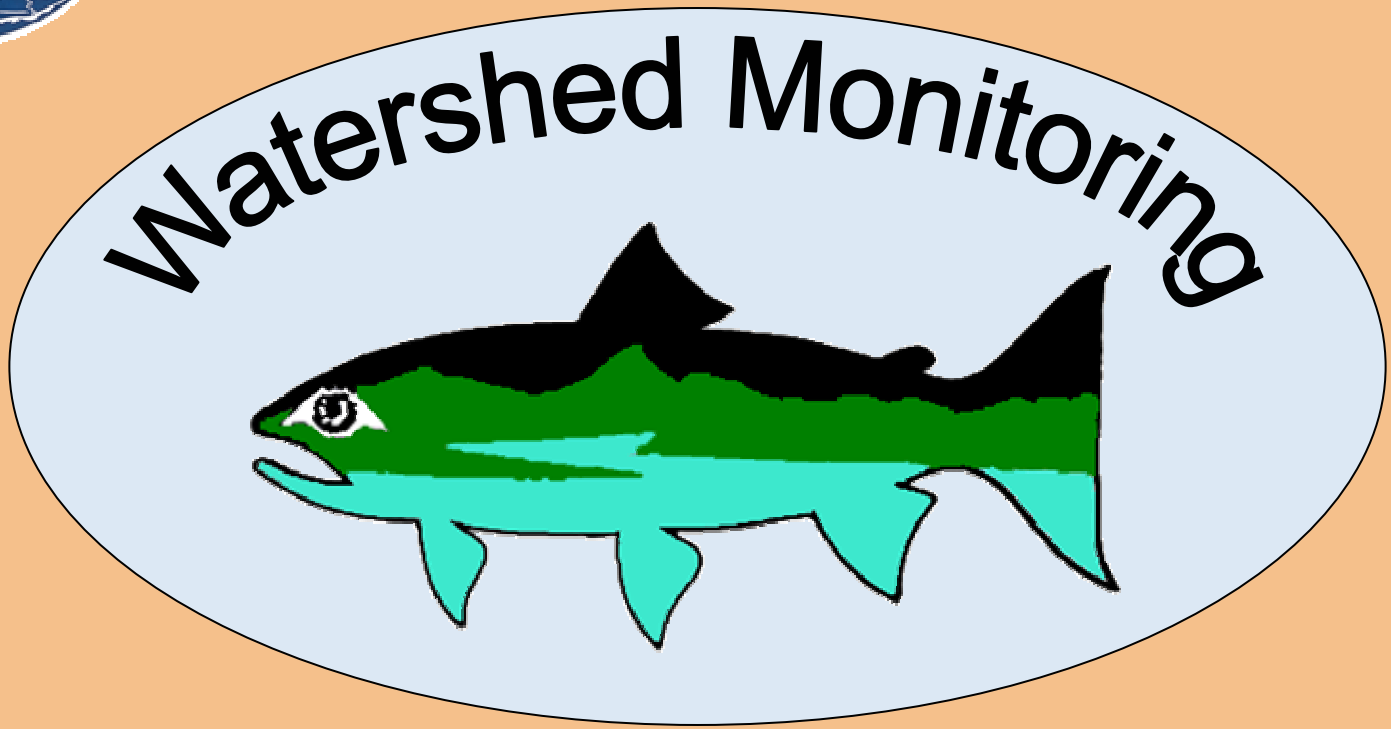
Interagency Regional Monitoring Program



Watershed Condition Under the Northwest Forest Plan: Changes by Land-Use Allocation

