MH GLOBAL REPORT FOR SUBDUCTION ZONE SCENARIO**



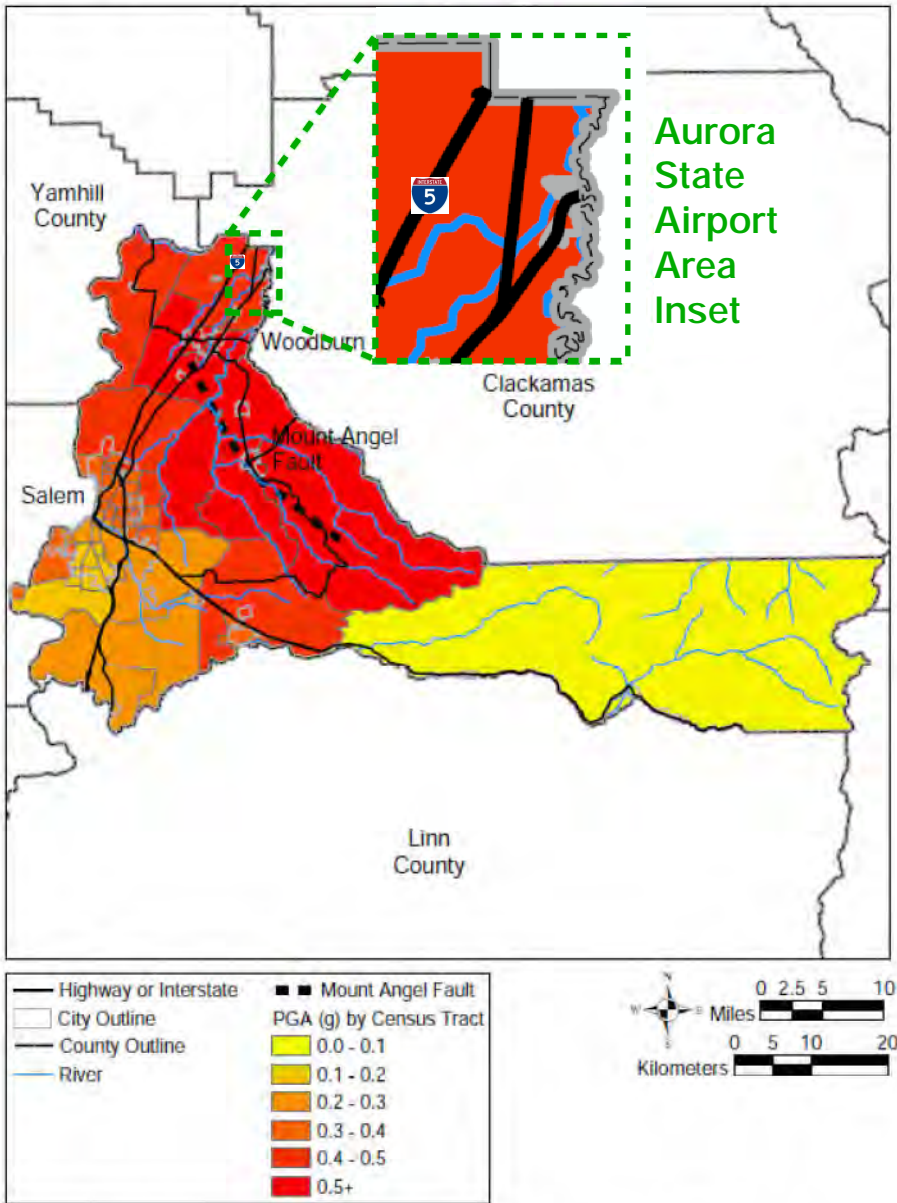
## CRUSTAL EARTHQUAKE SCENARIO DETAILS FOR MARION COUNTY

**Crustal Earthquake Scenario:** A magnitude 6.9 earthquake on the Mount Angel Fault.

For the magnitude 6.9 earthquake on the Mount Angel Fault scenario, we defined the fault source using the “deterministic seismic source” option within HAZUS-MH (Figure E1) (FEMA, 2003b). The fault and earthquake event were chosen by examination of USGS (2004) data and data in the Geomatrix Consultants, Inc. (1995) *Seismic Design Mapping, State of Oregon* report prepared for the Oregon Department of Transportation. In general, a likely worst-case scenario was selected. Figure E1 has the location of the fault, shown as the dark line, and the census tracts within Marion County. Figure E2 displays the peak ground acceleration (PGA) for the crustal scenario.

