



Private Forests Monitoring Unit Update

Oregon Board of Forestry, 5 September 2018

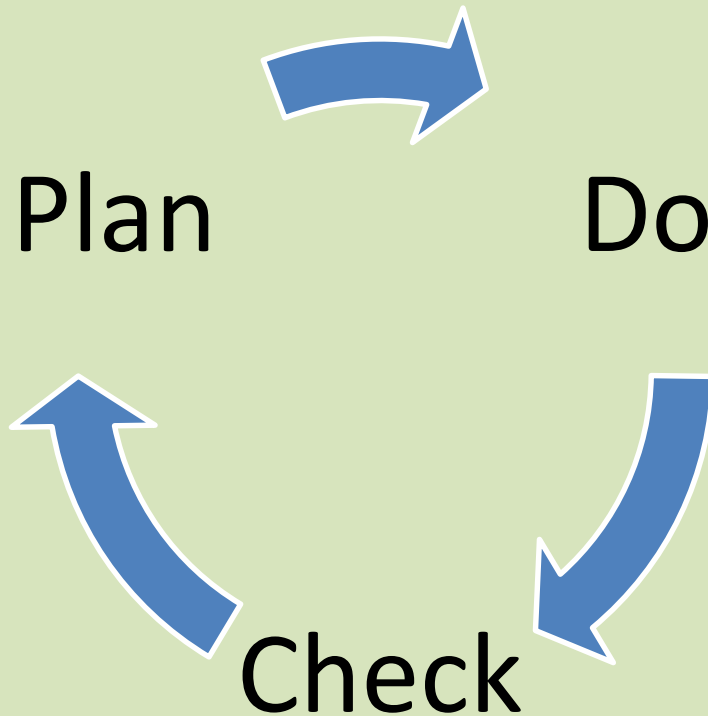
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Training Coordinator

Adam Coble
Monitoring Specialist

Ariel Cowan
Monitoring Specialist

Why Monitor?



- **Expectations**

- Statute, Rule, Policy
- Agency best practice

- **Emphasis**

- Collaboration
- Continuous learning
- Adapting to new science
- Rules

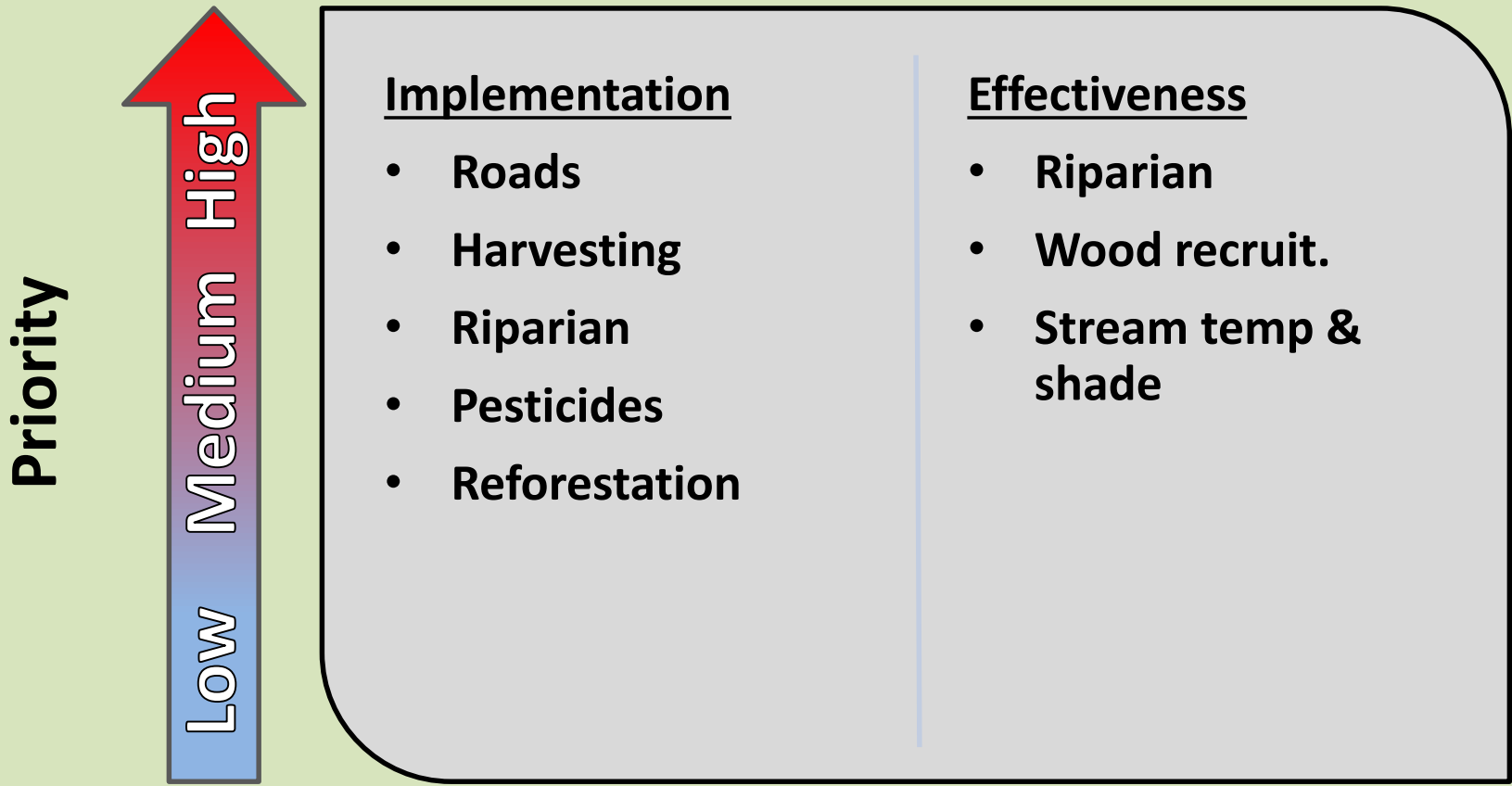
- **Riparian**

- **Landslides, Public Safety**

- **Pesticides**

References: ORS 527.710(7), OAR 629-635-0110,
OAR 629-623-0000(4), OAR 629-620-0700,
Forestry Program for Oregon

