# Renewable Materials at Oregon State University

L.R. Schimleck & Kaichang Li Wood
Science & Engineering, OSU

Linc Cannon, OFIC

# Forest ownership



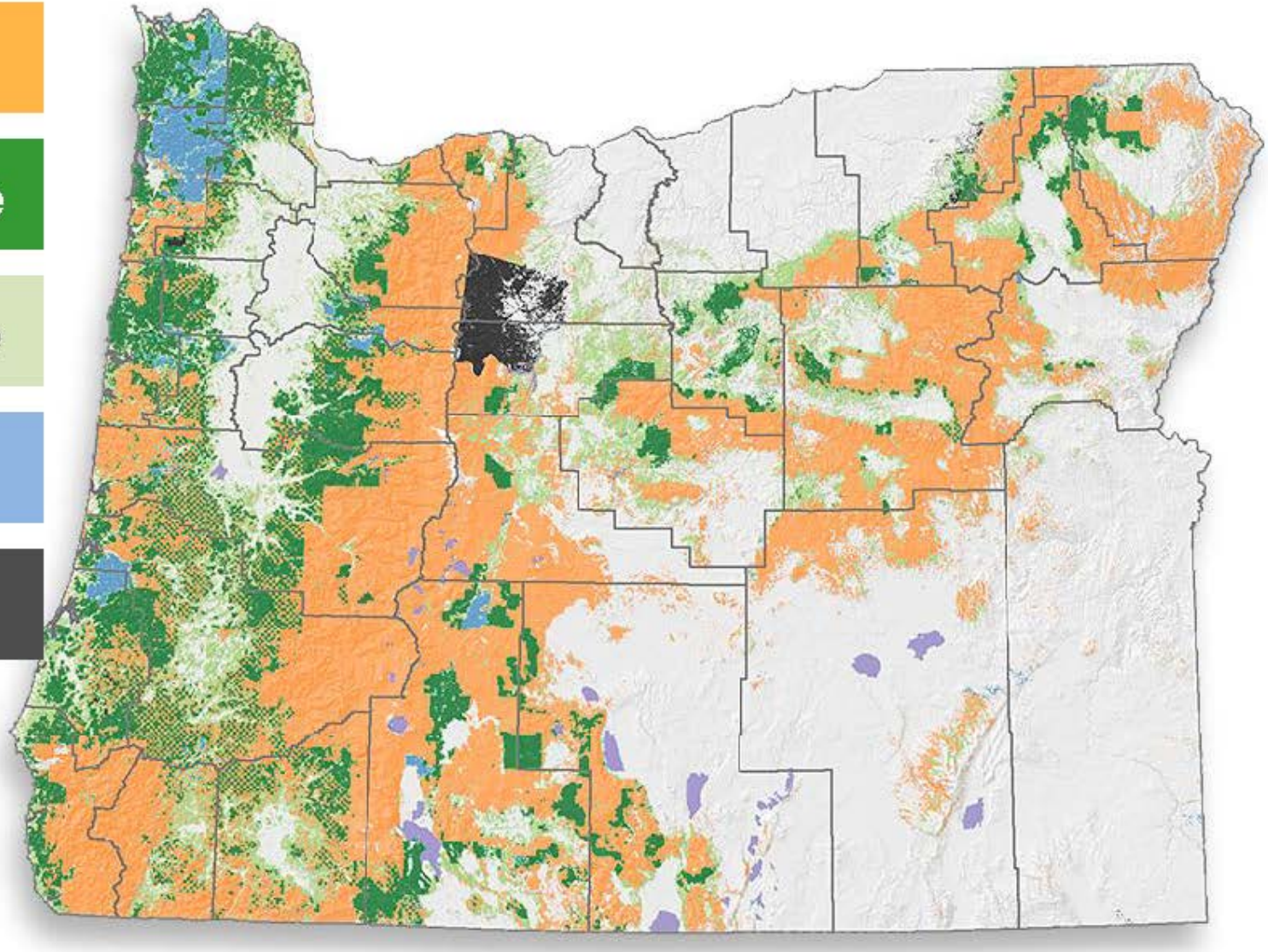
Federal

Large private

Small private

State

Tribal



# Ownership vs. harvest

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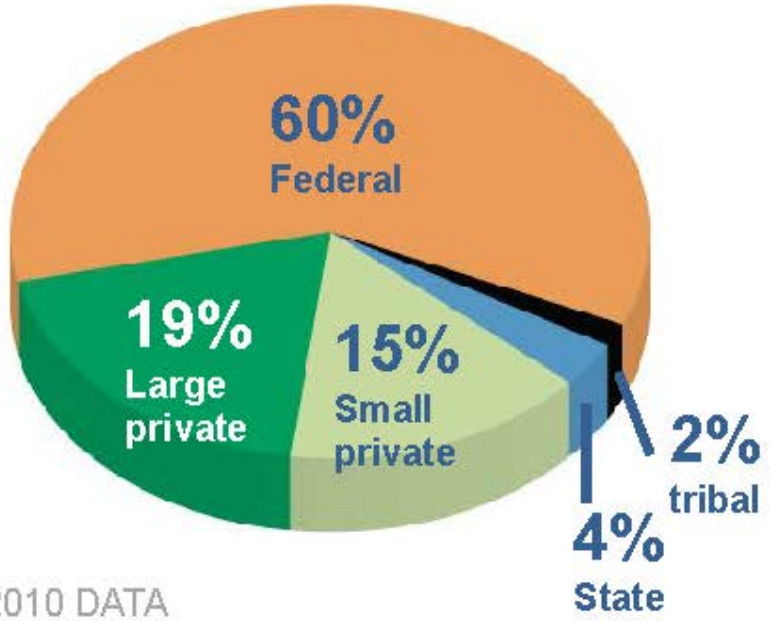
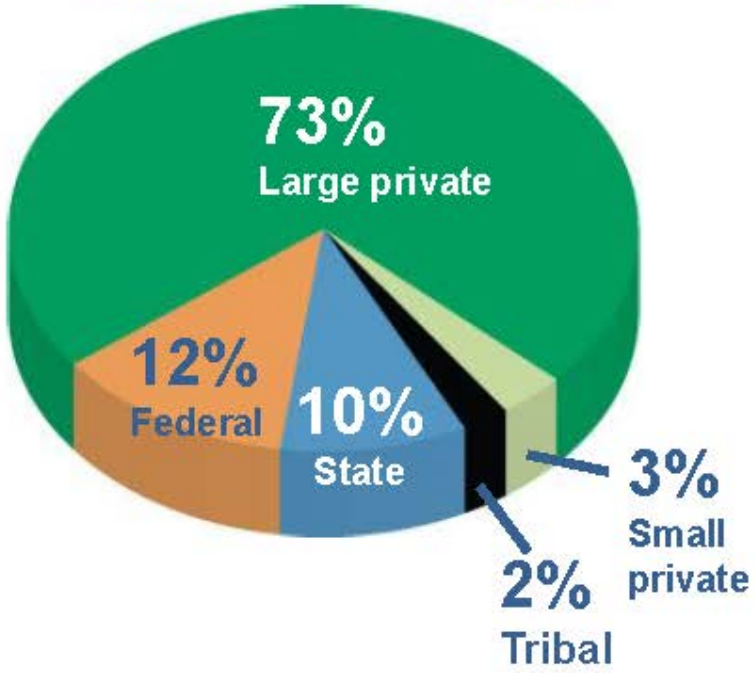
## Forestland by ownership