Scenario Name	Mount Angel M6.9
Type of Earthquake	Source
Fault Name	Mount Angel Fault
Historical Epicenter ID #	67
Probabilistic Return Period	NA
Longitude of Epicenter	-122.83
Latitude of Epicenter	45.05
Earthquake Magnitude	6.90
Depth (km)	0.00
Rupture Length (km)	30.69
Rupture Orientation (degrees)	0.00
Attenuation Function	Project 2000 West - Non Extensional

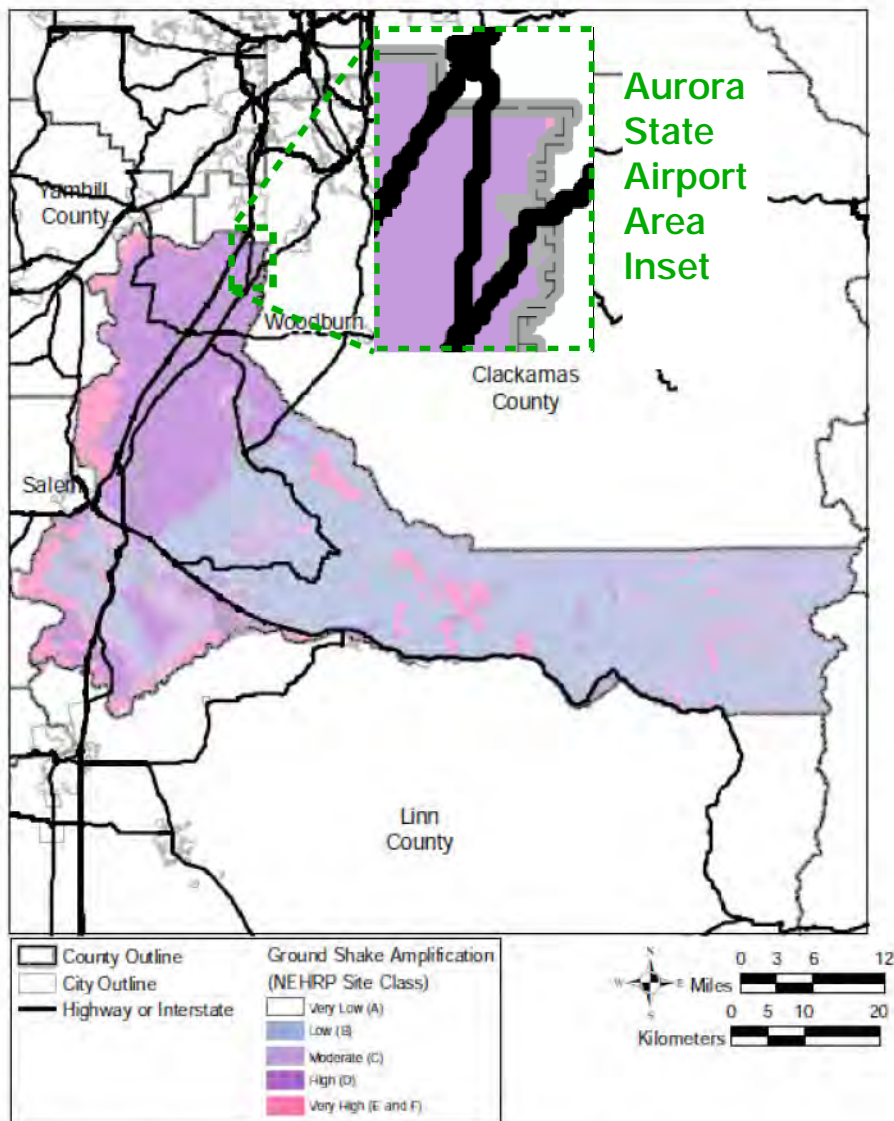
**Crustal Earthquake Scenario Ground Motion Map**