Living the Strategy: Priority Work Topics



All projects: High – medium priority topics

Monitoring Update

- **Implementation**

- Compliance Audit: 2013-2017 effort (2017 focus)
- Up next: Reforestation Study

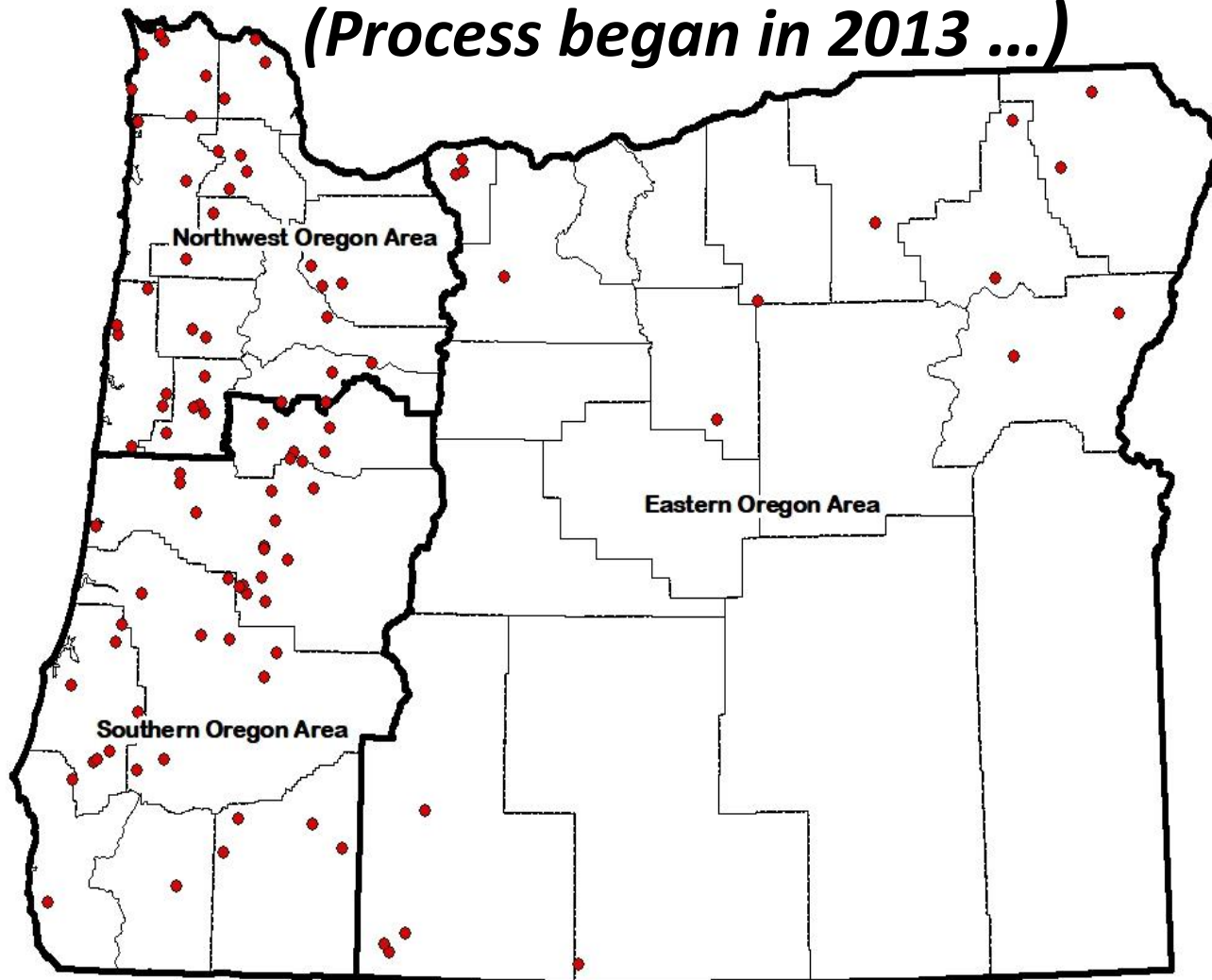
- **Effectiveness**

- Western OR streamside protections review
- Siskiyou streamside protections review

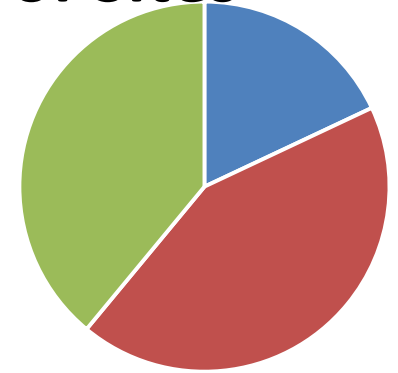
Forest Practices Compliance Monitoring - 2017



(Process began in 2013 ...)



Distribution of Sites



■ Eastern Oregon Area

■ Southern Oregon Area

■ NW Oregon Area

2017: 100 sites statewide, stratified based on ODF Area and Ownership Class

Rule Divisions subject to this study are:

Written Plans of Operation – Various Divisions

- **Road Construction & Maintenance**
- **Harvesting**
- **Vegetation Retention along Streams**
- **Protection of Significant Wetlands**
- **Protection of “Other Wetlands”**
- **Operations Near Waters of the State**

PROCESS

CONTRACTOR Gathers Field Data
Electronic download to ODF



ODF Analyzes Data for Compliance



COMPLIANT

DATA POINT

**NON -
COMPLIANT**

ODF : Quality Control Sampling of Data at Sites

AGENDA ITEM A

Attachment 02
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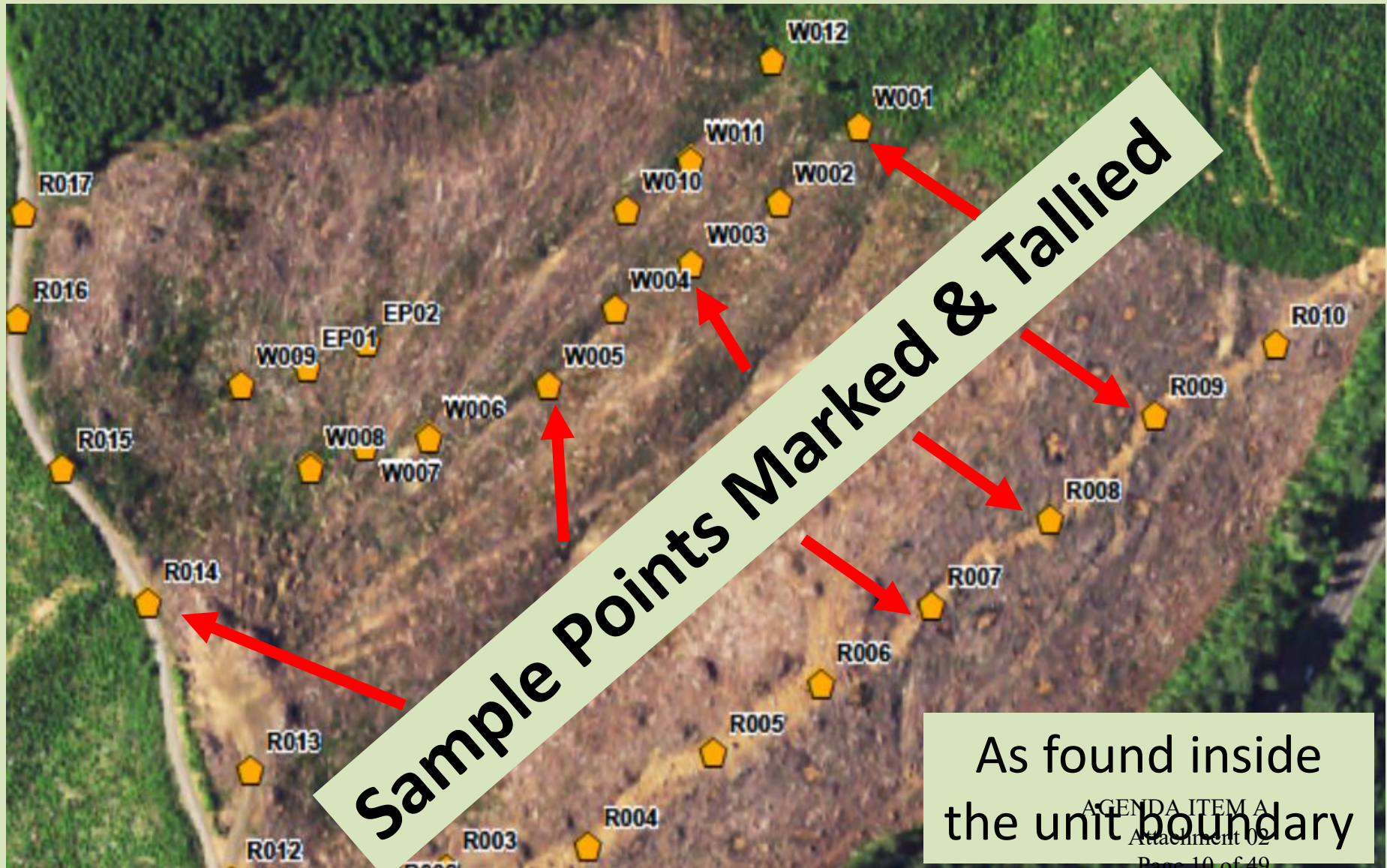


Non-Compliance =

(At the sample point)

- a) Rule was applicable at the sample point,**
- b) Rule not implemented properly**
- c) Sediment deposition to waters observed –
or other damage, or administrative
requirements not met**

