

Preliminary Assessment of the Condition of Watersheds Under the Northwest Forest Plan

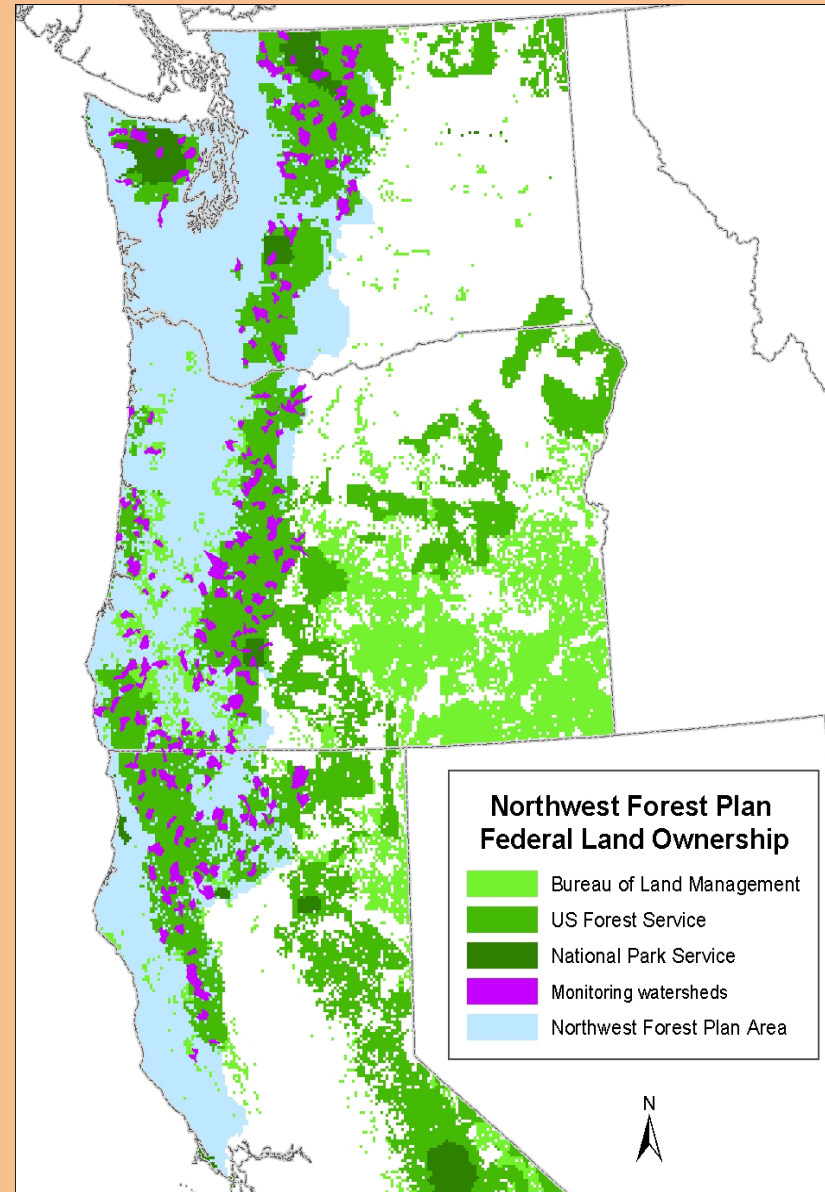


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Office USDA Forest Service - Region 6

Watershed condition monitoring

- ✦ 250 randomly selected watersheds
- ✦ Minimum of 25 % federal ownership



Implementation of the monitoring program

Number of watersheds sampled

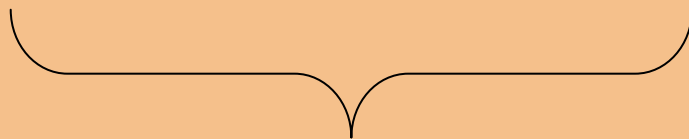
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1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
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Northwest Forest Plan implemented



