

Design Trends

# 3 NARRATIVES FOR HARDWOODS IN DESIGN

*Western Hardwoods Association  
2023 Annual Convention*



## About (the quick version):

- Tenure Track Interior Architecture Professor at University of Oregon in Eugene
- Furniture Designer and Maker
- Prior Commercial Interior Designer, Custom Cabinetmaker, Trim Carpenter, European Kitchen Designer (Leicht and Alno)











# BIOPHILIC DESIGNS

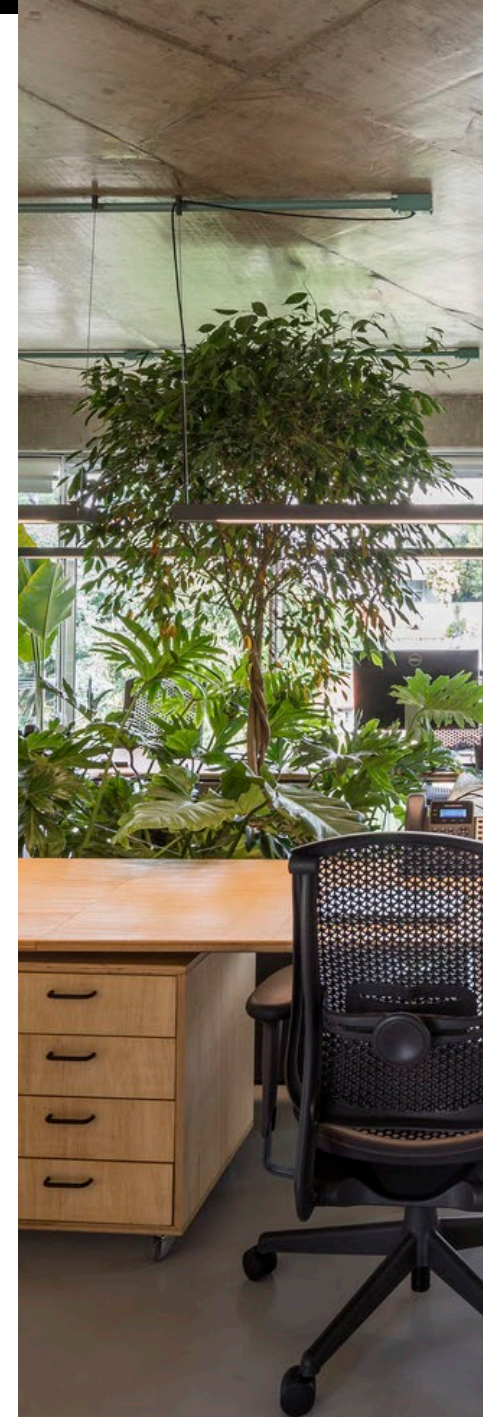
*Occupant Health*

*Productivity*

*Building Health*

# BIOPHILIC DESIGN

Introduces real nature, indirect nature, or spatial conditions that mimic natural phenomena.







**LIVING  
BUILDING  
CHALLENGE**

LEED BD+C Pilot Points for Biophilia  
(abbreviated):