2010 DATA

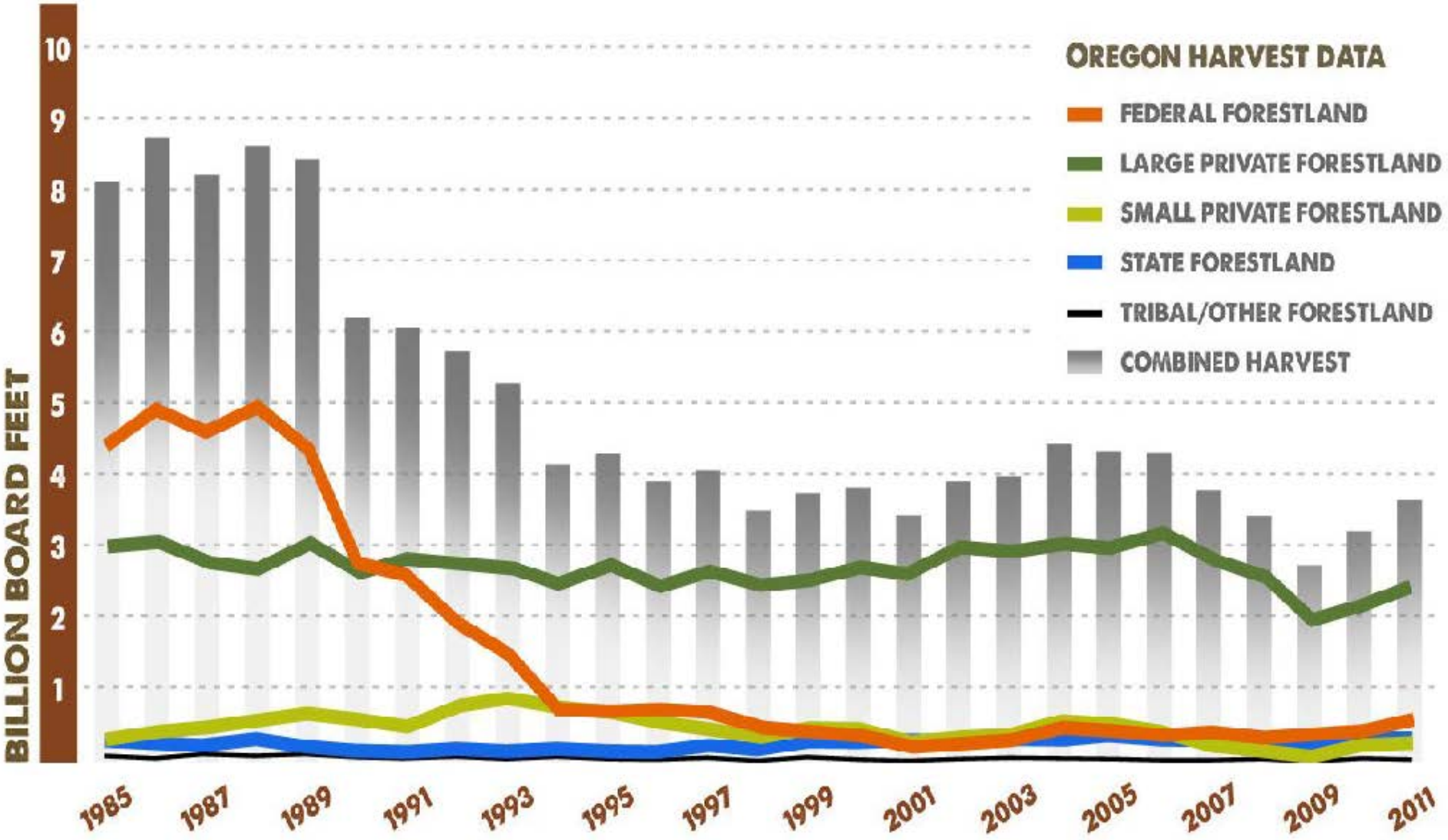
## Harvest by owner




**75% of annual harvest comes from private forestland**

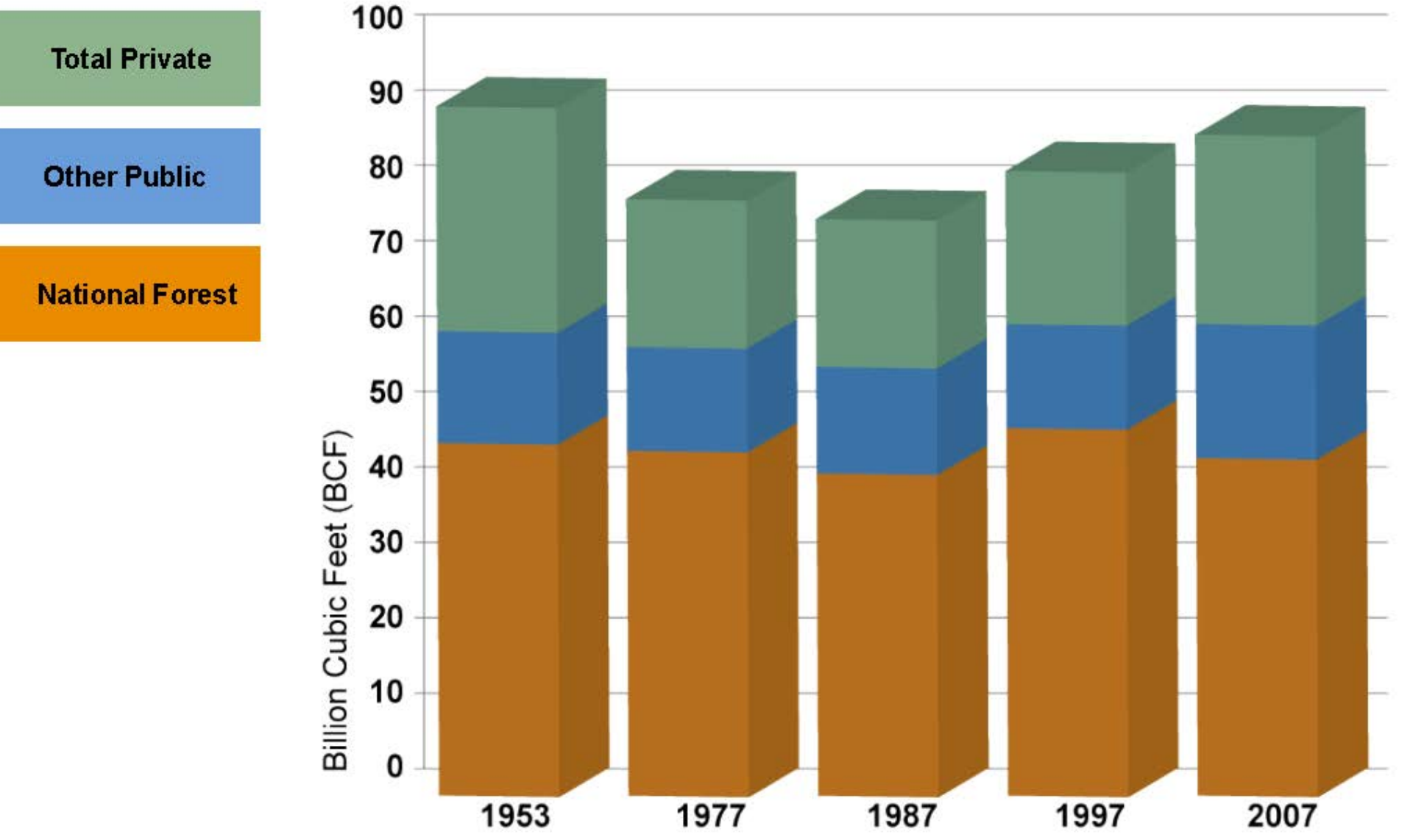
# Harvest by owner

THE FOREST REPORT .ORG



# Forest abundance





# College of Forestry

## Wood Science & Engineering Department

Meeting needs for renewable "green" materials, energy alternatives, innovation and economic growth

- Science, technology, engineering, and business practices
- Global competitiveness of US businesses

## Forest Engineering, Resources & Management Department

Forest management and conservation for socially desired benefits

- Forest productivity, resilience and adaptability
- Forest engineering and operations
- Forests and water

## Forest Ecosystems & Society Department

Forest ecosystems and human communities

- Forest ecosystem function at multiple scales
- Forests and climate
- Forests and biodiversity
- Forests and people