Monitoring program development



Monitoring program approved by Executives



Monitoring program pilot phase



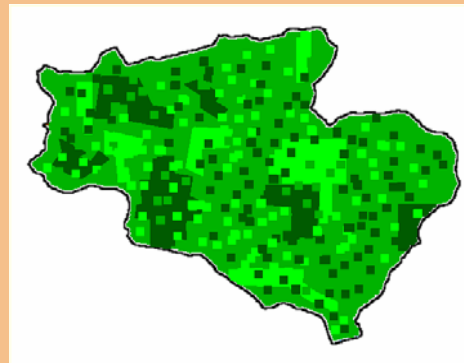
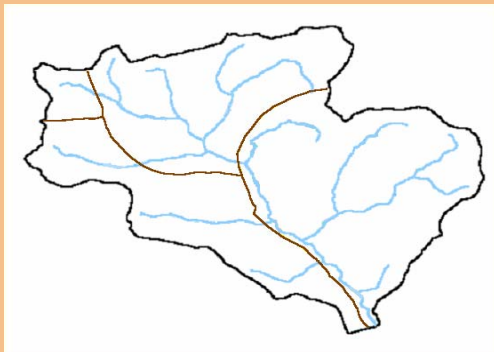
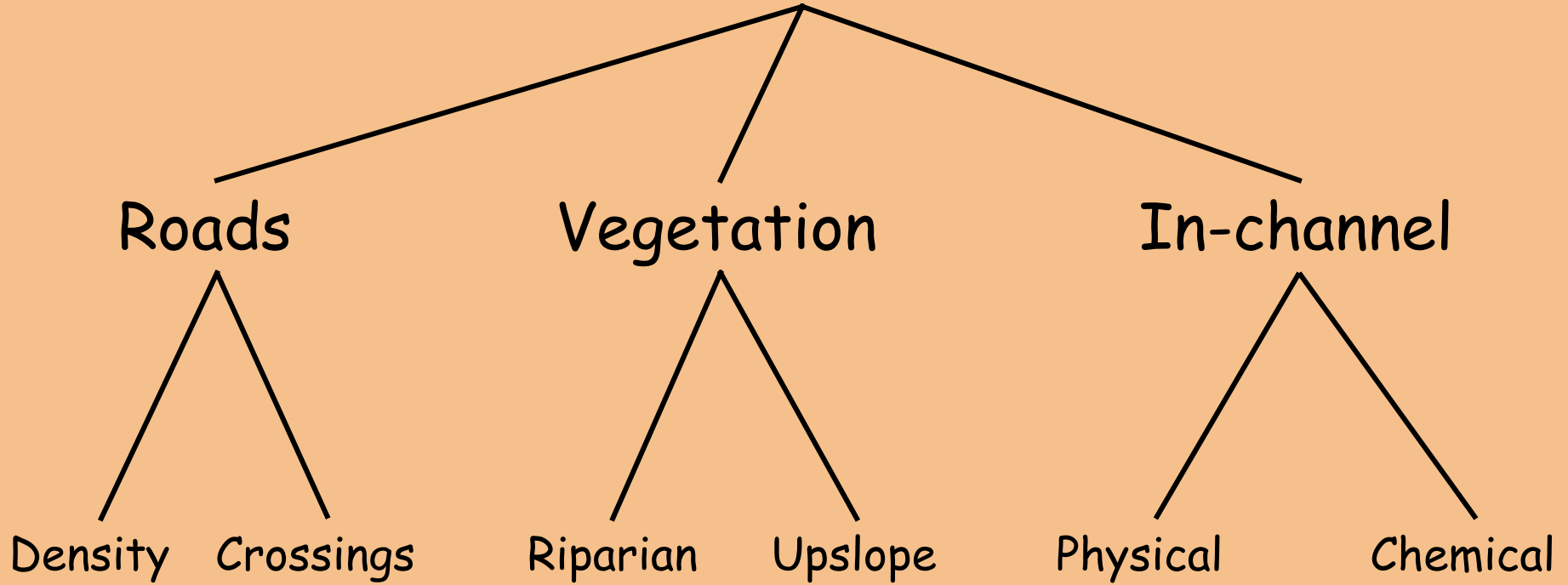
Monitoring program implemented