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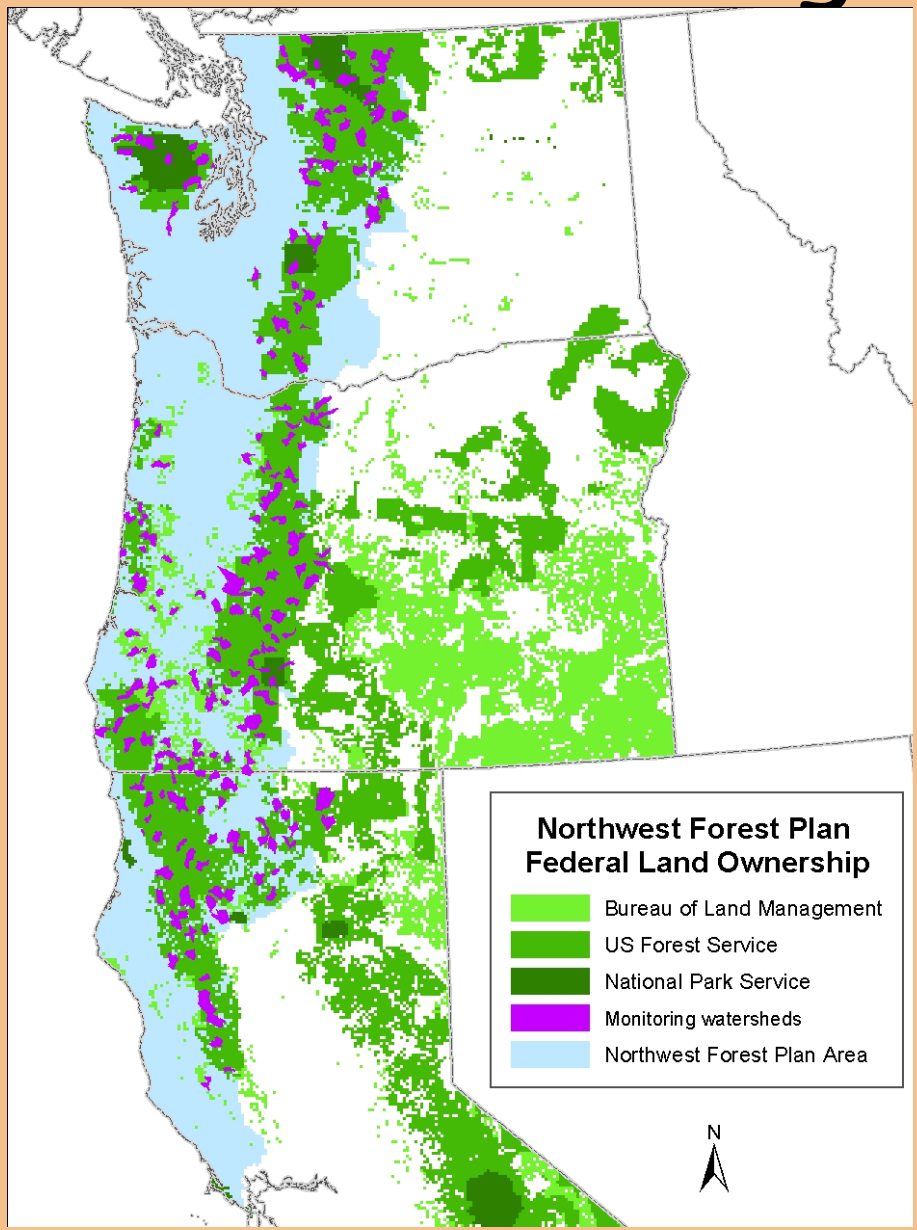
Watershed condition monitoring

- 250 randomly selected watersheds
- 50 watersheds sampled per year on 5-year rotation
- Post-stratified watersheds into LUAs depending on > 50 % of the watershed area



Field data collected

Available for 55 watersheds in current time period only

Channel morphology

- Bankfull width: depth, sinuosity, gradient
- entrenchment ratio

Habitat characteristics

- Wood and pool frequency, residual pool depth, substrate

Biological characteristics

- Fish, amphibians, benthic invertebrates, periphyton

Land-use allocations

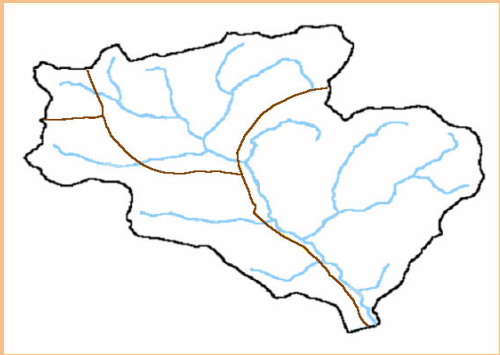
Category	N	Land-use allocation
Matrix	37	Matrix + Riparian Reserves
Congressional reserves	56	Congressional reserves Administratively withdrawn areas
Late-successional reserves	64	Late-successional reserve 1 Late-successional reserve 2 Late-successional reserve 3 Managed late-successional reserves Adaptive management reserves
Nonfederal	41	None

