

Riparian Areas: Conditions, Implementation and Effectiveness

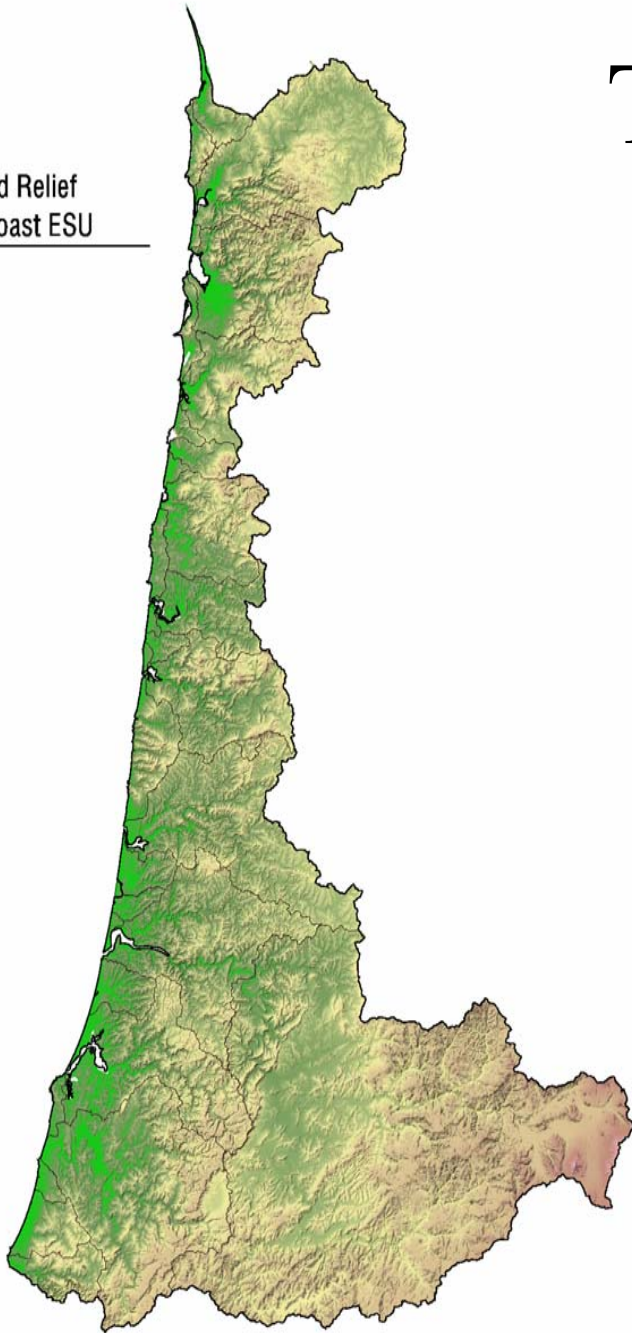
Oregon Plan Habitat Team

Habitat Factors For Decline



- Channel Form
- Substrate
- Roughness
- Estuaries and Wetlands
- **Riparian Areas**
- Water Quality
- Stream flow
- Passage
- Habitat Elimination

Shaded Relief
North Coast ESU



Today's Presentation

- Status and Trend Analysis
 - Findings
- Implementation
- Effectiveness
- Conclusions

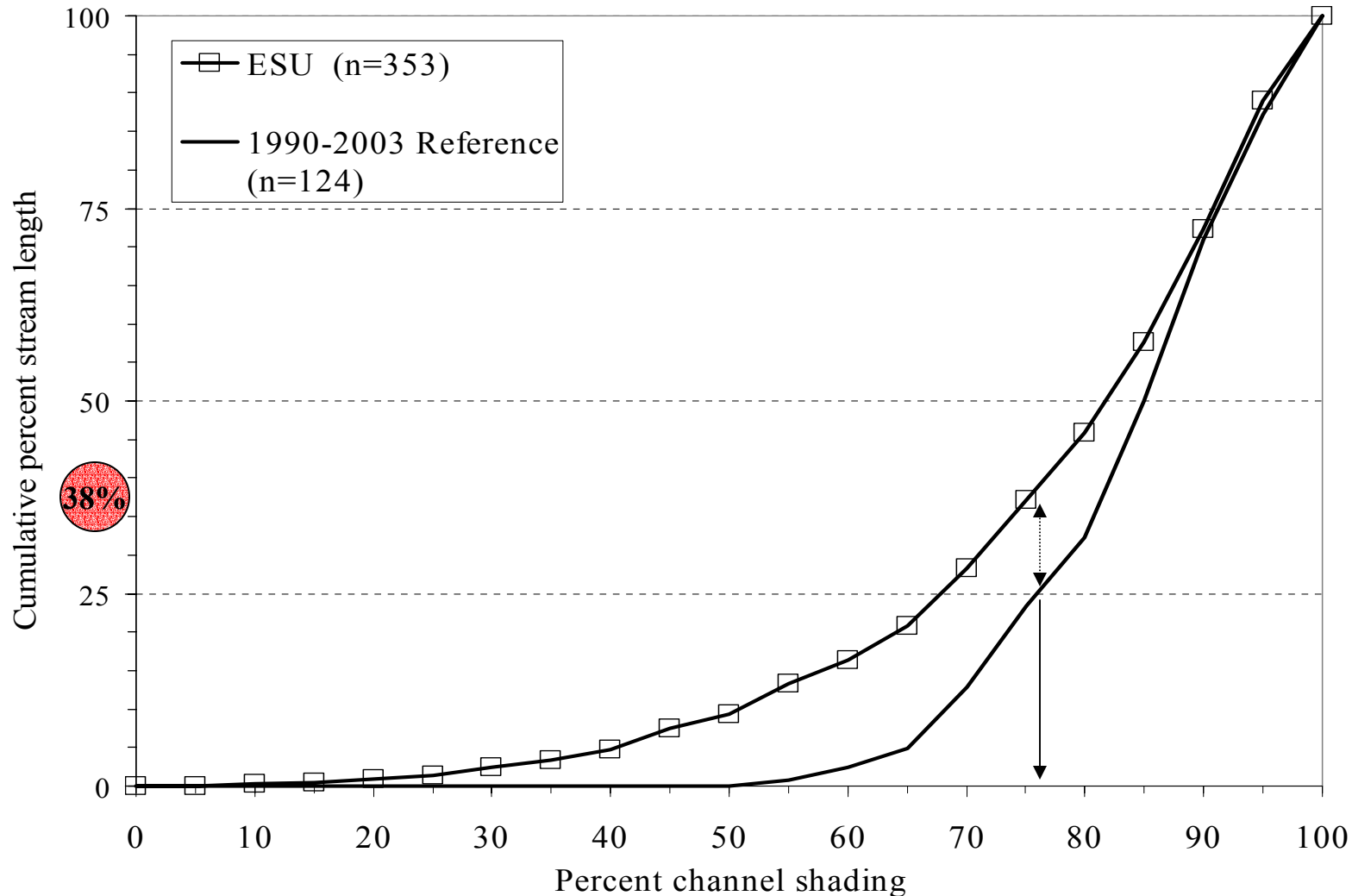
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Status and Trend Analysis