Data Gathering



2017 Sample...



25,600 observations on 100 sites

2017 Results

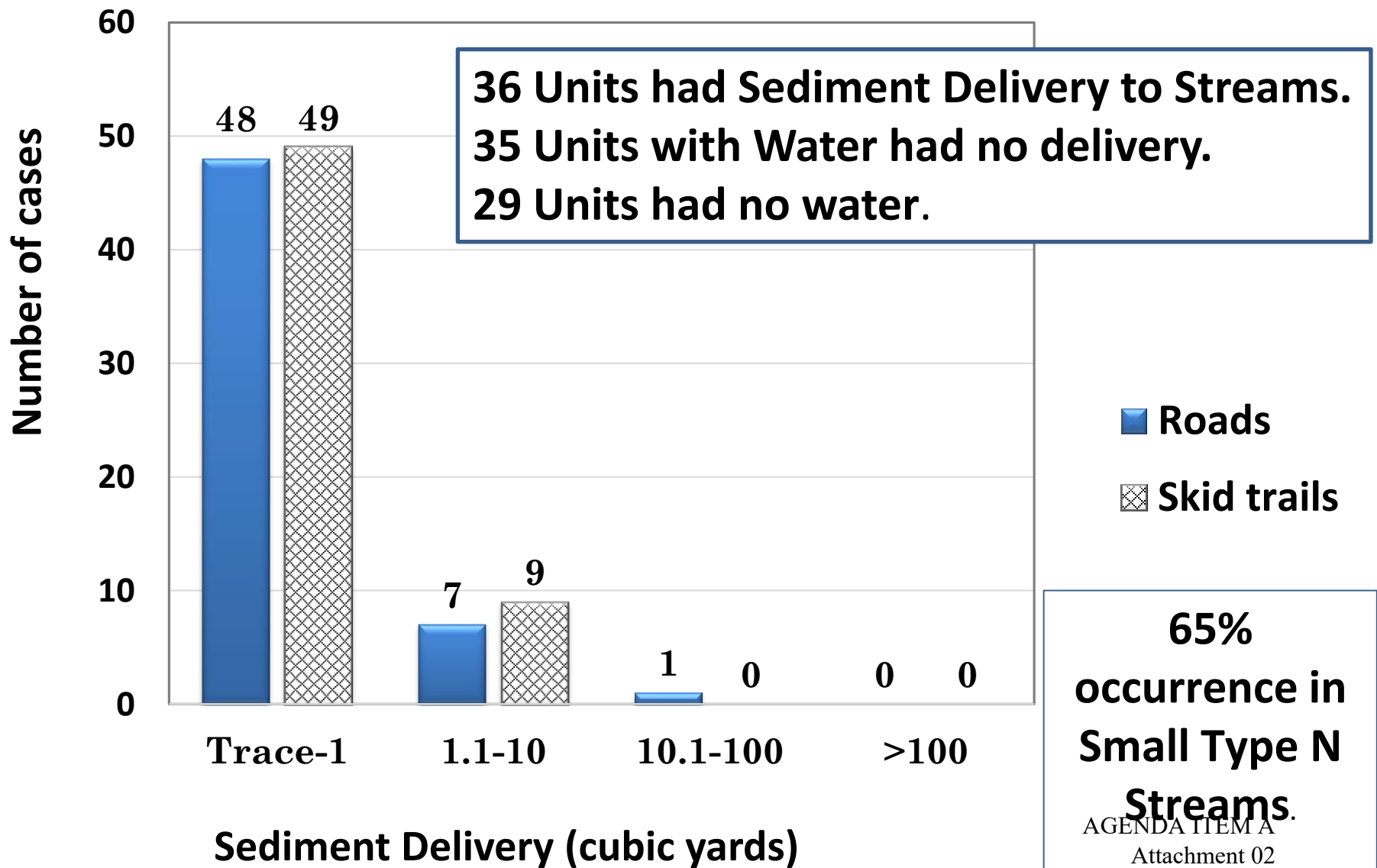
100 sites, 57 rules

Overall compliance: 98 %

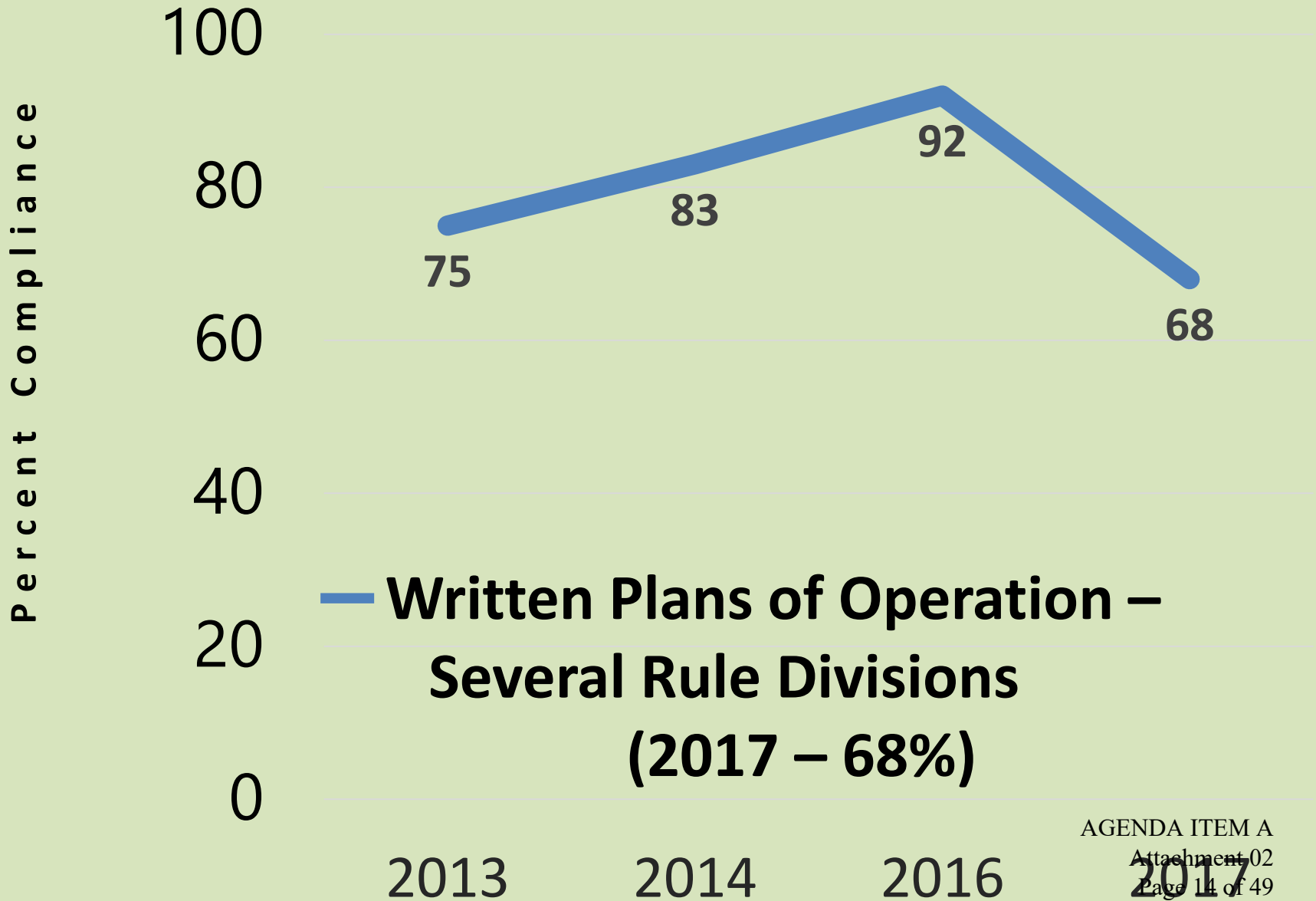
| <u>AREA</u> | <u>COMPLIANCE</u> |
|------------------------|-------------------|
| Eastern Oregon | 98% |
| Northwest Oregon | 98% |
| Southern Oregon | 97% |
| <u>LANDOWNER TYPE</u> | |
| Private Non-Industrial | 96% |
| Private Industrial | 98% |
| Other | 98% |

