

Contemporary Forest Practices vs. Coho Habitat in Oregon

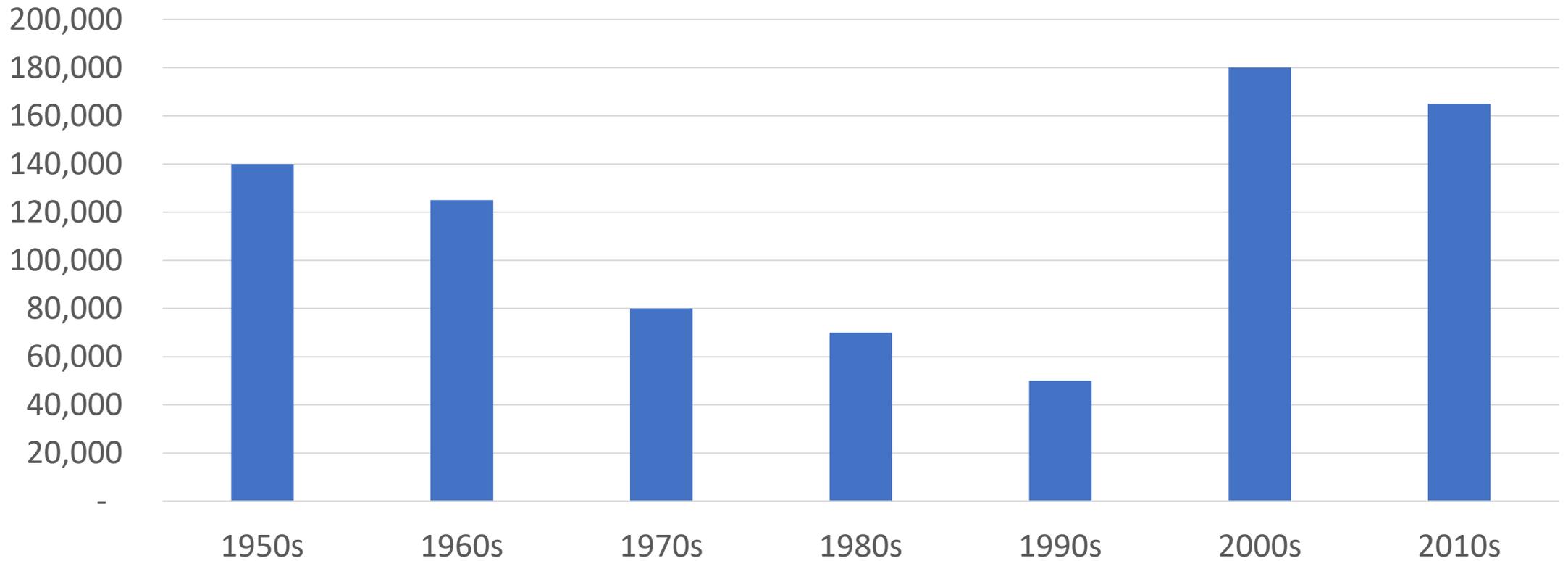
Summary of Current Science

Jeff Light

Presented to the Oregon Board of Forestry
July 24, 2019

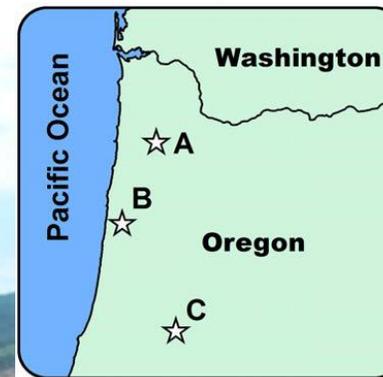
Oregon Wild Coho Are Recovering

Oregon Coast Wild Coho Spawners



Paired Watershed Studies

- Hinkle
- Alsea
- Trask



Legend

- ▲ Downstream Sites
- ▲ Upstream Sites
- NHD Streams
- ▨ Harvest Area
- ▤ Monitored Catchment
- ▭ Watershed Boundary