- ODF&W Aquatic Habitat Surveys
- Data Sources and Methods have been described



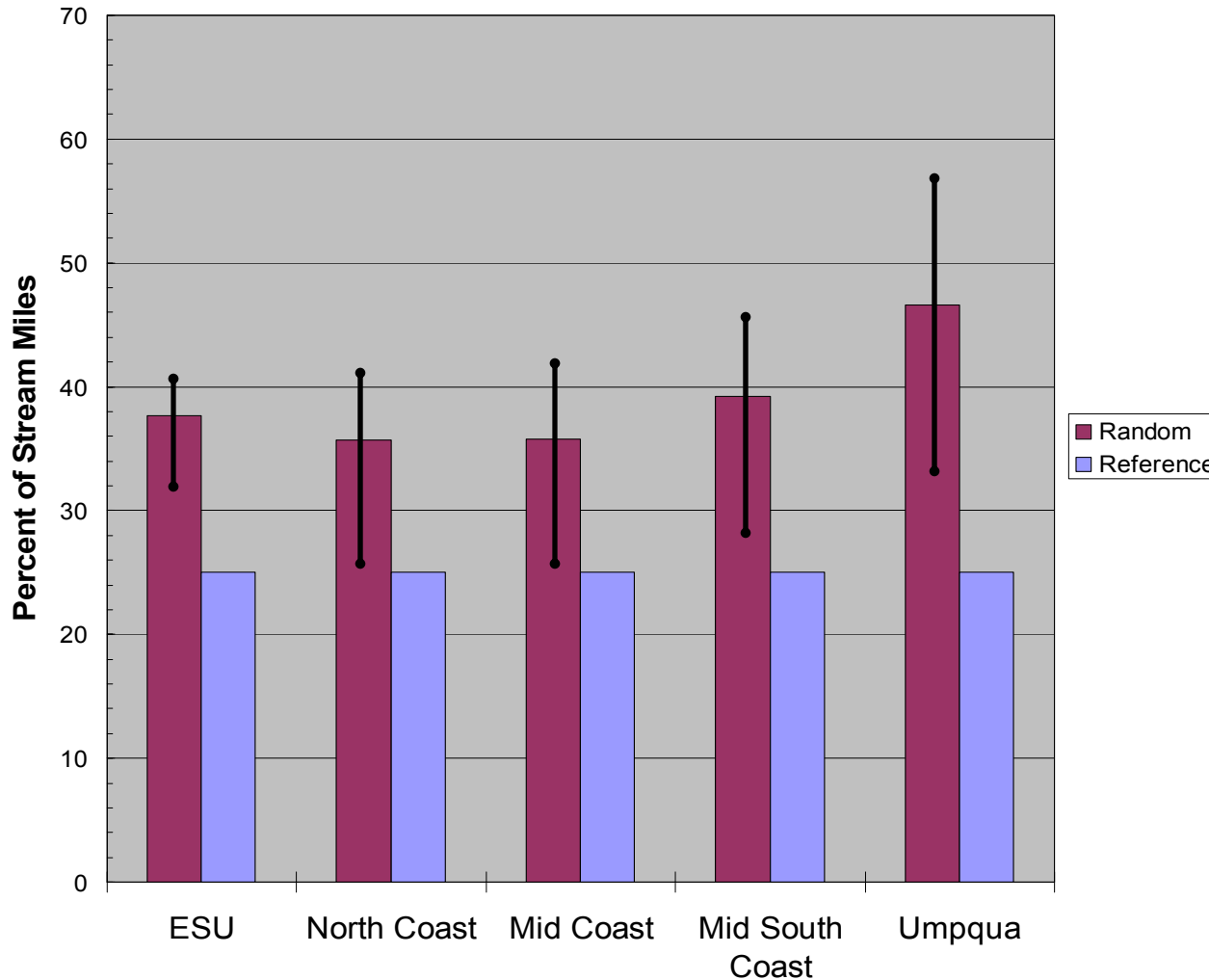
Shade Conditions: Random And Reference



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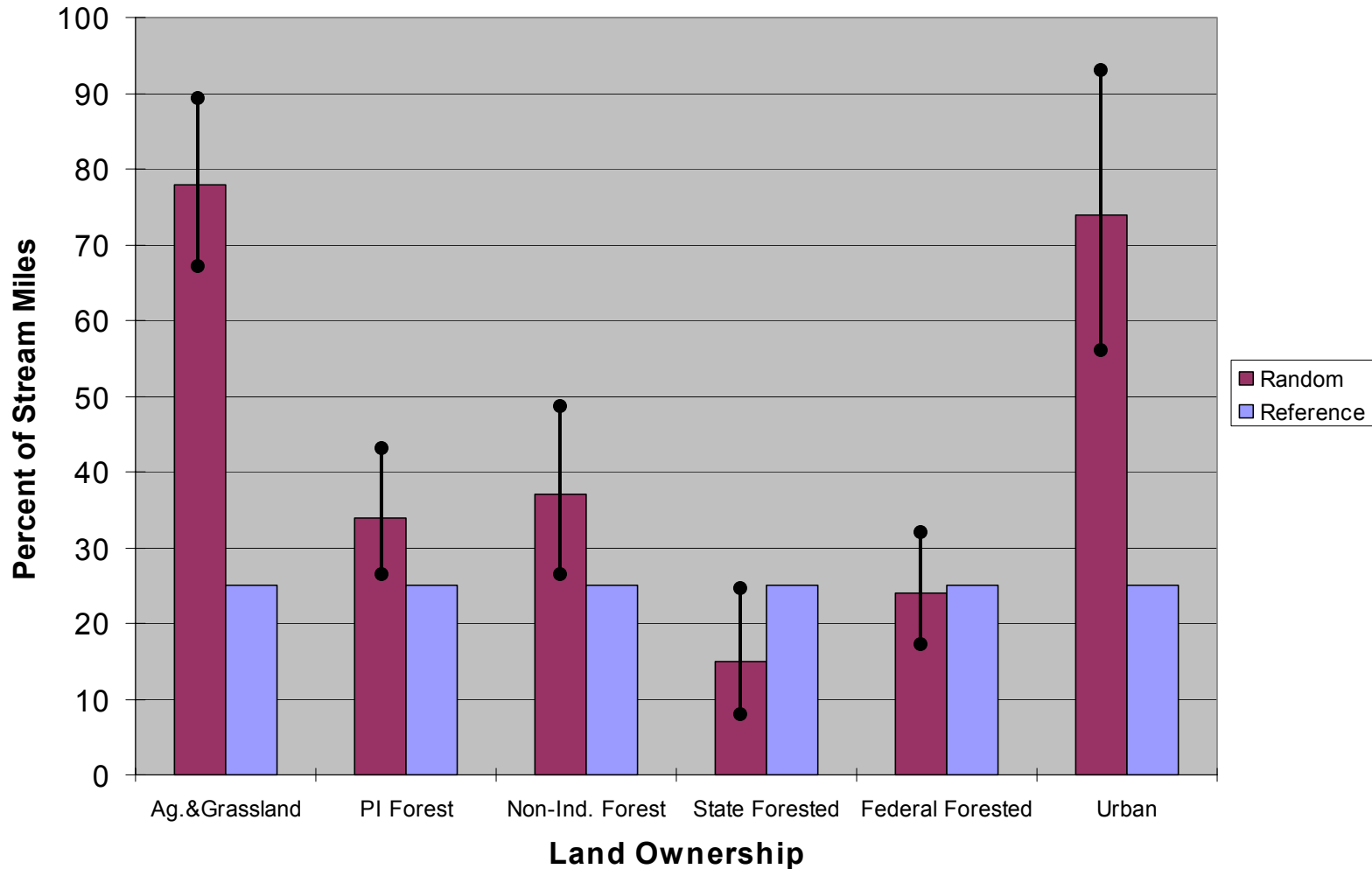
Percent of Streams in “Lower” Shade Conditions: Monitoring Unit