2017- Scale of Impacts from Non Compliance

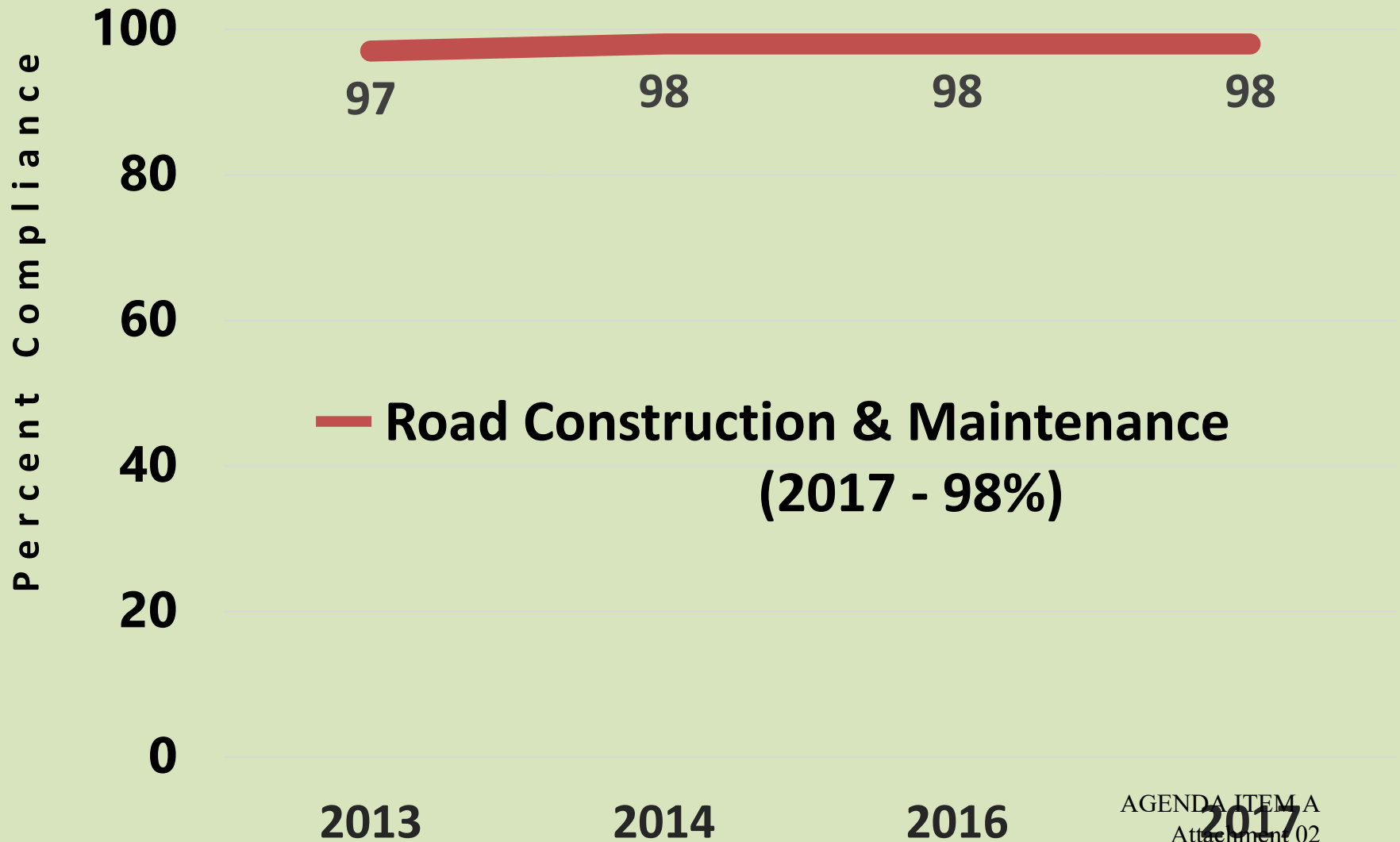
Amount of Sediment Delivery



Over Time - Rule Division Level Compliance 2013 -2017



Over Time - Rule Division Level Compliance 2013 -2017

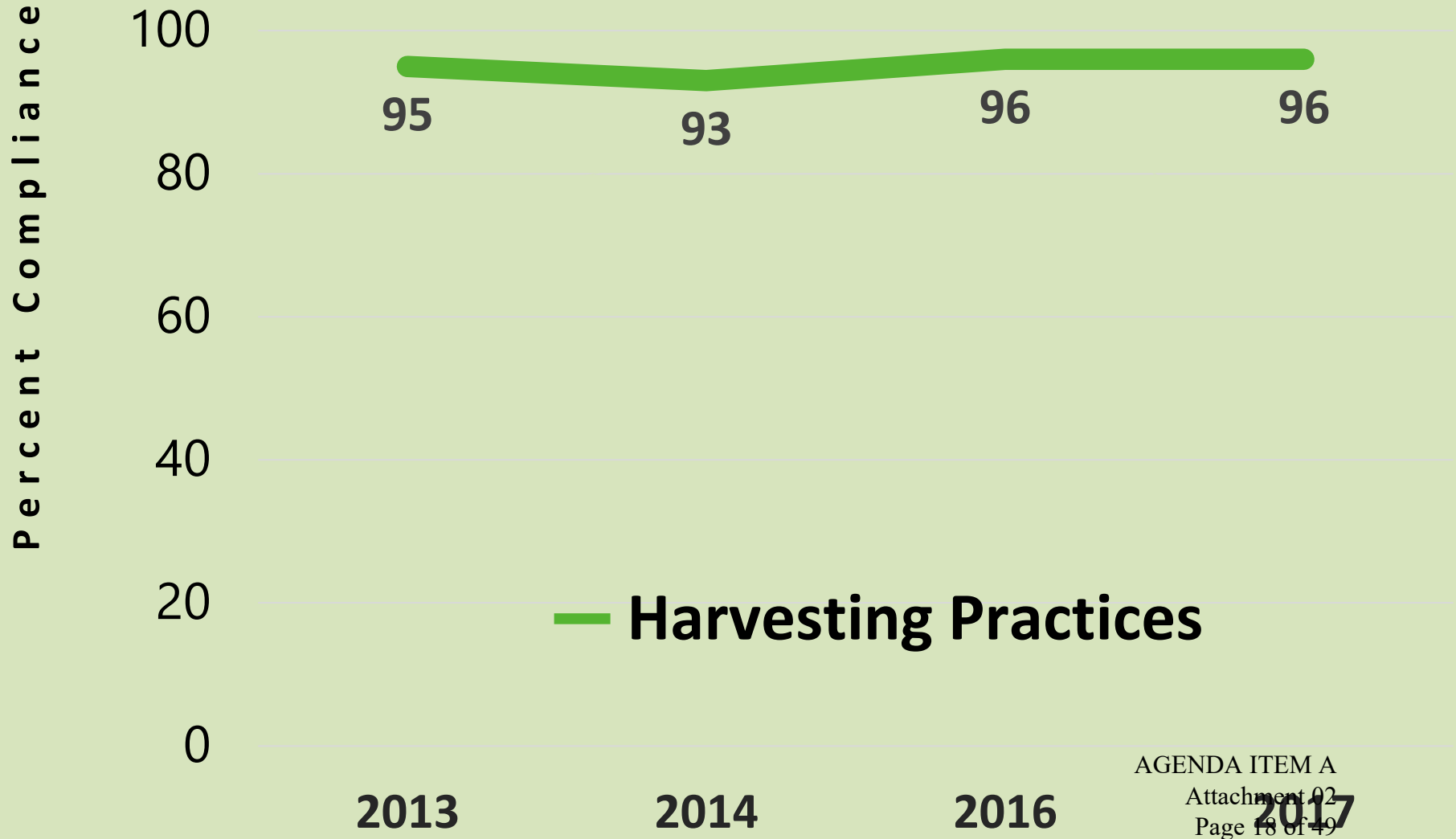


Roads – Ongoing need at stream crossings to disconnect road drainage from stream





Over Time - Rule Division Level Compliance 2013 -2017