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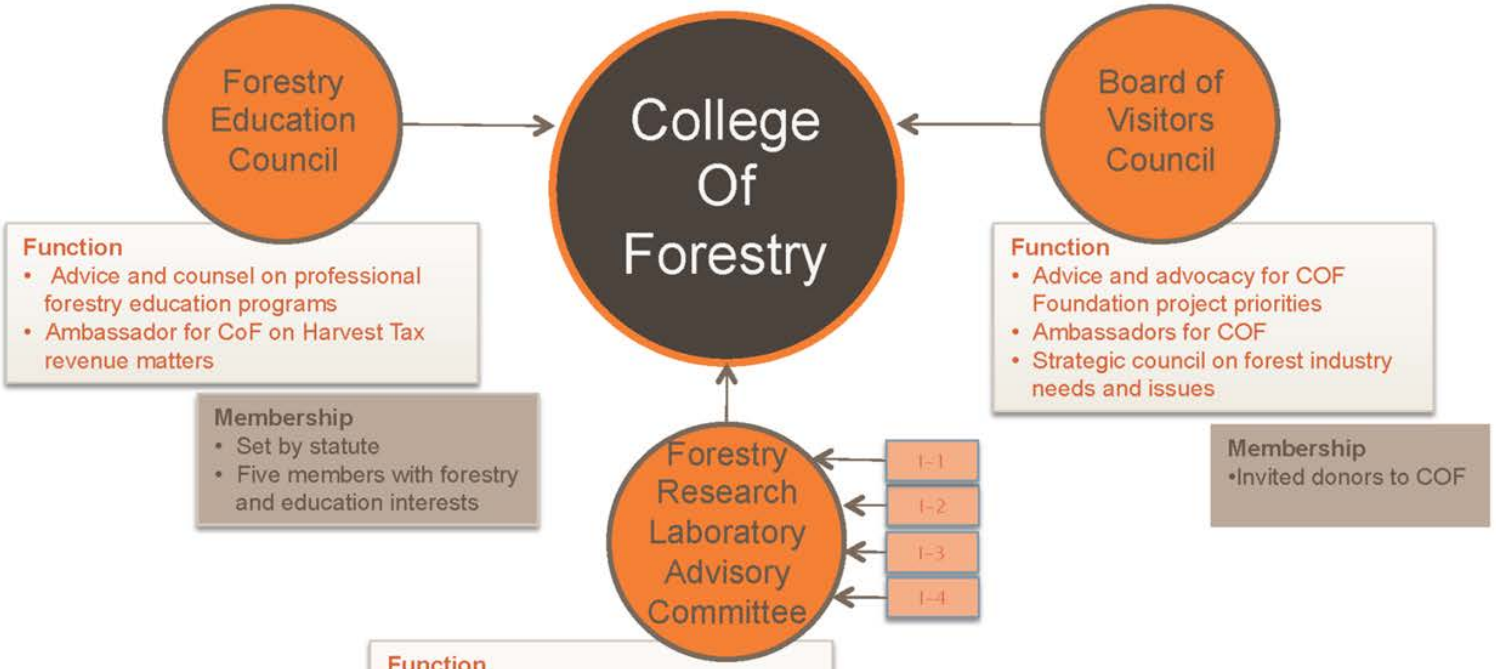
Form • Function • Membership

# OSU College of Forestry Advisory Bodies




**Function**
- Advice and counsel on professional forestry education programs
- Ambassador for CoF on Harvest Tax revenue matters

**Membership**
- Set by statute
- Five members with forestry and education interests

**Function**
- Advice and advocacy for COF Foundation project priorities
- Ambassadors for COF
- Strategic council on forest industry needs and issues

**Membership**
- Invited donors to COF

**Function**
- Strategic advice on research and outreach priorities and direction
- Foster application and use of COF research
- Foster collaboration and partnerships with private and public entities
- Ambassadors for COF research and outreach beyond the college

**Membership**
- 15 members set by statute
- Nominated by COF Dean

I-1 Ecosystem Science Institute
I-2 Silviculture Institute
I-3 Working Forest Institute
i-4 Competitiveness Institute

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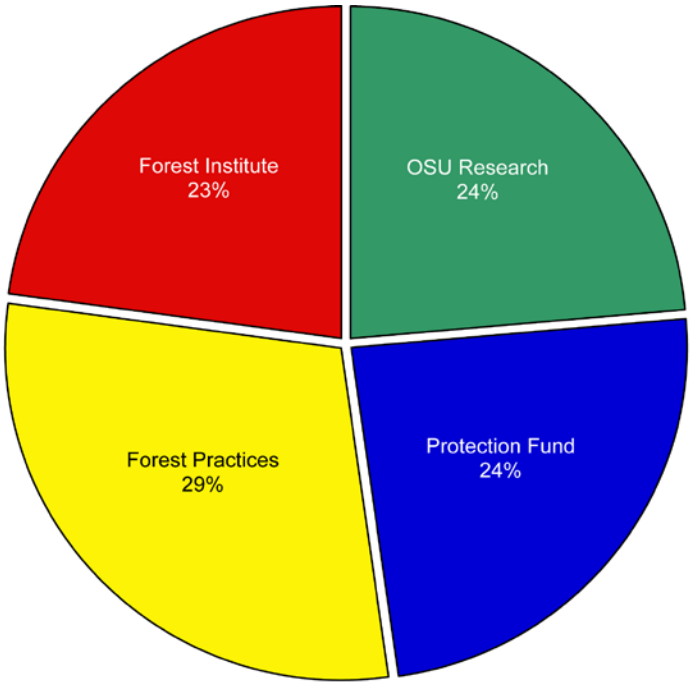
# Harvest Tax