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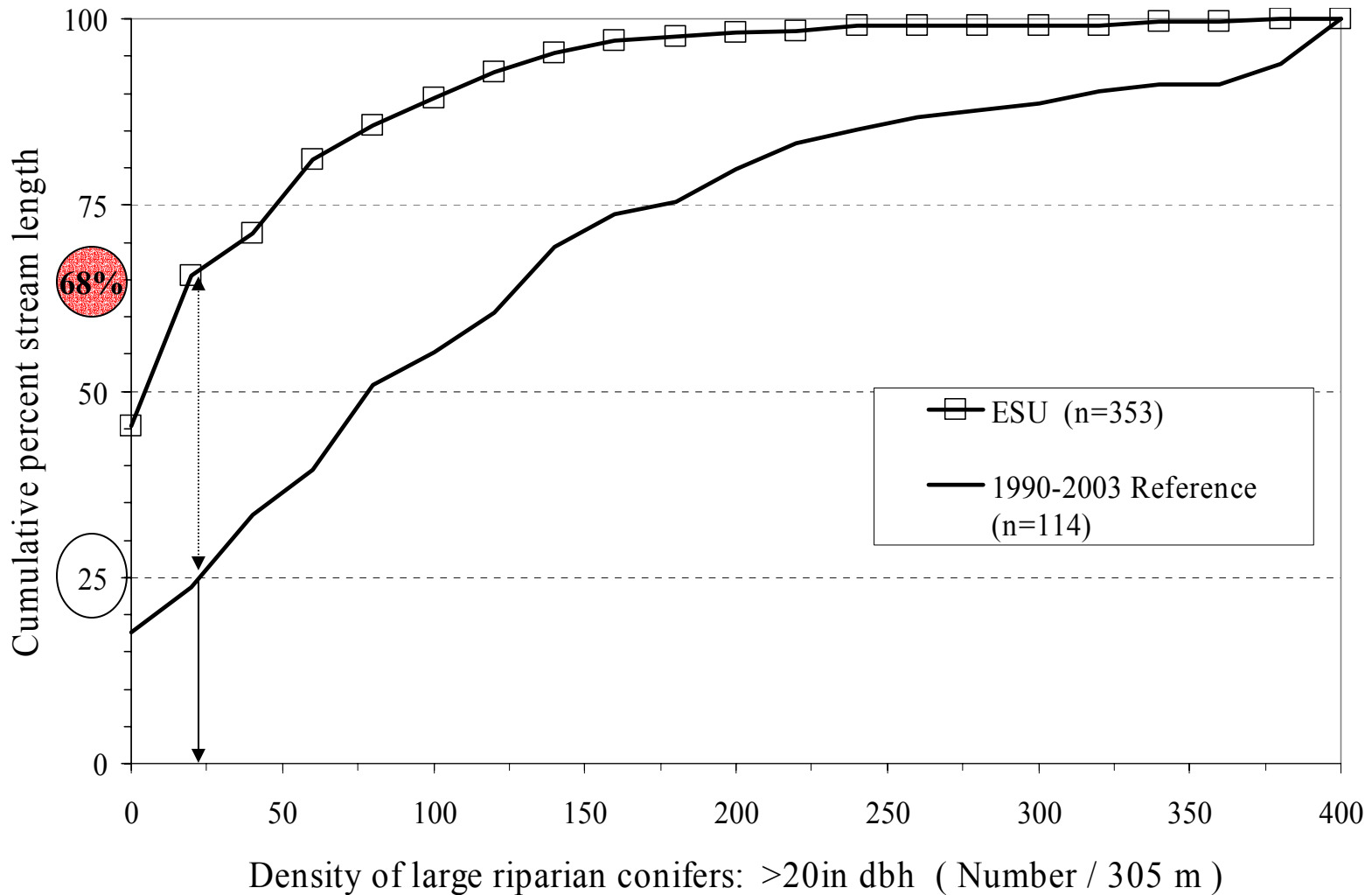
Percent of Coho Stream Miles in “Lower” Shade Conditions: Land Ownership



