



# STATE OF OREGON

## The Economic Role and Outlook for Oregon's Craft Industries



OLCC Commission Task Force Meeting  
September 12<sup>th</sup>, 2014

Mark McMullen  
State Economist



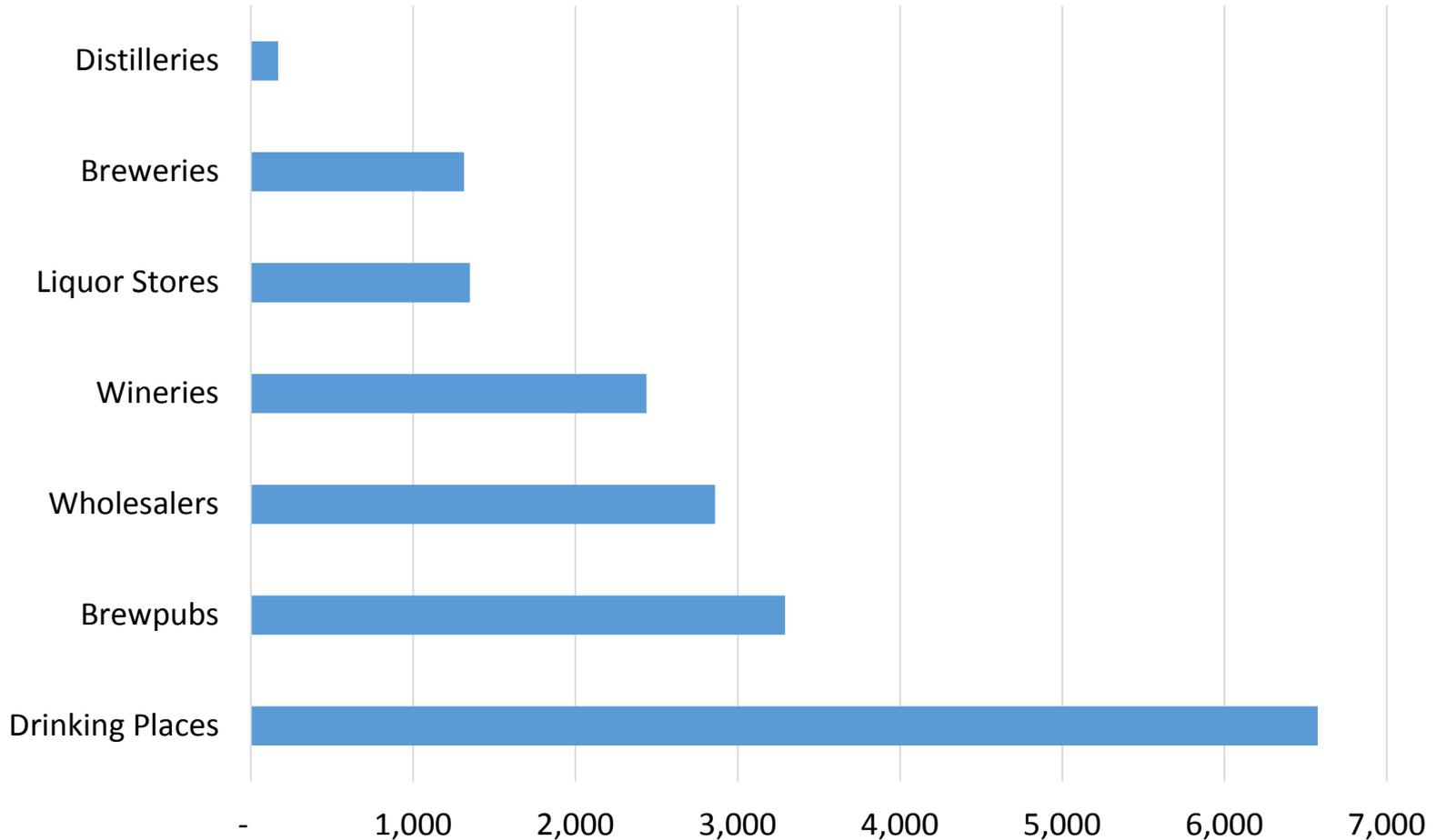
**STATE OF OREGON**

# The Role of the Craft Alcohol Cluster in Oregon's Regional Economy



# Craft Industries In the Jobs Data

Oregon Employment



Missing Industries Include: Hops, Barley and Grain Producers, Equipment Manufacturers, Specialized Industry Consultants and Business Services

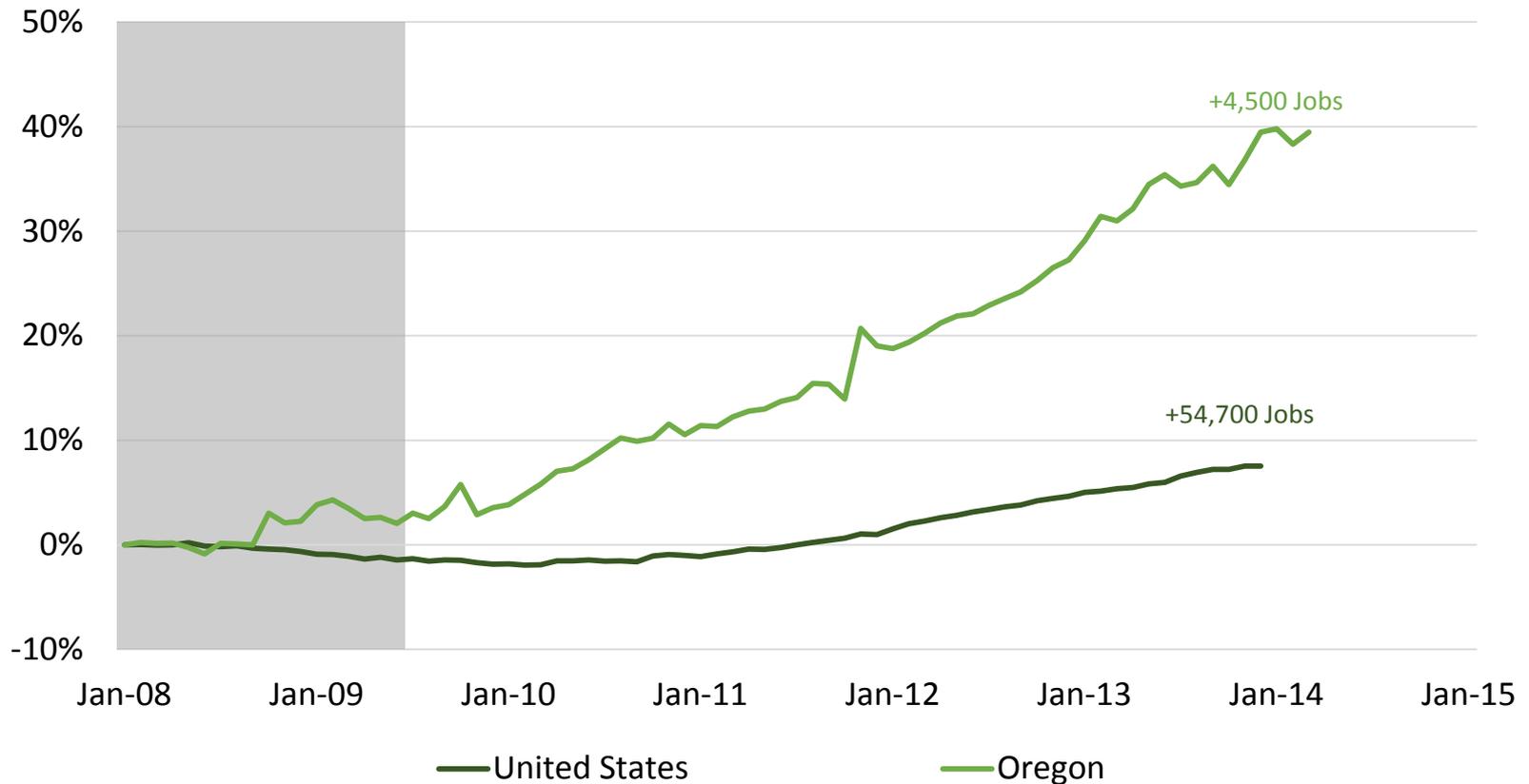




# What Great Recession?

## Alcohol Cluster Employment

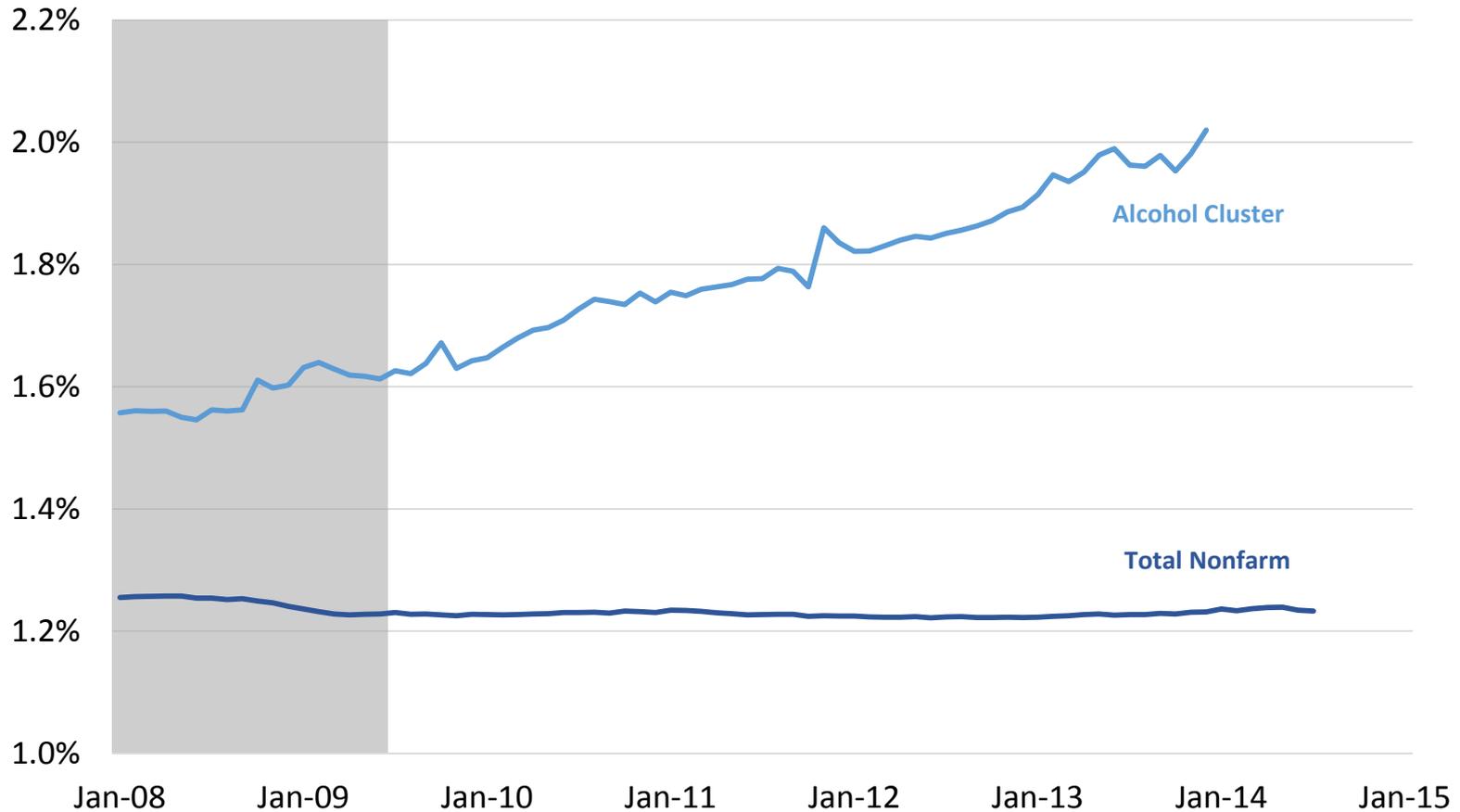
Breweries, Wineries, Distilleries, Beer/Wine/Alcohol Wholesalers, Beer/Wine/Liquor Stores, Drinking Places





# Oregon's Comparative Advantage

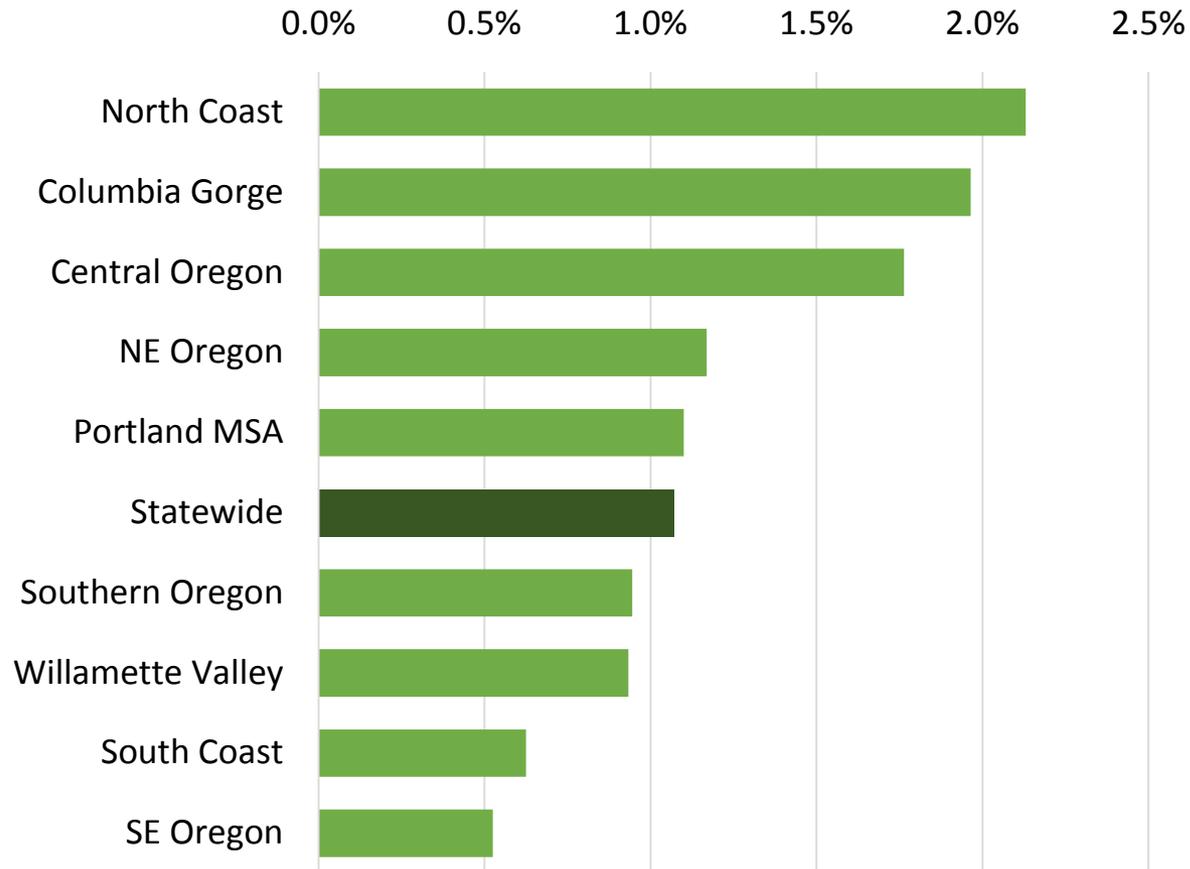
## Oregon Employment, Share of U.S.