**Products Harvest Tax Rates (per 1000 board feet)**

| Period of Time | | | Tax Rate |
|---|---|---|---|
| 1/1/2004 | thru | 12/31/2004 | $2.95 |
| 1/1/2005 | thru | 12/31/2005 | $2.85 |
| 1/1/2006 | thru | 12/31/2006 | $2.61 |
| 1/1/2007 | thru | 12/31/2007 | $2.61 |
| 1/1/2008 | thru | 12/31/2008 | $3.5806 |
| 1/1/2009 | thru | 12/31/2009 | $3.8956 |
| 1/1/2010 | thru | 12/31/2010 | $3.5750 |
| 1/1/2011 | thru | 12/31/2011 | $3.5750 |
| 1/1/2012 | thru | 12/31/2012 | $3.6841 |
| 1/1/2013 | thru | 12/31/2013 | $3.6841 |

**2009 Forest Products Harvest Tax Distribution**




http://www.oregon.gov/ODF/STATE_FORESTS/FRP/Charts.shtml

# Educators' day

- Educators' Day brings together the forest products industry with the presidents of OSU and U of O, the Chancellor of the Oregon University system and the Dean and department heads of the OSU College of Forestry.
- Purpose – to allow for frank and open discussion of the issues and challenges affecting higher education and the Oregon forest products industry

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# Renewable Materials Degree (RM)


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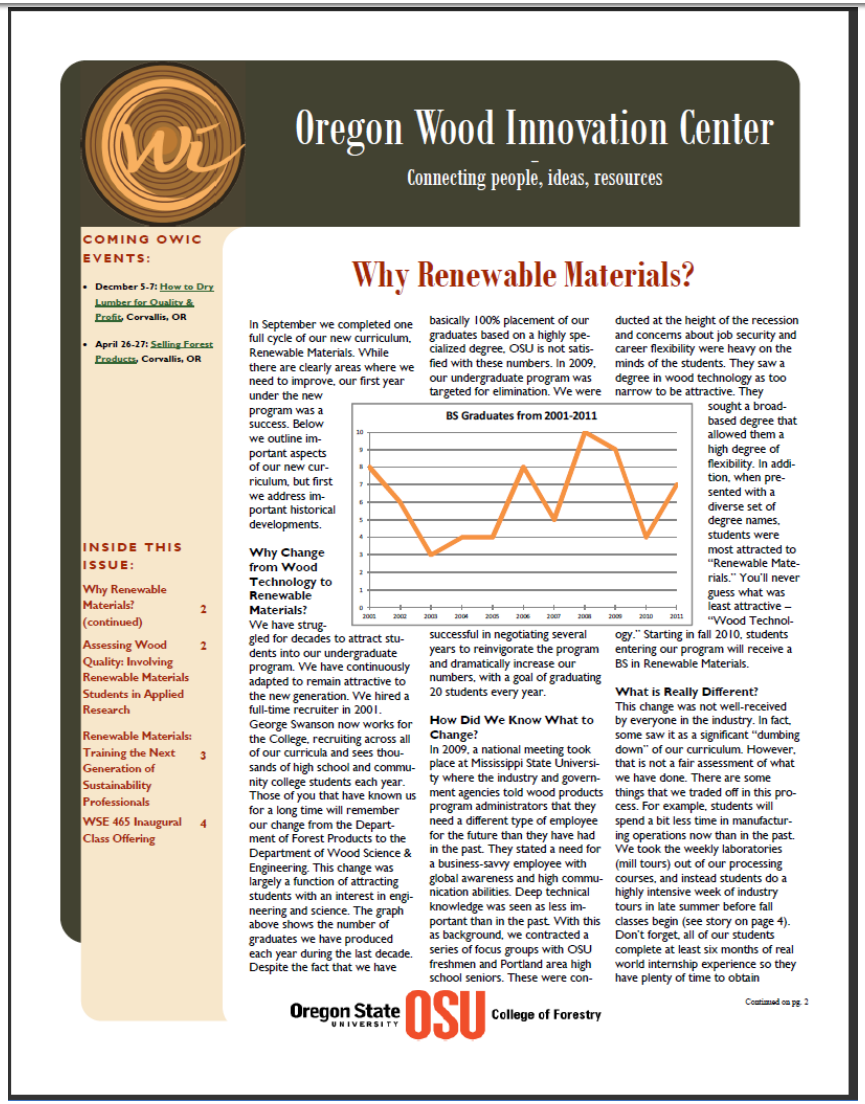
# Developing RM



Oregon Wood Innovation Center

Connecting people, ideas, resources

COMING OWIC EVENTS:

- December 5-7: How to Dry Lumber for Quality & Profit, Corvallis, OR
- April 26-27: Selling Forest Products, Corvallis, OR

INSIDE THIS ISSUE:



## Why Renewable Materials?

In September we completed one full cycle of our new curriculum, Renewable Materials. While there are clearly areas where we need to improve, our first year under the new program was a success. Below we outline important aspects of our new curriculum, but first we address important historical developments.