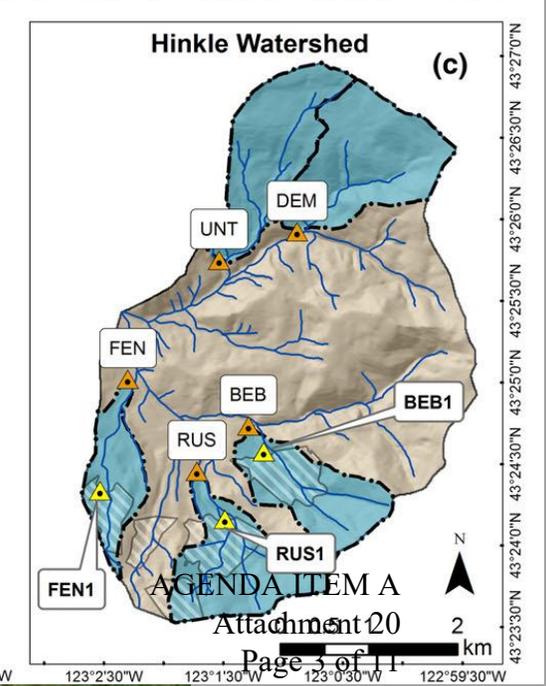
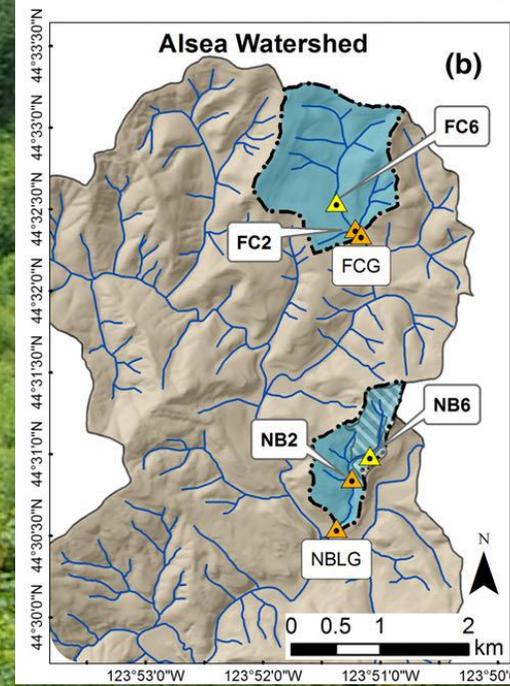
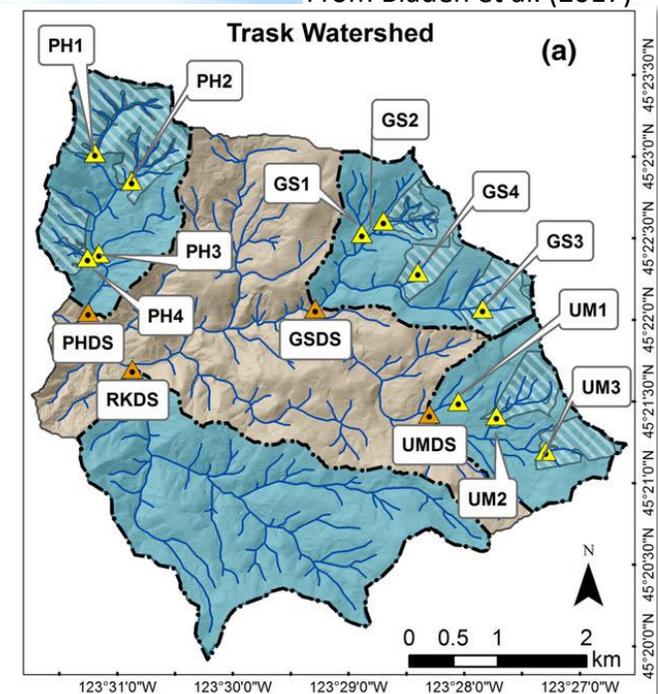