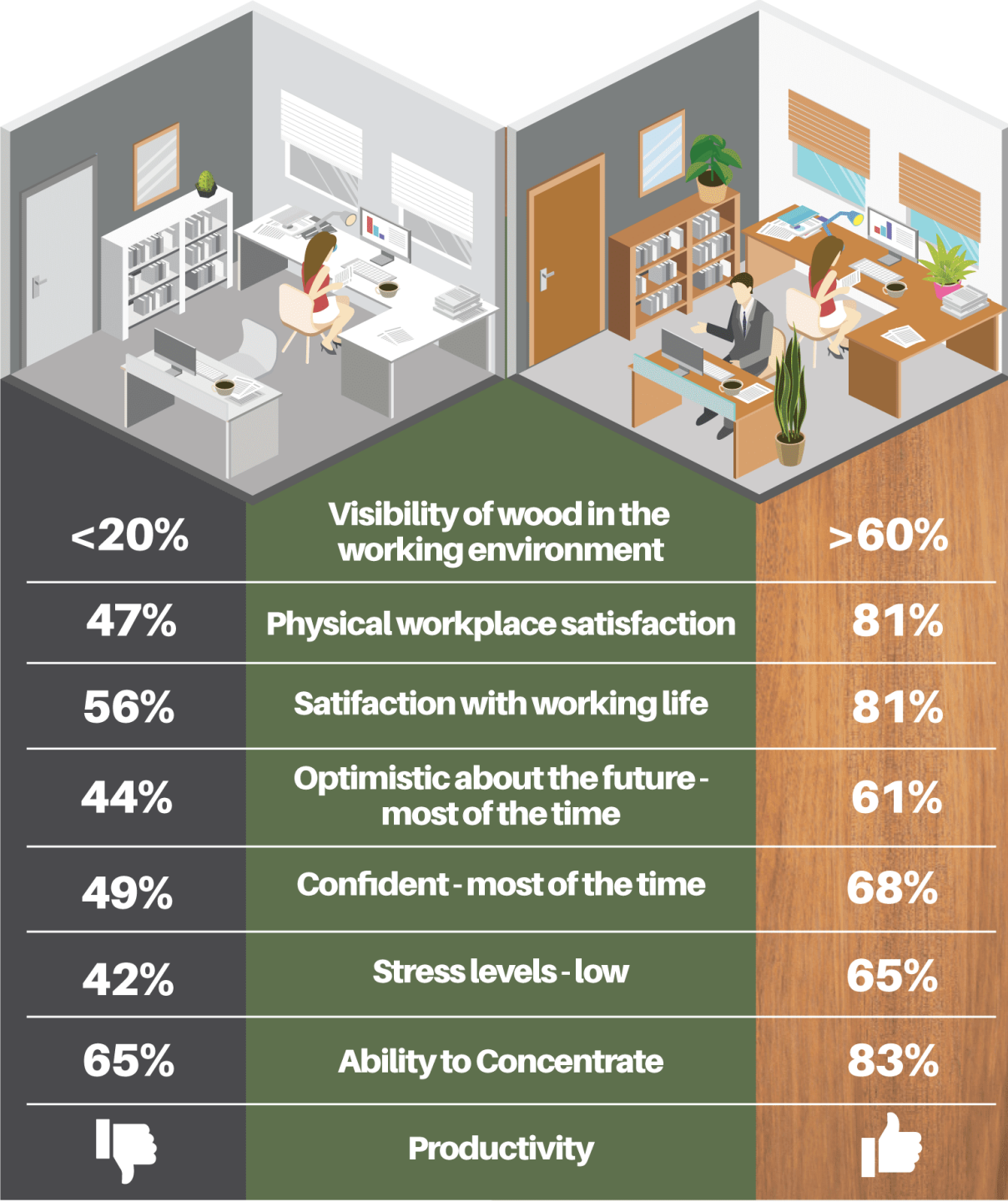
- 1) The project design provides regular access to **Nature in the Space**
- 2) The project design offers **Natural Analogues**
- 3) The project design has spatial properties that align with the **Nature of the Space**
- 4) The project uniquely connects people to the place, climate, and culture through **Place-Based Relationships**
- 5) The project creates sufficient opportunities for human-nature interactions within the building and within the project boundary, external to the building, creating an environment that ties the landscape and interior environments together.











From a study for Forest and Wood Products Australia, key highlights of Biophilic Design:

- Office design: productivity can be increased by 8% and rates of well-being increased by 13%
- Education spaces: increased rates of learning, improved test results, concentration levels and attendance, reduced impacts of ADHD
- Healthcare spaces: post-operative rates of recovery reduced by 8.5%, reduced pain medication by 22%
- Retail: the presence of vegetation & landscaping has been found to increase average rental rates on retail spaces with customers indicating they were willing to pay 8-12% more for goods and services.
- Homes: 7-8 % less crime attributed to areas with access to nature and can command an increase of 4-5% in property price

Infographic excerpt from [Workplaces: Wellness + Wood + Productivity](#) via ThinkWood