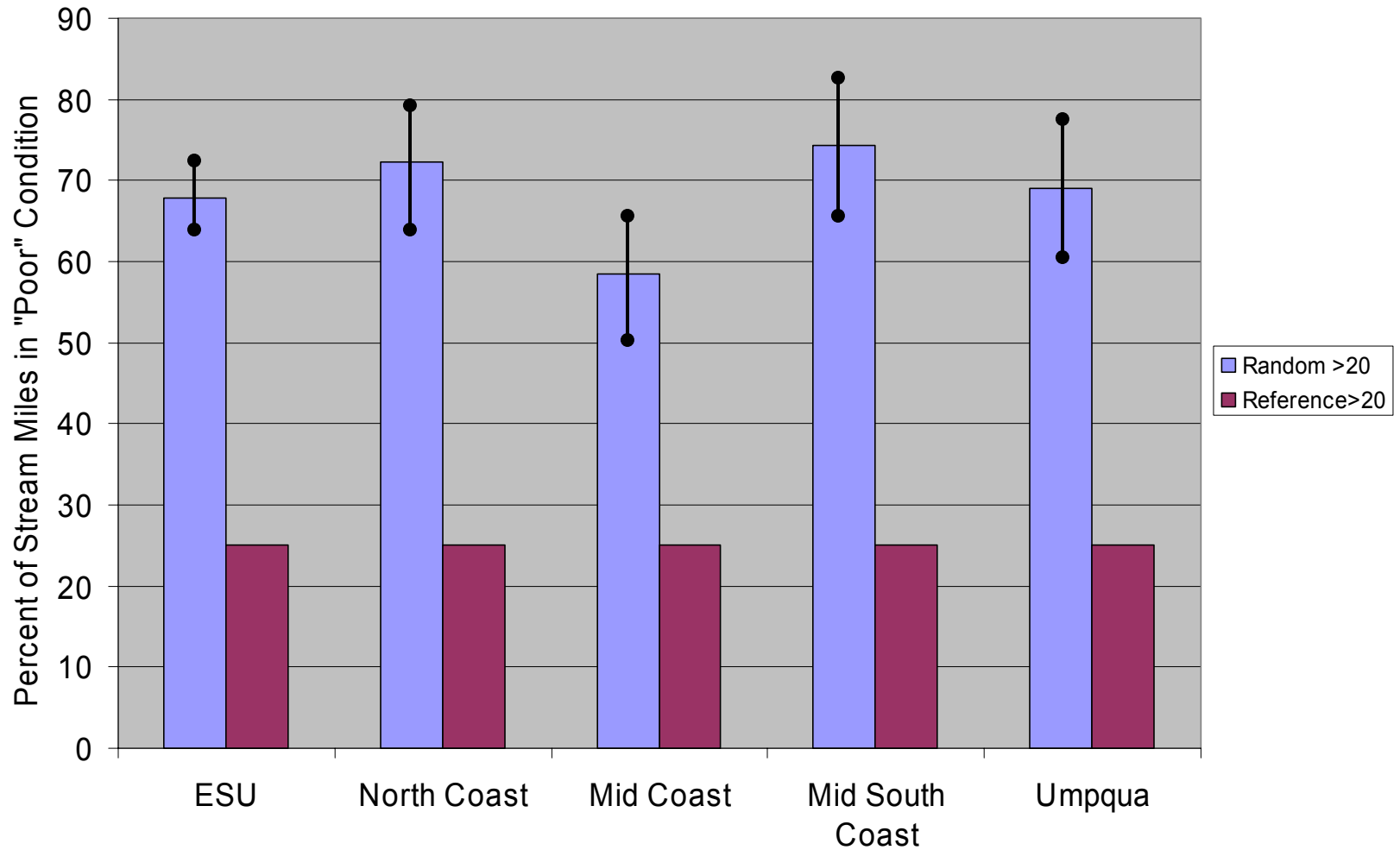
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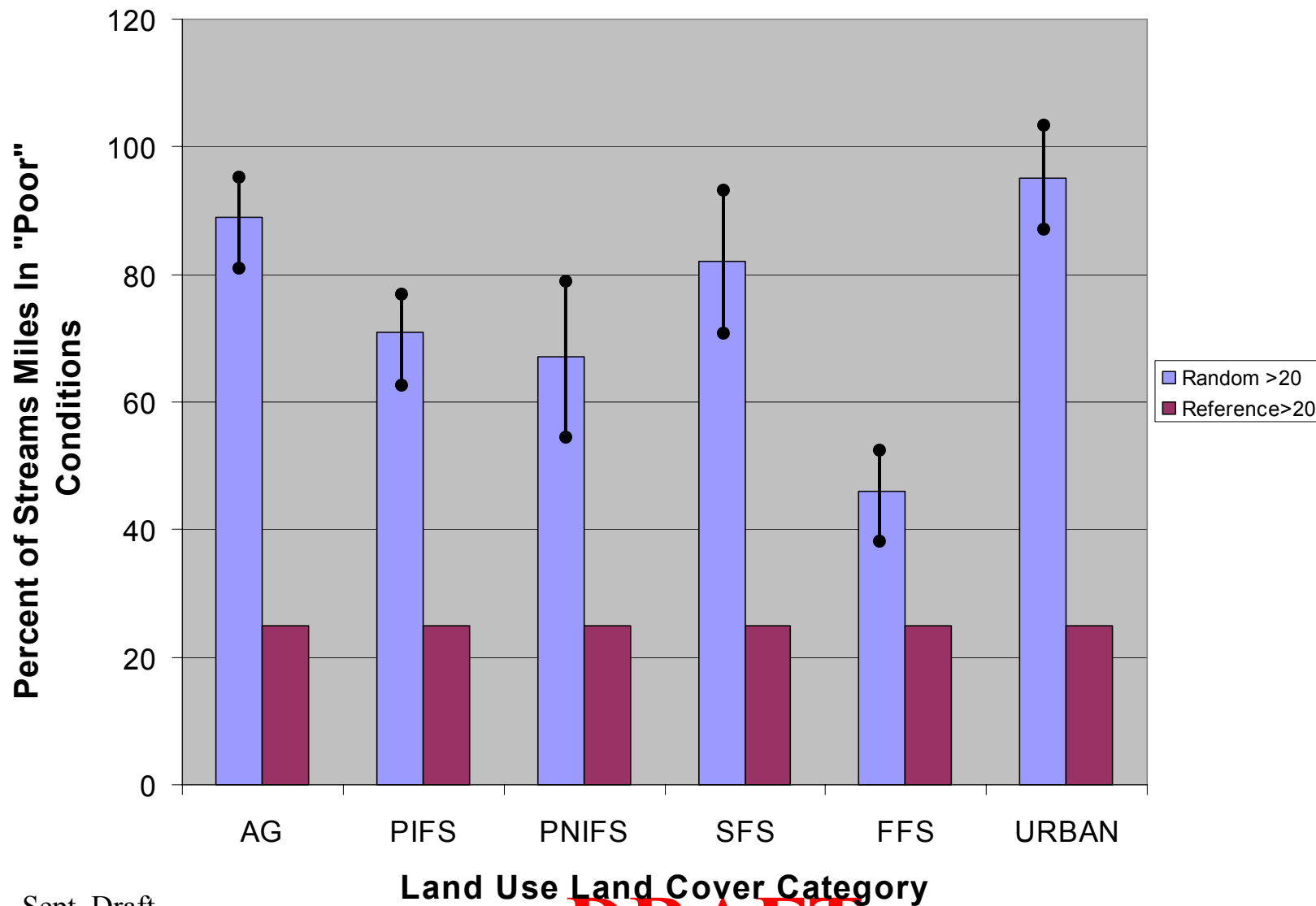
Density of Large Riparian Conifers