Photo courtesy of OFRI

Fish Response to Current Rules

- Clearcut or thinning of fishless headwaters (with and without buffers)
 - Hinkle (Phase 1)
 - Significant increases in late-summer biomass of age 1+ cutthroat trout
 - No other detectable effects on downstream fish or their habitat
 - Trask
 - No effect of harvest on growth of trout or sculpins downstream



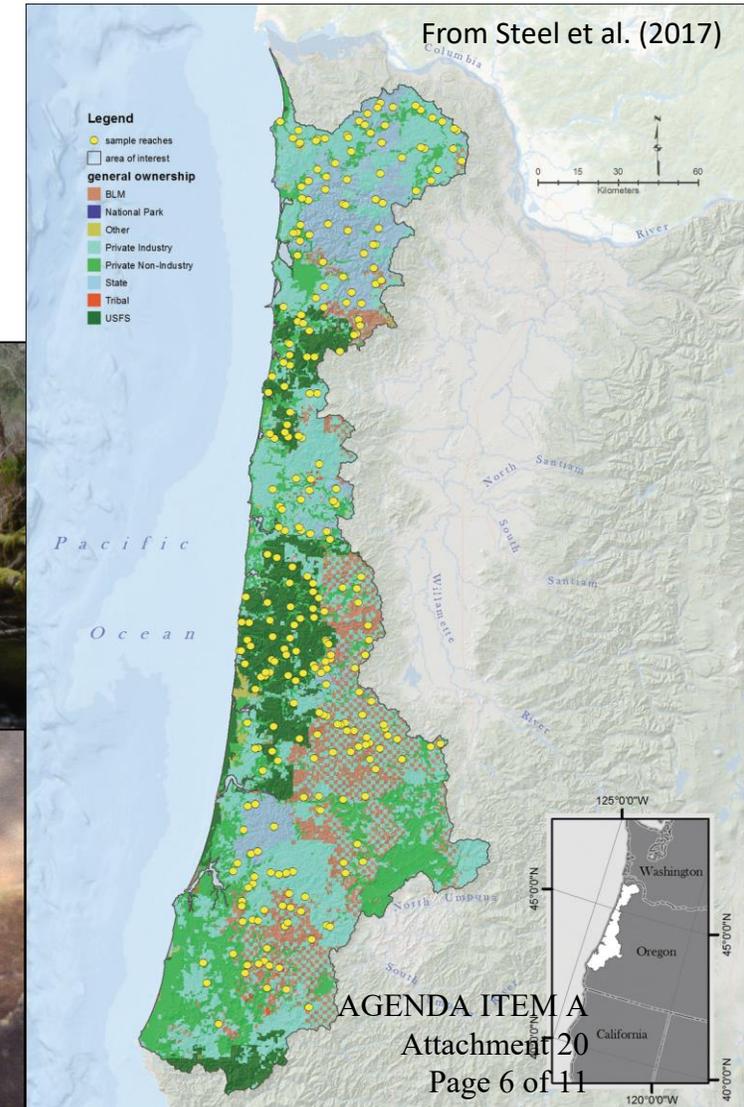
Fish Response to Current Rules

- Clearcut adjacent to fish-bearing streams with buffers
 - Alsea (phase 1)
 - % pool habitat increased
 - Density and Biomass of Age 1+ cutthroat increased
 - Juvenile coho showed no significant changes “in any of the biotic parameters measured”
 - SW British Columbia
 - No detectable logging effects on relative abundance or condition of cutthroat trout

