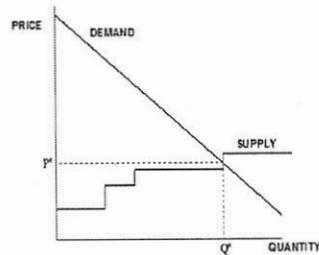


Economic Analysis to Satisfy ORS 527.714(7)

Brandon R. Kaetzel, PhD

January 4, 2017



Background

- This analysis assessed the impact of a change in the riparian rules for small and medium salmon, steelhead, and bull-trout streams (SSBT)
- The economic analysis has been a two year endeavor between ODF, USDA-FIA, OSU, and UO
- ORS 527.714(7) indicates four questions/estimates that have to be answered/calculated before the Board can move forward with a rule decision

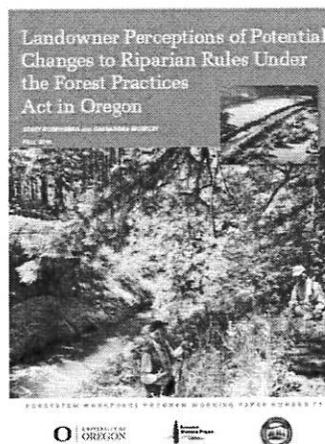
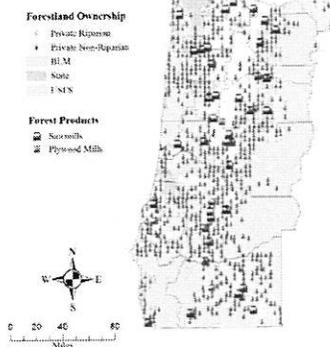
Background

The four pieces of ORS 527.714(7) are:

- ORS 527.714(7)(a) an **estimate of the potential change in timber harvest** as a result of the rule,
- ORS 527.714(7)(b) an **estimate of the overall statewide impact, in output, incomes, and employment,**
- ORS 527.714(7)(c) an **estimate of the total economic impact on the forest products industry and common school and county forest trust land revenues, both regionally and statewide, and**
- ORS 527.714(7)(d) **Information derived from consultation with potentially affected landowners and timber owners and an assessment of the economic impact of the proposed rule under a wide variety of circumstances, including varying ownership sizes and the geographic location and terrain of a diverse subset of potentially affected forest parcels**

Background

Western Oregon Log Market Model

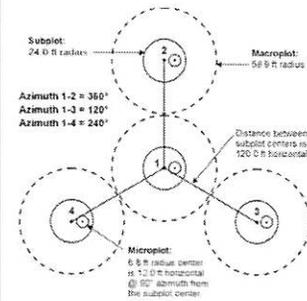
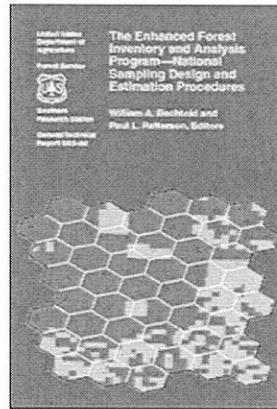


The Log Market Model (LMM)

Components

- a) Inventory Data
- b) Silvicultural Regimes
- c) Timber Yield Projections
- d) Changes in Timberland
- e) Model that projects future harvest

Focus on (a)

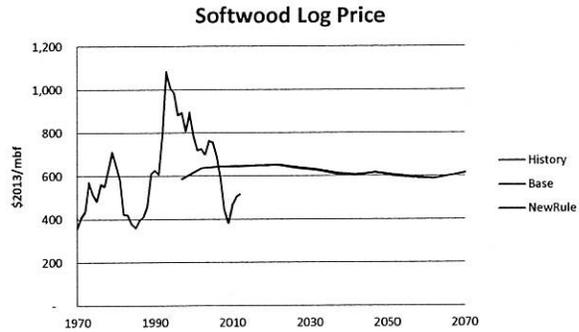
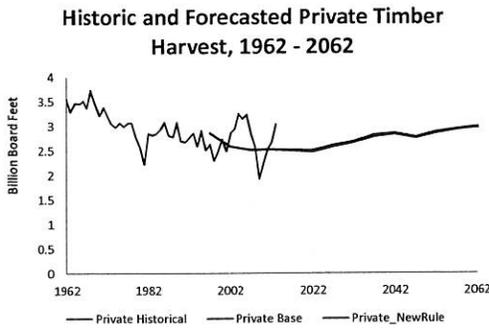