**Why Change from Wood Technology to Renewable Materials?**

We have struggled for decades to attract students into our undergraduate program. We have continuously adapted to remain attractive to the new generation. We hired a full-time recruiter in 2001. George Swanson now works for the College, recruiting across all of our curricula and sees thousands of high school and community college students each year. Those of you that have known us for a long time will remember our change from the Department of Forest Products to the Department of Wood Science & Engineering. This change was largely a function of attracting students with an interest in engineering and science. The graph above shows the number of graduates we have produced each year during the last decade. Despite the fact that we have basically 100% placement of our graduates based on a highly specialized degree, OSU is not satisfied with these numbers. In 2009, our undergraduate program was targeted for elimination. We were successful in negotiating several years to reinvigorate the program and dramatically increase our numbers, with a goal of graduating 20 students every year.




**How Did We Know What to Change?**

In 2009, a national meeting took place at Mississippi State University where the industry and government agencies told wood products program administrators that they need a different type of employee for the future than they have had in the past. They stated a need for a business-savvy employee with global awareness and high communication abilities. Deep technical knowledge was seen as less important than in the past. With this as background, we contracted a series of focus groups with OSU freshmen and Portland area high school seniors. These were conducted at the height of the recession and concerns about job security and career flexibility were heavy on the minds of the students. They saw a degree in wood technology as too narrow to be attractive. They sought a broad-based degree that allowed them a high degree of flexibility. In addition, when presented with a diverse set of degree names, students were most attracted to "Renewable Materials." You'll never guess what was least attractive – "Wood Technology." Starting in fall 2010, students entering our program will receive a BS in Renewable Materials.

**What is Really Different?**

This change was not well-received by everyone in the industry. In fact, some saw it as a significant "dumbing down" of our curriculum. However, that is not a fair assessment of what we have done. There are some things that we traded off in this process. For example, students will spend a bit less time in manufacturing operations now than in the past. We took the weekly laboratories (mill tours) out of our processing courses, and instead students do a highly intensive week of industry tours in late summer before fall classes begin (see story on page 4). Don't forget, all of our students complete at least six months of real world internship experience so they have plenty of time to obtain

Continued on pg. 2

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- Why change?
- What changed?
- What are we doing now?
- What about the future?

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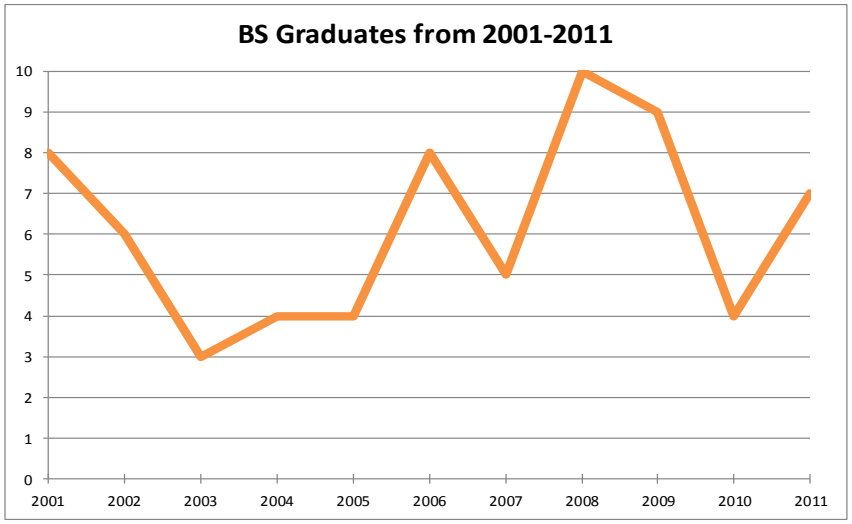
# Why Change?

- **Problem**
  - not enough students or graduates
  - employer frustration
  - Provost mandate—change or die
- **Analysis**
  - focus groups
  - national workshop
  - students/employers

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# Why Change?

- **Conclusions**
  - Need to rebrand major and career path
  - Employer needs are changing……
  - Need to revise curriculum and skill sets of graduates
- **Actions**
  - Rebranded degree program as **RENEWABLE MATERIALS**
  - Created new curriculum and launched Fall 2010
  - Developed marketing/communications plan and implemented aggressively

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# What Changed?

- Major re-investment by the College, Department, and Faculty
  - 100s of hours of personnel time invested in new curriculum
  - $40,000+ in promotion so far
- Reduced emphasis on manufacturing technologies
- Expanded coverage to other plant-based **renewable materials**.
- Focus on: building materials, consumer goods, bioenergy and some industrial chemicals

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# What Changed?

- New courses:
  - Renewable building construction and LCA
  - Bioenergy and environmental  impacts
  - Global trade in renewable materials
  - Professionalism, writing, communications
  - Added innovation content to marketing course
- Two options:
  - Marketing and Management (includes B&E Minor)
  - Science & Engineering
- Increased scheduling flexibility
- Increased "global" orientation

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# What Changed?