# Broad Regional Footprint

### Alcohol Cluster as Share of Employment, 2013

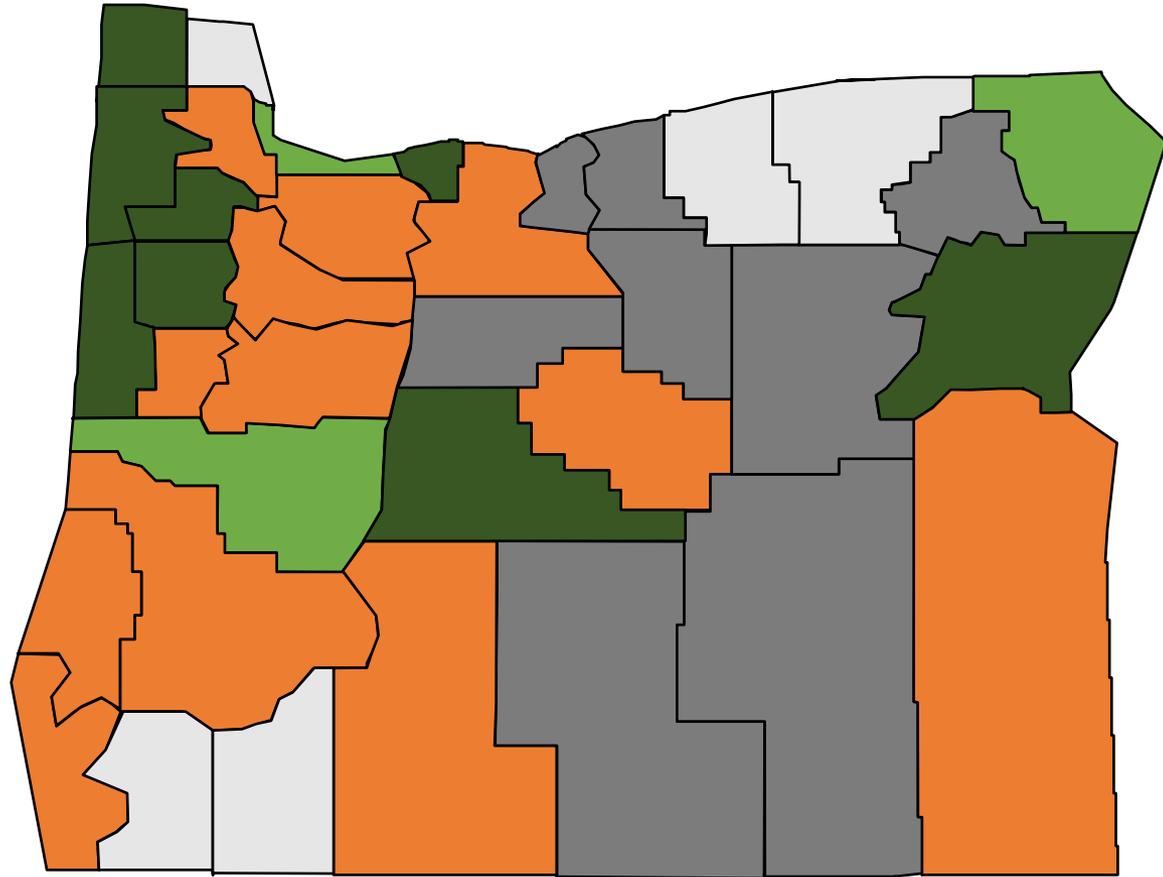




# Alcohol Cluster Employment by County

## 2013

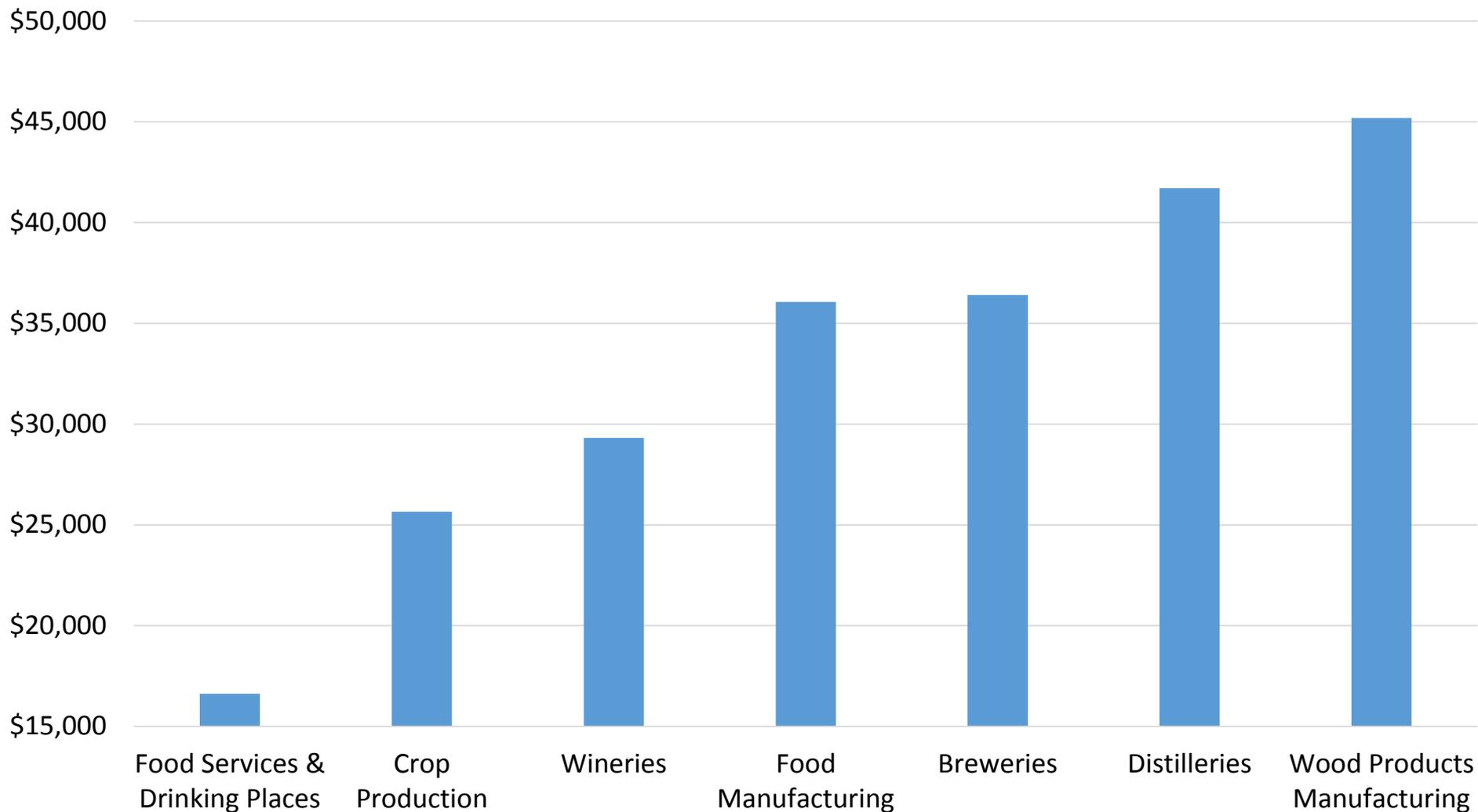
	>75%
	15-75%
	+/- 15%
	-15-75%
	<-75%





# Craft Industry Jobs Pay Better than Many Consumer Industries

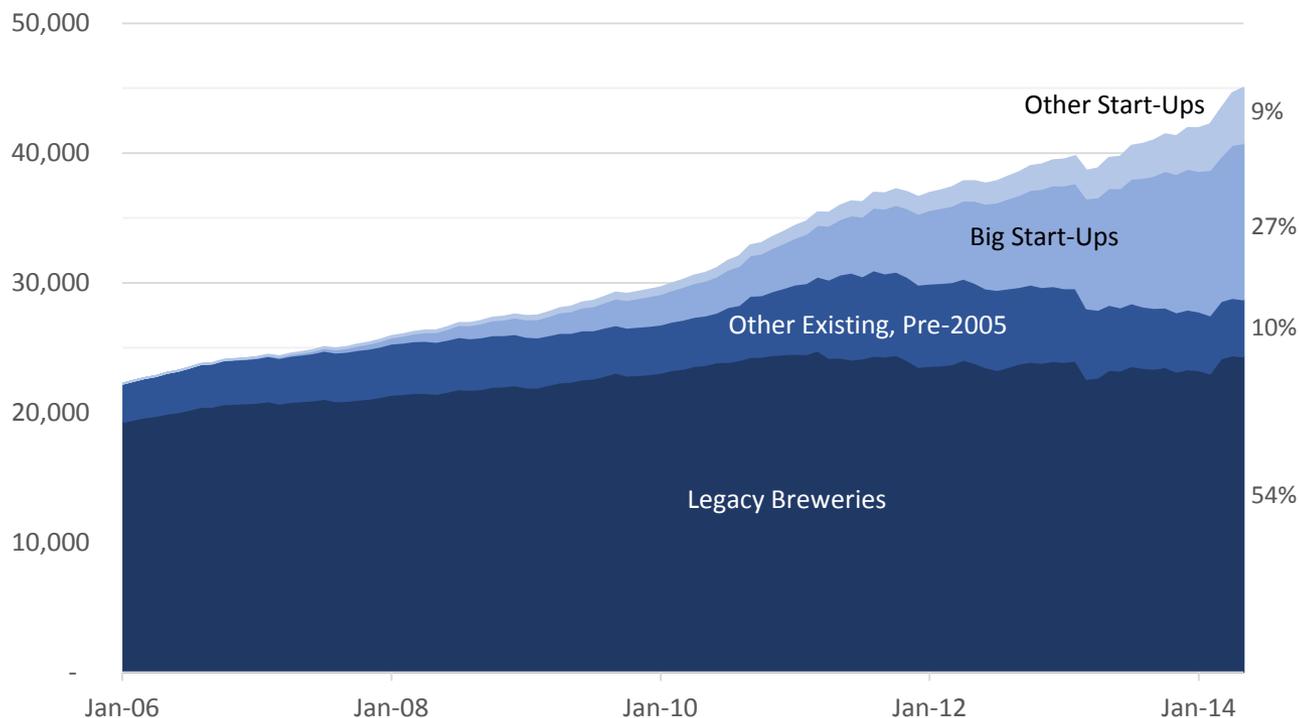
Average Pay Per Oregon Worker, 2013



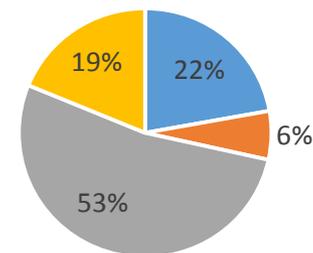
# Brewing: New Breweries Spread In Oregon, While Mature Firms Look to Other Products and Markets



Barrels of Beer for Oregon Consumption  
12 Month Average



Brewing Gains  
Share of Total Statewide Gain from 2006 to 2014



- Legacy Breweries
- Other Pre-2005
- Big Start-Ups
- Other Start-Ups

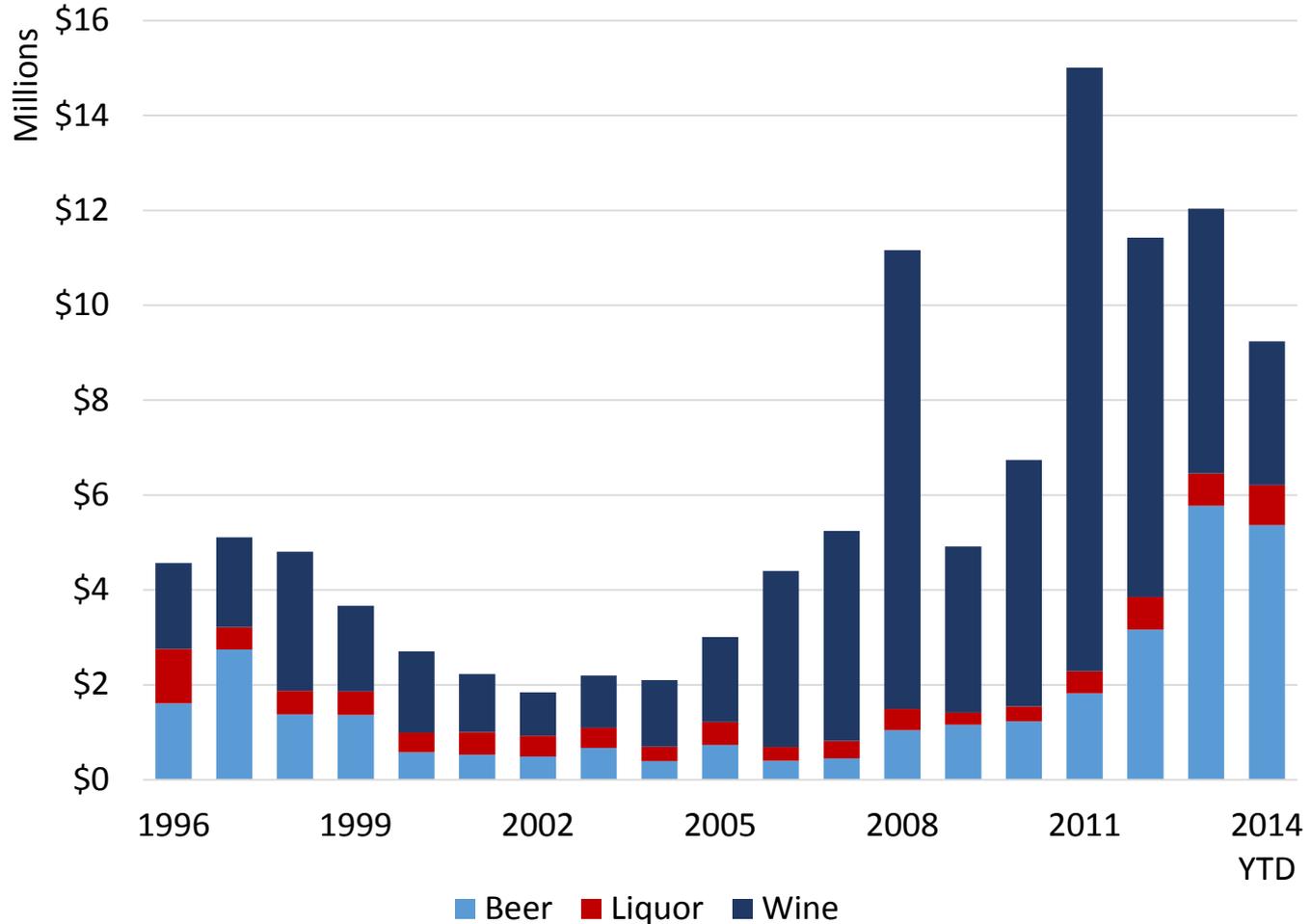
**Legacy:** Bridgeport, CBA, Deschutes, Full Sail, Portland, McMenamins, Rogue  
**Big Start-Ups:** 10 Barrel, Boneyard, Burnside, Crux, Double Mountain, Fort George, Gigantic, Good Life, Hop Valley, Hopworks, Ninkasi, Pfriem, Worthy





