

## Forest Practices Effectiveness Monitoring and Compliance Audit Update



Presentation to the Oregon Board of Forestry  
9 September 2015

### Monitoring Unit History

Monitoring Unit Topic	1990's	2000-2012	2013-2015
Unit/Personnel	Unit created	Unit cut, restored	+1FTE Clean Water POP stalls
Monitoring Strategy		2002 Update	Update started
Landslides	X		
Pesticides	X	X	X
Road BMPs	X	X	X
Stream Temp	X	X	X
Riparian function	X	X	X
FPA Compliance	X	X	X

## Completed & Ongoing Projects vs. 2002 Monitoring Strategy Priorities

Top	High	Moderate
<ul style="list-style-type: none"><li>• RipStream</li><li>• Riparian Rules</li><li>• Leave Tree Report</li><li>• Oregon Plan Voluntary Measures</li></ul>	<ul style="list-style-type: none"><li>• Trask Watershed Study Road Sediment Analysis</li></ul>	<ul style="list-style-type: none"><li>• Pesticide Stewardship Partnerships</li></ul>

- + **FPA Compliance Audit – Legislative Budget Note, addresses various Strategy topics**
- + **Monitoring Strategy Update underway**

## Compliance and Implementation



## Compliance & Implementation Projects

- FPA Compliance Audit
  - Accomplishments
  - Next steps
- Leave Tree & Downed Wood Compliance
- Voluntary Measures in Coast Range

### FPA Compliance Audit



## FPA Compliance Audit

- Goal: Determine state-wide FPA compliance
- Objectives:
  - Statistically-valid sampling
  - Determine compliance rates for industrial/non-industrial/other lands
  - Compliance rates for NWO/SOA/EOA

## FPA Compliance Audit

Currently examining 55 rules:

- Division 625: Harvest
- Division 630: Roads
- (Division 640: Riparian Areas)



## FPA Compliance Audit: Accomplishments

- 2013 Compliance Audit Report (Board: Sept. 2014)
- 2014 Compliance Audit Report (finalizing report)
- 2015 Implementation delays
  - Biennium budget
  - Emergency fire duties

## Compliance rates

- For ODF Areas, similar rates in 2013 and 2014 (both 96% statewide; range: 94-98%)
- By ownership, similar rates in 2013 and 2014 (range: 94-98%)
- By Rule Division:

Rule Division	Description	2013	2014
Several	Written plans	75%	83%
625	Road Construction and Maintenance	97%	98%
630	Harvesting	95%	93%
640	Vegetation Retention Along Streams	98%	99%
655	Protection for Other Wetlands	72%	83%
660	Operations Near Waters of the State	99%	98%

## Compliance Audit: Values Created

- Focused training (internally and externally)
- Forest certification process
  - Useful for periodic review of management measures on timber source lands

## FPA Compliance Audit Anticipated Events 2015-2016

- Continue examining same rules in 2015, 2016 → evaluate compliance variance, trends in response
- Develop strategy to expand (2017+)

## Leave Tree & Downed Wood

Monitoring compliance: harvest > 25 acres that trigger reforestation requirements (n=37)

- 2 snags/green trees per acre
- 2 downed logs
- 97% compliance rate
- However: could not assess compliance for leave trees outside of mapped unit boundaries (8% of units; n=3)

Report to Board in April 2014 ->

Board direction: explore improving efficiency & effectiveness with Regional Forest Practices Committees

## Voluntary Measures

### Study Objectives:

1. Tell story of voluntary measures on forestlands in Oregon
2. Identify barriers to implementation & reporting of voluntary measures
3. Describe measures most frequently implemented

### Methods:

- Summarize information from Oregon Watershed Restoration Inventory (OWRI) database (obj. 1, 3)
- Survey forestland owners re: barriers to implementing, reporting voluntary projects (obj. 2)

## Voluntary Measures

### Study benefits:

- Increased awareness & support of voluntary measures by landowners, stakeholders
- Improved access to technical assistance, reporting opportunities, financial assistance for implementing restoration work
- Increased implementation and reporting of voluntary measures

## Effectiveness Monitoring



## Effectiveness Monitoring

### RipStream

- Accomplishments
- Riparian Rule Analysis

### Trask Watershed Study

## Effectiveness Monitoring - RipStream

Evaluate effectiveness of FPA rules and State Forest management at:

- Protecting stream temperatures
- Promoting desired riparian structure, large wood recruitment

### Focus to date:

- Riparian protections & stream temperature
- Downstream temperature outcomes

### Upcoming:

- Riparian stand conditions/desired future conditions
- Large wood recruitment

## RipStream Accomplishments

### Cooperative agreements & contracts

#### Downstream temperature analysis

-OSU: Descriptive model (PI: Dr. Iván Arismendi; report complete)

-Consultant: Physical model (PI: Dr. Lawrence Davis; in press)