- Out with the old

- In with the new

# What are we doing now?
## Marketing the RM Program

- Videos
  - Faculty
  - Student
- Web page
- Facebook
- LinkedIn
- YouTube

Homepage | Renewable Materials | Oregon State University - Mozilla Firefox

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renewablematerials.oregonstate.edu

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# Renewable Materials

Why RM? Student Life Academics Interact Topics


## Training the next generation of sustainability professionals who...

-Are innovative scientists, engineers, and business people who want to make a difference

-Fill a growing demand for professionals in the manufacture, marketing and utilization of natural materials

-Have a broad education that emphasizes science, technology, business and communications

-Enhance local, regional and global sustainability

### Video

Meet Lech Muszyński Associate Professor in Composite Materials Science

Meet Arijit Sinha Assistant Professor in Green Building Engineering & Materials

*More Videos*

### Featured Student

### Calendar/Events

There currently are no events

### Check Out Our Facebook Page!

Oregon State University Renewable Materials Degree Program on Facebook

Like You like this.

Oregon State University Renewable Materials Degree Program

This is pretty cool!

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http://youtu.be/JPPvggOF6tU

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EDIT

About Edit

The OSU Renewable Materials Degree provides students with the specialized...

More

2,007
like this

123
talking about this

1
was here

Likes See All

AIA Washington Council

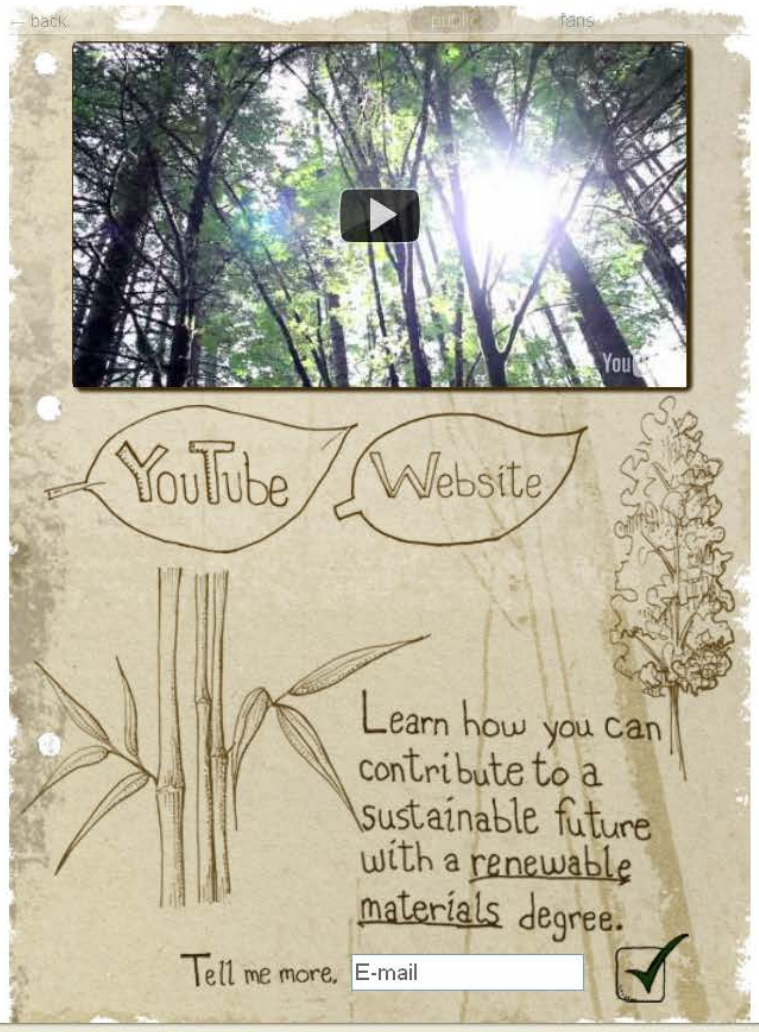
Construction Specification Institute

# Oregon State University Renewable Materials Degree Program

## Welcome

University · Government & Community · Corvallis, Oregon · Edit Info

← back wall fans




Admins (6) [?] See All

Use Facebook as Oregon State University Renewable Materials Degree Program

Notifications

Promote with an Ad

View old Insights

Invite Friends

You and Oregon State University Renewable Materials Degree Program

36 friends like this.

Recommend This Place

Help your friends discover great places to visit by recommending this.

Write a recommendation...

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Chris Knowles likes National Association of Home Builders.

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# OSU Renewable Materials

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## OSURenewableMaterial's activity

view

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**RM Internship Danny Way.mp4**

Renewable Materials senior Danny Way discusses his internship at Hampton Affiliates in Randle, Washington. Danny discusses the work he

OSURenewableMaterial 19 views

+ One more: Favorited

**OSURenewableMaterial** uploaded 1 month ago


**Renewable Materials Lech Muszynski.mov**

Curious about what kind of a faculty members teach in the Renewable Materials degree program at Oregon State University? This video provides

OSURenewableMaterial 42 views

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**Renewable Materials Arijit Sinha.mov**

Curious about what kind of a faculty members teach in the Renewable Materials degree program at Oregon State University? This video provides

OSURenewableMaterial 66 views

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**Faculty Profile: Dr. Arijit Sinha, Renewable Materials**

This video highlights Dr. Arijit Sinha, a faculty member in the Oregon State University Renewable Materials degree program.