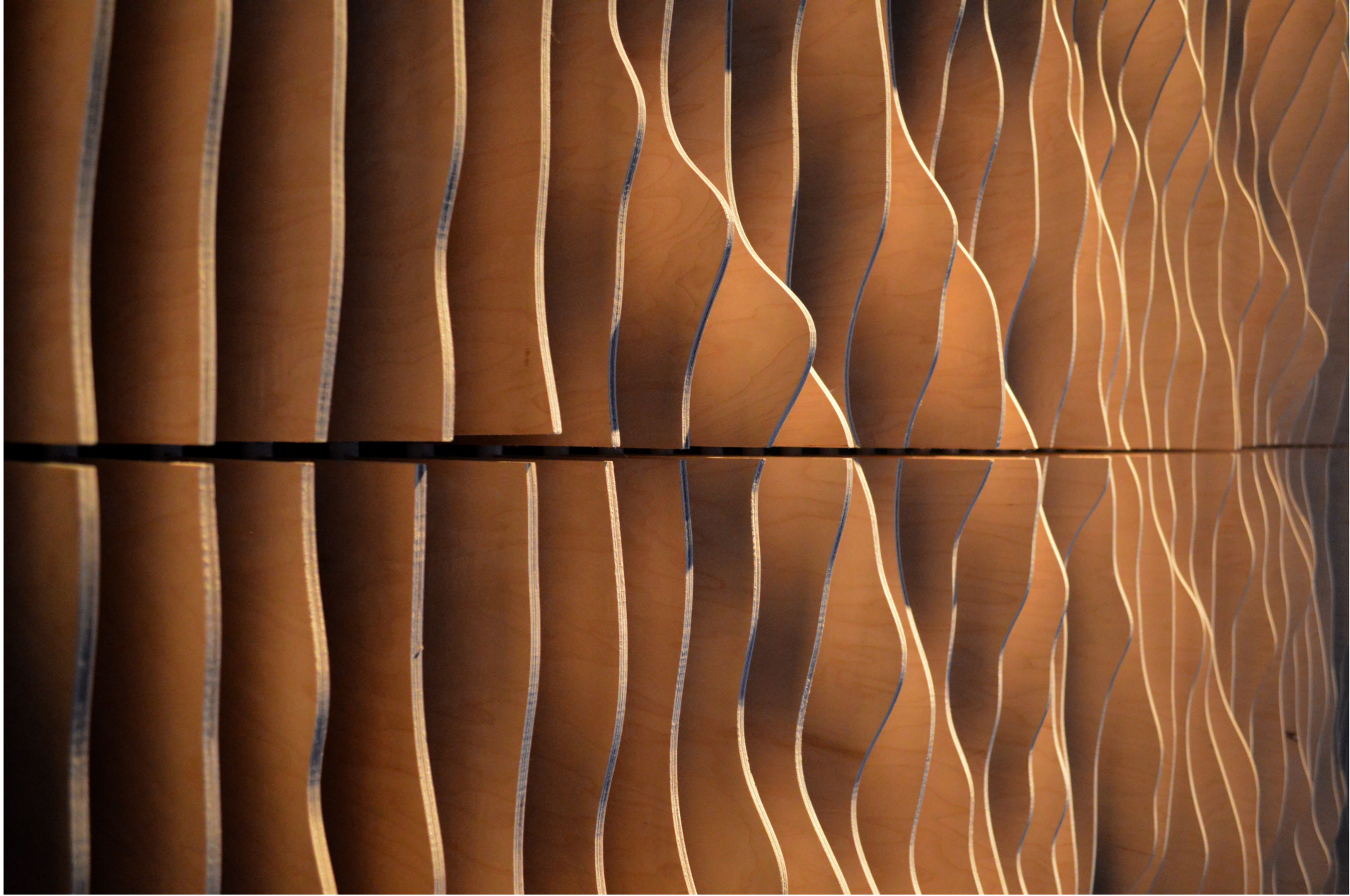














# FORMOSA MINE

Katie Reifsnnyder and Marissa Perez



The Formosa Mine was previously site for extraction of copper, zinc, and thorium in Douglas County, Oregon between 1910-1937. Reopening again between 1990-1993, it became Oregon's most polluted Superfund site, even in its short history. Stormwater driven contaminants have led to the discharge of millions of gallons of acid rock drainage and toxic metals into the upper reaches of the Middle Creek watersheds every year. Middle Creek, part of the Fork watershed, severely