Percent of Streams with “Low” levels of Large Conifers (>20”) By Monitoring Unit



Percent of Streams with Low Levels of Large (>20") Conifer Trees: By Land Ownership



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Status of Riparian Conditions in the Coastal ESU

Spatial Scale	% Shade	conifer >20 in	conifer >30 in
ESU			
North Coast			
Mid Coast			
Mid-South Coast			

Color Key

 Significantly Better Than Reference Conditions

 Similar To Reference Conditions

 Significantly Worse Than Reference Conditions

Status of Riparian Conditions in the Coastal ESU: By Land Use

Landuse	% Shade	Con>20	Con>35
Ag.&Grass	Red	Red	Red
Federal Forested	Green	Red	Red
PVT Forested	Red	Red	Red
PVT NonInd Forest	Red	Red	Red
State Forested	Blue	Red	Red
Urban	Red	Red	Red

Color Key



Significantly Better Than Reference Conditions



Similar To Reference Conditions



Significantly Worse Than Reference Conditions

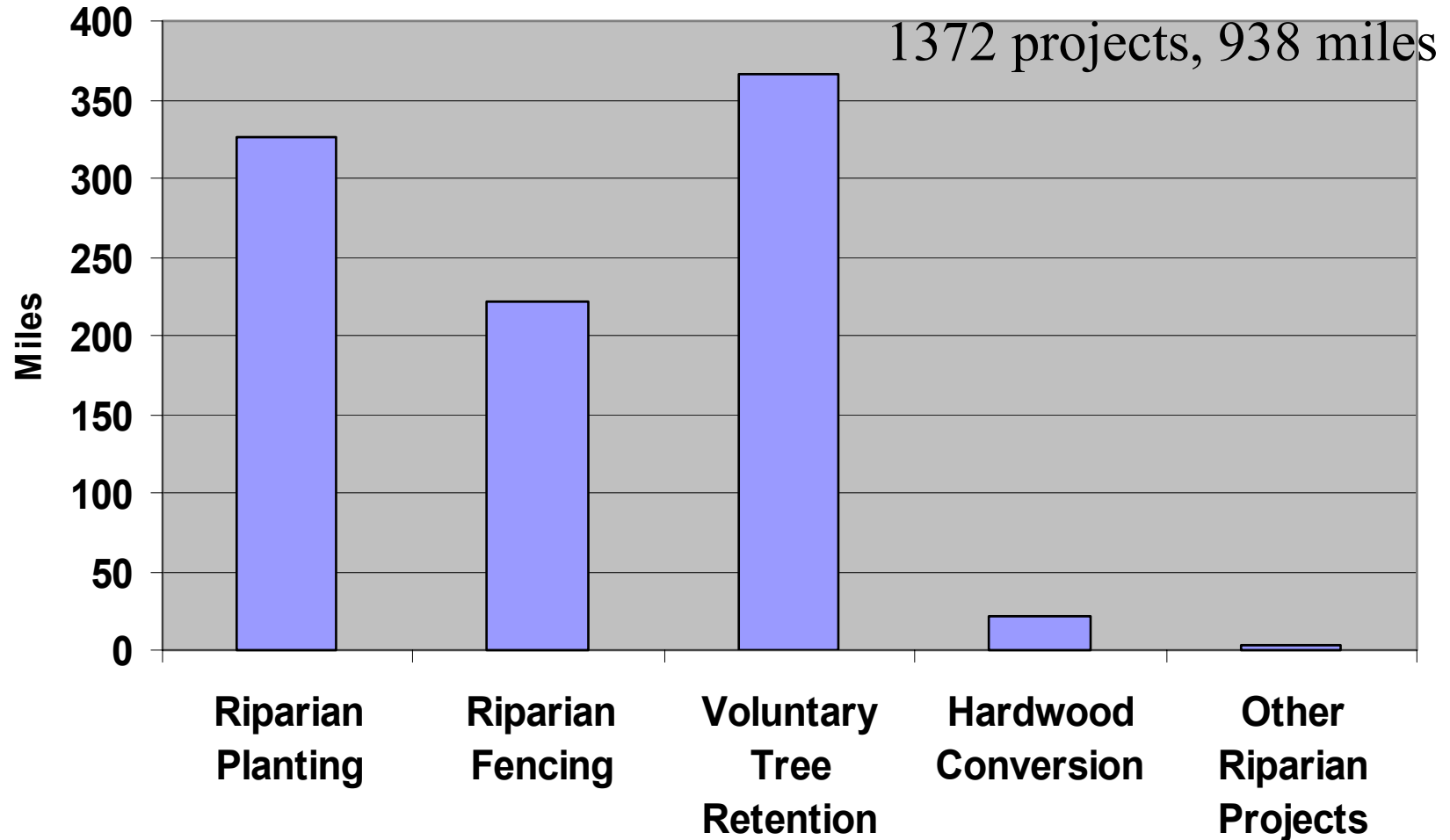
Restoration Actions: Implementation



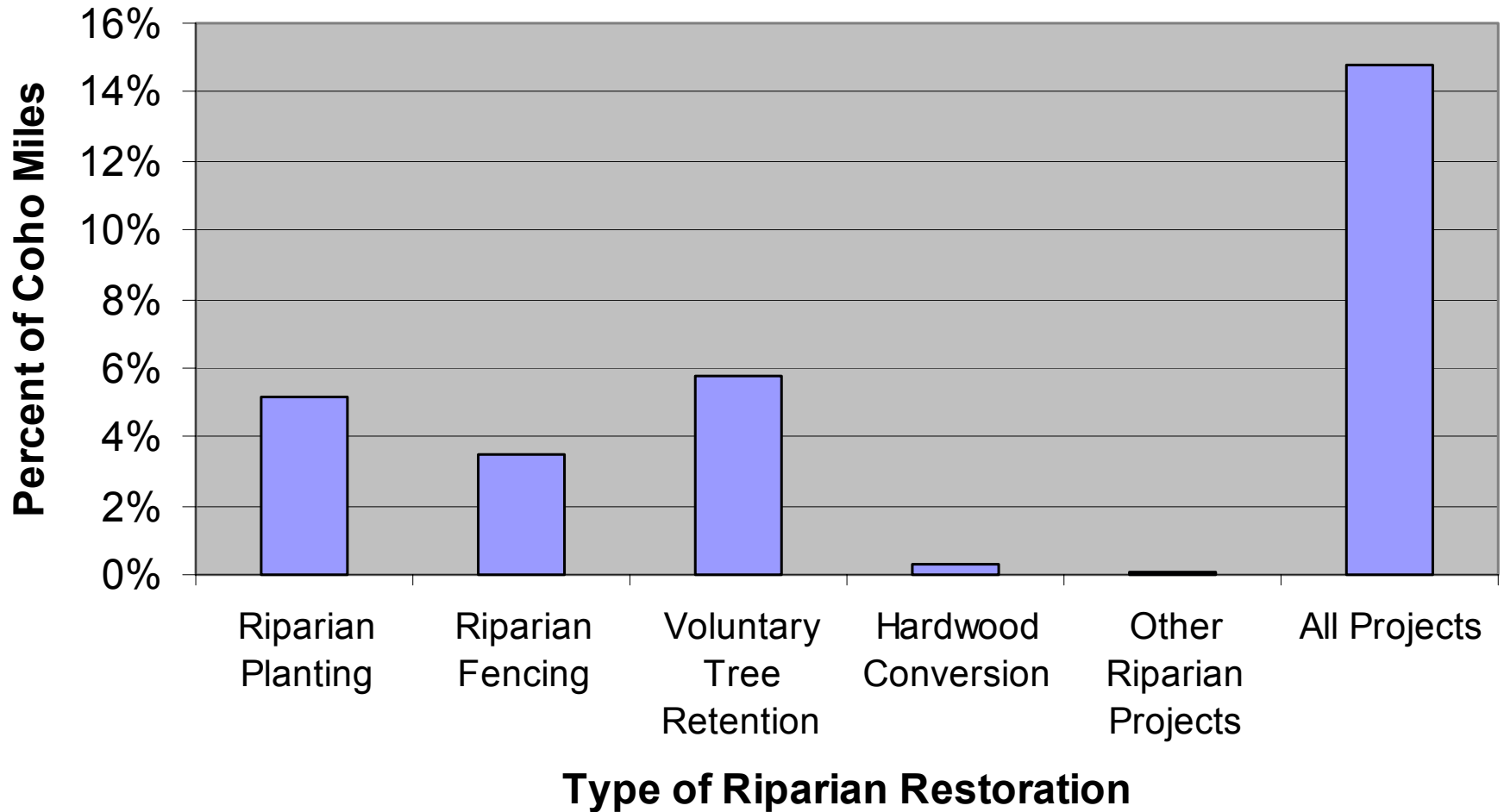
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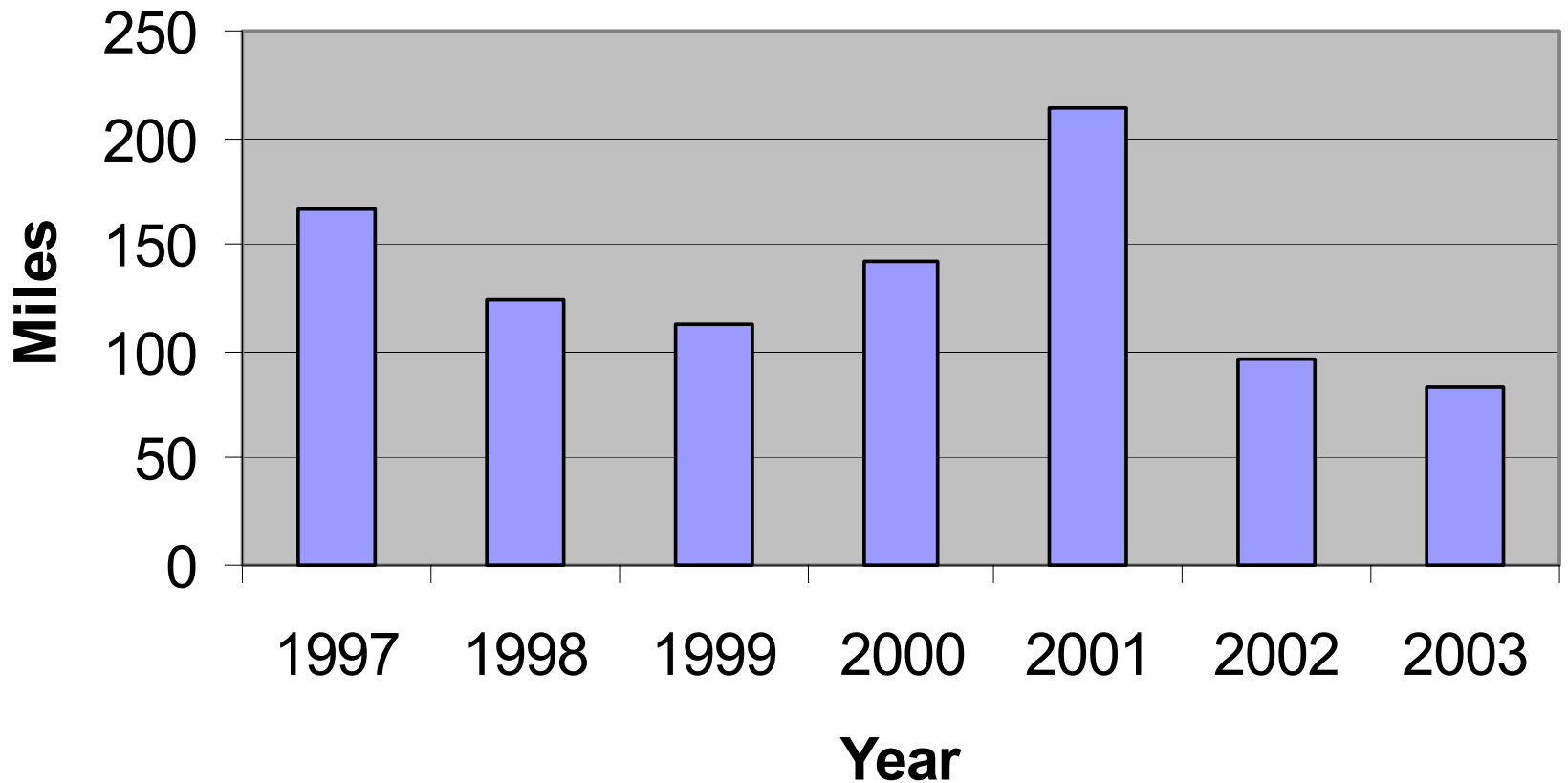
Riparian Restoration Projects



Riparian Restoration as a Percent of Coho Miles



Riparian Restoration Actions By Year



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Effectiveness of Riparian Restoration