The Log Market Model (LMM)

Two Scenarios:

1. Base scenario
 - a) No cut buffer of 23 horizontal feet on small fish bearing streams
 - b) No cut buffer of 41 horizontal feet on medium fish bearing streams
2. Proposed Riparian SSBT Policy
 - a) No cut buffer of 54 horizontal feet on small fish bearing streams
 - b) No cut buffer of 72 horizontal feet on medium fish bearing streams

The Results



ORS 527.714(7) (a) an estimate of the potential change in timber harvest as a result of the rule

Table 1. Change in 20-year annual average harvest between current rule and the proposed new rule

Riparian Policy	Industrial	Non-Industrial	Total
20-year average annual softwood harvest (mbf)			
Model Results for ALL Small and Medium fish-bearing streams			
Current Rule (CR)	1,965,380	576,419	2,541,799
New Rule	1,946,560	567,268	2,513,828
Change	(18,820)	(9,151)	(27,971)
% Change	-0.96%	-1.59%	-1.10%
Change for SSBT (25 to 35% of Small and Medium fish-bearing streams)			
Change if SSBT is 25%	(4,705)	(2,288)	(6,993)
% Change from CR	-0.24%	-0.40%	-0.28%
Change if SSBT is 35%	(6,587)	(3,203)	(9,790)
% Change from CR	-0.34%	-0.56%	-0.39%

ORS 527.714(7)(b) An estimate of the overall statewide impact, in output, incomes, and employment

Table 2. Estimate of Jobs Affected and Reduction in Employee Compensation by Potential Change in Rule for SSBT

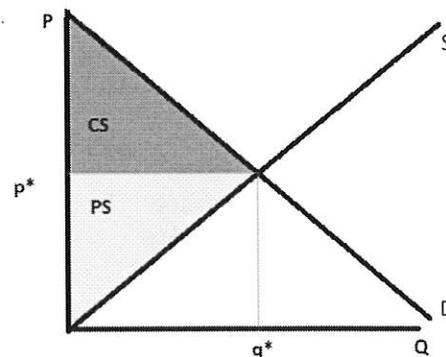
	Jobs Affected	Compensation
All Small and Medium	248.94	\$15.23 million
if SSBT is 25%	62.24	\$3.81 million
if SSBT is 35%	87.13	\$5.33 million

Table 3. Change in 20-year annual average lumber and plywood output between current rule and the proposed new rule

Riparian Policy	Lumber	Plywood
	(mbf) - 20-year annual average - (msf)	
Model Results for ALL Small and Medium fish-bearing streams		
Current Rule (CR)	6,066,420	3,338,456
New Rule	6,039,871	3,304,036
Change	(26,549)	(34,420)
% Change	-0.44%	-1.03%
Change for SSBT (25 to 35% of Small and Medium fish-bearing streams)		
Change if SSBT is 25%	(6,637)	(8,605)
% Change from CR	-0.11%	-0.26%
Change if SSBT is 35%	(9,292)	(12,047)
% Change from CR	-0.15%	-0.36%

ORS 527.714(7)(c) An estimate of the total economic impact on the forest products industry and common school and county forest trust land revenues, both regionally and statewide

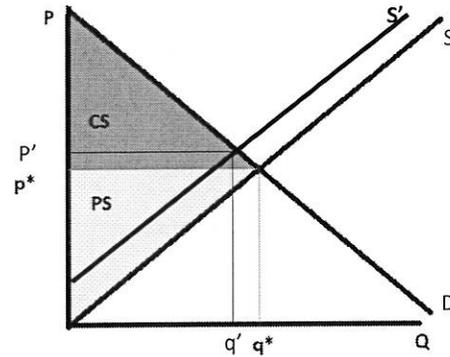
- Decrease in net social surplus:
 - All s/m – decrease of \$99.3 million
 - SSBT is 25% - decrease of \$24.83 million
 - SSBT is 35% - decrease of \$34.76 million
- This is out of \$45.97 billion – these decreases are each less than one quarter of one percent



Not to scale

ORS 527.714(7)(c) An estimate of the total economic impact on the forest products industry and common school and county forest trust land revenues, both regionally and statewide

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Not to scale

ORS 527.714(7)(d) ... and an assessment of the economic impact of the proposed rule under a wide variety of circumstances, including varying ownership sizes...