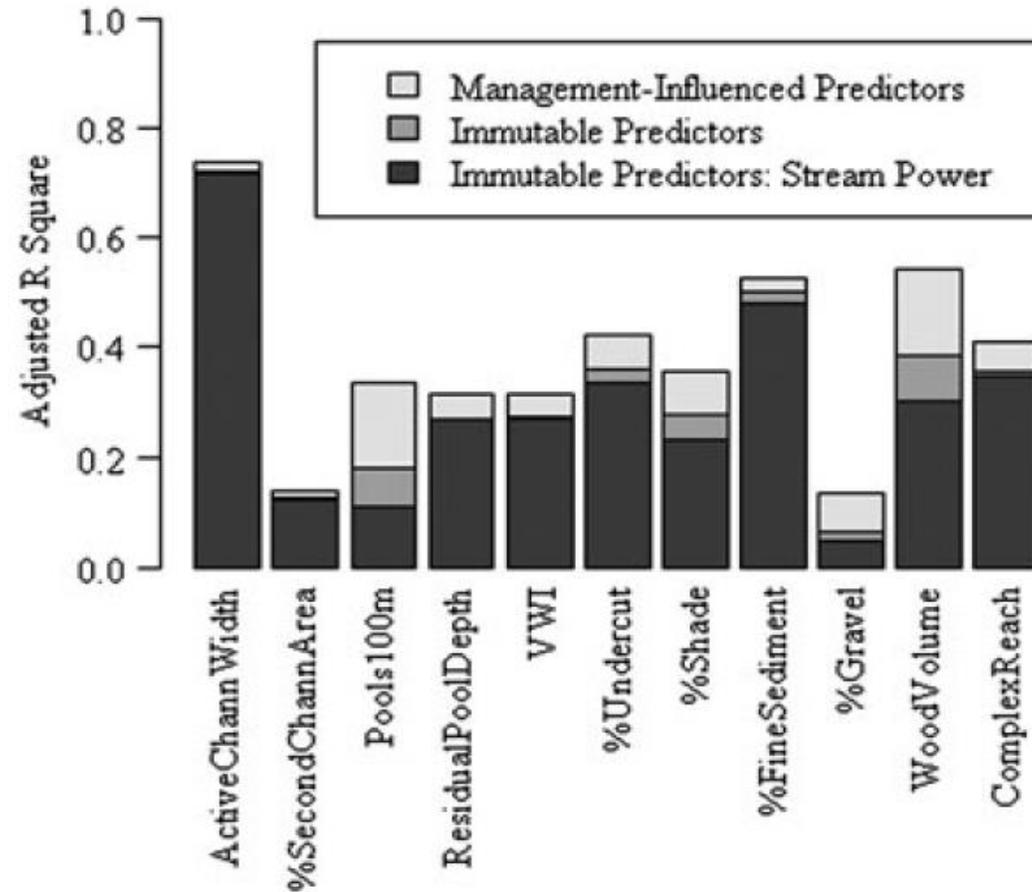


New Research On Forestry-Fisheries Interactions Should Be Informing Rule Changes

- Salmonid Habitat and Juvenile Monitoring
 - Coast-wide status and trends

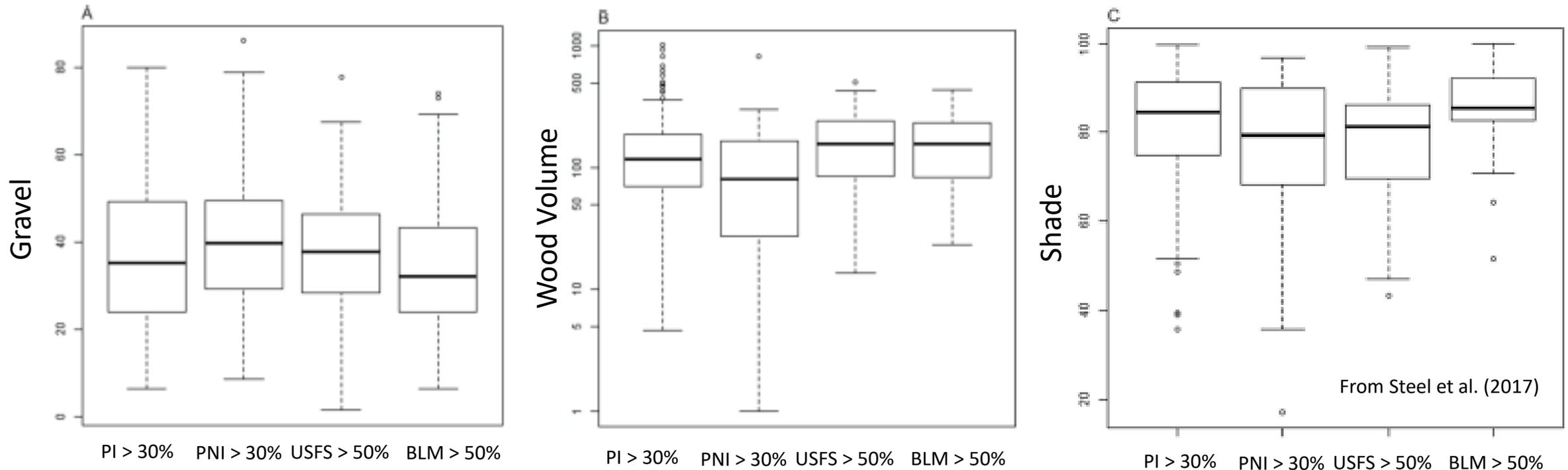


Oregon's Forests Provide Productive Coho Habitat