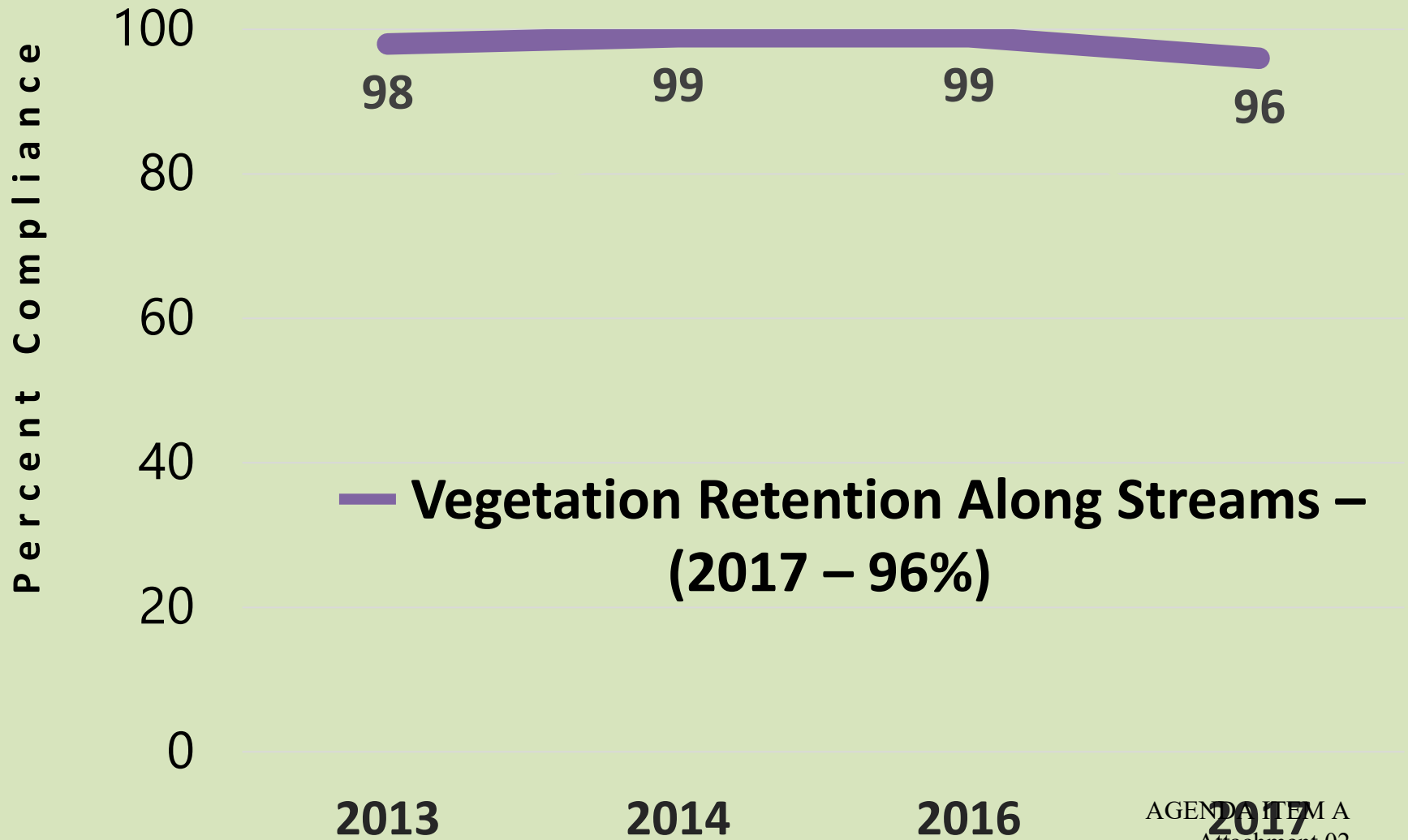




Harvesting - Small Type N Streams - awareness / avoidance

AGENDA ITEM A
Attachment 02
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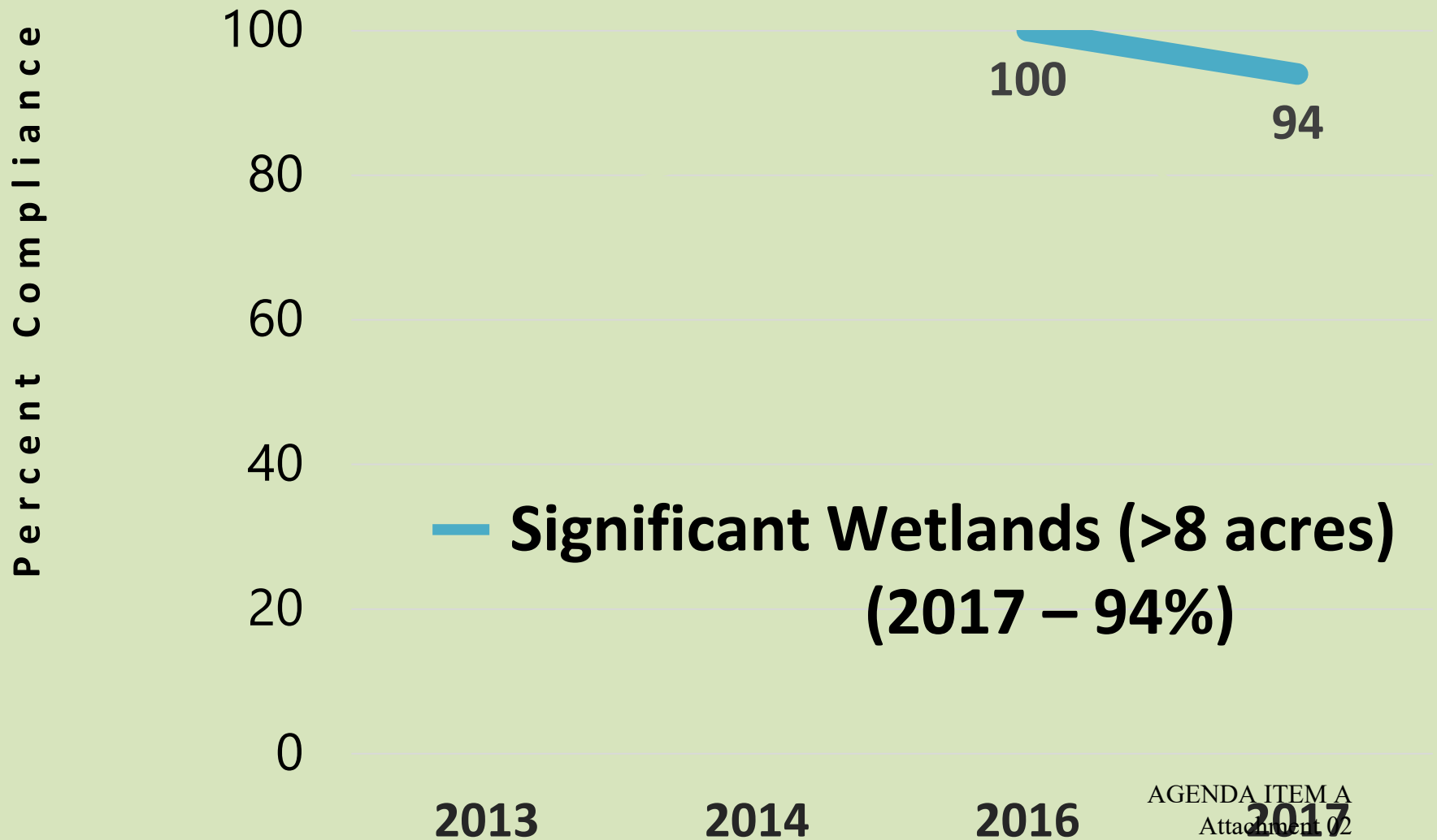
Over Time - Rule Division Level Compliance 2013 -2017





Vegetation Retention Along Streams –trends high.

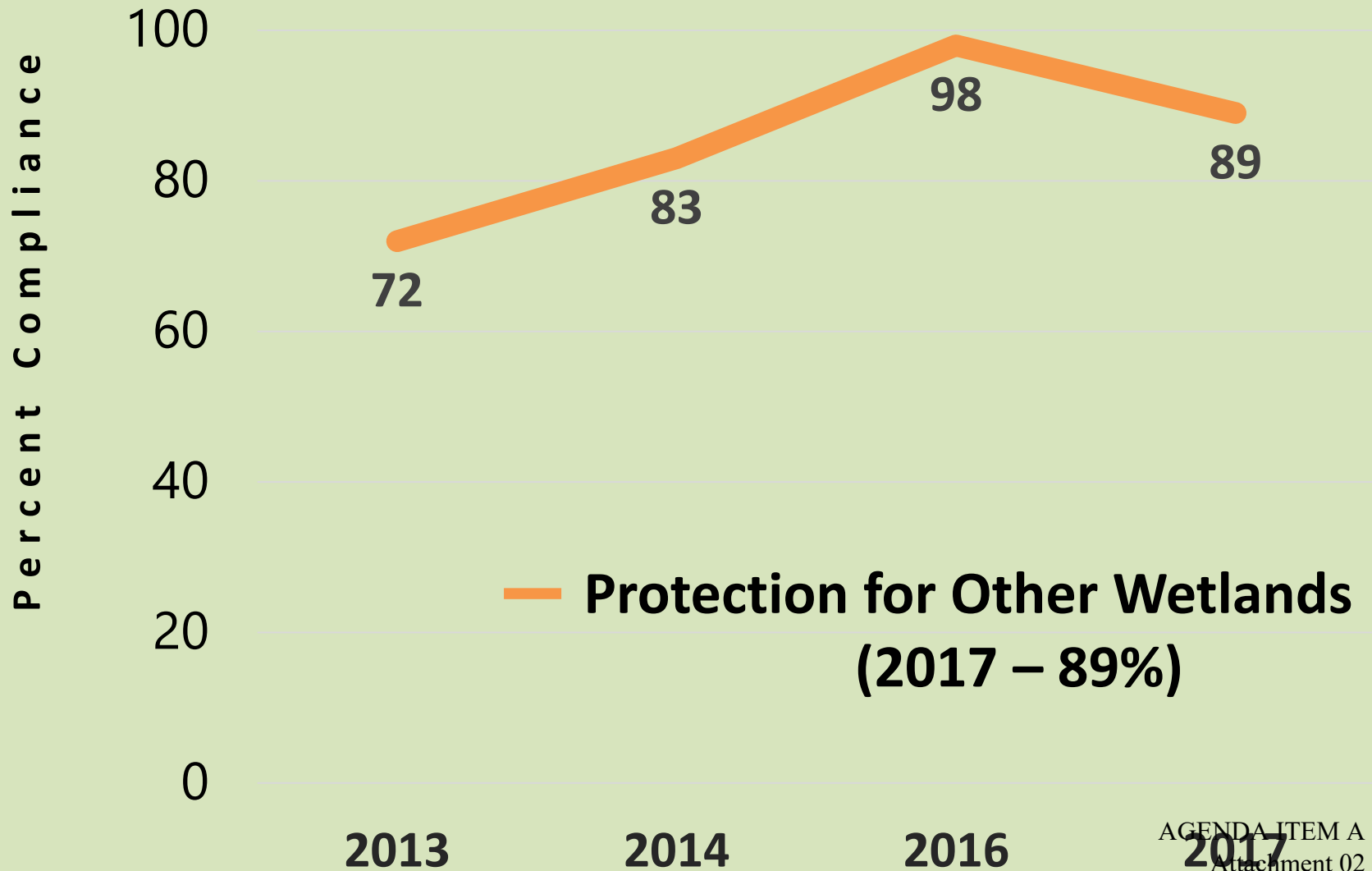
Over Time - Rule Division Level Compliance 2013 -2017