**Figure E2.** Peak ground acceleration (PGA) by census tracts map for the crustal earthquake scenario, Marion County, Oregon (FEMA, 2003b)

## GEOLOGIC HAZARD MAPS





### Relative Ground-Shaking Amplification Susceptibility Map



**Figure E5.** Relative ground-shaking amplification susceptibility map for Marion County, Oregon.

### Relative Amplification Hazard Map

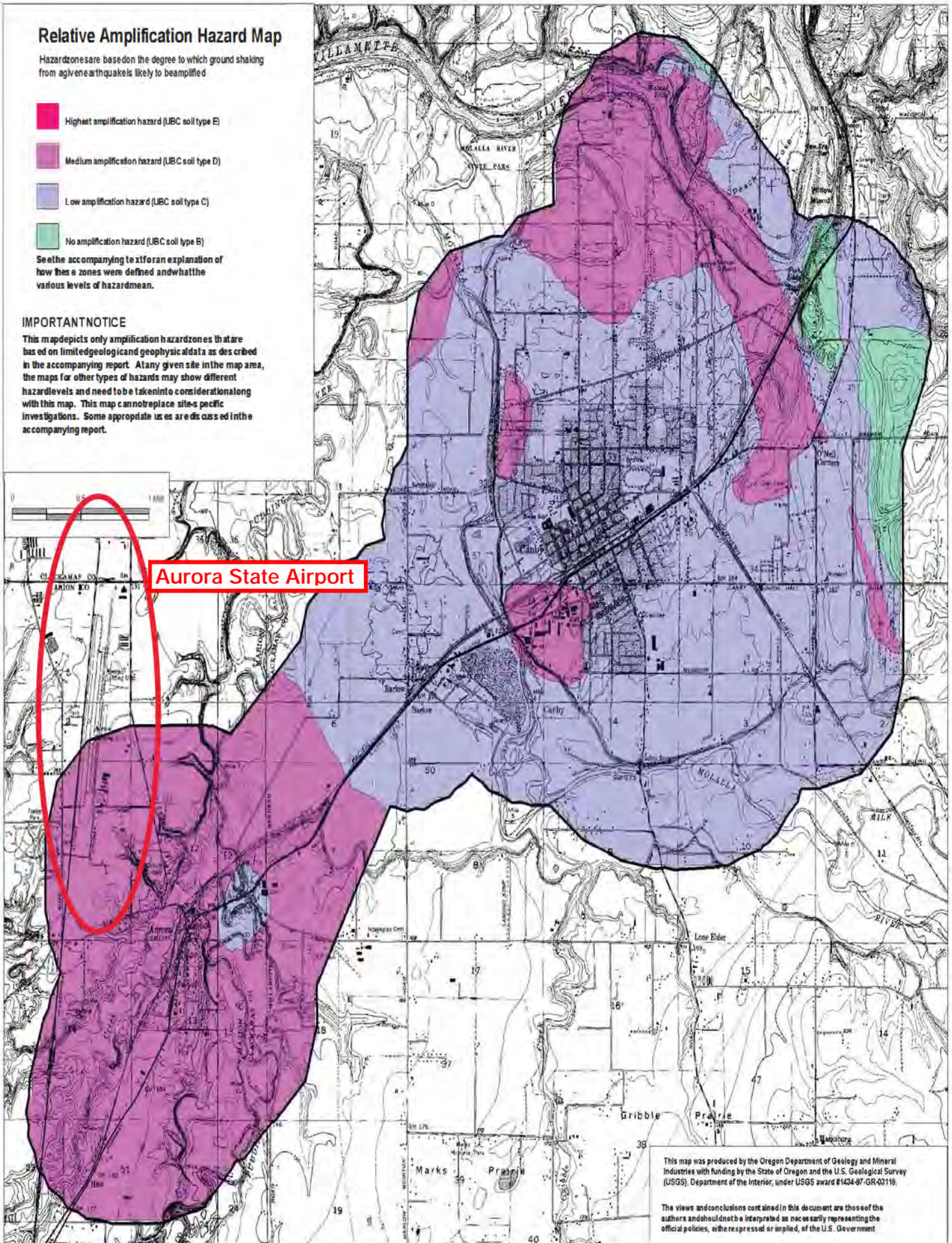
Hazard zones are based on the degree to which ground shaking from active earthquakes is likely to be amplified.