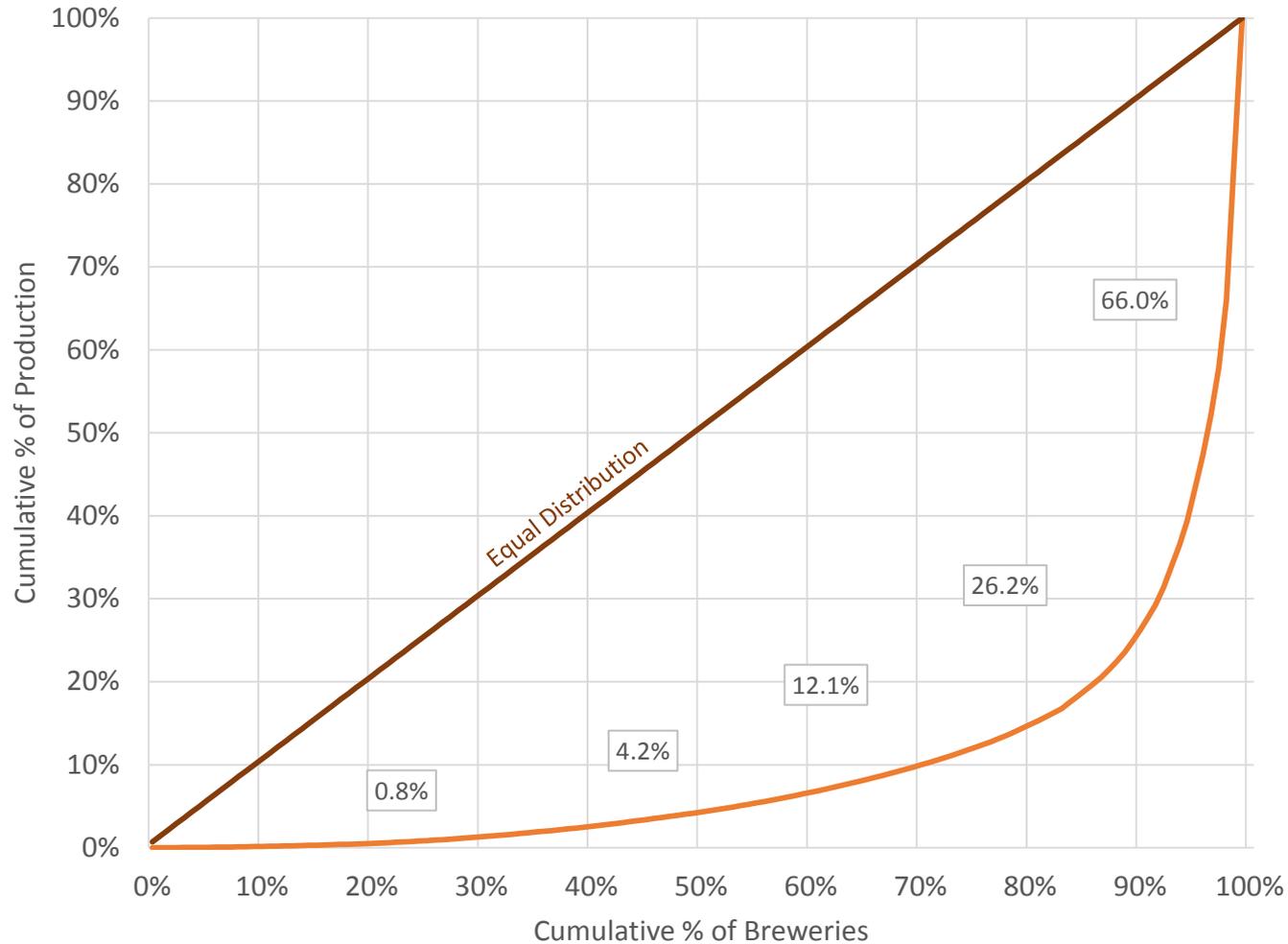
# Exports Have Doubled During the Recovery

## Oregon Alcohol Exports



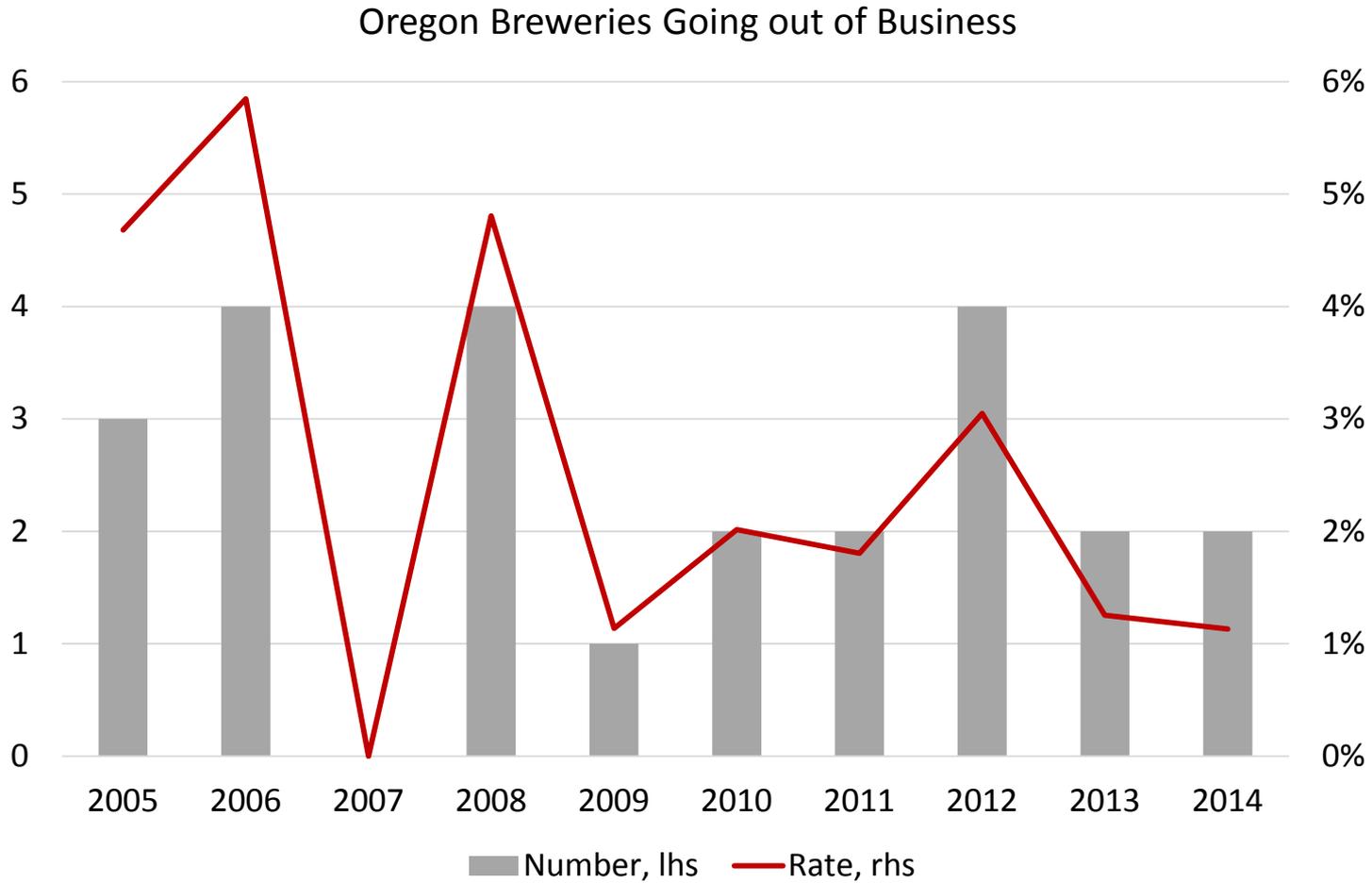


# Brewing: A Lot of Little Guys, but the Big Brewers Still Dominate Oregon Sales





# Brewing: Little Evidence that Craft Beer Market Has Become Saturated



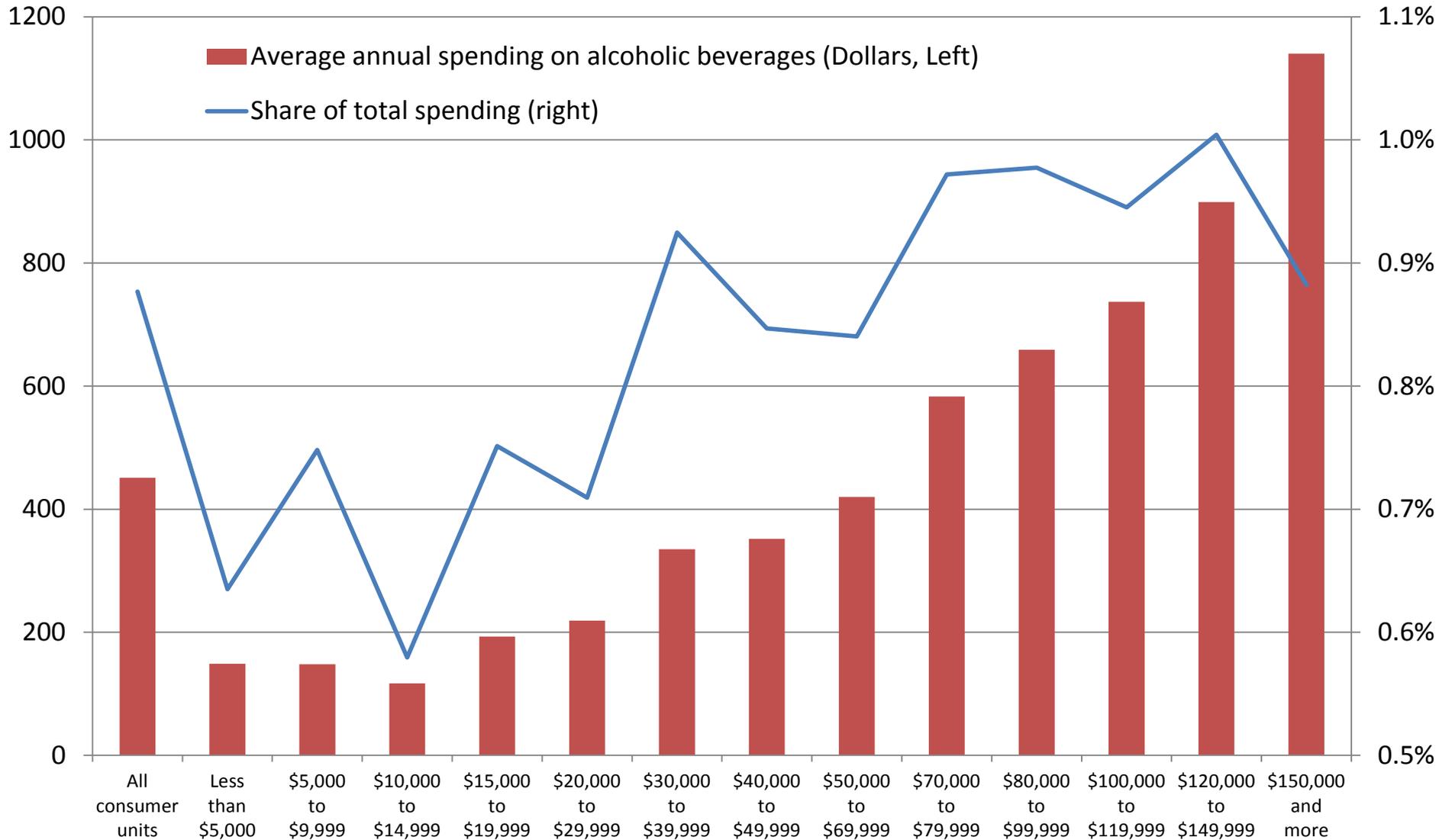


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Demand Backdrop:  
Determinants of Alcohol Sales