Wetlands > 8 acres



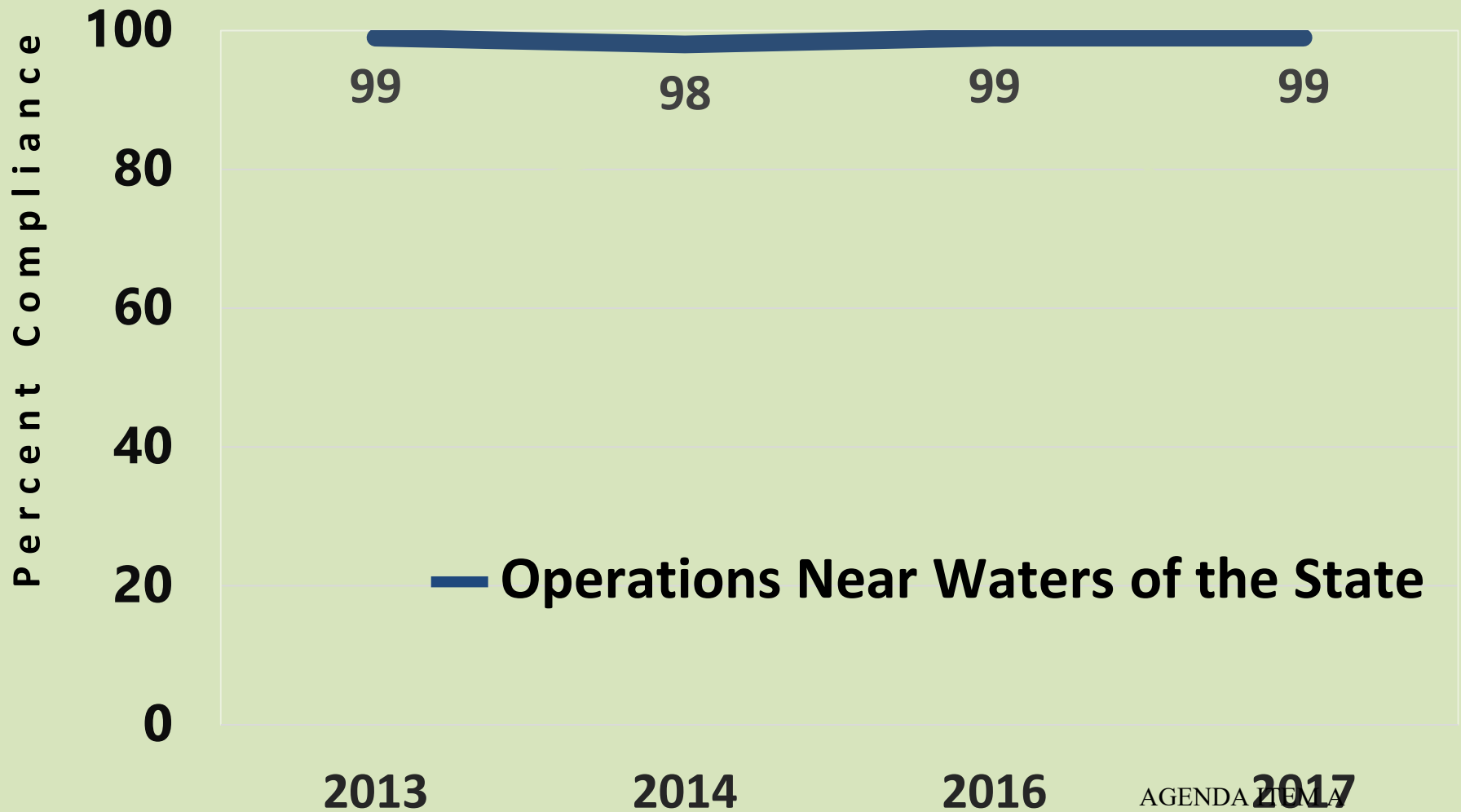
Over Time – Rule Division Level Compliance 2013 -2017



PROTECT OTHER WETLANDS (<8 acres)



Over Time - Rule Division Level Compliance 2013 -2017



Operations Near Waters of the State – (Channel Relocation)



2017 - Ongoing Needs for Improvement

- **Small Type N: 65% of instances of sediment delivery**
- **Small wetlands**
- **Road drainage & filtration near stream crossings**
- **Placement of Road Materials on Steep Slopes**
- **Culvert Sizing – 50 year flows**
- **Temporary Stream Crossing removal and stabilize**

2013 -2018 Compliance Audit – Contract Complete

2017

- Contractor completed last sites in March

2018 and beyond

- Analysis of all contract data (2013-2017)
- Reforestation study

Ongoing

- Outreach and education plan

Thanks Are in Order -



Barnes & Associates, Inc.

Barnes & Associates, Inc. was contractor for data acquisition, did excellent work.

Stakeholder Support from various organizations and individual partners, including:



NEXT...

Reforestation Study

Division 610 – Forest Practices Reforestation Rules



Upcoming 2019 - Reforestation Study

- 100 Sites statewide –
- Proportional to Area of Notifications
- Notifications for “Clear Cut” completed by 12/16
- Private contractor for data gathering
- Largely based on existing stocking protocol
- Review herbicide records of applications if existing



2019 Reforestation Study

Next Steps:

- Select Sites from Database
- Landowner Permissions
- Screen Sites
- List RFP in ORPIN
- Award Contract
- Field Work begin in 2019
- Planning for five iterations





Compliance Audit QUESTIONS?

Effectiveness Monitoring

Streamside Protections Reviews (Board direction)