-  Highest amplification hazard (UBC soil type E)
-  Medium amplification hazard (UBC soil type D)
-  Low amplification hazard (UBC soil type C)
-  No amplification hazard (UBC soil type B)

See the accompanying text for an explanation of how these zones were defined and what the various levels of hazard mean.

#### IMPORTANT NOTICE

This map depicts only amplification hazard zones that are based on limited geologic and geophysical data as described in the accompanying report. At any given site in the map area, the maps for other types of hazards may show different hazard levels and need to be taken into consideration along with this map. This map cannot replace site-specific investigations. Some appropriate uses are discussed in the accompanying report.



This map was produced by the Oregon Department of Geology and Mineral Industries with funding by the State of Oregon and the U.S. Geological Survey (USGS), Department of the Interior, under USGS award #1434-87-GR-03118.

The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government.

### Canby-Barlow-Aurora Urban Area

By Ian P. Madin and Zhenming Wang

CANBY-BARLOW-AURORA

#### Relative Earthquake Hazard Map

Hazard zones are based on the combined effects of ground shaking amplification, liquefaction, and earthquake-induced landsliding.

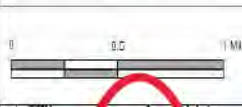
- Zone A - Highest hazard
- Zone B - Intermediate to high hazard
- Zone C - Low to intermediate hazard
- Zone D - Lowest hazard

See the accompanying text for an explanation of how these zones were defined and what the various levels of hazard mean.