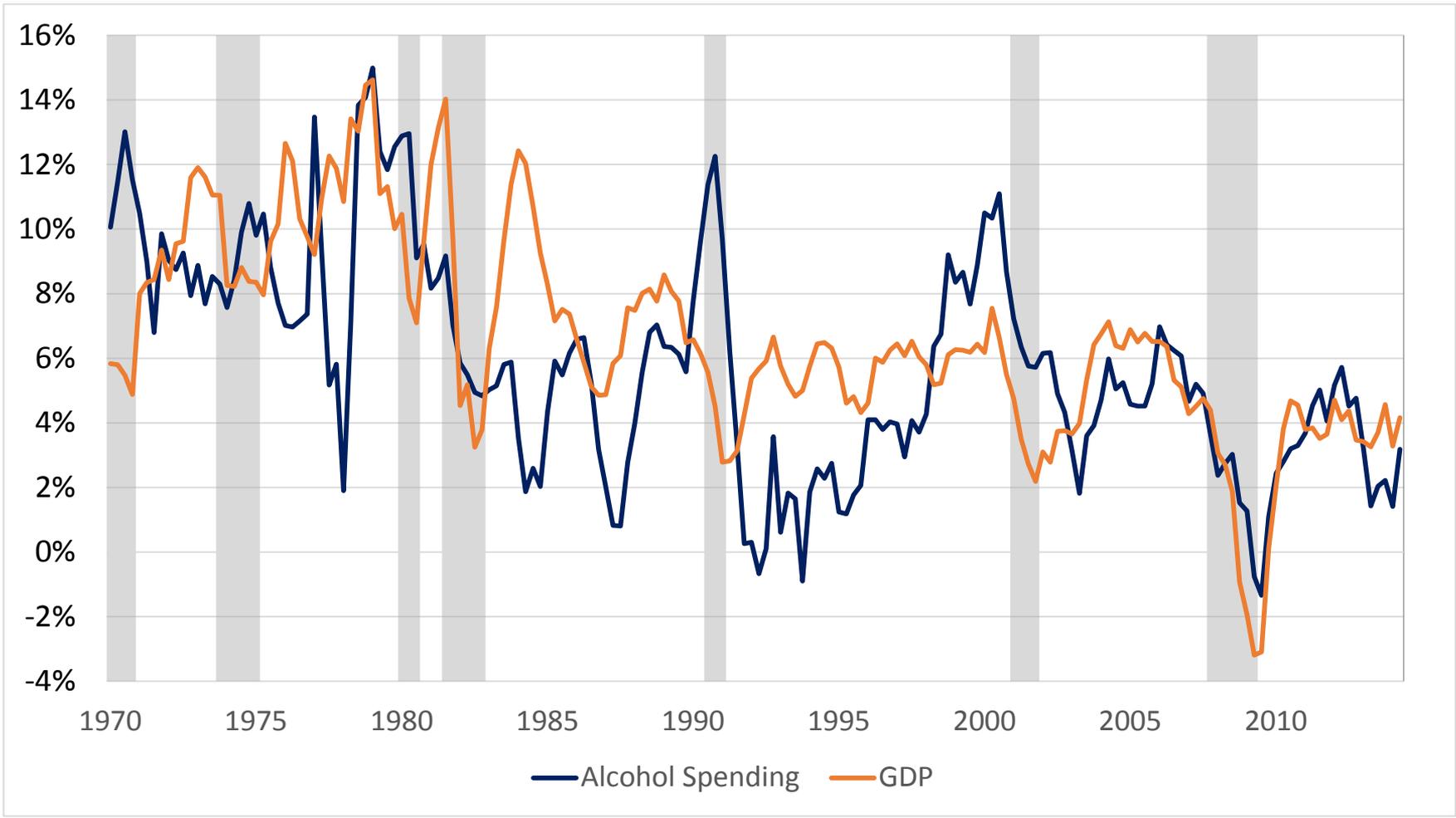


# Income Growth Fuels Sales—Particularly Among Middle-Wage Households



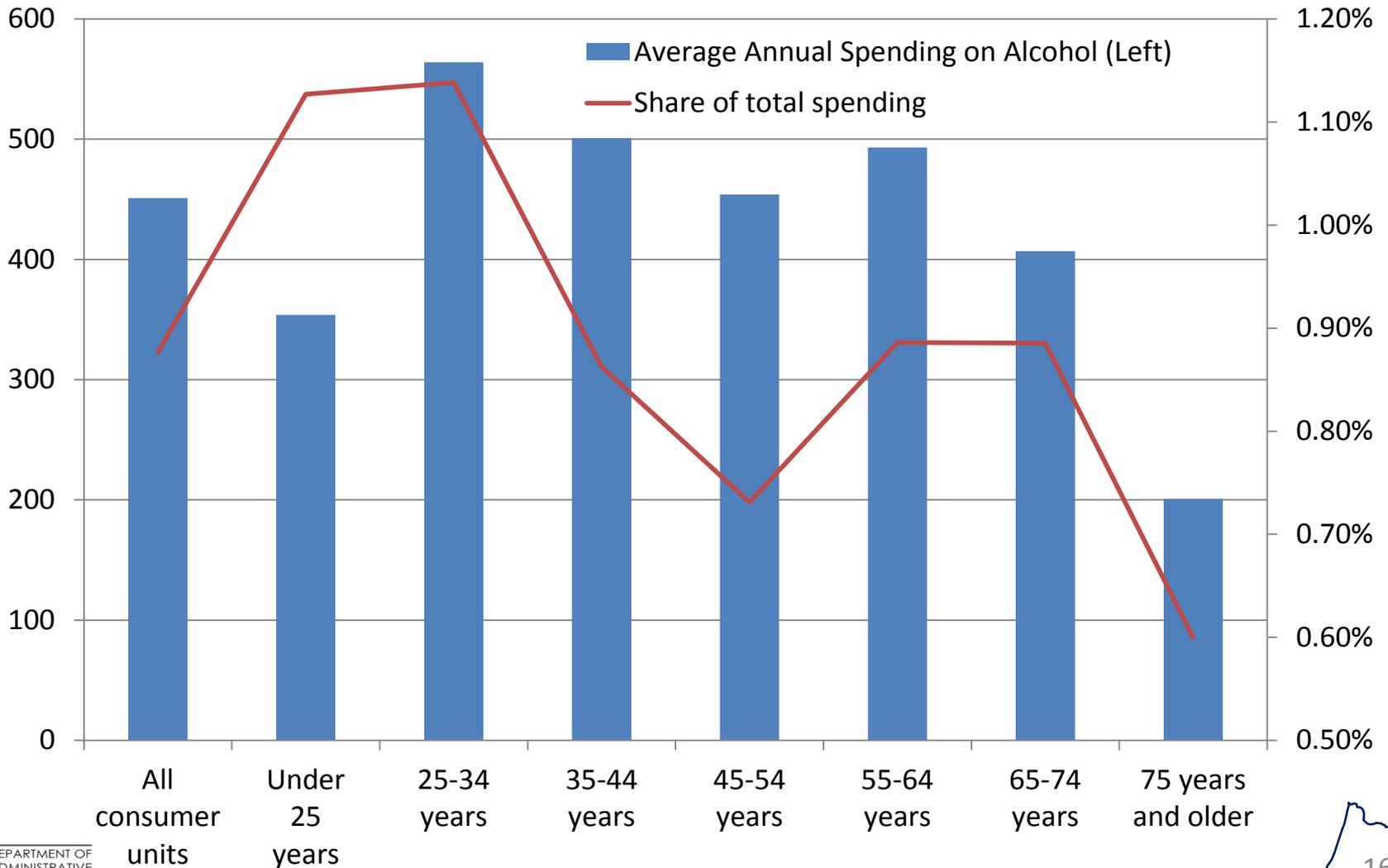


# Alcohol Sales Are Very Sensitive to the Business Cycle



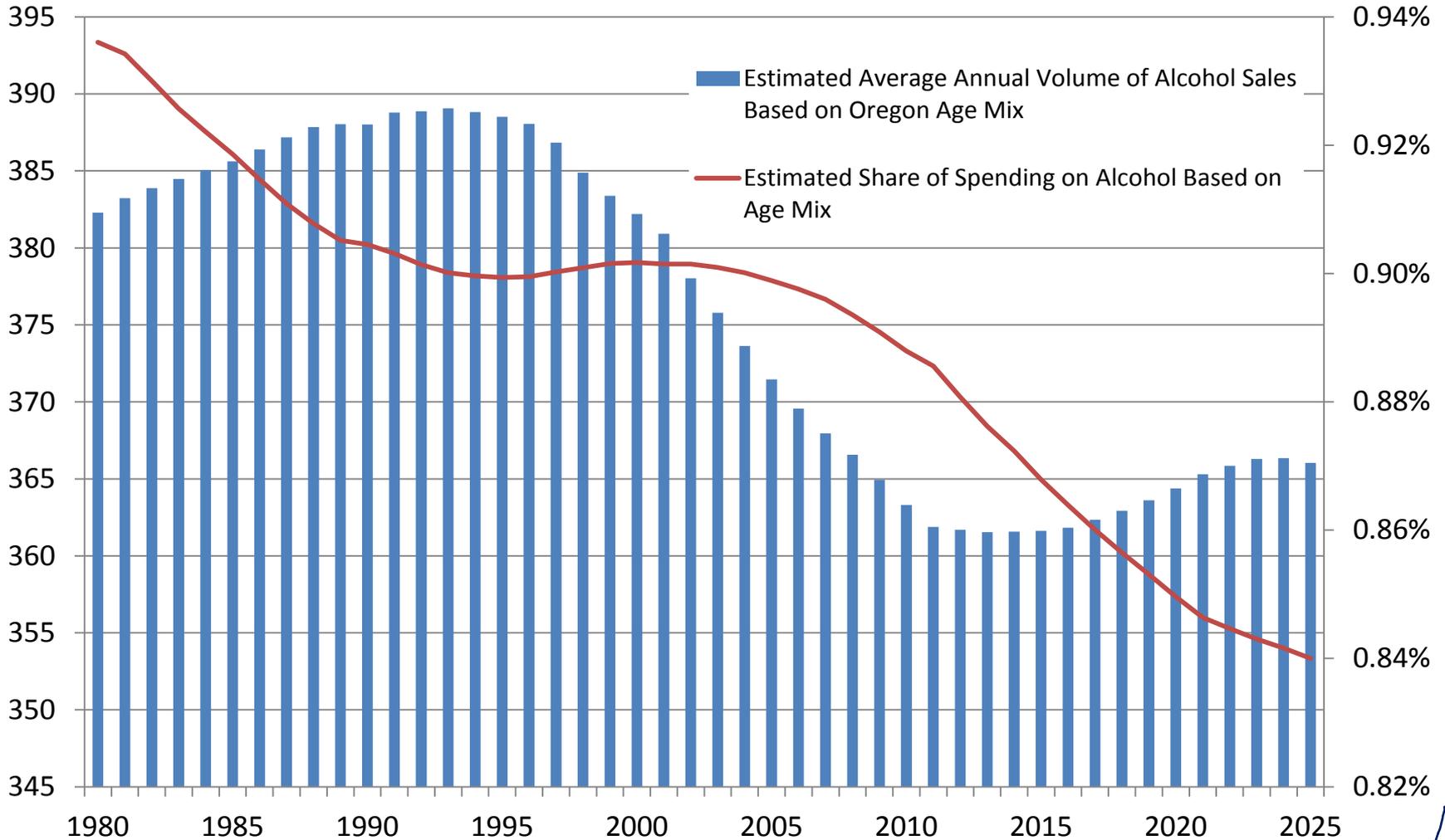


# Demographics: Millennials vs Boomers





# Demographics: Age-Based Alcohol Sales Forecast



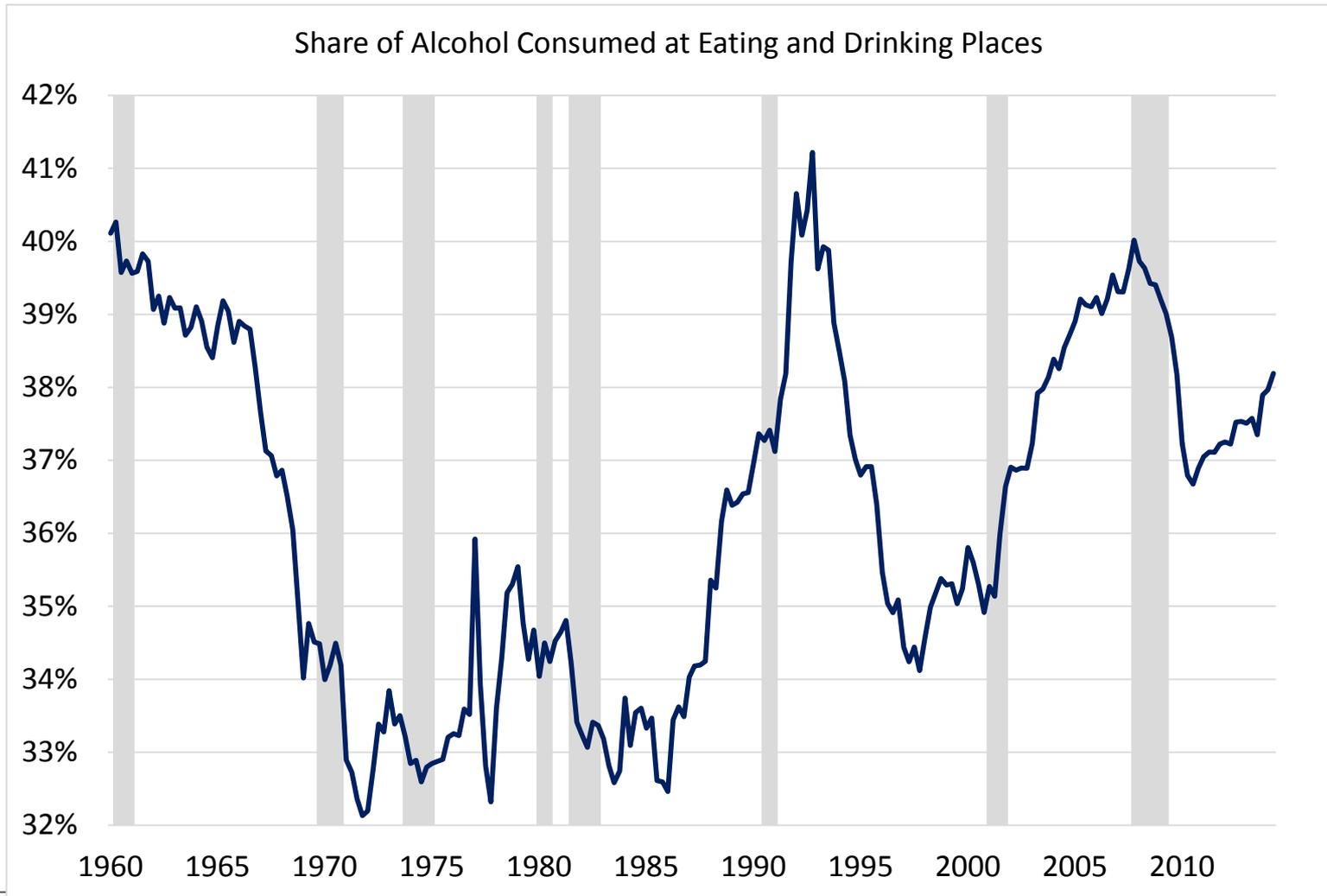


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## Demand Backdrop: Composition of Alcohol Sales