# FORMOSA MINE

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A site visit meeting with Oregon-based Dale Salmon and Charles Flax is a key element of the watershed. The site visit revealed the need for a local copper mine and the environmental restoration project. The site visit revealed the need for a local copper mine and the environmental restoration project. The site visit revealed the need for a local copper mine and the environmental restoration project.

## LIGHT AND MICROBES



Text describing the exhibit, likely related to the 'Light and Microbes' theme.

## PIPELINE PORTALS



Text describing the exhibit, likely related to the 'Pipeline Portals' theme.

## TALLWOOD DESIGN INSTITUTE



Text describing the Tallwood Design Institute project or mission.

## DESIGNING FOR THE INTIMATE SHARED REALITY OF ALL SPECIES



Text describing the design philosophy or project related to 'Designing for the Intimate Shared Reality of All Species'.



Text describing the Oregon State University involvement in the project.



Text describing the State of Oregon involvement in the project.



# MATERIALS AND MICROBES

The Biology and the Built  
Environment Center (BioBE)



Does wood species impact our built environment  
microbiome?

Exposed wood in buildings has a positive emotional impact on occupants; however, it may also have unseen physiological impacts on their health. This may be driven, in part, by the influence of wood to shape a building's microbiome through selective pressures created by terpenoid emissions, tannins, porosity and moisture buffering. Wood is a porous, natural material that can foster microbes on its surfaces but many of these are sequestered into wood's pores and difficult to recover; therefore, also more difficult to transfer compared to smooth, non-porous surfaces. Many of these microbes are structurally





# LOCAL MATERIAL

*Sustainability*

*Community*

*Story*



### LEED BD+C Points for Regional Materials:

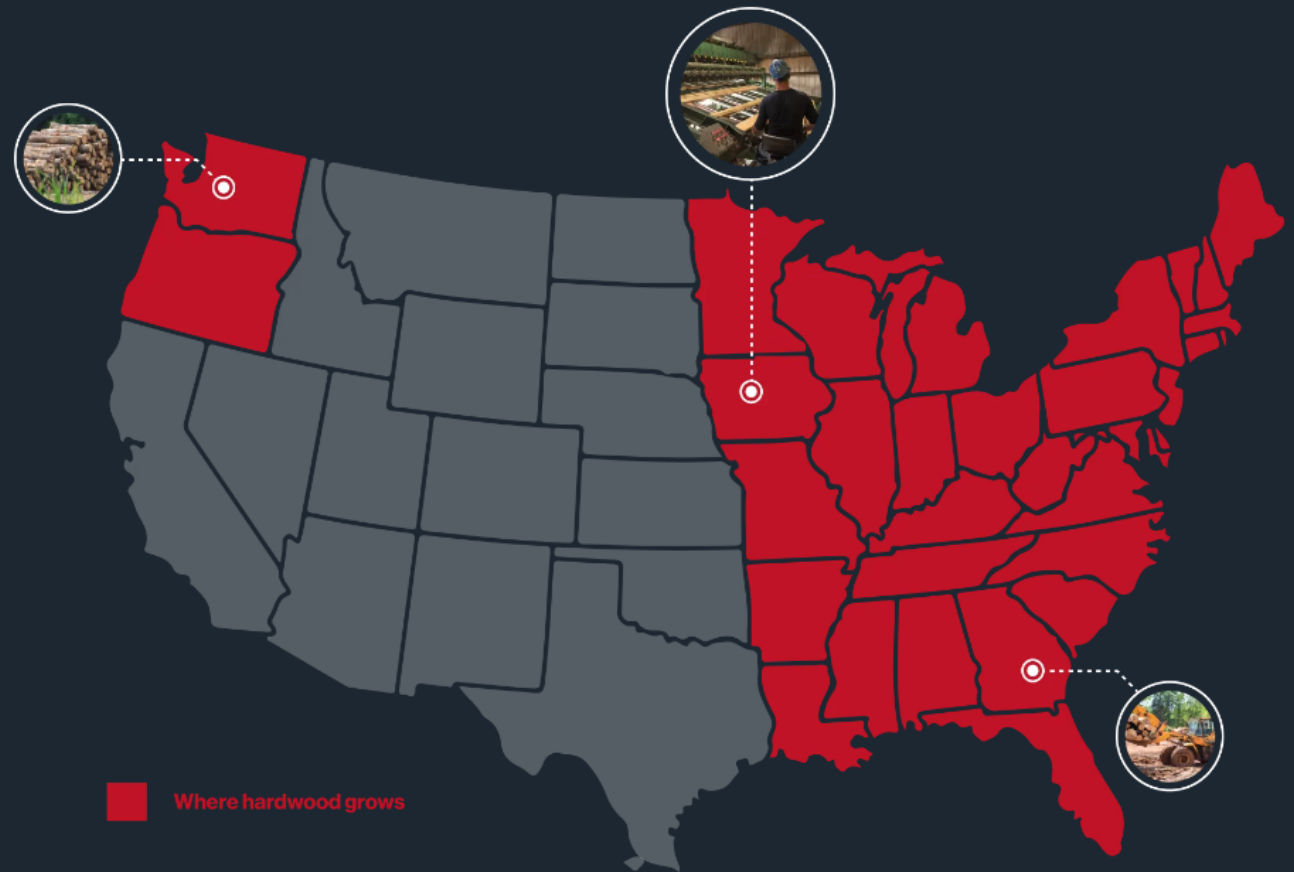
- 1) All building materials or products have been extracted, harvested or recovered, as well as manufactured within a 500 mile (800 kilometer) radius of the project site.