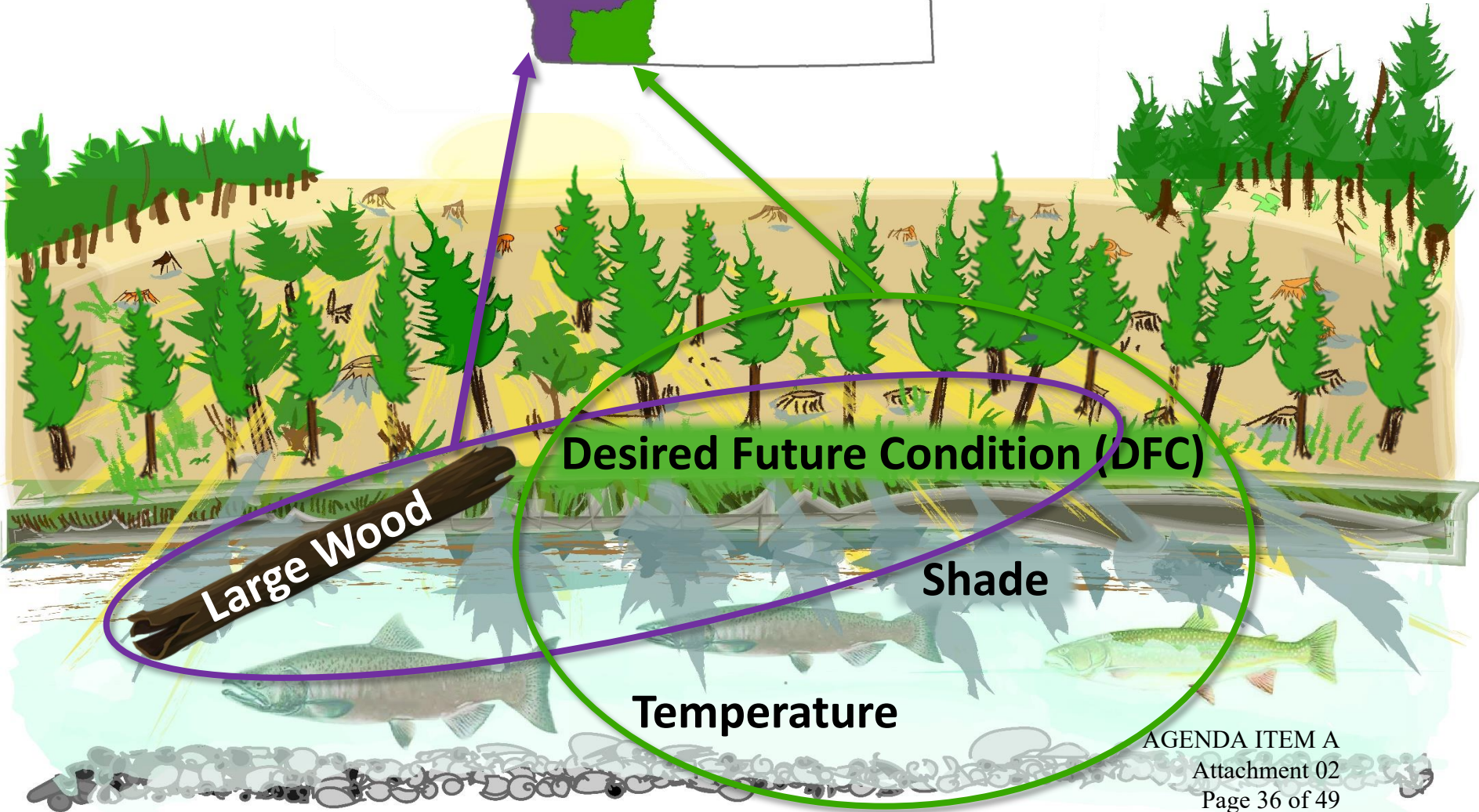
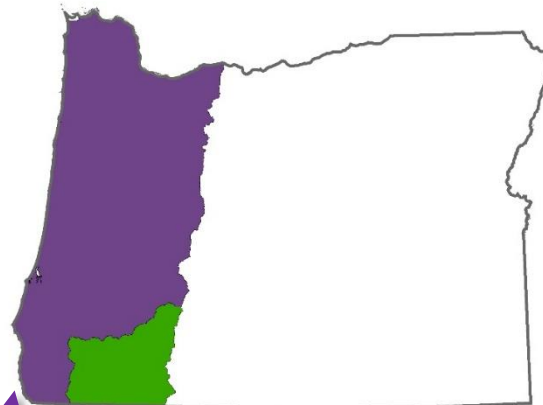
- 1. Western Oregon**
- 2. Siskiyou**

Potential Board responses

- FPA works as designed**
- FPA may not meet stated objectives**
- Additional study warranted**
- No action needed**

Topics & Geography

Small & Medium
Fish Streams



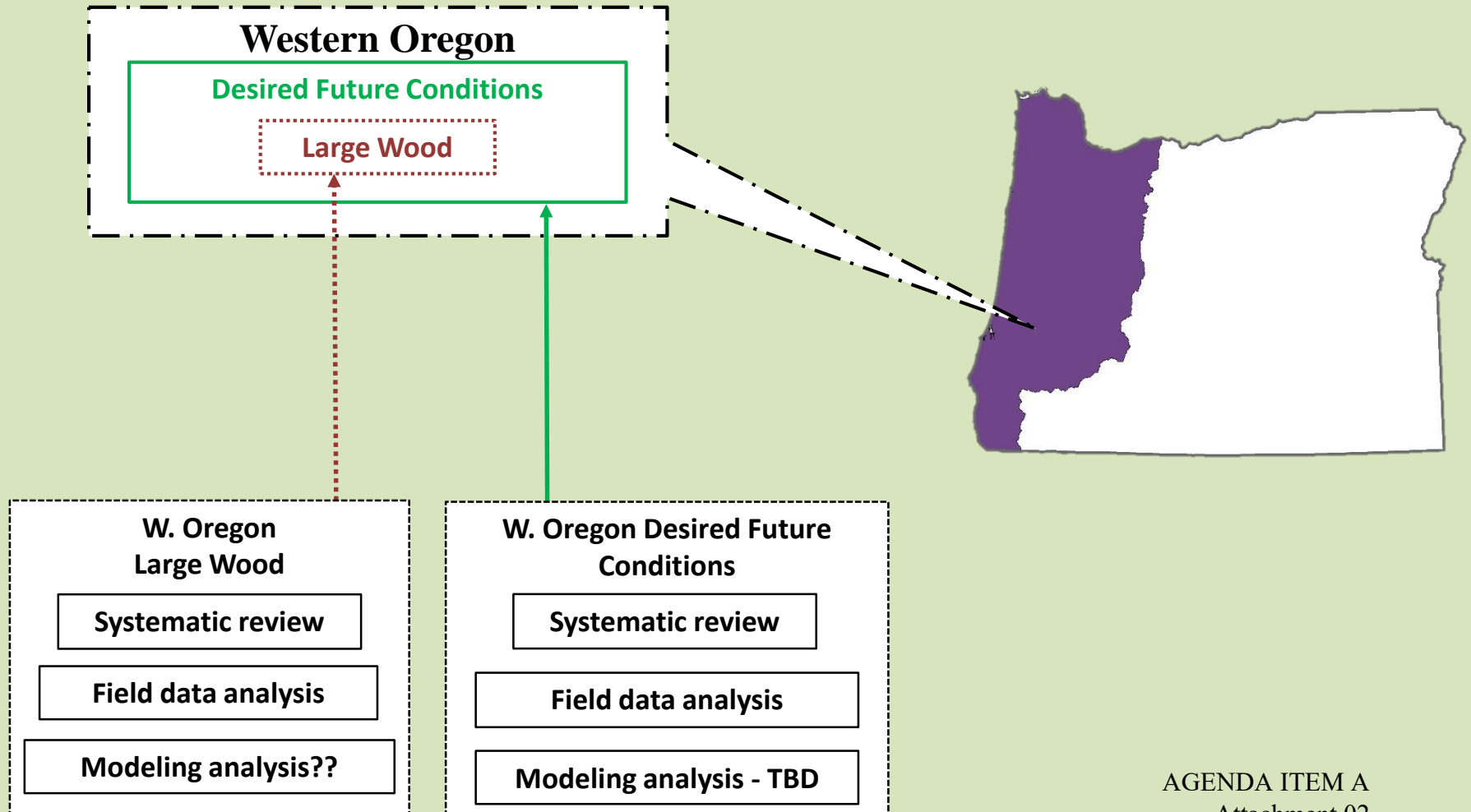
Background on Desired Future Conditions

- **Desired Future Condition (DFC):**
 - “...to grow and retain vegetation so that, over time, average conditions across the landscape become similar to those of mature streamside stands.”
- **Mature streamside stands**
 - Often conifer dominated
 - Stand age: avg. 120 years
 - Provide multiple functions

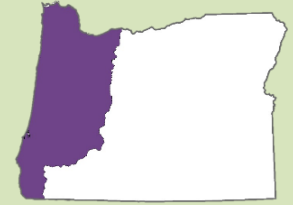


Western OR Streamside Protections Review:

Are FPA rules effective in achieving the goals for desired future conditions and large wood?



Western OR Streamside Protections Review



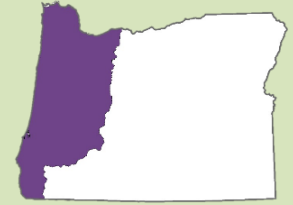
Why use Systematic Reviews?