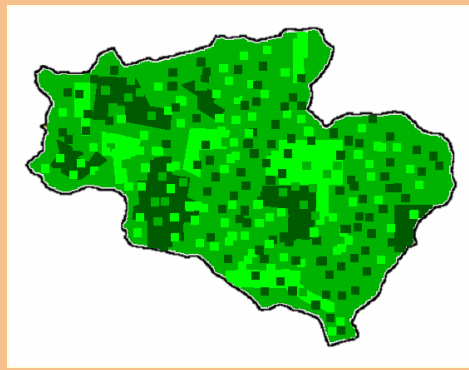
Management in land-use allocations

Category	Management
Congressional reserves	National parks and wilderness
Late-successional reserves	Protect and enhance late-successional and old-growth forest
Matrix	Timber production

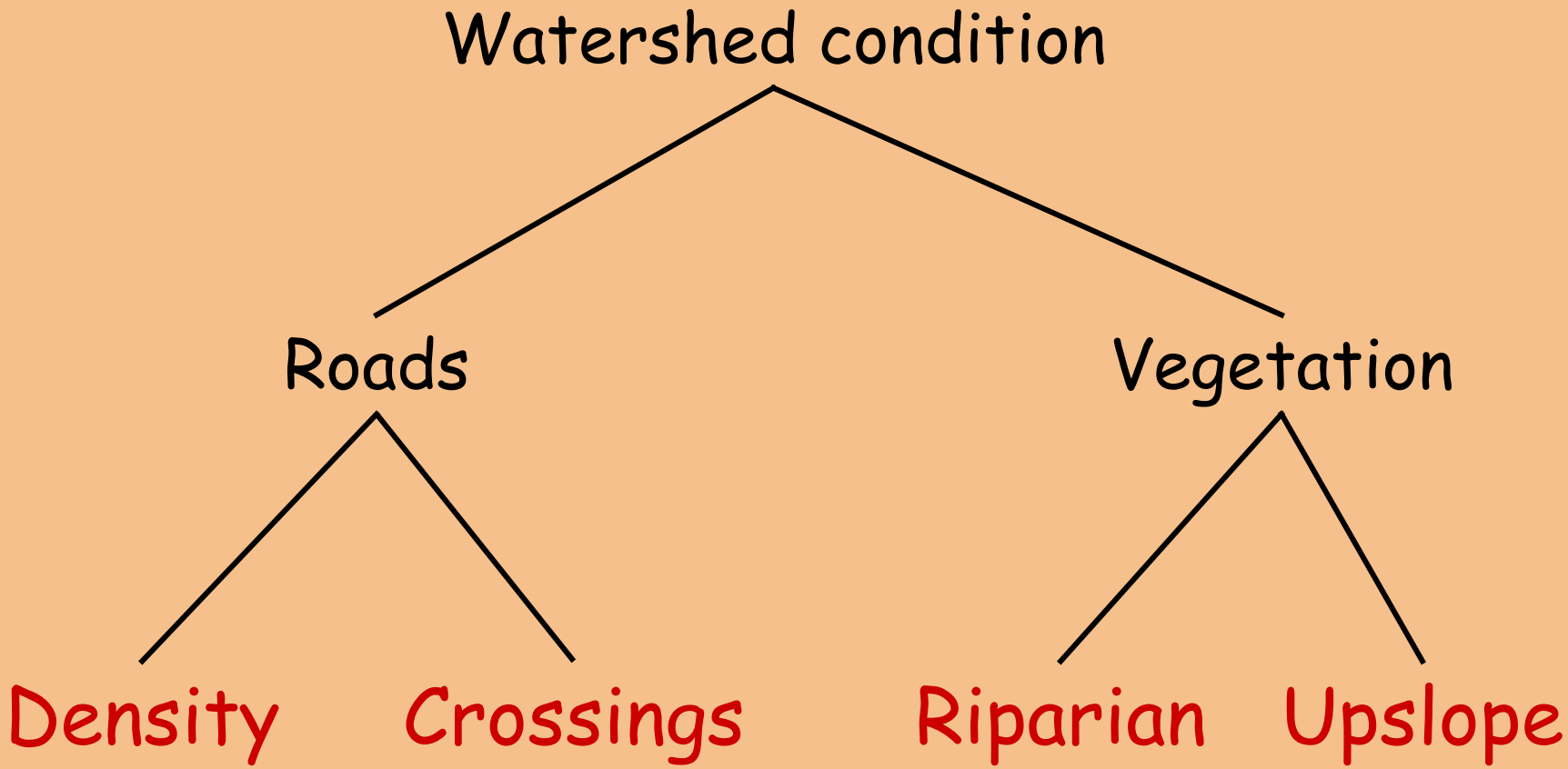
Watershed condition

- Roads
  - Density
  - Crossings
- Vegetation
  - Riparian
  - Upslope