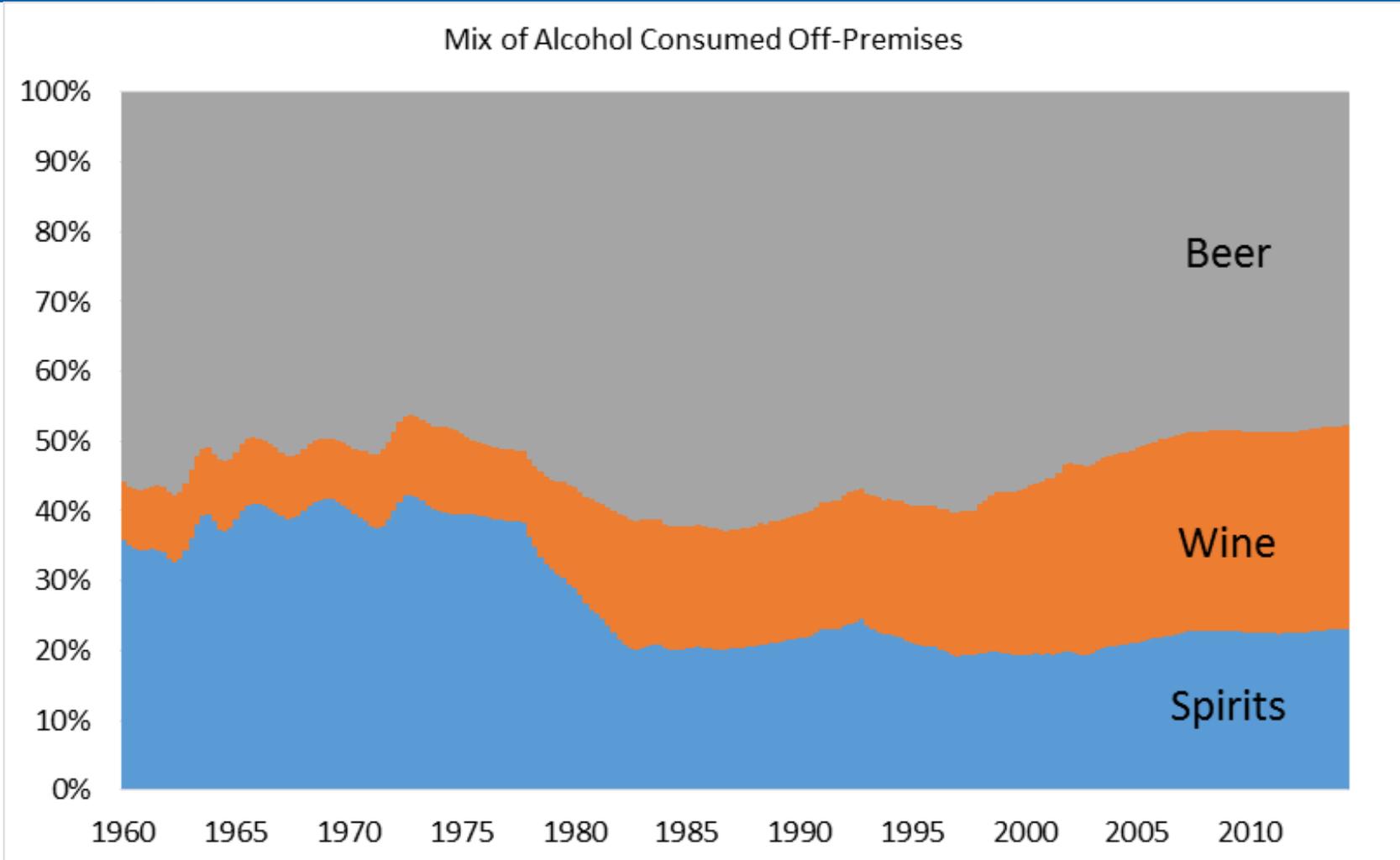


# Hitting the Town: The Kids Have Grown Up





# Hitting the Town: Preferences Over Time





# For More Information

## Standard Contact:

155 Cottage Street NE

Salem, OR 97301

(503) 378-3405

[oea.info@state.or.us](mailto:oea.info@state.or.us)

[www.oregon.gov/das/oea](http://www.oregon.gov/das/oea)

## Social Media:



[www.OregonEconomicAnalysis.com](http://www.OregonEconomicAnalysis.com)



[@OR\\_EconAnalysis](https://twitter.com/OR_EconAnalysis)

Fermentation  
Science

Oregon State  
University



**Bill Boggess**  
Executive Associate Dean

OLCC Meeting, Bend OR  
September 12, 2013

# Program Breadth

## *Agricultural Inputs*

Grapes

Milk

Barley, malt, hops

Barley

Wheat

## *Products*

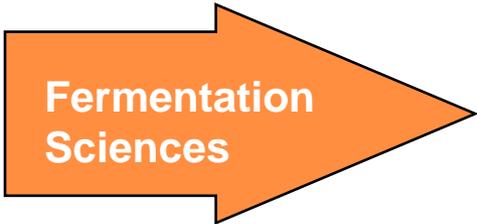
Wine

Cheese

Beer

Bread

Bread



Fermentation  
Sciences

# Fermentation Sciences

## **TECHNICAL UNDERPINNINGS:**

### **Applied Economics**

*Business, marketing*

### **Animal & Rangeland Sciences**

*Dairy research, operations*

### **Biological & Ecological Engineering**

*Bioenergy and biomaterials*

### **Crop & Soil Science**

*Breeding: hops, barley, wheat*

### **Food Science & Technology**

*Enology, brewing, cheese, bread*

### **Horticulture**

*Viticulture, small fruits*

### **Oregon Wine Research Institute**

### **Microbiology**

*Fermentation microbiology*





Wiegand Hall - Corvallis



Food Innovation Center - Portland



OSU Seafood Laboratory - Astoria



# Food Science & Technology



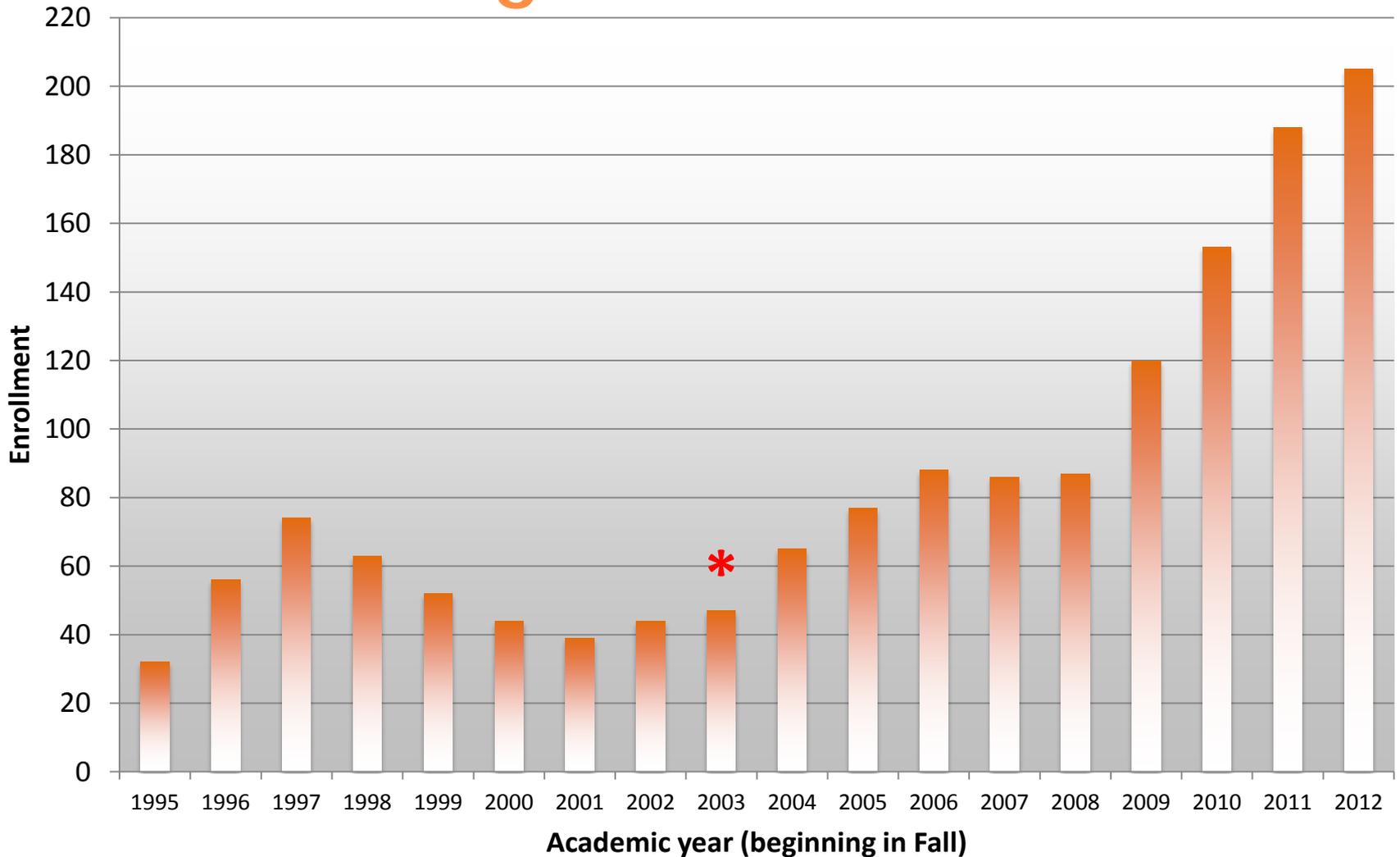


# OSU Food Science

## - *Fast Facts* -

- Second-oldest U. S. Food Science program (1918)
- One of only two national programs in Fermentation Science
- Launched in 1996 with major gift from Nor'Wester Brewing
- Breadth: *Enology, brewing, artisan cheese, artisan bread*
- In-depth expertise: *Flavor chemistry, sensory science, food processing, food safety, bio-fermentates*
- Expanding into distilled beverages and ciders
- Rapid 10-year growth of OSU's Fermentation Science program parallels that of the Oregon's fermentation industries

# FST Undergraduate enrollment



# OSU Food Science Undergraduate Degree Programs\*

B.S. Degree in Food Science and Technology

- Food Science 29%
- Fermentation Science 58%
- Enology & Viticulture 13%

*\* Approved programs by Institute of Food Technologists*

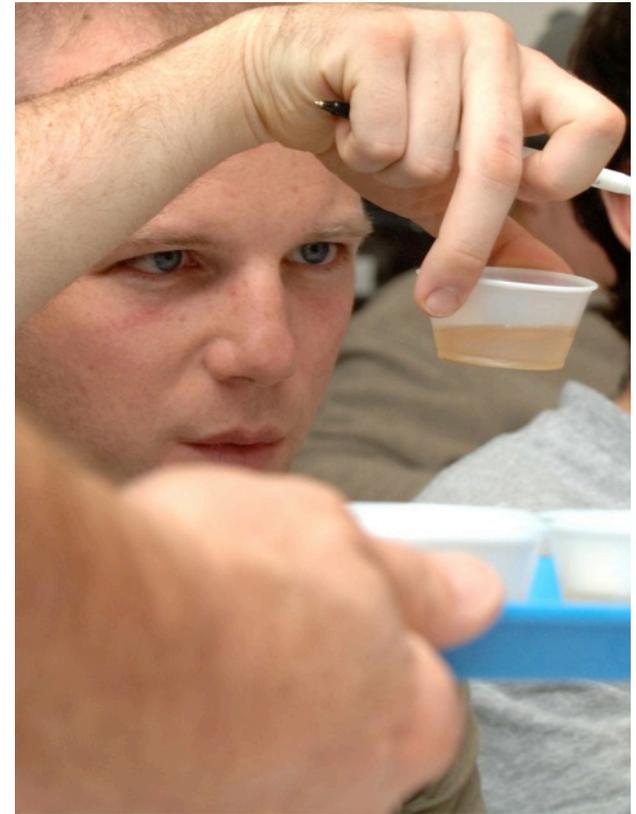


# Graduate Research

37 Graduate students: 24 M.S. 13 Ph.D.  
*Fermentation students: 9 M.S. 3 Ph.D.*



# Training students to be brewers



Photos courtesy of Lynn Ketchum

# OSU Pilot Brewery

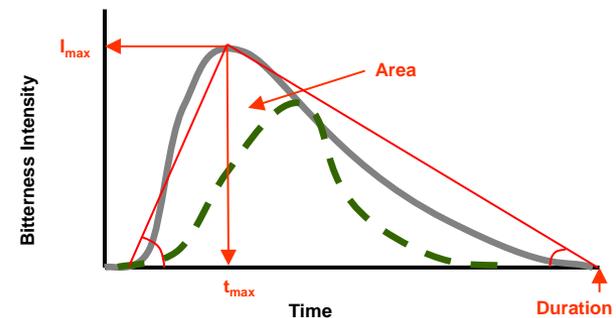
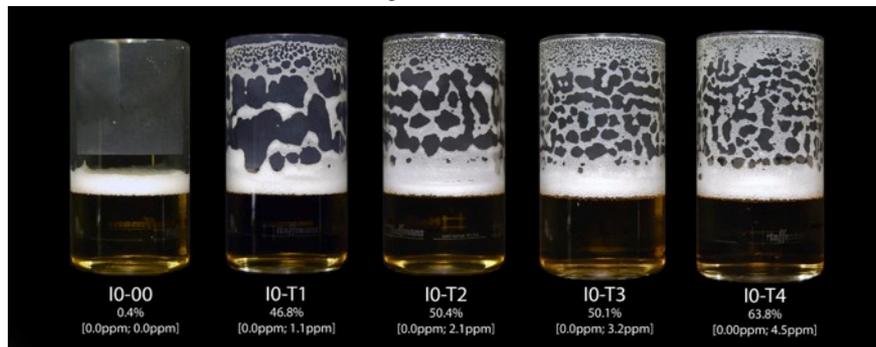
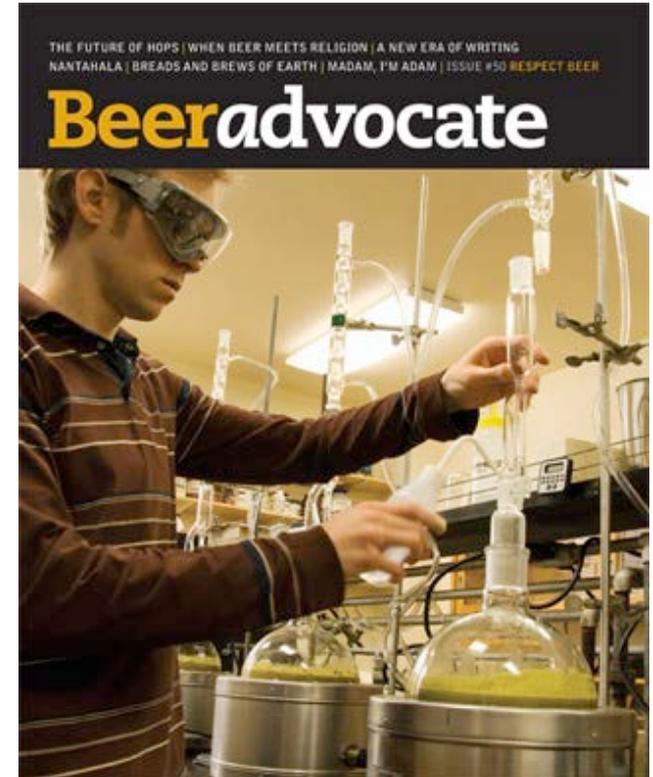
## 2-barrel brewhouse / 6 fermenters