#### Large wood recruitment

Case study of large wood recruitment in a State Forest stream (PI: Dr. Mark Meleason; published)

Presentation of Systematic Review work (AWRA 2013; SAF 2014)

## RipStream: Upcoming work

- Analyses complete, manuscripts in prep:
  - Downstream temperature descriptive model
  - stream temperature predictive model
  - Biologically-based numeric criteria
  - stream temp. & shade response 1-5 yrs. post-harvest
- Analysis of the riparian desired future condition
- Large wood recruitment analysis

## Riparian Rule Analysis

### Monitoring group charge:

- Determine proposed alternatives reflect scientific information
- Review science on applicability of alternatives
- Evaluate alternatives in terms of restrictions on practices; provide input on alternatives
- Select alternative(s) to carry into rule language development and/or voluntary measure(s)
- Analyze geographic scope of proposed rules

The Department met regularly with: Regional Forest Practices Committees, Committee for Family Forestlands, and stakeholders to develop prescriptions that meet PCW to MEP

### Trask Study







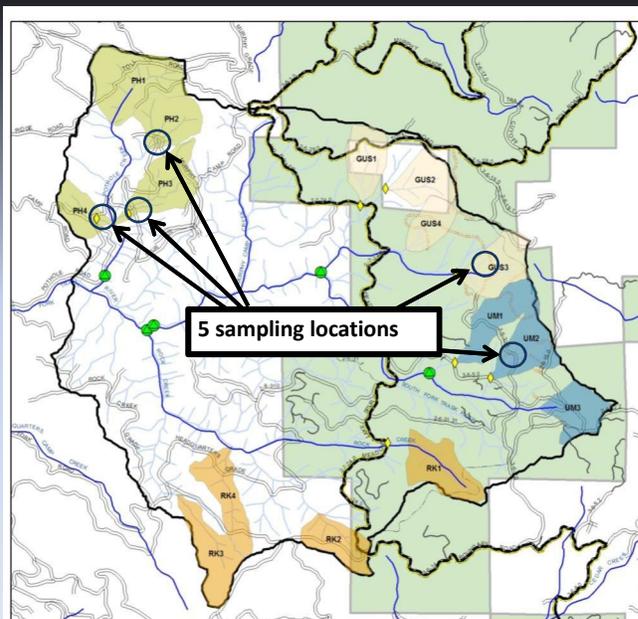




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## Trask Road Sediment Study

- Three years of data collection: pre-/post-road construction & maintenance, post-harvest & haul
- Five headwater streams intensively sampled above & below road
- Facet of suspended sediment sampling currently being done at 4 sites



## Trask Road Sediment Study

### Study findings:

- Increases in turbidity, sediment at some road crossings
- Level of increases below thresholds detrimental to local organisms
- Largest increases in turbidity & sediment: control crossing (coincident with alder falling between 2 sample stations)
- One crossing (surrounded by clearcut harvest without buffer): diminished sediment & turbidity levels (above-below road, after harvest & road improvement)

PI: Dr. Ivan Arismendi (OSU), manuscript submitted (April 2015)

## Updating Private Forests' Monitoring Strategy

### 2002 Strategy

- Guided monitoring priorities since it was updated in 2002
- Prioritized list of monitoring questions categorized by general issues and monitoring type

### 2015-16 Update to Strategy:

- Draft work plan for update process (Board approved, January 2015)
- Staff work: gathered input from stakeholders, partner agencies on questions and how to prioritize them
- Next phases:
  - Prioritize questions
  - Address stakeholder input on the draft Strategy
  - Bring Strategy to Board (2016)

## Water Quality Pesticide Management Team (ODA, DEQ, OHA, ODF, OSU, OWEB+)

2011 State Pesticide Mgt Plan –  
Reduce pesticides in water.  
4 Key Questions

Pesticides of concern?

Watershed vulnerable?

Monitoring outcomes?

Coordinated response?

## Pesticide Stewardship Partnerships

- 8 PSPs (9<sup>th</sup> -Middle Rogue)
  - 3 include private forestland (Clackamas, Hood, South Yamhill)
- Non-regulatory, collaborative approach
- ODF role - Technical info on forest practices, connect forestry community with Team
- Yamhill Results – Forest pesticides not at frequencies or concentrations of concern
  - Change in federal Atrazine benchmark likely to change this outcome

## Additional Unit work

### **Unit personnel also:**

- Developed workshop on interface between science and values in policy-making processes
- Represented ODF on interagency water-monitoring group (Stream Team)
- Administered contract for State Forests' Systematic Review of hypotheses on Marbled Murrelets

## Next Steps

- Continue Riparian Rule Support
- Complete other analyses, reports/manuscripts
- Address leave tree implementation questions (RFPCs)
- Continue participation in Water Quality Pesticide Management Team
- Continue integration of Compliance Audit outcomes with internal/external training

## Questions?