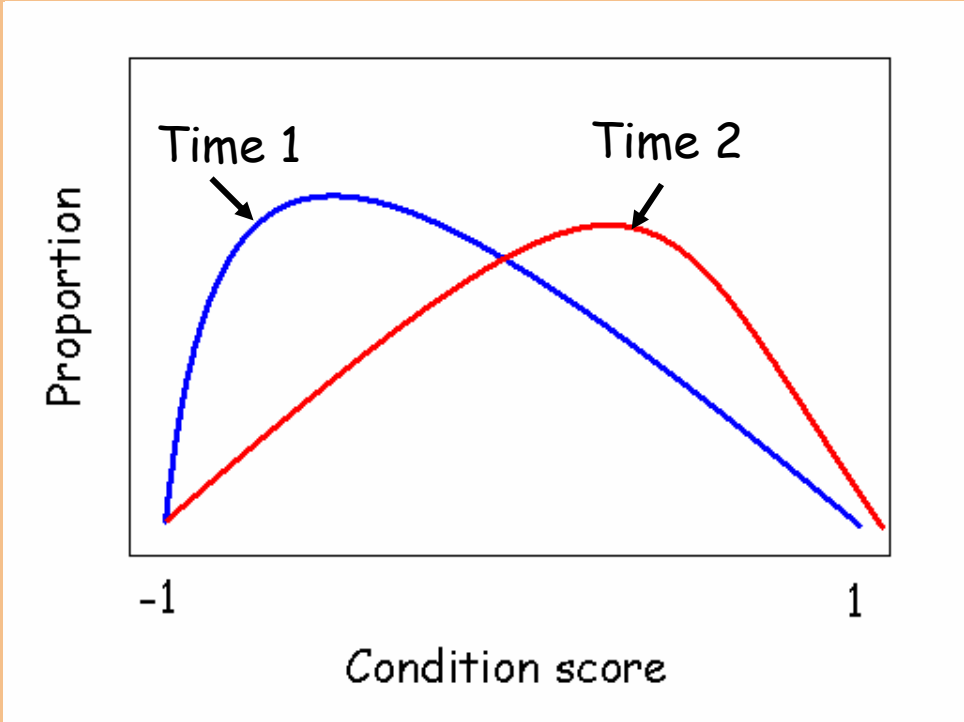


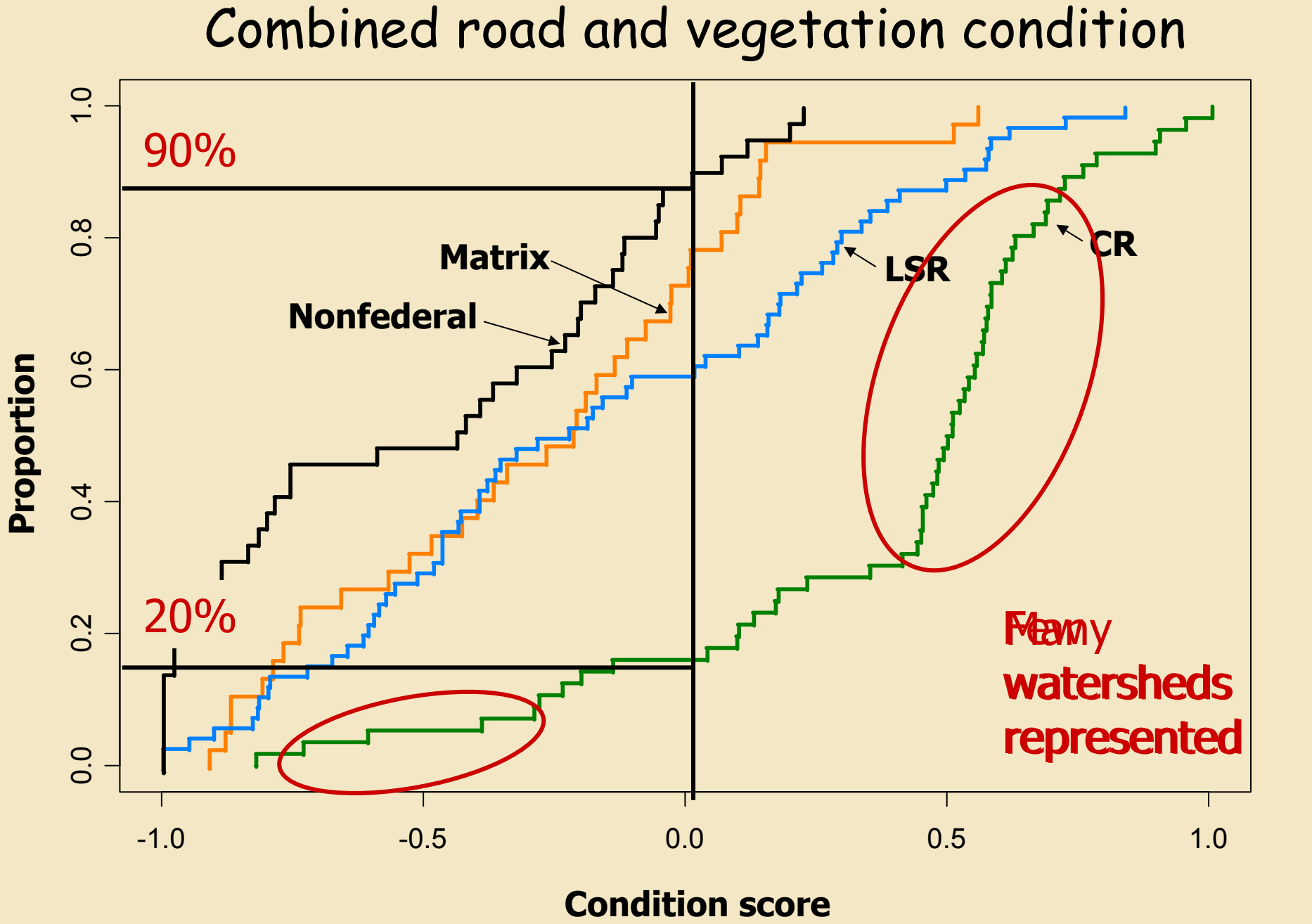
Step 1. Evaluate attributes



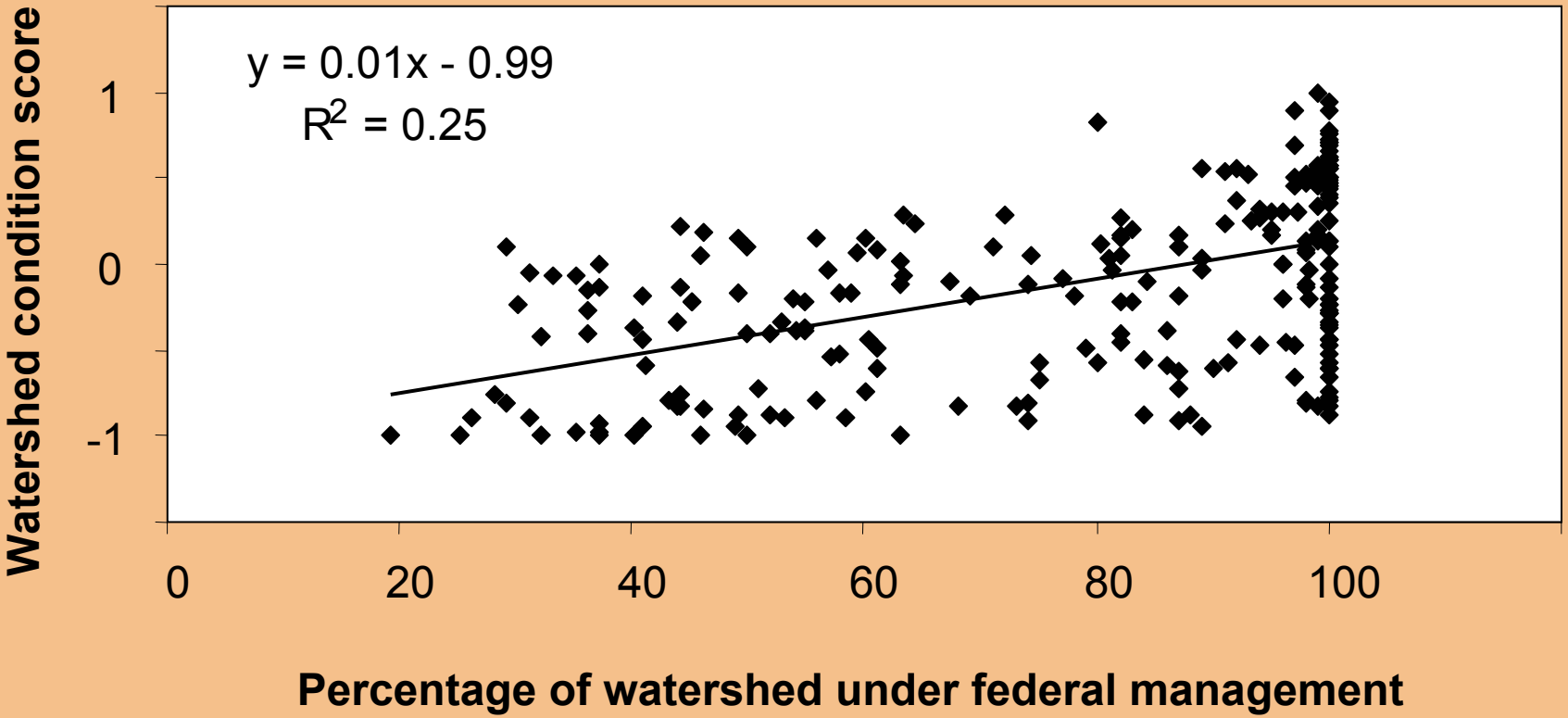
Aquatic Conservation Strategy

- Goal is to maintain or improve the condition of watersheds.
- Does not describe the baseline distribution nor identify a "desired" distribution.
- We infer that the distribution should move toward improved condition.