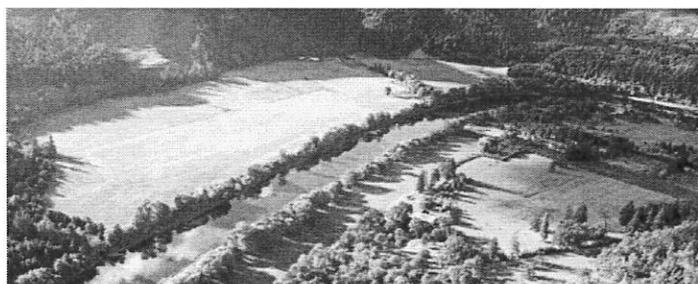
Table 4. Total value of encumbered acres by size class

Size Class (acres)	Number of Owners	Encumbered Acres	LEV/Acre	Total Value of Encumbered Acres
2-10	39,875	776	\$7,155.30	\$ 5,552,512.80
10-20	10,427	552	\$7,155.30	\$ 3,949,725.60
20-50	9,258	1,180	\$7,155.30	\$ 8,443,254.00
50-100	3,834	1,040	\$7,155.30	\$ 7,441,512.00
100-500	2,982	2,995	\$7,155.30	\$ 21,430,123.50
500-5000	470	4,105	\$7,155.30	\$ 29,372,506.50
>5000	46	5,704	\$5,107.22	\$ 29,131,582.88
Total				\$ 105,321,217.28

Questions?



Landowner Perceptions of Potential Changes to Riparian Rules in Oregon



Presented by: Cassandra Moseley
Ecosystem Workforce Program, University of Oregon

14

Today's focus

- Landowner survey and results
 - Landowner survey overview
 - Who took the survey?
 - What did we find?



15

The survey



- Intent: assess private forest landowner views on the rule change
- Mailed to: 1,379 landowners with forestland and fish-bearing streams
 - 17 counties west of Cascades
- Questions on:
 - Property, land-use, and respondents characteristics
 - How landowners view proposed changes
 - Perspectives on forest management

16



Response

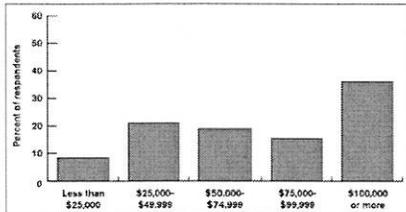
- 46% response rate
- 437 respondents owned 10 or more acres of forestland