American Made

## Where in America is hardwood?

Most hardwood forestland in the continental United States is in the eastern half of the country; the equivalent of hardwood trees covering every square inch of New York, Pennsylvania, Ohio, Indiana, Illinois, West Virginia, North and South Carolina, and Georgia. It is the home of the oaks, maples, cherry, ash, poplar, and scores of other hardwood species, many of which grow nowhere else in the world.



### Did you know?

Of all temperate forests in the world, North American forests have the most diverse hardwood species. They vary in appearance and durability, with some species more plentiful than others because of their natural occurrence.

# OREGON NATIVE HARDWOODS

## Common Name

## Scientific Name

Bigleaf maple

*Acer macrophyllum* Pursh

Black cottonwood

*Populus trichocarpa* Torr. & Gray

California black oak

*Quercus kelloggii* Newb.

California-laurel

*Umbellularia californica* (Hook. & Arn.) Nutt.

Giant chinkapin

*Castanopsis chrysophylla* (Dougl.) A. DC.

Oregon ash

*Fraxinus latifolia* Benth.

Oregon white oak

*Quercus garryana* Dougl. ex Hook.

Pacific madrone

*Arbutus menziesii* Pursh

Red alder

*Alnus rubra* Bong.

Tanoak

*Lithocarpus densiflorus* (Hook. & Arn.) Rehd.













On June 30, 2022, [emerald ash borer](#) (EAB), an exotic beetle that infests ash trees, was discovered in Forest Grove, Oregon, marking the first confirmation of the invasive pest on the West Coast.