Proportion of variability attributed to management influenced predictors, immutable predictors (climate, geology, topography), and stream power indicators (gradient, precipitation, drainage area) for the 11 in-stream habitat response features evaluated. From Anlauf et al. (2011, Figure 2).

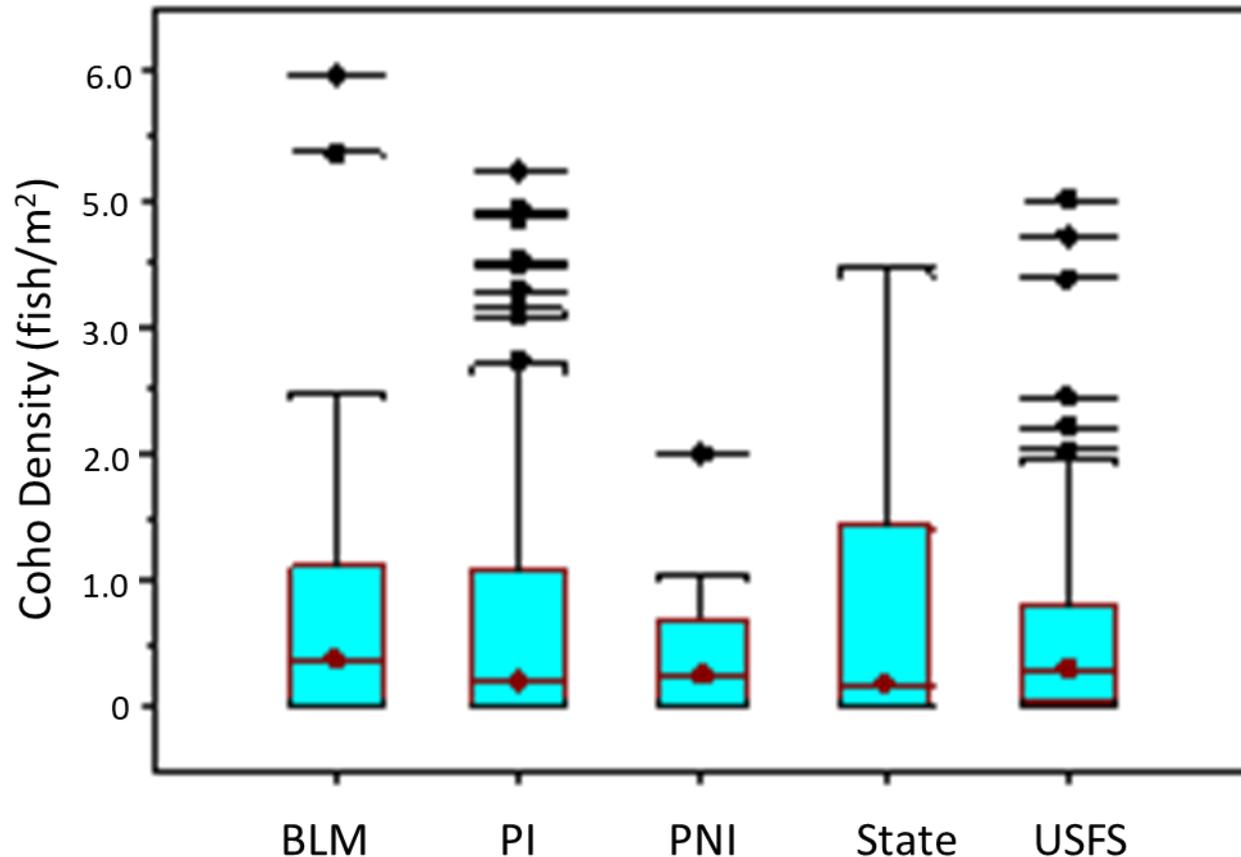
Oregon's Forests Provide Productive Coho Habitat



