

# Western Juniper Briefing Outline

## Prepared for Oregon Senate Committee on Agriculture and Natural Resources

*We feel like we're buying our land a second time, due to the costs of managing juniper.*  
(Fred Otley, Burns, OR.; past President of the Oregon Cattleman's Association)

Prepared By: Larry Swan, U.S. Forest Service/Co-Chair Ad Hoc Western Juniper Commercialization Steering Committee, and members of the Steering Committee (see Attachment B).

Issues: What are the nature, extent and trends of juniper woodlands, and how does this affect Eastern Oregon watershed health and local economies?

How can the Oregon Legislature help?

Nature, : Nature & Extent - There are about 2.2 million acres of western juniper woodlands in  
Extent, & Eastern Oregon (defined as having 10% canopy cover or more). **This does not include** the  
Trends literally hundreds of thousands of acres which will convert to woodlands over the next 20 to 40  
years, or the 2.8 million acres with scattered juniper. About 58% of the acreage with 10%  
canopy cover or more is private. Other states with significant juniper acreage are  
California (1.3 million acres) and Idaho (275,000 acres).

Trends - Juniper woodland acreage has increased over 500% since 1936. Scientists estimate that total woodland area could increase to 6,000,000 acres within the next 50 years, which represents 10% of Oregon's total land area. This would make juniper woodlands the most extensive forest type in Eastern Oregon. Eleven of 17 Eastern Oregon counties have at least 100,000 acres of juniper (the six which have insignificant amounts are Gilliam, Morrow, Sherman, Umatilla, Union, and Wallowa). Four counties have juniper on over 50% of their non-forested lands (Crook, Grant, Jefferson, and Wheeler).

Effects: Watershed Quality, Wildlife Habitat, and Overall Biodiversity - The quality of Eastern Oregon rangeland habitat and watersheds associated with juniper woodlands is deteriorating at an alarming rate. Over one million acres of juniper-dominated rangeland habitat (defined as having 20% canopy cover or more) show clear evidence of watershed degradation, loss of site productivity, decline in numbers of wildlife species, and over-all reduction in biodiversity.

Agriculture Industry Income - Many Eastern Oregon ranchers report significant decreases in forage, which combined with low cattle prices are having a serious impact on their financial viability.

Opportunities: "Win/Win" Situation - Research completed by Oregon State University shows that proper juniper management can significantly increase forage, improve wildlife habitat, and increase overall biodiversity. Timing is important though. Costs to treat juniper at the seedling/ sapling stage can be as low as \$4 to \$8/acre if prescribed fire is used. Treatment for mature woodlands, where juniper has out-competed native grasses and shrubs, ranges between \$30 to \$100/acre, depending upon the amount of restoration work needed (such as seeding and scattering slash).

Surface Water Response - Preliminary research results and years of anecdotal evidence suggest juniper management can increase capture, storage, and beneficial release of precipitation in watershed drainage subbasins with high juniper densities. For example, in areas with 20% juniper canopy cover or more, it is theoretically possible to increase precipitation going into the water cycle by two inches or more simply by reducing the amount of snow and rain intercepted by and evaporated from the woodland canopy. This is equal to about a 15% increase, given that average annual precipitation for many woodland areas is only 12 to 14 inches.

Jobs in Economically-Distressed Rural Communities - Western juniper is probably the least commercially-utilized native tree in the Pacific Northwest. About seven years ago, an ad hoc group organized by the U.S. Forest Service and the Oregon Economic Development Department began working together to see what could be done to better utilize juniper, which up until that time had been considered a weed tree. During the last three years, activities sponsored by the Western Juniper Commercialization Steering Committee have helped generate over 35 full-time equivalent jobs in more than 14 Eastern Oregon communities, increased the number of companies with at least some juniper production from five to over 35, and increased gross sales of juniper products over 500%. Commercialization activities are funded in part by the Oregon Regional Strategies Program and U.S. Forest Service, and supported strongly by local economic development boards.