Private Forest Program  
Forest Health

# Oregon Emerald Ash Borer Risk Map

## Oregon Campgrounds

### Risk Sites

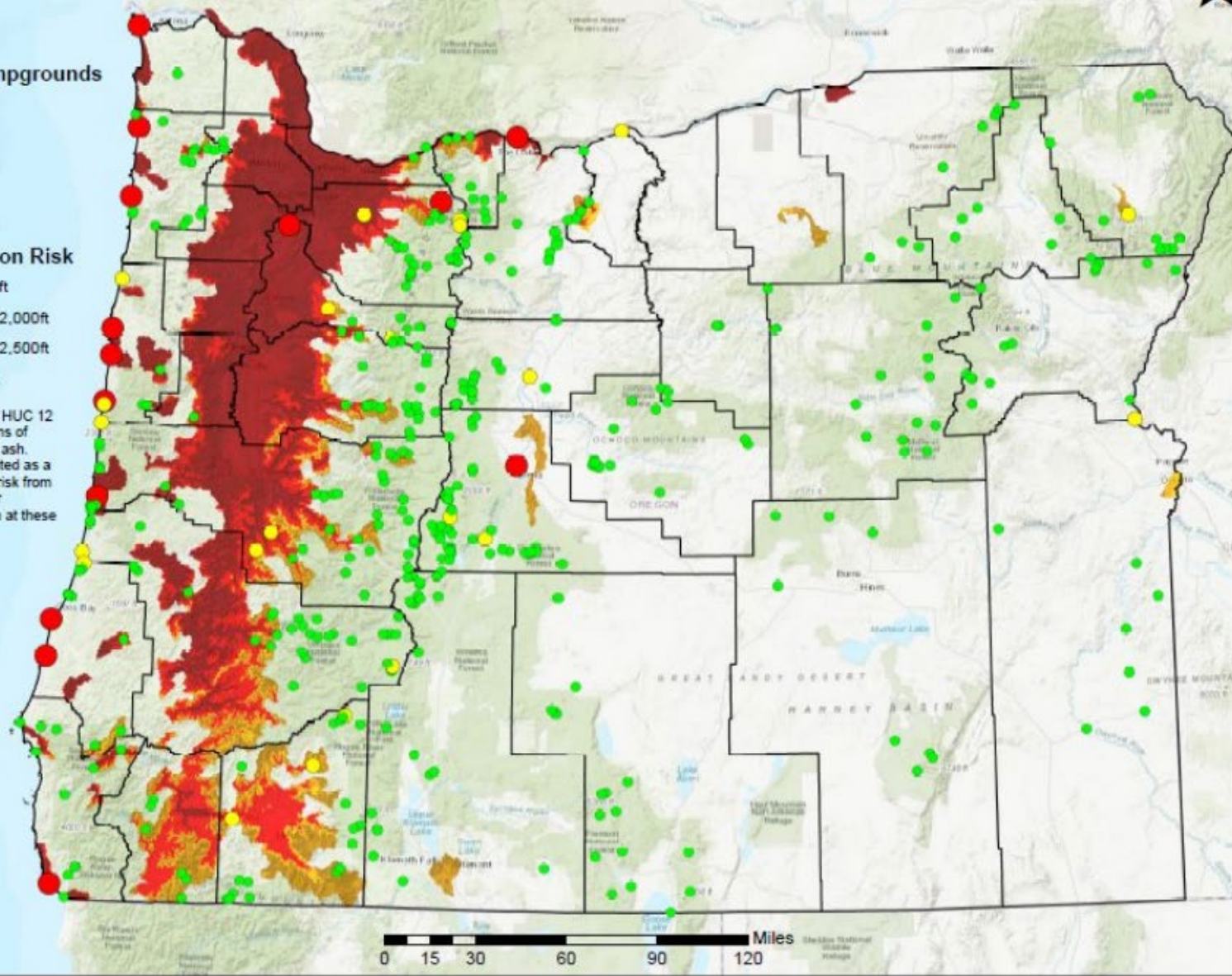
- 500 +
- 100-500
- 0-100

Counties

### EAB Elevation Risk

- 0 - 1,000ft
- 1,000ft - 2,000ft
- 2,000ft - 2,500ft
- > 2,500ft

Representation of HUC 12 watershed locations of Oregon and other ash. Elevation is indicated as a representation of risk from EAB due to higher populations of ash at these elevations.



# SPECIES TRENDS

*Perennial Favorites*

*Recent Trade Shows*

*Architecture Biennale*









# THE JOINERY

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Bay Bar Stool



Bay Counter Stool



Harbor Bar Stool