- Little difference across ownerships
- Pool surface area: Public > Private Industrial > Private Non-Industrial
- PI status from historic practices (esp. log drives)
- PNI had more intense land use (only 54% forested)

Oregon's Forests Provide Productive Coho Habitat

Juvenile Coho Abundance
From K. Burnett



“Ownership did not have a statistically significant effect on juvenile coho density within pools” (Steel et al. 2017)

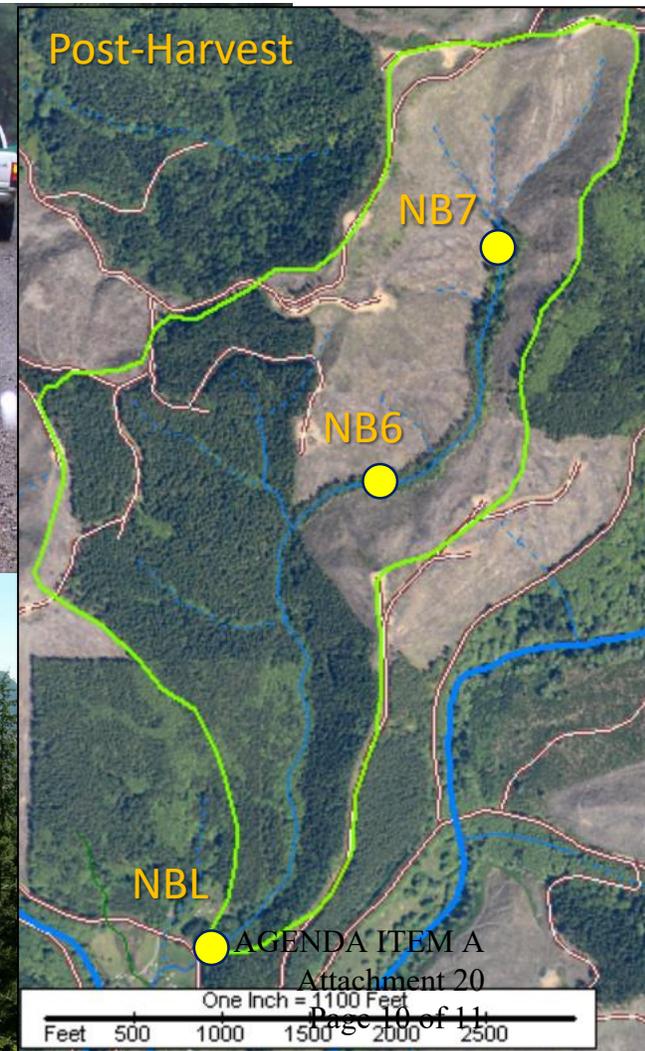
- More stringent rules \neq more coho
 - 8-generations under NWFP
 - 6 generations under Forests and Fish in Washington

Habitat and Water Quality Response to Current Rules

- Sediment
 - Roads
 - No effect (Alsea)
 - Minimal Increases (Hinkle, Trask)
 - Landslides
- Temperature
- Habitat Quality/Complexity
 - Buffers provide bulk of LWD
 - Active placement for priority reaches
- Fish Access
- Summer Low Flows



Clearcut size limits and adjacency constraints



Conclusion

- Forest landowners are keen to see coho recover
- Current forest practices protect and maintain coho and their habitat
- The industry supports voluntary restoration via the Oregon Plan
- The FPA and the system that supports it are working
- Abrupt, wholesale changes to rules are unnecessary
- We urge the Board of Forestry to reject the coho petition