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Riparian Planting

- 45% high survival rates
- Sources of Mortality
 - Plant Competition
 - Animal Damage
- Increasing Success
 - Site preparation (increasing over time)
 - Post-planting maintenance
 - Tree Protection



Riparian Planting Continued

- CREP projects had higher rates of site prep and post-planting maintenance
- In general sites with low survival are being abandoned

Riparian Fencing

- 83% of fences were intact
- Of those with failing fences, less than 20% had high tree survival rates

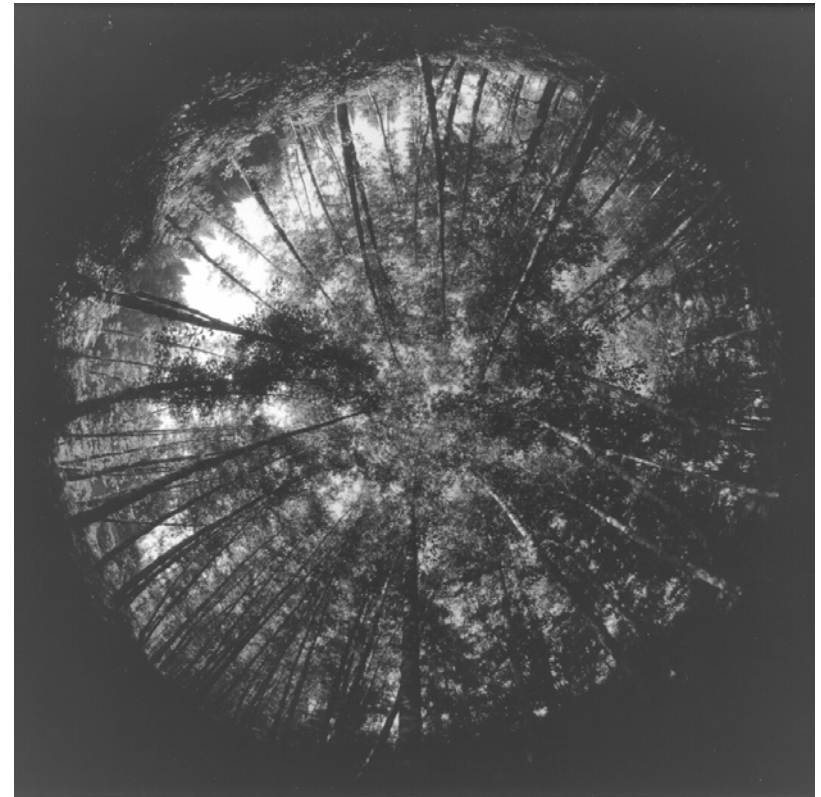


Beaver Creek Riparian Restoration Study

- Shading increased
 - 2 - 6 years with wider planting
 - 4 -7 with single row
- Decreased bank erosion within 1 year after fencing out cattle

Conclusions: Riparian Condition

- Lack of large conifer trees across all land uses and throughout the ESU
- Lower shade levels are more common on random sites



Conclusions: Riparian Conditions

- The lower shade trend is strongest in the Umpqua monitoring unit and on agricultural, shrublands, and urban lands.
- State and Federal forested lands have shade levels better than or equal to reference sites.
- Lack of large conifers is consistent throughout the ESU and across land uses.

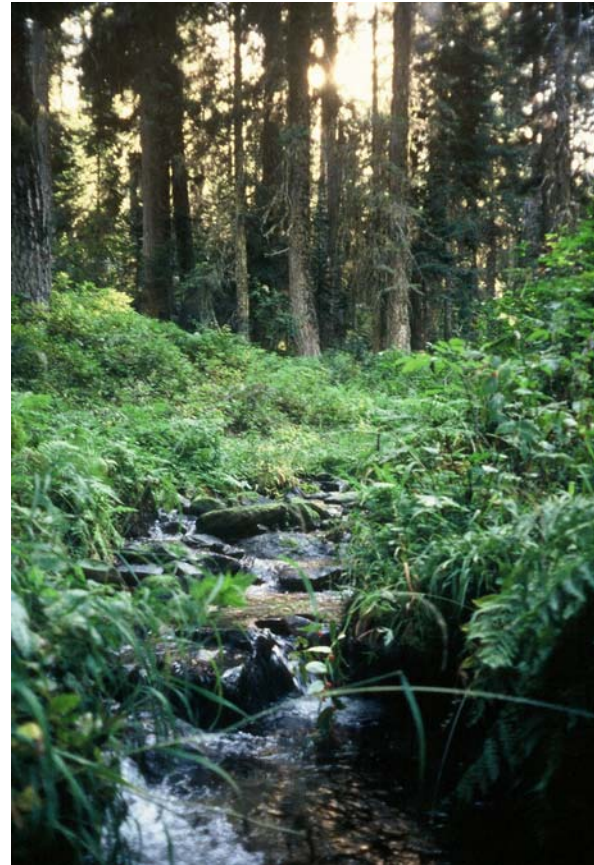
Conclusions: Implementation of Riparian Restoration