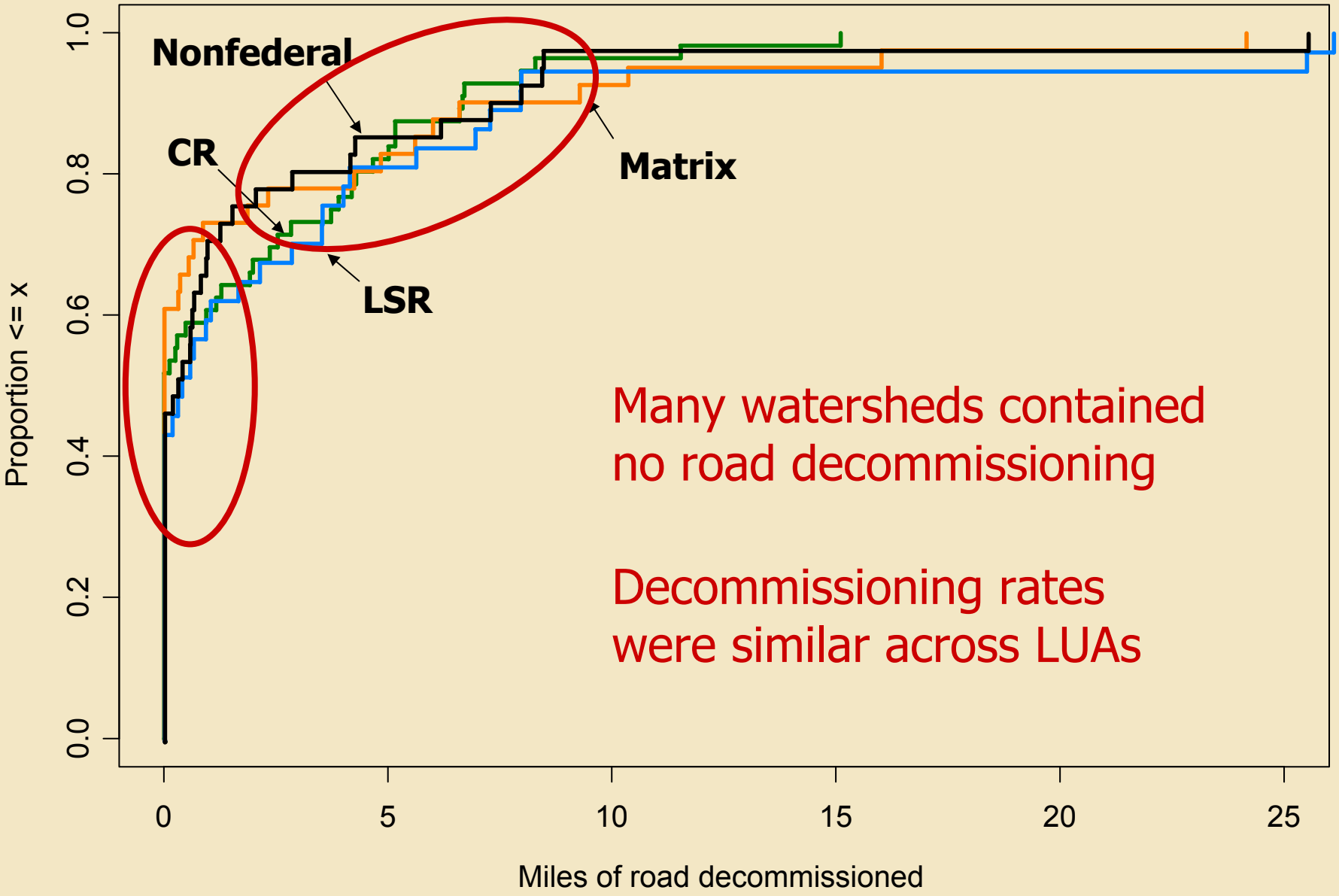



Combined road and vegetation condition
90%
20%
Matrix
Nonfederal
LSR
CR
Many watersheds represented
Proportion
Condition score
0.0
0.2
0.4
0.6
0.8
1.0
-1.0
-0.5
0.0
0.5
1.0