17

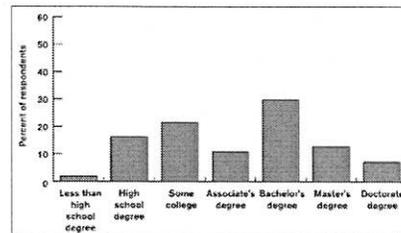
Respondents

- More than ¾ male
- Median age was 68

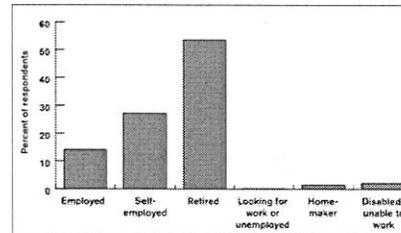
Income



Education



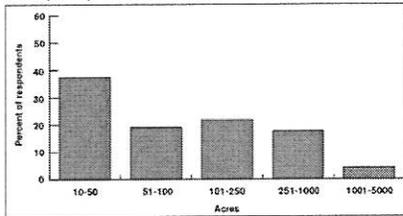
Work situation



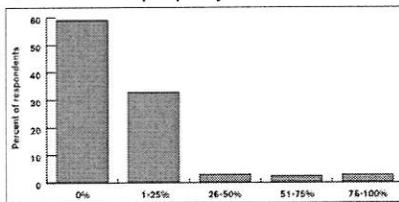
18

Property and management

Property size



% of income from forest management activities on property



- Forest management plan for property?
 - 32% yes
 - 62% no
 - 6% don't know

19

Knowledge on buffer regulations

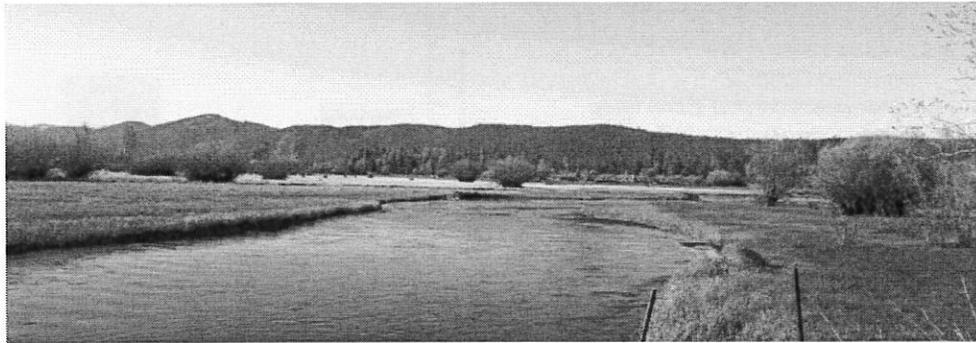


- 66% were familiar with current streamside buffer rules
- 37% were aware of proposed changes to increase buffers



20

Findings: 3 Options



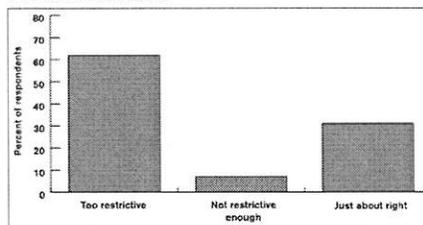
- Similar but simplified versions of the ODF proposed rule options
- For each option
 - how restrictive is it?
 - how likely is it to change timber management practices on property?

21

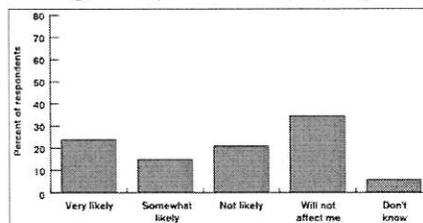
Option 1

Simplified option 1:
Landowners cannot cut any trees within 60 feet of a small fish-bearing stream and within 80 feet of a medium fish-bearing stream.

Restrictiveness



Likelihood to change timber management practices on property

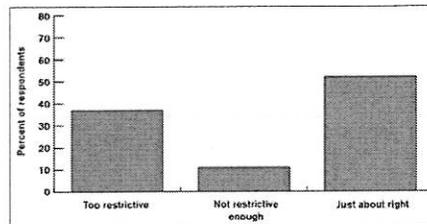


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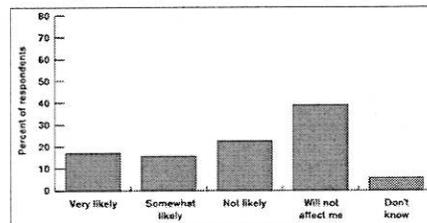
Option 2

Simplified Option 2:
 Landowners can cut some trees within the streamside buffer, but would need to leave other trees within the buffer uncut. Landowners with small fish-bearing streams would have to leave close to 50 percent of the trees within the streamside buffer uncut. Landowners with medium fish-bearing streams would have to leave close to 60 percent of the trees within the buffer uncut.

Restrictiveness



Likelihood to change timber management practices on property

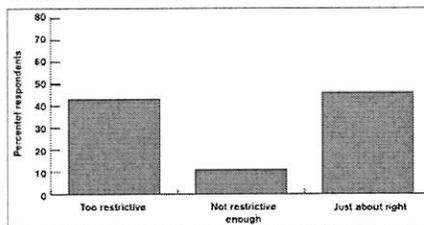


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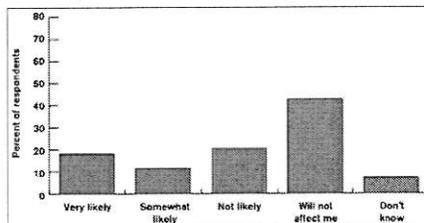
Option 3

Simplified Option 3:
 On properties with a stream that generally runs east to west, landowners can choose to use Option 1 or Option 2 for the south side of the stream and leave a 40-foot streamside buffer where no trees are cut on the north side of the stream.