Juniper Industry Growth Trends - The ad hoc Western Juniper Commercialization Steering Committee projects that total juniper-related employment could increase up to 100% over the next two years (equates to about 40 new jobs), assuming economic development assistance continues at present levels. Forest Product Industry Steering Committee members believe that a western juniper industry will eventually generate gross sales of over \$20 million a year, comparable to the mesquite industry of Texas, and more than 250 direct and indirect jobs.

Established Cooperative Partnerships - There is a history of cooperative public/private partnerships working together to improve rangeland habitat associated with juniper woodlands. This kind of cooperation and support exemplifies the networks available for future land management and economic development collaborative ventures.

Summary: The interest and assistance of the Oregon Legislature on the western juniper woodlands issue are needed in order to capitalize on a unique opportunity to combine progressive watershed management practices, and development of a long-term, sustainable industry based in economically-distressed Eastern Oregon communities. Timing is important though:

- Western juniper woodlands management has not yet assumed the political or legal complexities of other natural resource issues;
- There is a critical window of opportunity to economically treat hundreds of thousands of acres of rangeland habitat, before costs become prohibitive;

- Leadership is not going to come from Federal land managing agencies, such as the Bureau of Land Management or U.S. Forest Service, or State agencies. None of them have a dedicated high-level staff person for this issue in their main offices or in the field.

There are very few natural resource issues where there is such real potential to actually make a quantitative and qualitative difference, both in watershed health and rural economies. The interest and support of the Oregon Legislature in addressing the western juniper issue would be greatly appreciated by private landowners, watershed interest groups, and forest product industry businesses (see Attachment A for specific issues and suggestions which may require legislative assistance).

# ATTACHMENT A

Western Juniper Commercialization Coalition 1999 Priority Management & Commercialization Issues				
<i>Issue</i>	<i>Action Requested</i>	<i>Budget</i>	<i>Lead Agency or Partner</i>	<i>Completion Date</i>
1) New Product Liability - How to lower financial risk of introducing western juniper into the animal bedding market, and protect public investment?	Toxicology Research - Support request by OSU College of Vet. Medicine for advanced toxicology studies (build on past results).  <b>*Draft Senate Bill 413</b>	\$105,000	OSU, College of Vet. Medicine	Complete Within Two Years of Authorization
2) OR. Forest Practices Act - How can Forest Practice Act rules be clarified so they make sense for juniper woodland issues, and encourage woodland restoration?	Forest Practice Act (FPA) Rules Clarification - Direct the OR. Dept. of Forestry to examine FPA rules as they relate to commercial juniper harvest, how they can be clarified to encourage woodland restoration, and take corrective action.  <b>*Draft Senate Bill 1151</b>	?	OR. Dept. of Forestry	Full Implementation One Year From Authorization?
3) State Purchasing Program - How to encourage state agencies and contractors to purchase products made from under-utilized species, such as western juniper, and small diameter tree thinnings (less than or equal to nine-inches diameter-at-breast height [DBH])	Affirmative Procurement Program - Direct state agencies and contractors to examine opportunities to increase purchases of products made from under-utilized species, such as western juniper, and small-diameter tree thinnings (<9 in. DBH), and implement an affirmative procurement program to encourage purchase and utilization of such products.	?	?	Full Implementation One Year From Authorization?
4) Watershed Enhancement Program Guidelines - How to encourage consideration of management actions outside of riparian zones and stream channels which help achieve	Upland Watershed Subbasin Restoration - Direct state agencies to analyze and consider management alternatives outside of riparian zones	?	Dept. of Ag.? GWEB?	Full Implementation One Year From Authorization?