Photo's courtesy of Steve Werblow

# Hops & Brewing Research Shellhammer Lab

- Investigating the sources of citrus aroma/flavor from hops
- Hop harvest maturity influences on oil quality
- Basic studies on dry hopping
- How hops affect beer flavor stability
- New methods for assessing beer bitterness intensity
- Foam stability, reduced iso's



# OSU Mini-malter



Photo's courtesy of Lynn Ketchum

# Enology & Viticulture Program



# Enology & Viticulture Program

## E&V Undergraduate Option (Teaching)

- Focus: Developing strong understanding of foundational sciences
- Scientific application to winemaking and hands-on training
- Teaching winery (Withycombe Hall) and vineyard (Woodhall)
- 50+ students in Enology and Viticulture
- Graduates placed in wineries in OR, WA, and CA



# OREGON *Wine* RESEARCH INSTITUTE

## Research Focus

- Understanding factors impacting wine quality; precursors; closures
- Positive and negative contributions from microorganisms
- Chiral isomers related to wine flavor and aroma impact
- Collaboration with Oregon Wine Research Institute team including viticulturists, flavor chemists, sensory scientists
- Influence of yeast on grapes and in the winery – Regional differences? Winery differences? Commercial yeast vs. naturally present yeast? Role in producing unique, premium quality wines?



# Enology Extension Program

- Providing wine producers with new information and skills
- Applying research results and identifying emerging problems



# OSU's first student venture product



# Savor Education

## **Beaver Classic™** Artisan-style cheese

- Developed and produced by OSU Food Science students
- Milk from cows in OSU Dairy Center
- Oregon characteristics / alpine tradition
- Nutty taste with creamy, buttery and caramelized flavors

*“Savor fine artisan cheese while supporting our students and preparing them for careers in the food and dairy industry.”*



# Employers of OSU Ferm. Sci. Grads

**Anheuser-Busch**

**MillerCoors**

**Boston Beer Company**

**Deschutes Brewery**

**Full Sail Brewing**

**McMenamins'**

**Rogue Ales**

**Widmer Brothers Brewing**

**Willamette Valley Vineyards**

**King Estate Winery**

**Argyle Winery**

**Adelsheim Winery**

**E&J Gallo**

**Chateau St. Michelle**

**Hogue Cellars**

**Tilamook County Creamery**

**Rogue Creamery**

**Tumalo Farms**

# *The Future: Distilled Spirits*



Fermentation  
Science

Oregon State  
University



**Bill Boggess**  
**Executive Associate Dean**

**OLCC Meeting Bend, OR**  
**September 12, 2014**



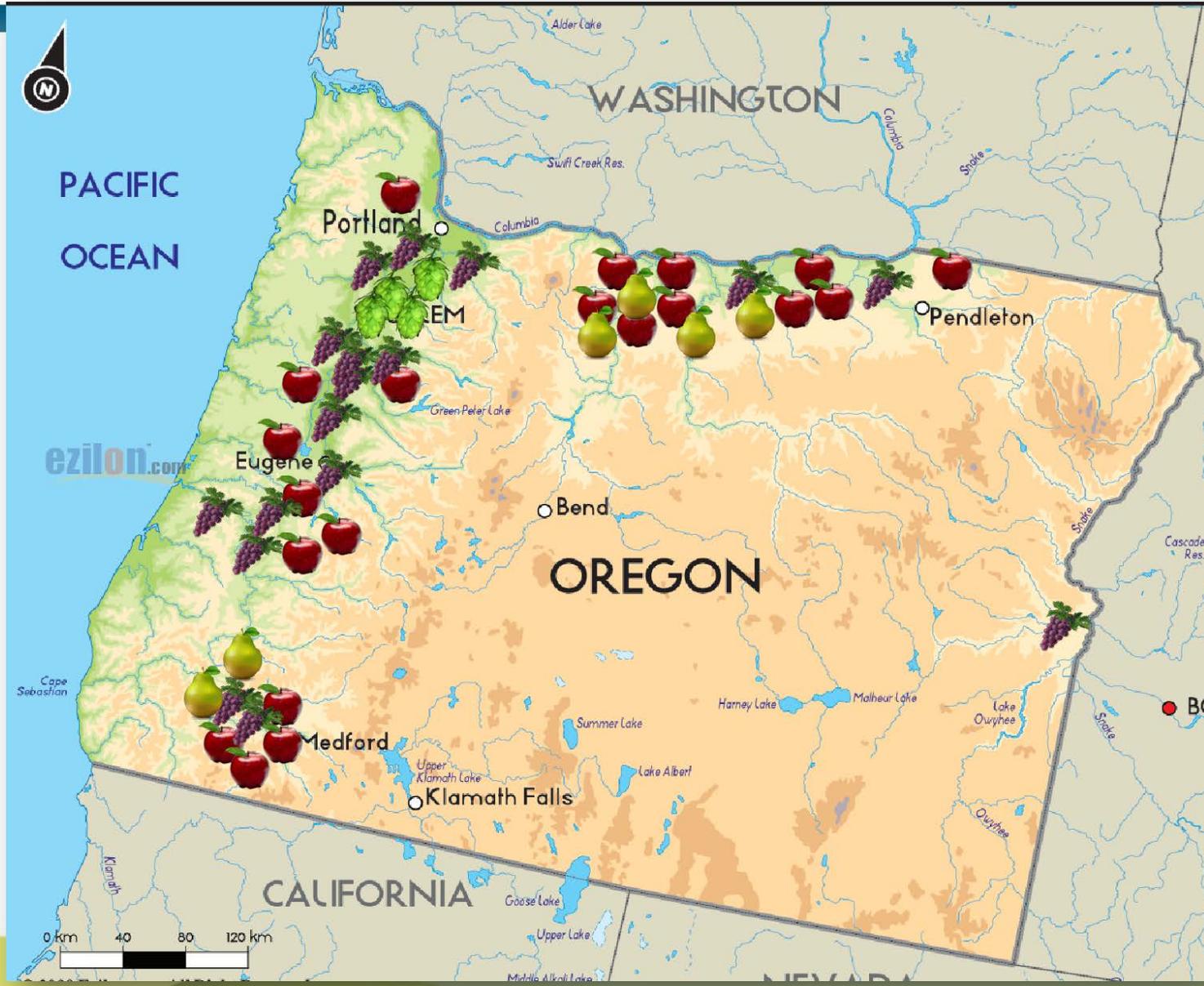
OREGON  
DEPARTMENT OF AGRICULTURE

OREGON'S CRAFT INDUSTRIES  
ECONOMIC BENEFIT IN THE AGRICULTURAL  
SECTOR

Lindsay Eng  
Director, Market Access & Certification Programs

# OREGON

DEPARTMENT OF AGRICULTURE





## OREGON HOPS

**Hop production began in Oregon in 1932.**

- Oregon is 2<sup>nd</sup> largest producer in US.
- 17% of the United States market share
- 5% of hops grown in the world.

**The majority of hops in Oregon are grown in Marion County with some grown in Polk County. Oregon grows about ten varieties of hops on about 6183 acres.**

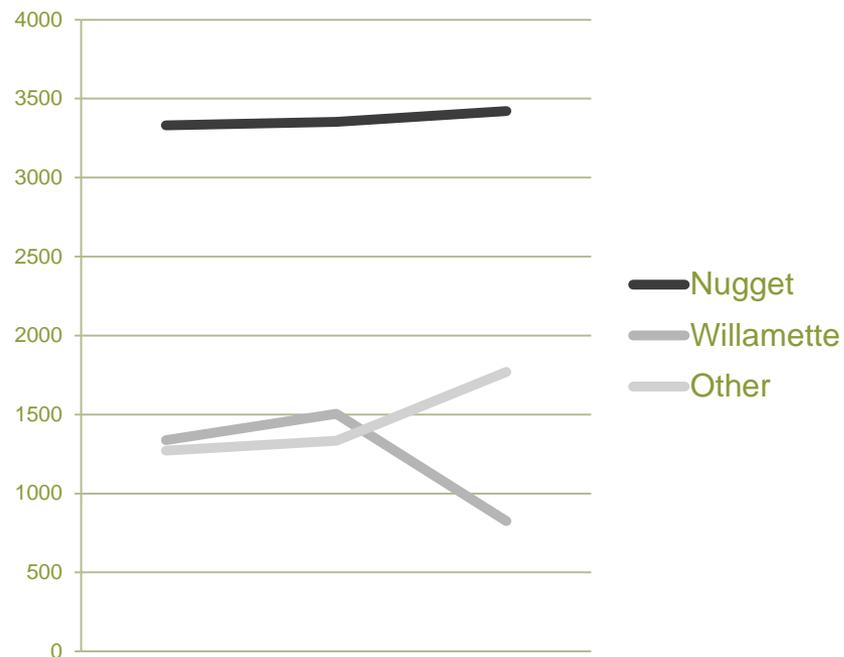
**Quality Assured – all hops produced in Oregon are required to be inspected.**

- The Hop inspection services provided by the ODA provide an official independent analysis of hop quality that facilitates transactions between hop growers and hop processors.
- The presence of leaf, stems and especially hop seeds can alter the character/flavor of the hops and ultimately the price paid to the grower or processor.
- This ODA official inspection, authorized and licensed by FGIS, protects both the growers who have invested large amounts of time and money to produce the hops and the processor who must guarantee its buyers and brewers they are receiving high quality hops whose flavor and aroma are vital and consistent.



## OREGON HOPS

	Production by Variety		1000 lbs	NASS data
	2011	2012	2013	3-yr change
Cascade	425	623.5	627.1	48%
Centennial		370	394.6	
Fuggles			75.3	
Golding			222.7	
Liberty	143.2	126.7		
Magnum	123.4	146.1	146.2	18%
Mt. Hood	404.5	392.6	346.2	-14%
Nugget	3332.1	3353.5	3422	3%
Perle		159	64.8	
Sterling	164.7		197.8	20%
Super Galena	545.5	483.6	396.4	-27%
Tettnanger	114.4	91.1		
Willamette	1337	1504.7	824.7	-38%
Experimental			60.7	
Other	1270.6	1333.5	1770.6	39%





## SPECIALTY CROP BLOCK GRANTS

### FY 2011

- **Promoting US Grown Hops through creation of education and promotional materials**
  - Includes trade show signage and visit to Anheuser Busch HQ
  - Achieved goal to keep Oregon hop acreage over 3500

### FY 2012

- **Promote the use of Oregon grown public hop varieties to craft breweries and home brewers**
  - Hop Commission attended several brewers and beer festivals throughout the state
  - Will develop a new website which will include a public hop variety manual



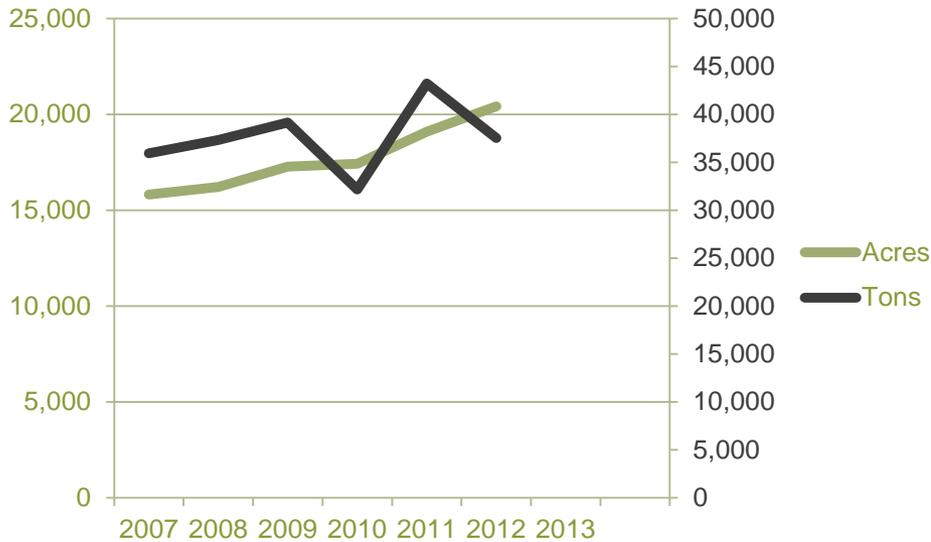
## SPECIALTY CROP BLOCK GRANTS

### FY 2014 (Pending)

- **Creation of an online database for promotion of public hop varieties**
  - Continuation of 2011 grant to educate brewers, but information will be posted online and on mobile app
  - Varieties developed by the USDA Hop Breeding Program (public hops) make up about 95% of Oregon-grown hops



## OREGON WINEGRAPES



Varietals (by production tons)	2010	2011	2012
Pinot Noir	16,765	23,726	28,565
Pinot Gris	5,312	6,046	7,423
Chardonnay	1,503	1,923	2,605
Syrah	947	1,319	2,097
White Riesling	1,861	1,899	1,812
Tempranillo	235	387	631
All others	4,577	6,200	7,043