Restrictiveness



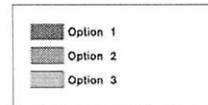
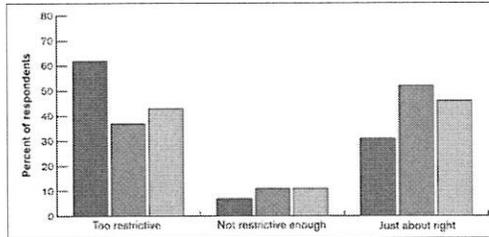
Likelihood to change timber management practices on property



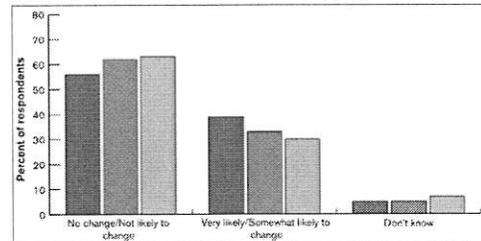
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Comparison of Options

Views on each option

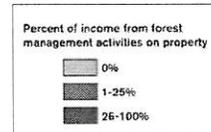
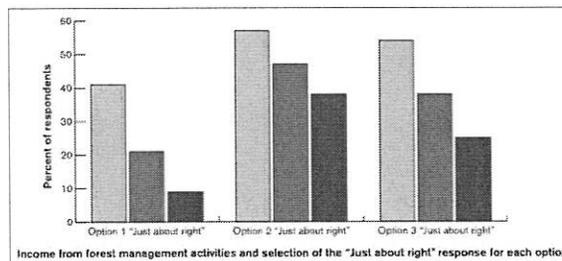
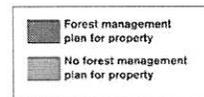
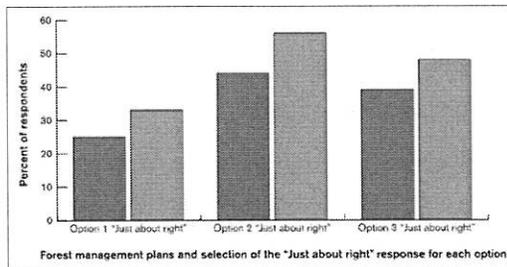


Likelihood of each option changing management practices



25

“Just about right”

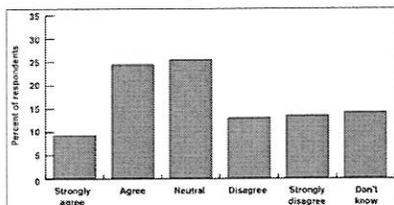


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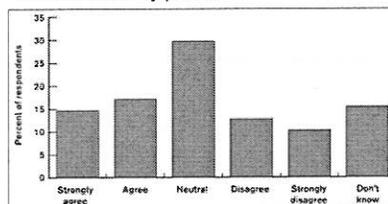
Perceptions of rule change as a whole

The proposed rule change...

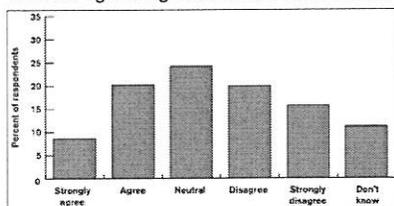
...will benefit salmon, steelhead, and bull trout



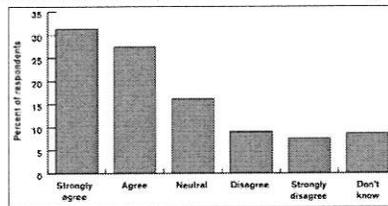
...will reduce my profits



...is the right thing to do for the environment



...adds unnecessary red tape to forest management



27

Land use and perspectives

- Respondents who use their property as a primary residence viewed all options more favorably
- Respondents who reported income generation and passing the land on to heirs as main uses were more likely to believe that the rule would affect them, but nearly half of these respondents still did not believe that they would be affected at all.

28

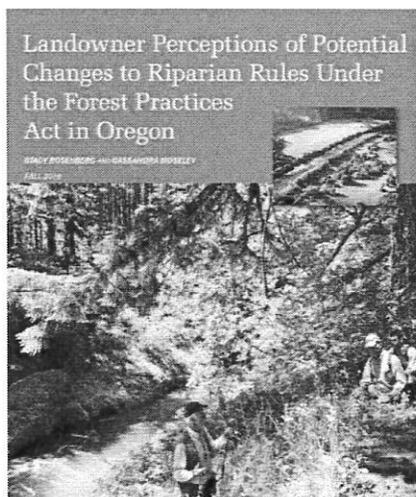
Themes from open-ended questions

- Wanting greater flexibility to work in streamside areas
- Issues with government regulations
- Opposition or support for streamside buffers



29

Report



<http://ewp.uoregon.edu/publications/working>



30



Questions?

Public Comment

33

Recommendation

That the Board of Forestry approve the report as satisfactory work regarding the requirements set forth in ORS 527.714(7).

34