OregonStateUniv 52 views

+ One more video

**OSURenewableMaterial** uploaded 4 months ago

**Renewable Materials Career Opportunities**

Curious what kind of a job you can get with a degree in Renewable Materials from Oregon State University? This video provides an overview

OSURenewableMaterial 20 views

## About OSU Renewable Materials

OSU's Renewable Materials degree program fills a growing demand for professionals in sustainable natural materials. Renewable materials, such as wood, bamboo, straw and other plant-based goods, are used to produce building products, textiles, pap...

more

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Renewable Materials

Created by

OSURenewableMaterial

Latest Activity

Dec 21, 2011

Date Joined

Oct 1, 2010

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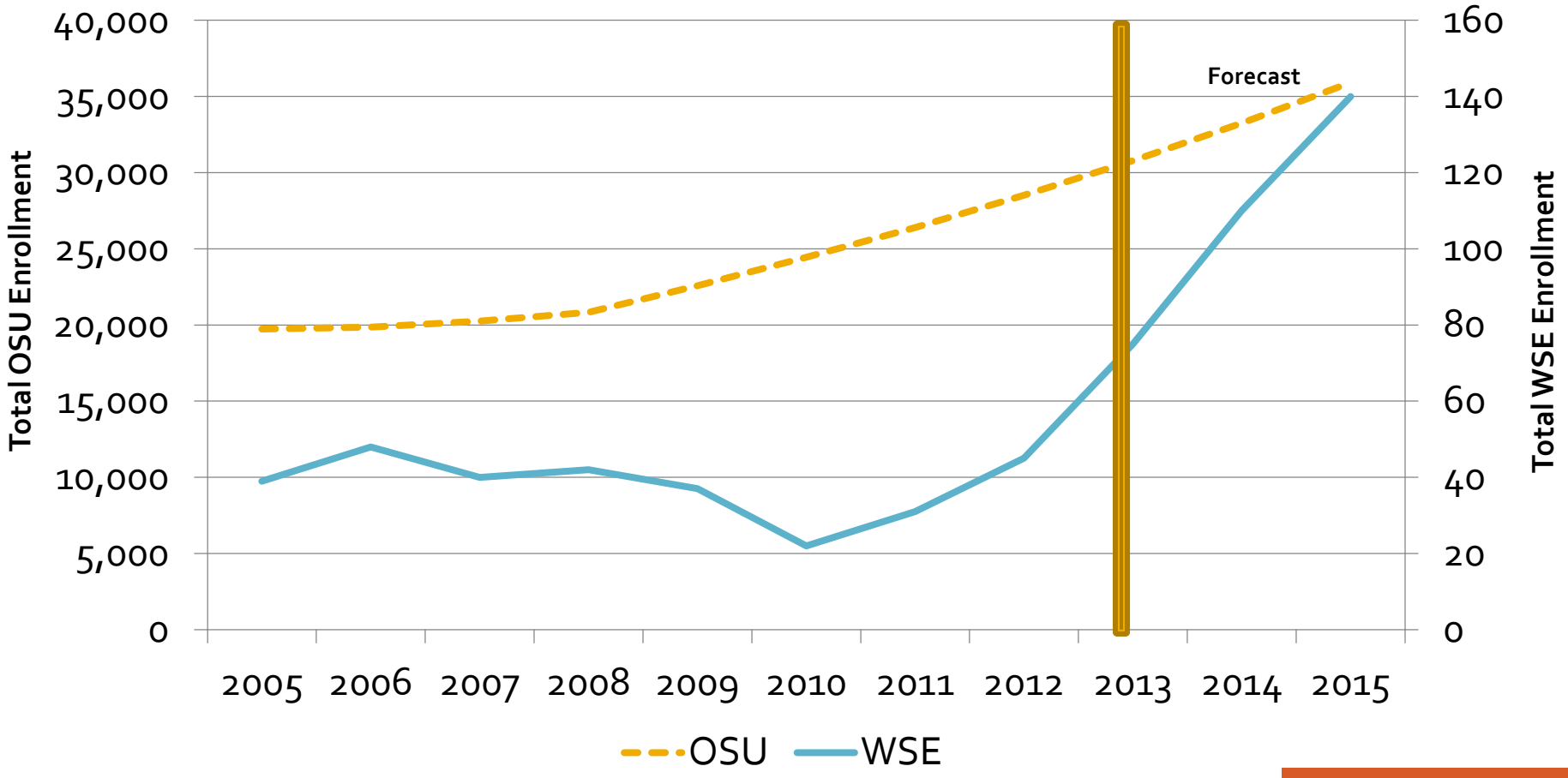
# Undergraduate Enrollment

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# RM – Undergraduate Research

- 2012/2013 – 2 of every 3 students involved with research/testing
- FRA to help with student supervision
- BoV support for student projects
- Examples of projects:
  - Hybrid poplar properties
  - Biomass heat values
  - Bio-char market assessment
  - Treated wood use in gardens
  - Red mold in lumber
  - Steam distillation products from forest biomass
  - Bamboo Glulam

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# RM – Undergraduate Internships

- All students involved in industry based internships
- Increasingly companies are viewing internships as an opportunity to assess RM students for future employment
- Major effort to link with industry to provide opportunities for as many students as possible
- Crucial as student body increases
- OWIC Innovation Days
- Job Fair

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# WSE – RM

- Educating the workforce for the future "green" economy
- Our graduates are in high demand
- Our education and research missions have important impacts on Oregon
  - Improved quality of life for citizens
  - Innovative utilization of biobased materials
  - Improved built environments

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