## SPECIALTY CROP BLOCK GRANTS

### FY 2014 (Pending)

- **Building an “Oregon Wine Experience” Mobile Application**
  - Final development of an interactive, educational mobile application
  - Roll-out of an iPad app to small wineries vineyards throughout the state
  - Templates will allow for seamless storytelling for wine enthusiasts visiting the state
- **Development of Value-Added Applications of Fruit and Wine Grape Pomace**
  - Research to develop value-added products from pomace
  - Solutions could include food ingredients and fiber for packaging



## OREGON TREE FRUITS

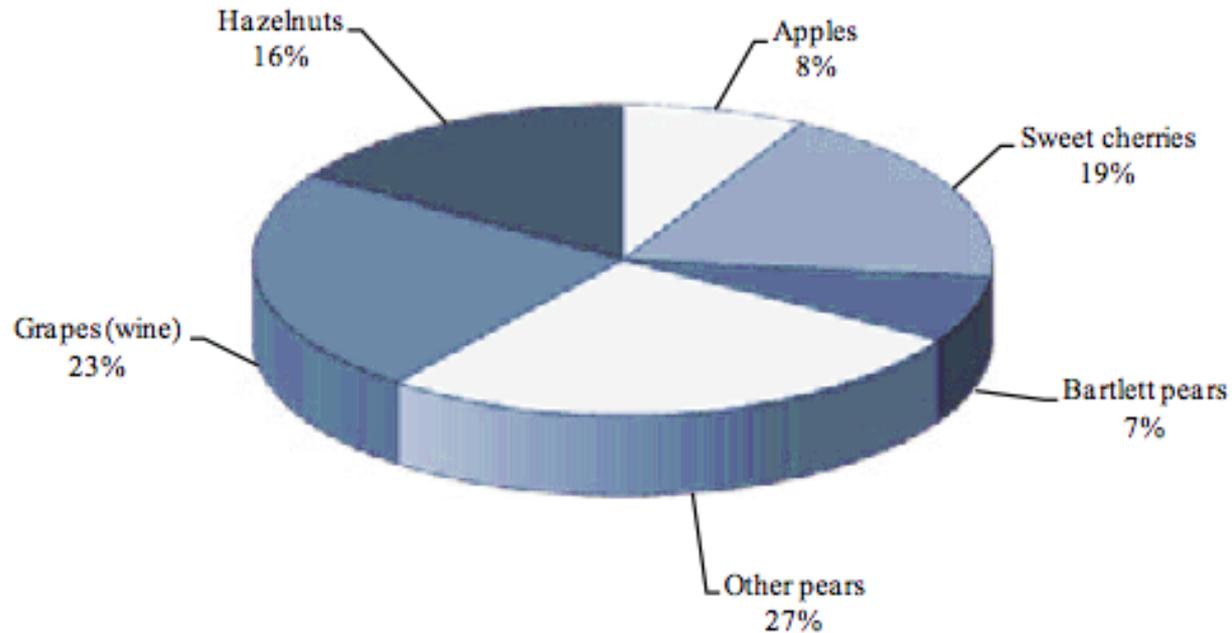
- **Traditional apple and pear varieties grown for commercial fresh market**
  - Oregon is 2<sup>nd</sup> in US for pear production
  - Large commercial apple industry has decreased, but growing in specialty varieties
- **Many burgeoning NW cider producers are growers first**
  - Growing estate orchards of cider apple and pear varieties
- **Existing industry provides expertise in growing and producing tree fruit for cider production, infrastructure, and great land**





## OREGON TREE FRUITS

**Value of production, percent of total, Oregon 2012**





## SPECIALTY CROP BLOCK GRANTS

### **FY 2014 (Pending)**

- **Creation of an organization to manage growth and promotion of the Mid-Columbia River Gorge cider industry**
  - Includes a collective marketing strategy, business development classes, and two annual cider focused events
- **Formation of production standards for the Northwest cider industry**
  - Establishing production best practices, creating a certification process, and standardizing definitions (such as craft, cider, and Northwest)



## GRAINS

- **Barley 53,000 acres (2012)**
  - 3,816,000 bushels produced worth \$23,850,000
- **Bulk of production centered around the North Central and Northeast regions of the state**
- **Rye and oats are centered around the same areas of the state with small-scale production of other cereal grains occurring in other areas of Oregon.**
- **Not a significant amount of malting facilities/infrastructure in Oregon for malted barley**

# Oregon Beer, Wine, and Spirits



Bill Schuette, Economist  
Oregon Liquor Control Commission

# OLCC's Role With Craft Industries

- License
  - Brew Pubs, Breweries, Wineries, Distilleries
- Tax (Privilege Tax)
  - Collect and audit
  - Distribution of \$0.02/gallon to OR Wine Board
  - Collect and audit \$25 per ton tax for grapes for the OR Wine Board
- Distribute Spirits
  - Contract with Distillery Agents to Sell Spirits
  - 248 Liquor Stores plus 61 Distillery Agents

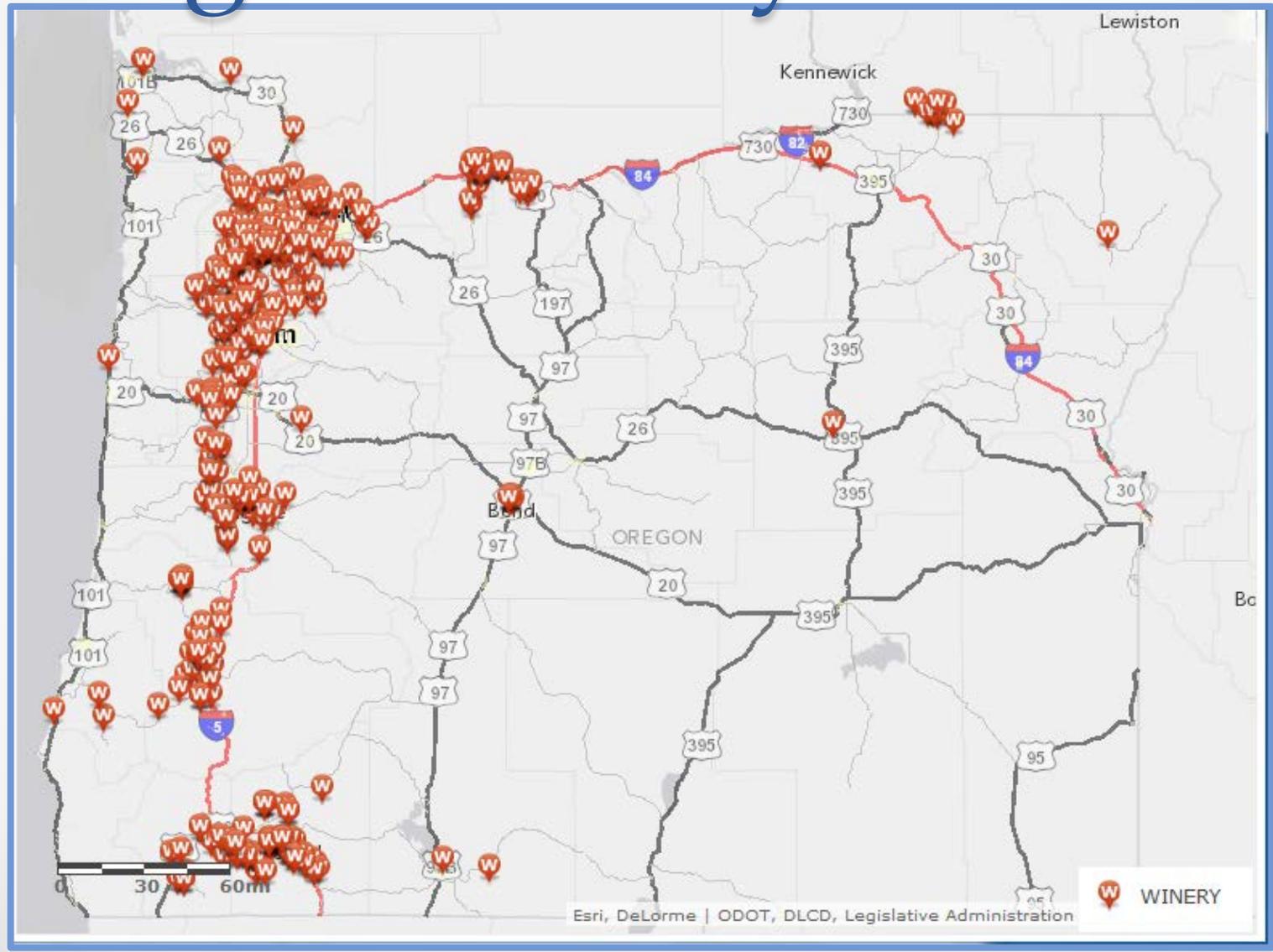


# Oregon Winery Licensees

- 954 Winery Licenses (622 Locations) in 2014
  - Import, bottle, produce, blend store, transport, and export wines.
  - Most allow wholesale and retail sales
  - Multiple licenses may be housed at one location



# Oregon Winery Licenses



# Oregon Winery Licenses



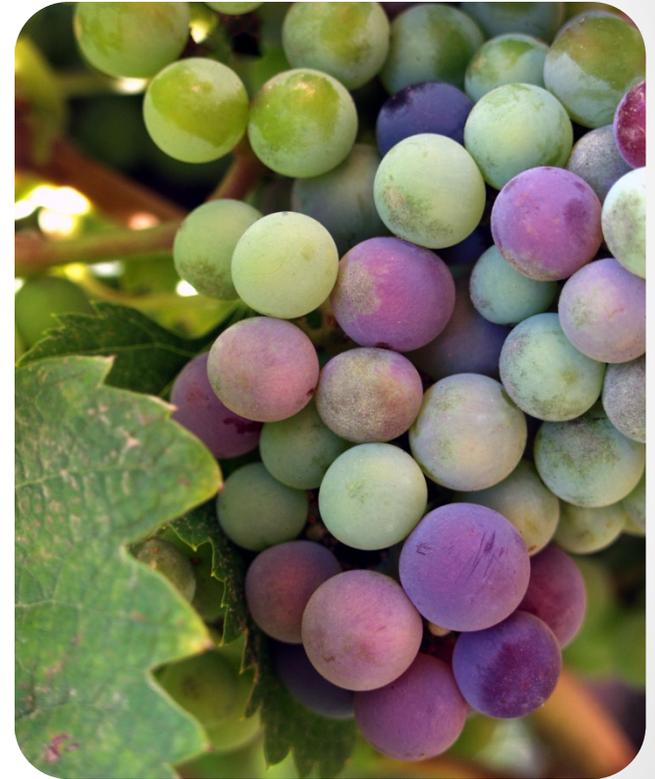
# Who Pays Wine Tax In Oregon

## \$9.5 Million in FY 2013

License Type	Percent of Tax Collections
Out of State Direct Shippers and Wine Self Distributors	4%
Warehouse	4%
Distributor (WMBW)	89%
Winery	3%

# Wine Tax

- Table Wine Privilege tax \$0.67 per gallon
  - Less than 14 % ABV
  - Collected \$8.8 Million in 2013
- Dessert Wine Taxed at \$0.77 per gallon
  - Greater than 14.01% ABV
  - Collected \$0.7 Million in Fiscal Year 2013



# More on Oregon Wine Tax

- Small Winery Exemption
  - If winery produces less than 100,000 gallons in calendar year then they can exempt 40,000 gallons from wine tax
  - 37 Oregon Wineries paid wine tax in 2013 (out of about 954)
  - Applies to In-state and Out-of-State Wineries
  - Can be moved between licenses



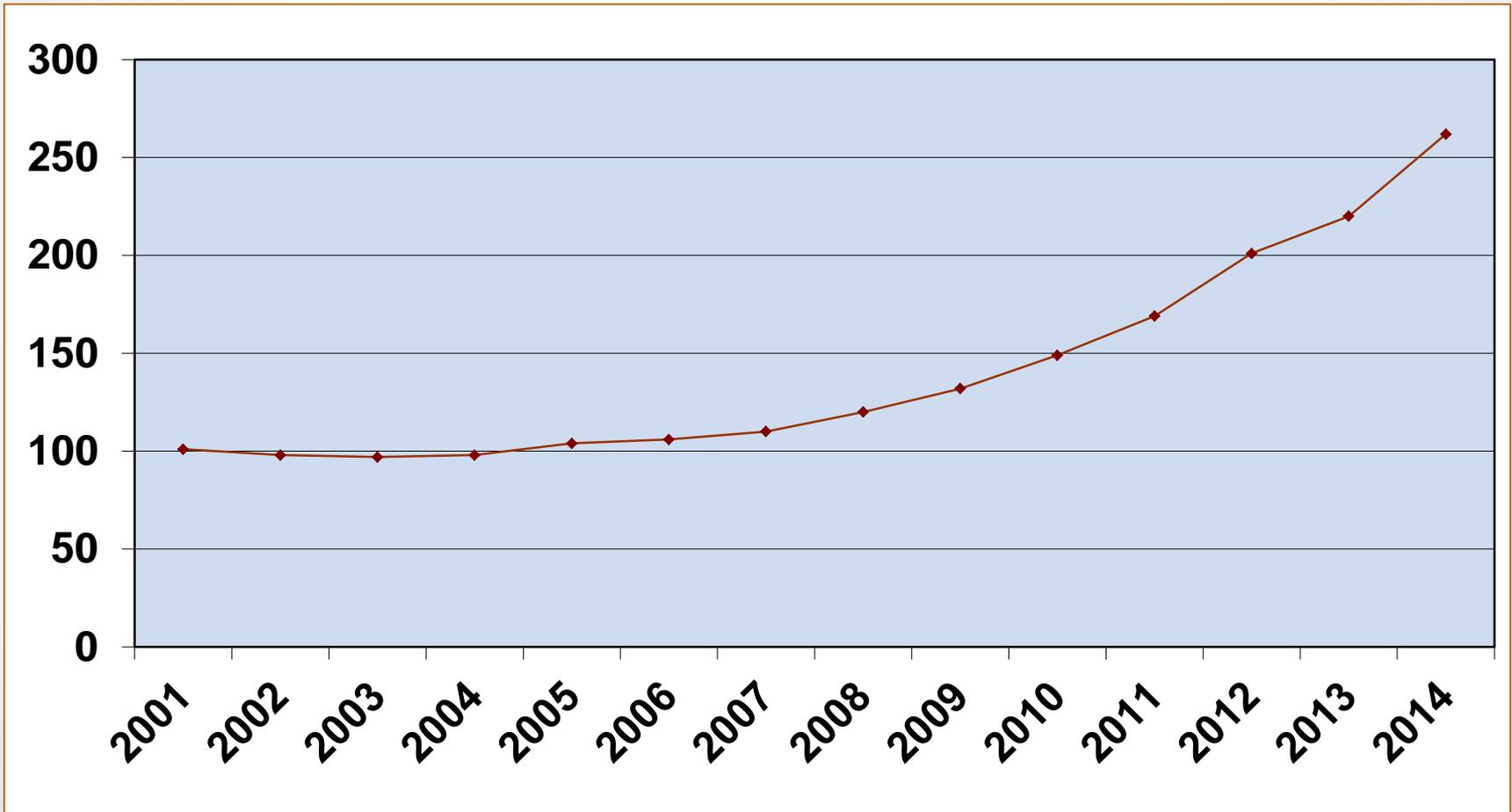
# Oregon Wine Movement From 2013 Tax Records