Relationship between condition and federal management



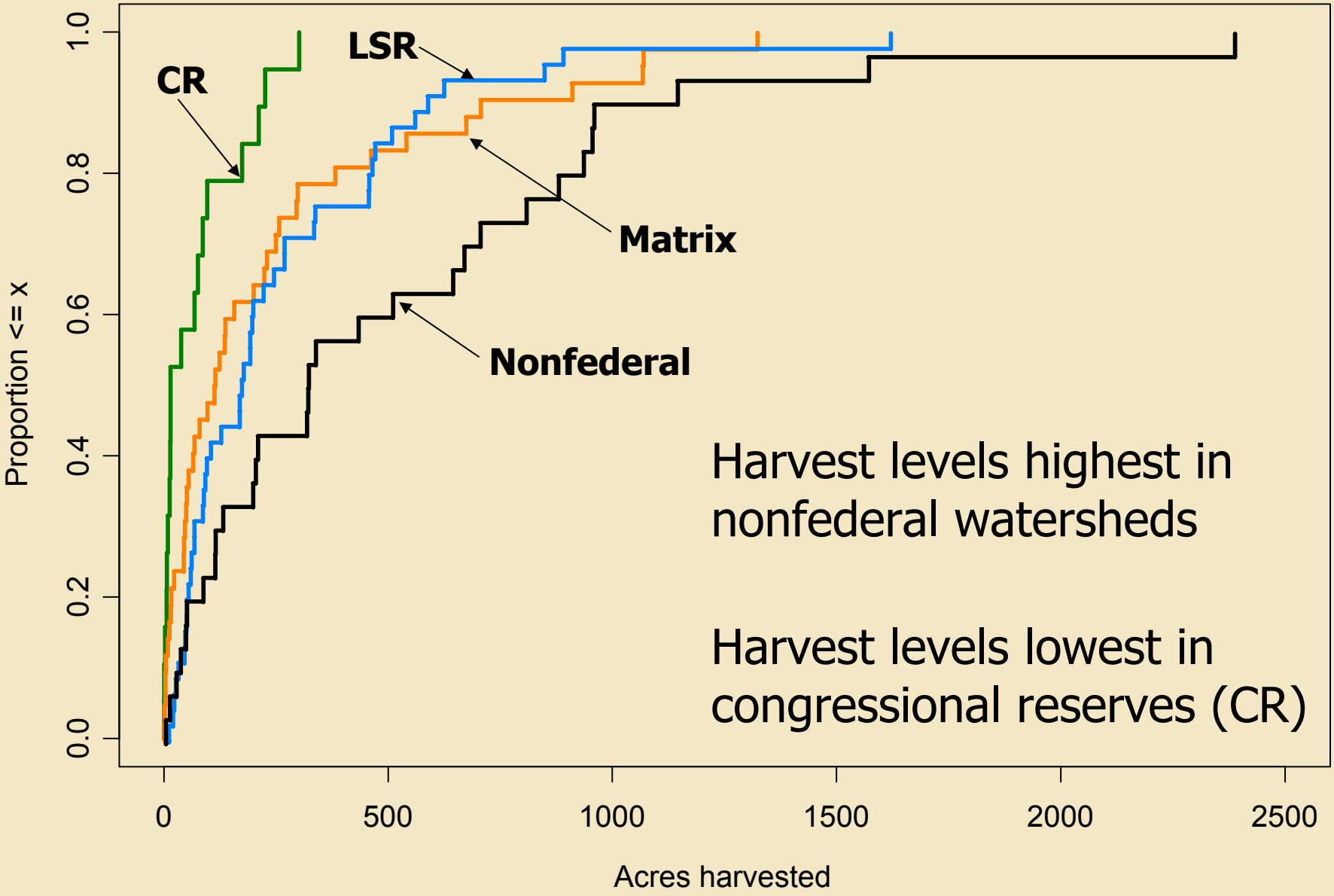
Roads miles decommissioned



Changes in road condition scores

	Decline	No change	Improve
CR	0	76	23
LSR	0	52	48
Matrix	0	66	33
Nonfederal	0	64	36

Acres harvested



Harvest levels highest in nonfederal watersheds

Harvest levels lowest in congressional reserves (CR)

Changes in vegetation condition scores

	Decrease	No change	Increase
CR	3	31	63
LSR	8	21	72
Matrix	0	49	51
Nonfederal	0	73	26

Conclusions

- Few watersheds declined in condition in any land-use allocation.
- Watersheds under federal management tend to have higher condition scores than those not under federal management.
- Road conditions improved the most in late-successional reserves, the least in congressional reserves.
- Vegetation conditions improved the most in congressional and late-successional reserves.