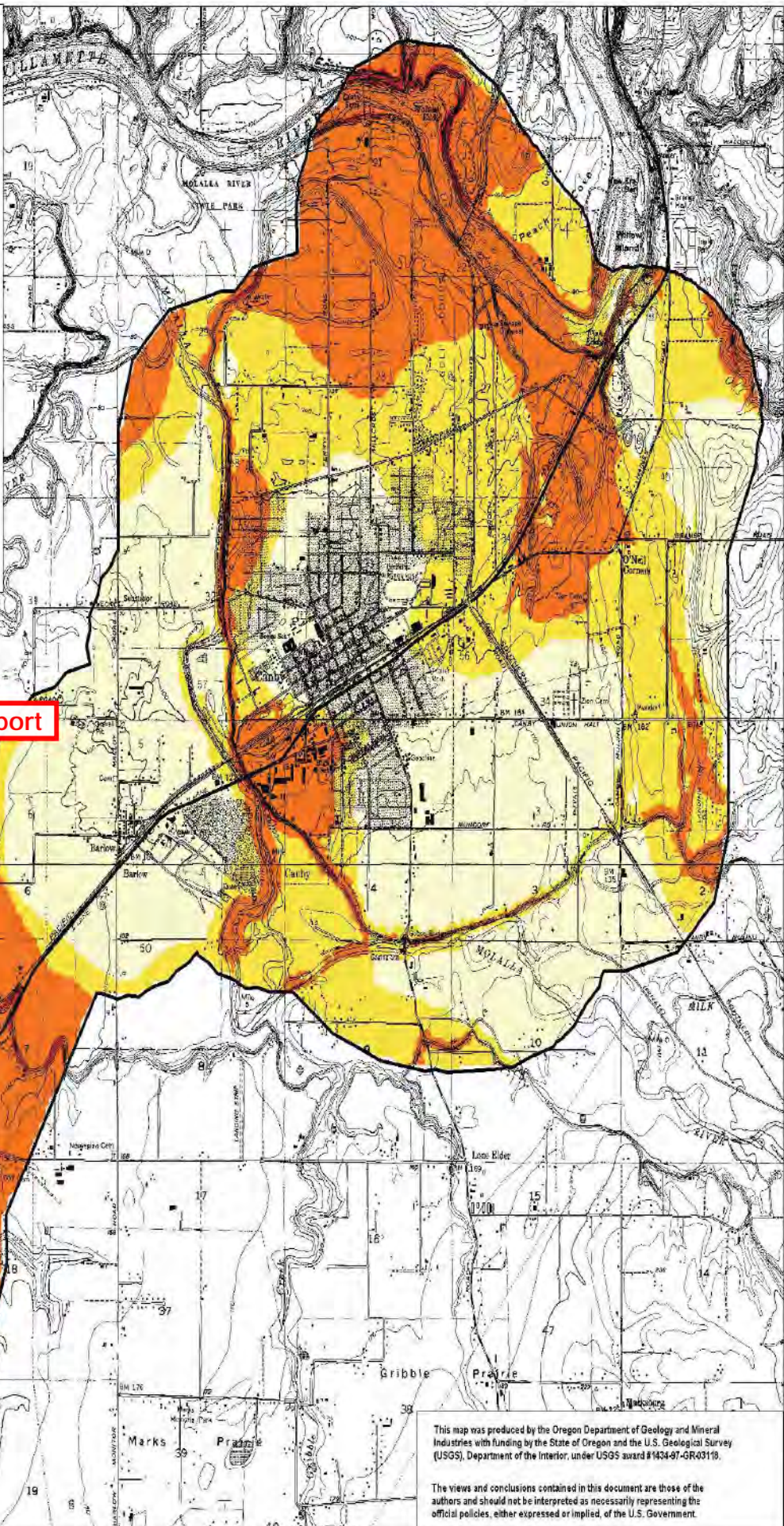
#### IMPORTANT NOTICE

This map depicts earthquake hazard zones that are the result of combining the maps of individual hazards and are based on limited geologic and geophysical data. These hazards and data are described in the accompanying report. At any given site in the map area, site-specific data could give results that differ from those shown on this map. This map cannot replace site-specific investigations. Some appropriate uses are discussed in the accompanying report.

This map shows areas that are relatively more or less hazardous due to local geological conditions within a community. For a complete understanding of the earthquake hazard, see also GMS-100, Earthquake Hazard Maps for Oregon.



**Aurora State Airport**



This map was produced by the Oregon Department of Geology and Mineral Industries with funding by the State of Oregon and the U.S. Geological Survey (USGS), Department of the Interior, under USGS award #1434-97-GR0318.

The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government.

## Relative Hazard Map of Earthquake-Induced Landslides

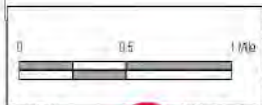
Hazard zones are based on the possibility that  
a given earthquake will trigger landslides.