(in and out of state production)

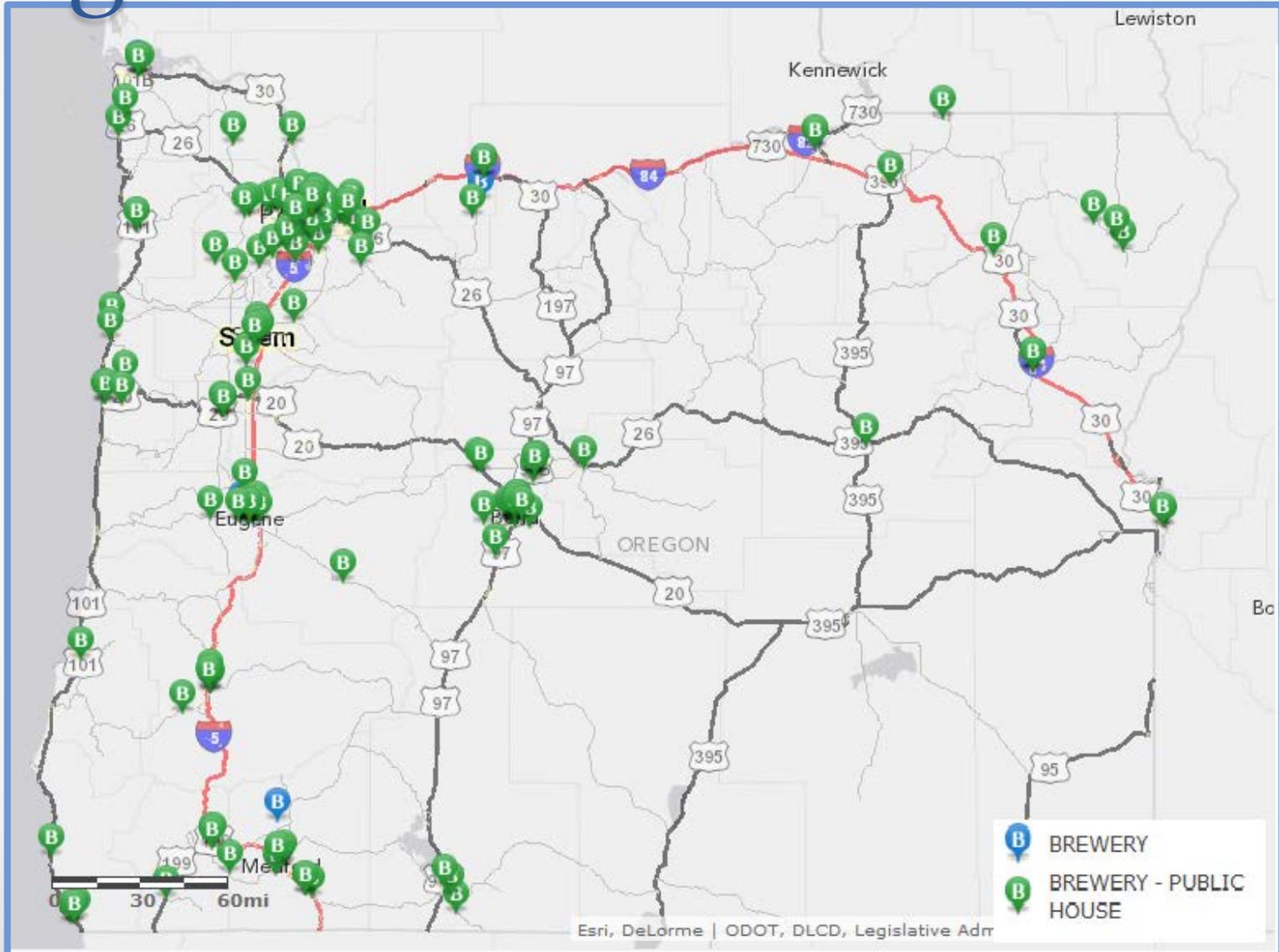
- Table Wine – 27.9 million gallons
  - 20.5 million gallons sold
  - 5.0 million gallons exported
  - 2.4 million gallons exempted
- Dessert Wine – 2.9 million gallons
  - 1.9 million sold
  - 0.5 million exported
  - 0.5 million exempted



# Oregon Brew Pubs & Brewery Licenses



# Oregon Breweries & Brew Pubs



# Who Pays Beer Tax in Oregon

\$6.9 million in FY 2013

License Type	Percent of Tax Payments
Brew Pubs /Breweries	15%
Warehouse	34%
Distributor (WMBW)	49%
Wineries (Cider)	2%

# Oregon Malt Beverage Production

- Malt Beverage is defined as alcohol under 7% ABV
- Taxed At \$0.08 per gallon
  - No production exemptions
- 43.1 Million Gallons Sold in 2013 from Oregon Brew Pubs and Breweries



# Oregon Malt Beverage Production From 2013 Tax Filings

- 84.4 million gallons taxed in FY 2013
- 43.1 Million gallons from Oregon Brewers
  - 15.9 Million Gallons Sold in Oregon
    - 19% of state consumption
  - 27.2 Million Gallons Exported
    - 63% of total production exported



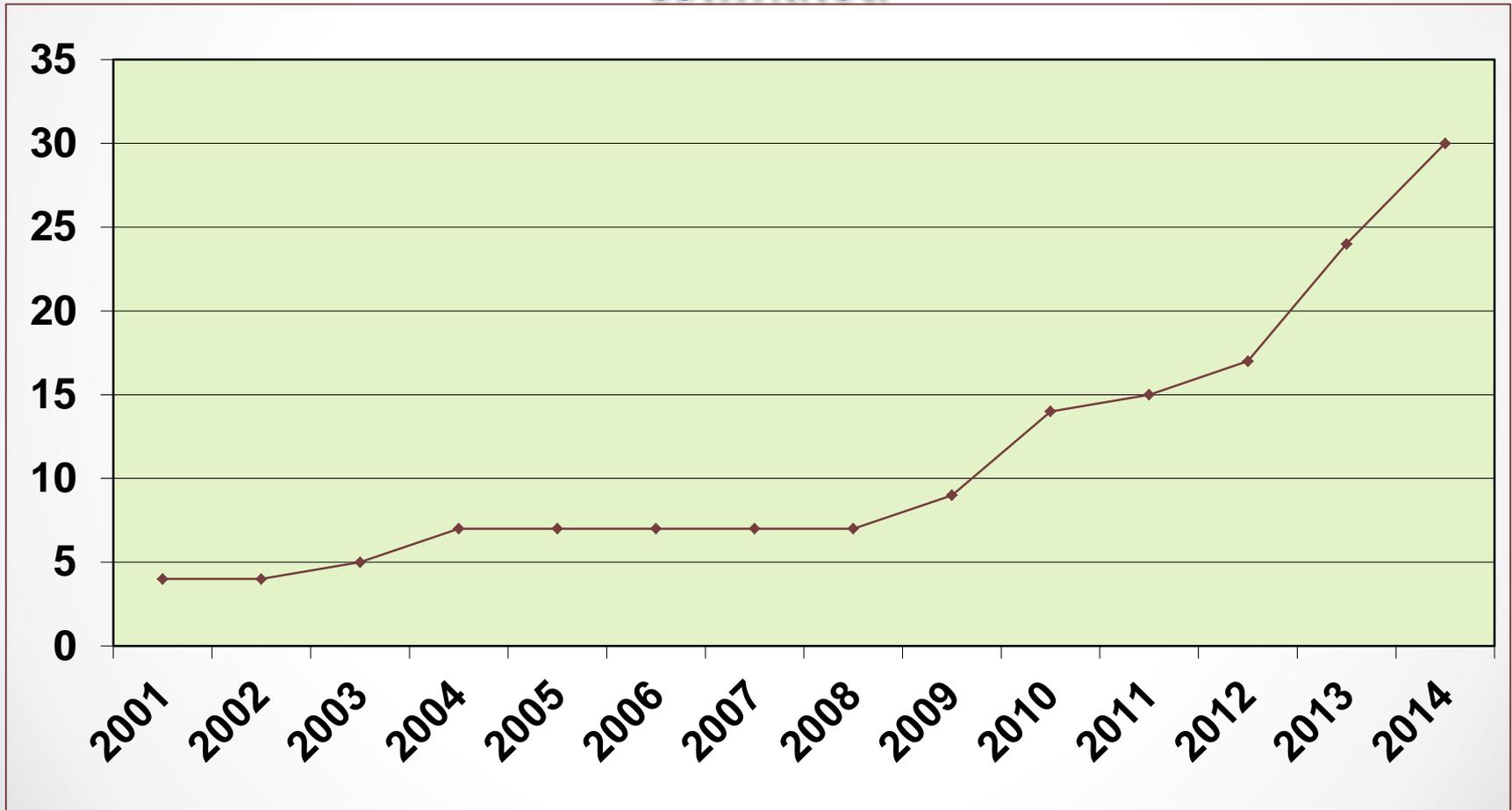
# Cider Production

- Produced under a Winery License
- Taxed as Malt beverage unless over 7% ABV
- Estimated to be 30 cider producers in Oregon in 2014



# Cider Producers in Oregon\*

\*estimated

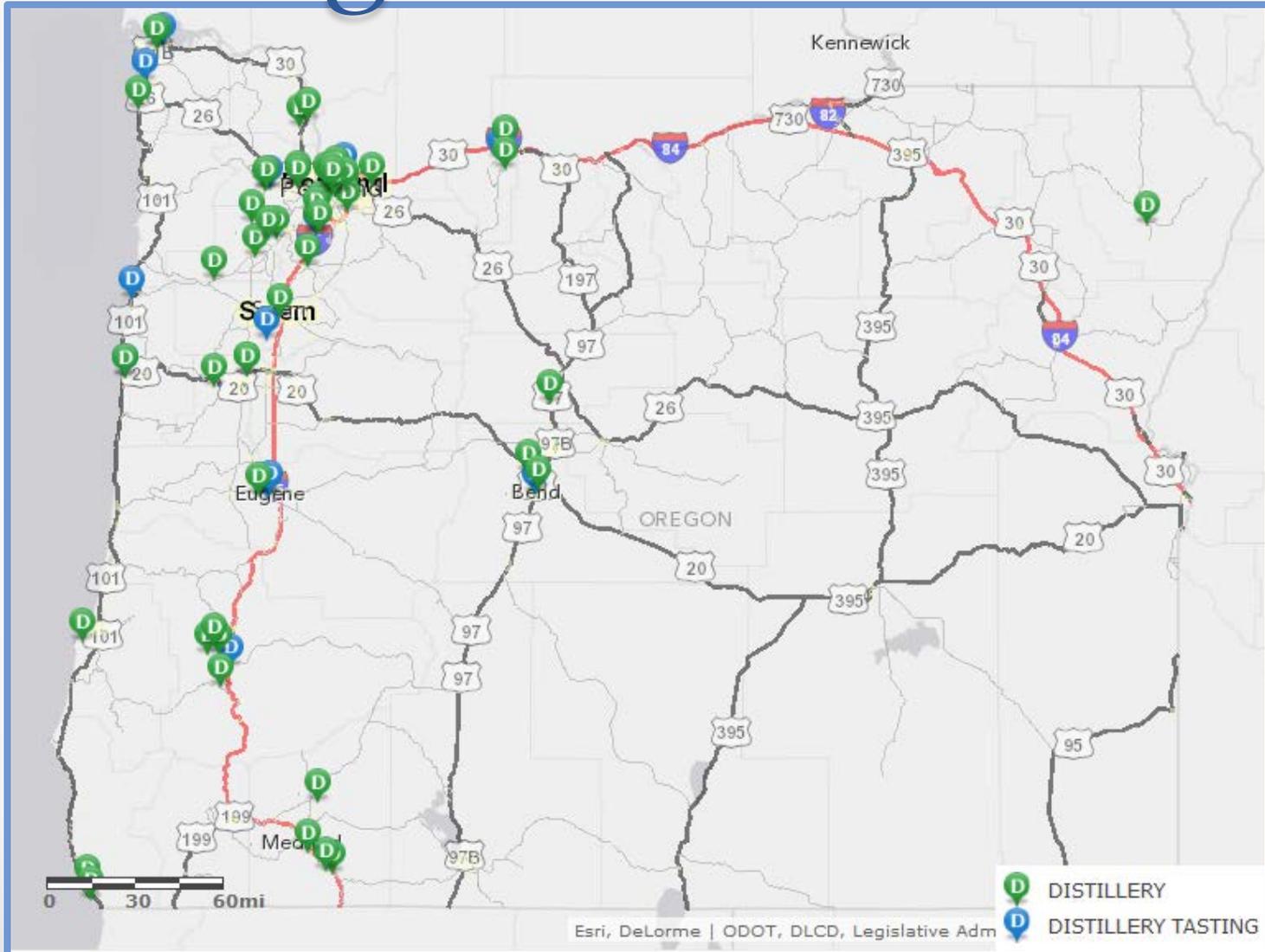


# Oregon Distilleries

- 72 Distilleries in July 2014
  - Includes 61 distillery agents that can sell retail
- \$66 million in Gross Sales in Oregon
  - 12.5% of total sales
  - \$3.9 million from distillery locations in 2014
    - \$2.6 million in FY 2013 (49% Increase)
- OLCC does not track exports from Oregon Distilleries



# Oregon Distilleries



# Questions?