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state-funded watershed enhancement goals?	and streamside channels, such as juniper woodland thinning in small watershed subbasins, which will help achieve watershed enhancement goals, as well as provide clear authority to expend funds for such projects.			
5) Harvest Taxes - How to reduce impact of various harvest taxes on landowners and juniper processors while the industry is trying to establish itself in profitable markets?	Harvest Tax Waiver - Waive applicable taxes on the commercial harvest of juniper for five years.	Estimated will cost state govnt. less than \$50,000 over 5 yrs.	Dept. of Revenue	Implement Within One Year of Authorization and Make Retroactive to January, 1999.
6) Wood Borers - How to reduce risk to private and public investment, and protect consumers from buying infested material for unsuitable applications?	Authorize 4-Year Program to include: 1) Creation and implementation of industry-administered certification program for juniper lumber which has been properly treated to reduce risk of woodborer infestation; 2) Technical assistance and education program to improve juniper lumber production, handling, and drying procedures; 3) Mandatory fee paid by commercial lumber producers to partially defray costs of certification program (not to exceed \$50/MBF); 4) Administrative penalty for mis-use of certification stamp, non-compliance or deliberate misinformation(?)	\$200,000 (Industry-administered program with Dept. of Ag. oversight = 80%; OSU Wood Products Extension Tech. assist. = 20%)	Dept. of Ag.? (in cooperation with Western Juniper Commercialization Steering Committee; tech. assistance would come from OSU Wood Products Extension Program.)	Implementation Within One Year of Authorization
7) Predictive Juniper	Applied Research -	\$200,000	OSU, Eastern	Complete

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Watershed Risk and Management Response Model - How to identify woodlands with most potential to adversely affect watershed health, and predict response to management treatments?	Authorize funding to use existing data to create and field- check Geographic Info. Systems (GIS) map layers, sufficient to identify juniper woodland areas with highest potential to adversely affect key Eastern Oregon watersheds, and help private landowners and land managers outline management options and expected outcomes (costs and effectiveness).	*Potential for some Fed. match.	Oregon Agriculture Research Center (Burns)	within 3 years of authorization (need two field seasons).
8) Publication and Distribution of Juniper Research Results - How to ensure latest results of OSU juniper research are published and conveyed to private landowners, scientists, Federal land managers, and other interested citizens?	Funding Support for Technical and Extension Publications and Distribution - Authorize funding to: 1) Assemble and publish technical synthesis of information related to juniper woodland science and management; 2) Publish and distribute juniper woodland classification and management guidelines for the layperson;  <b>*Draft Senate Bill 413</b>	\$50,000	OSU, Eastern Oregon Agriculture Research Cntr. (Burns)	Complete within one year of authorization.

# Attachment B

## Western Juniper Commercialization Steering Committee Contributors and Reviewers of Oregon Legislature "Wish List"

### *Private Industry*

- Marc Kane, Executive Director, and Dennis Long, Project Manager, REACH, Inc. Western Juniper Shavings Mill and Restoration Project (Klamath Falls);
- Howard McGee, 4 Mac Industries (Dairy);
- Mike Connolly and Gevin Brown, Connolly Wood Products (Bend);
- Mark Douglas, Northwest Forest Industries (Silver Lake);
- Fred Otley, Otley Bros. Ranch (Diamond);
- Bill Breedlove, Wood Products Consultant (current Western Juniper Industry Facilitator) (Klamath Falls);
- Walt McGee, TIM Co. (Dairy);
- Terry Anthony, Klamath County Economic Development Association (Klamath Falls);

### *State and Federal Agencies*

- Glen Ardt, Regional Habitat Biologist, Oregon Dept. of Fish and Wildlife (Bend);
- Bill Hunt, District Forester, Oregon Dept. of Forestry (Klamath Falls);
- Larry Swan, Resource Specialist, U.S. Forest Service (Klamath Falls);

### *OSU Scientists and Extension*

- Rick Miller, OSU Dept. of Rangeland Resources, Burns Agricultural Research Cntr. (Burns);
- Lee Eddleman, OSU Dept. of Rangeland Resources (Corvallis);
- Scott Leavengood, OSU Wood Products Extension (Klamath Falls);