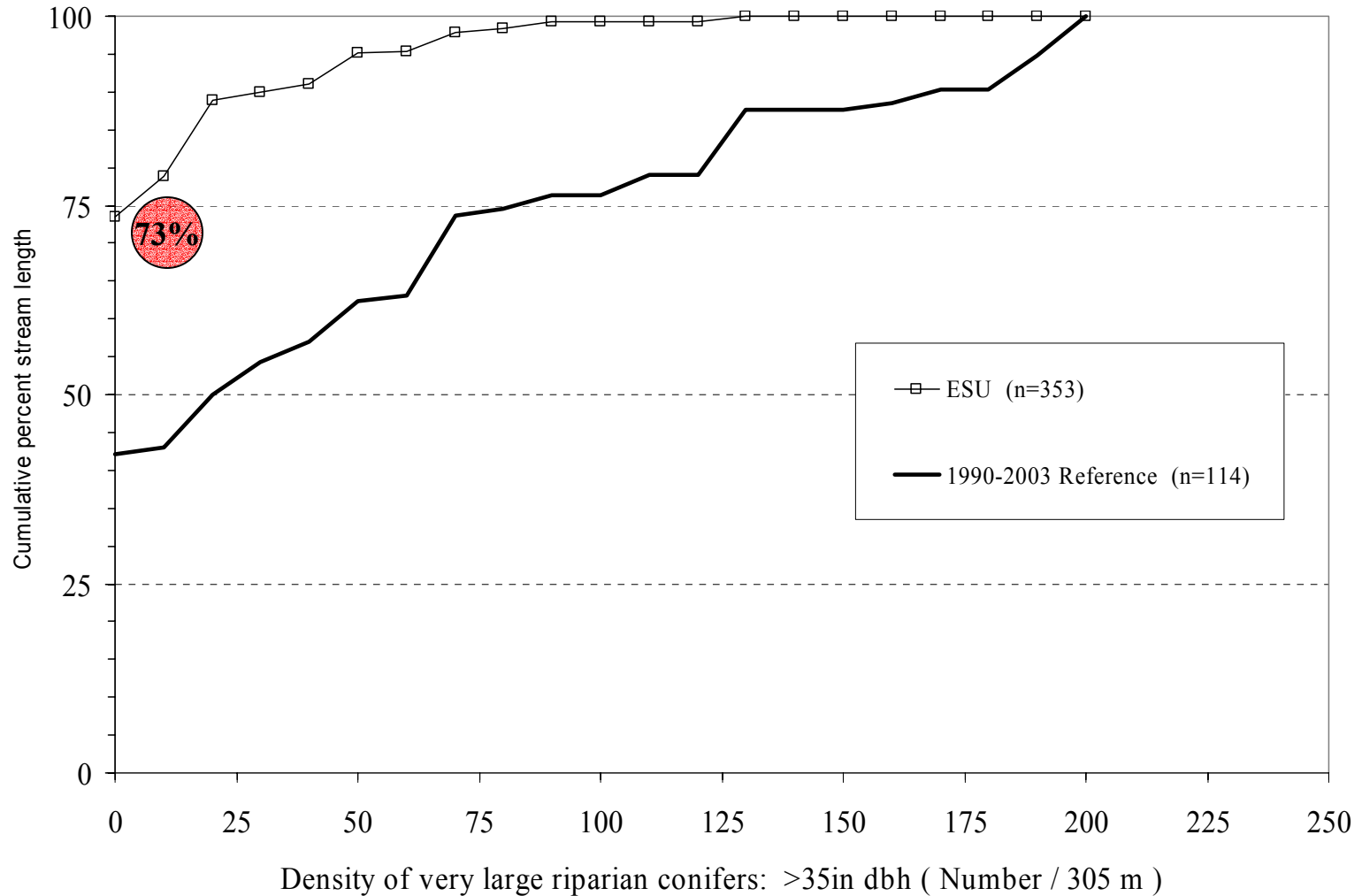
- Miles treated equate to 14% of coho miles
- Mostly
 - Planting
 - Fencing
 - Voluntary Retention

Conclusions: Effectiveness of Riparian Restoration

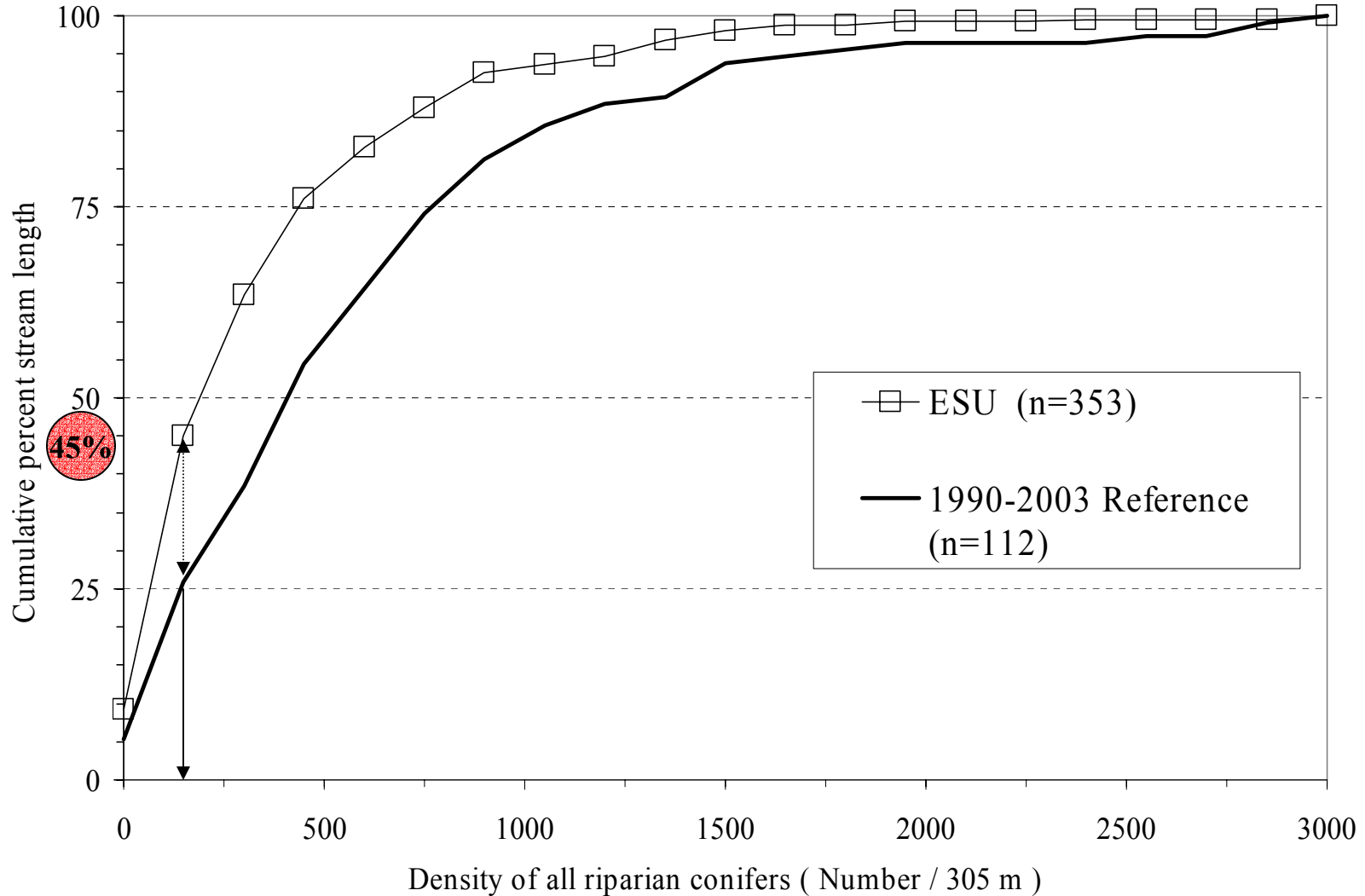
- Effectiveness has mostly been gauged by survival
 - Increases with site prep and maintenance
- Need to evaluate function and diversity



Density of Very Large Conifers



Density of All Riparian Conifers



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