Protocol: Rigor & repeatability

- Search methods
- Literature inclusion criteria
- Data extraction and synthesis

Methodical input from interested parties

Western OR Streamside Protections Review: Systematic Review



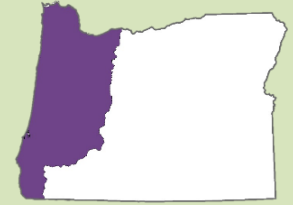
DFC

- *Forest management and desired future condition (DFC)*
- *Range of DFC conditions*
- *Species composition*
- *Regeneration*

Large Wood

- *Forest management and large wood recruitment*
- *Range of large wood*
- *What is considered 'abundant large wood'?*

Western OR Streamside Protections Review: Field Data Analysis

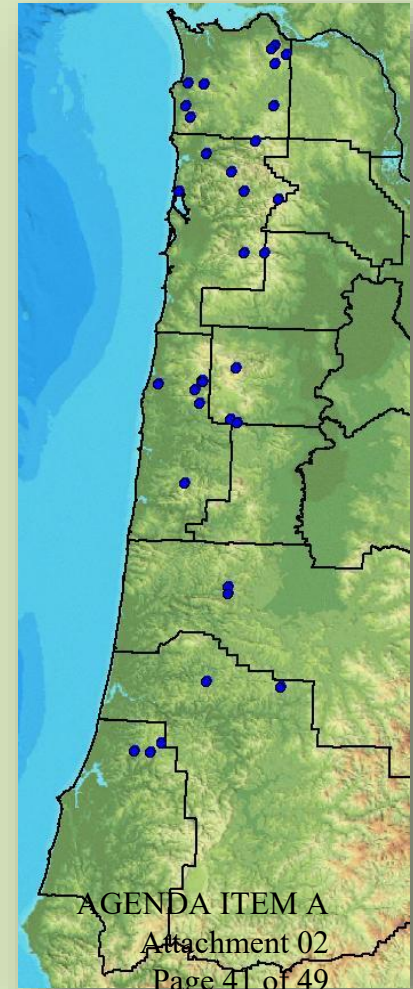


RipStream Protocol Questions

1. Trends in overstory & understory
2. Trends in regeneration
3. Large wood recruitment to streams & riparian areas

RipStream study

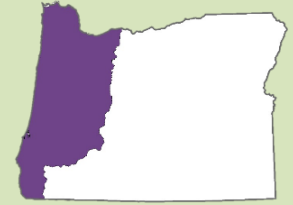
- 33 sites (Coast Range), Small & Medium F streams
- Pre- and post-harvest data



Western OR

Streamside Protections Review:

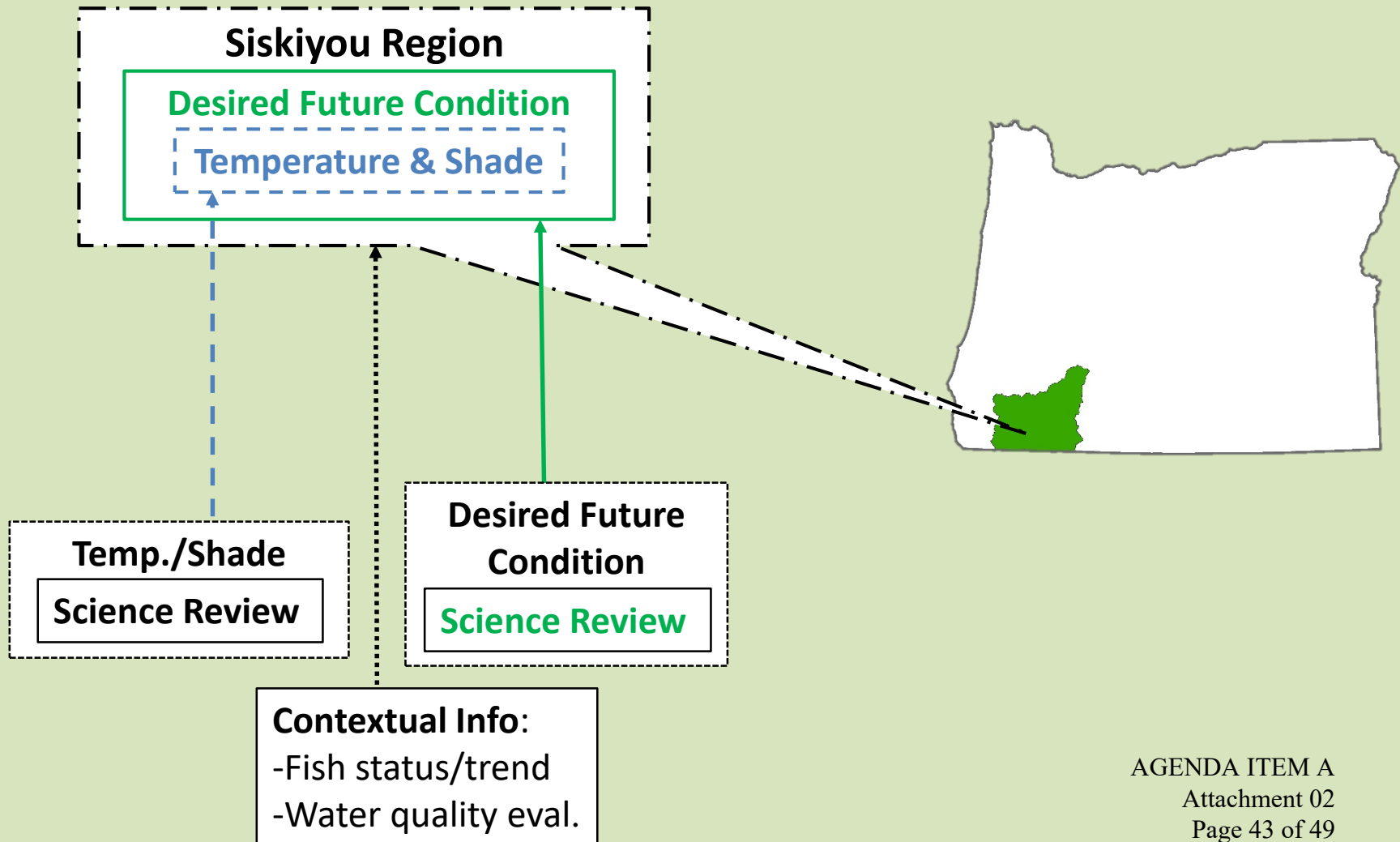
Modeling



In process: determining scope and role of modeling analysis

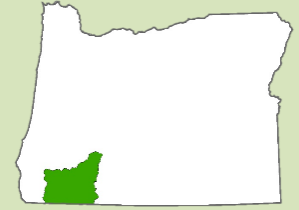
Siskiyou

Streamside Protections Review



Siskiyou

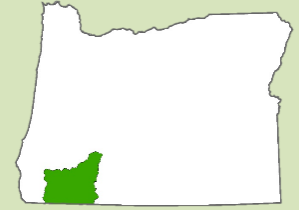
Streamside Protections Review: Systematic Review



What are the effects of near-stream forest management on **stream temperature and shade**?

- *Meets DEQ water quality standards?*
- *Shade similar to that of mature streamside stands?*

Siskiyou Streamside Protections Review: Systematic Review



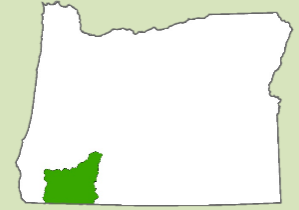
What are the effects of near-stream forest management on **desired future conditions** of riparian forests?

- *Range of DFC conditions in Siskiyou mature streamside stands*
- *Understory & overstory comparison*
- *Regeneration composition*

Siskiyou

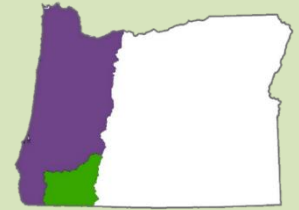
Streamside Protections Review:

Contextual Information



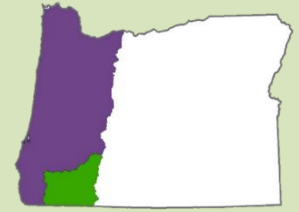
- **DEQ**
 - TMDL
 - Temperature, shade, riparian forest information
- **ODFW**
 - Fish status & trend
 - Shade, riparian forest information

Western OR and Siskiyou Reviews: Status



- Timelines developed
- Conversations with:
 - Stakeholders and Tribes
 - Local ODF staff
 - DEQ and ODFW
- RipStream data: analytic methods (Western OR)
- Draft protocols (Siskiyou and Western OR)

Review Timelines: Board Meetings



- **Siskiyou**

- Update & preliminary results – Winter/Spring 2019
- Completion – Spring/Summer 2019

- **Western Oregon**

- Update & preliminary results – Spring/Summer 2019
- Completion – Fall 2019/Winter 2020



Questions?

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