-  High landslide hazard
-  Medium landslide hazard
-  Low landslide hazard

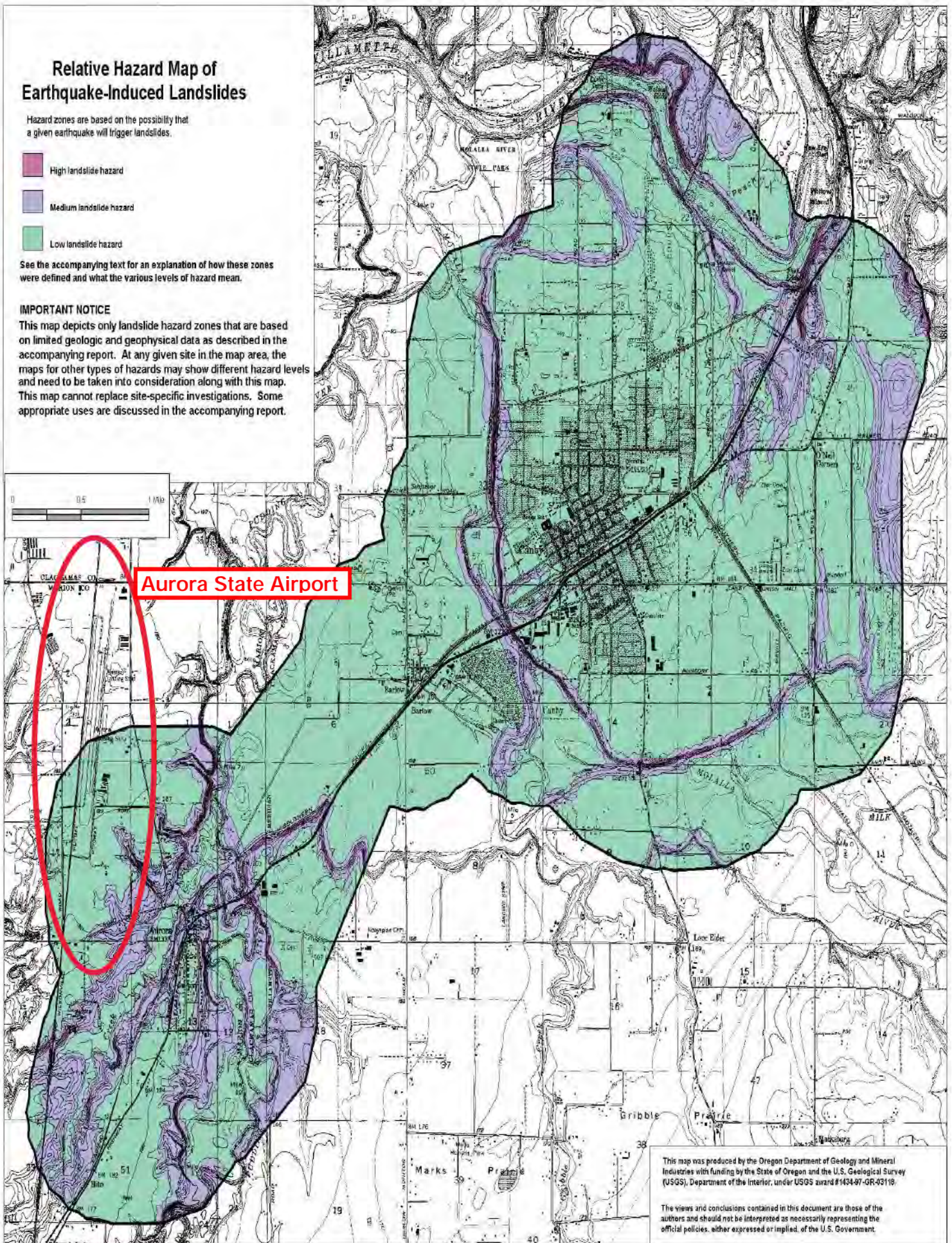
See the accompanying text for an explanation of how these zones  
were defined and what the various levels of hazard mean.

### IMPORTANT NOTICE

This map depicts only landslide hazard zones that are based  
on limited geologic and geophysical data as described in the  
accompanying report. At any given site in the map area, the  
maps for other types of hazards may show different hazard levels  
and need to be taken into consideration along with this map.  
This map cannot replace site-specific investigations. Some  
appropriate uses are discussed in the accompanying report.



**Aurora State Airport**



This map was produced by the Oregon Department of Geology and Mineral  
Industries with funding by the State of Oregon and the U.S. Geological Survey  
(USGS), Department of the Interior, under USGS award #143497-GR-43116.

The views and conclusions contained in this document are those of the  
authors and should not be interpreted as necessarily representing the  
official policies, either expressed or implied, of the U.S. Government.

### Canby-Barlow-Aurora Urban Area

## Relative Liquefaction Hazard Map

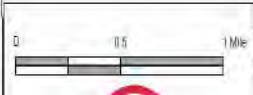
Hazard zones are based on the likelihood that liquefaction will occur in a given earthquake.

-  Highest liquefaction hazard
-  Medium liquefaction hazard
-  Low liquefaction hazard
-  No liquefaction hazard

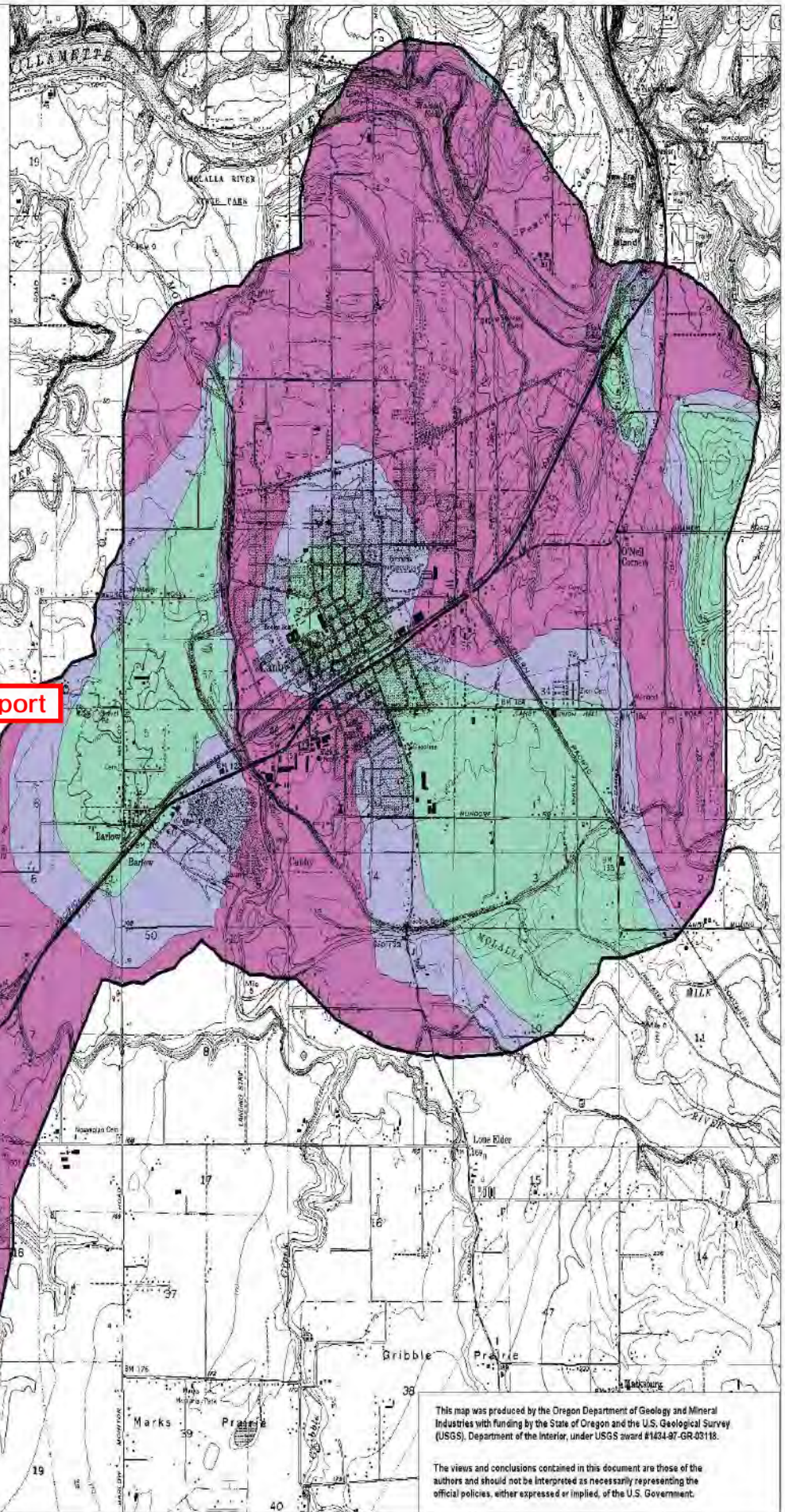
See the accompanying text for an explanation of how these zones were defined and what the various levels of hazard mean.

#### IMPORTANT NOTICE

This map depicts only liquefaction hazard zones that are based on limited geologic and geophysical data as described in the accompanying report. At any given site in the map area, the maps for other types of hazards may show different hazard levels and need to be taken into consideration along with this map. This map cannot replace site-specific investigations. Some appropriate uses are discussed in the accompanying report.



**Aurora State Airport**



This map was produced by the Oregon Department of Geology and Mineral Industries with funding by the State of Oregon and the U.S. Geological Survey (USGS), Department of the Interior, under USGS award #1434-97-GR-03118.

The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government.