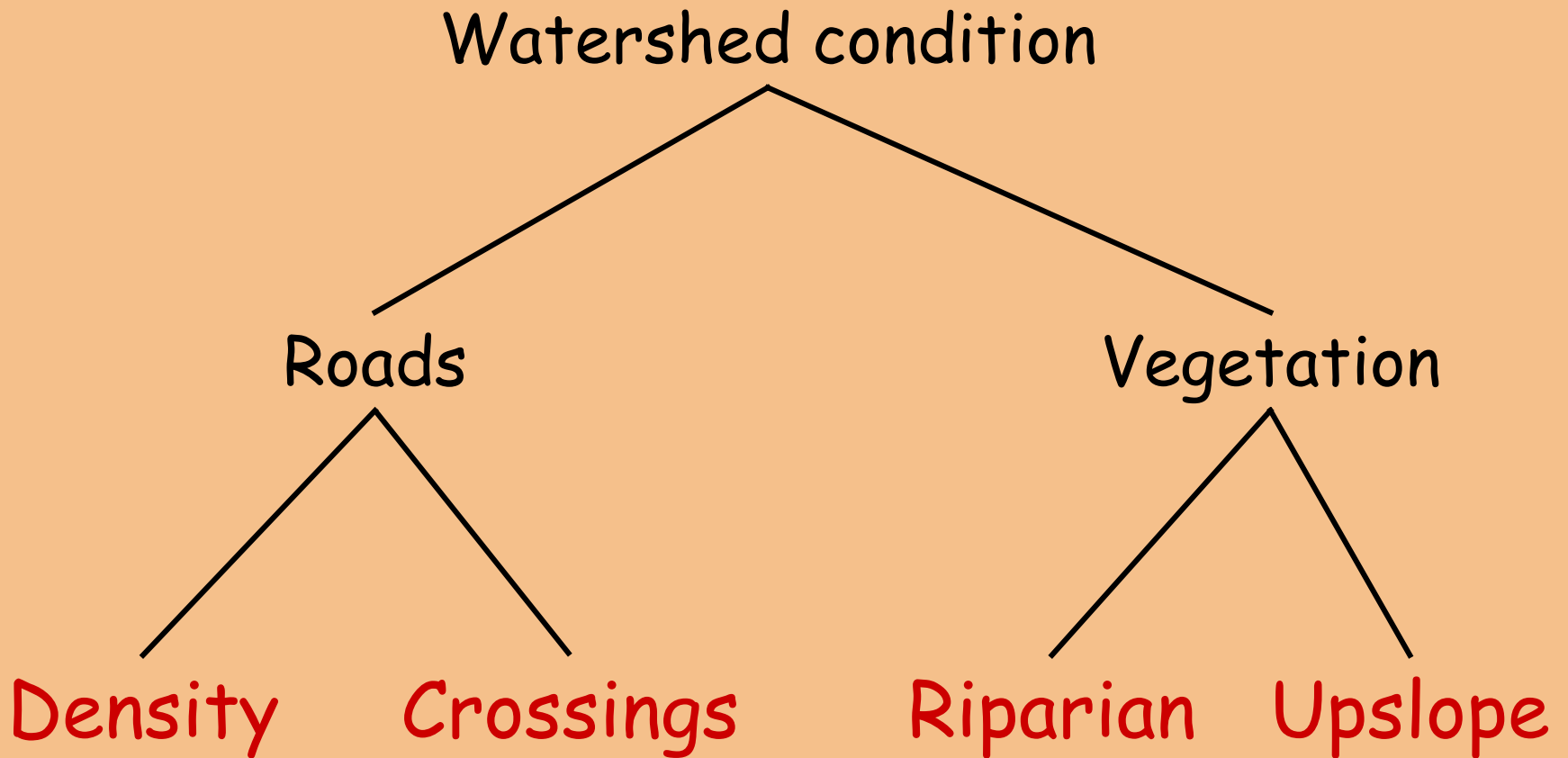
10-year assessment of the Plan



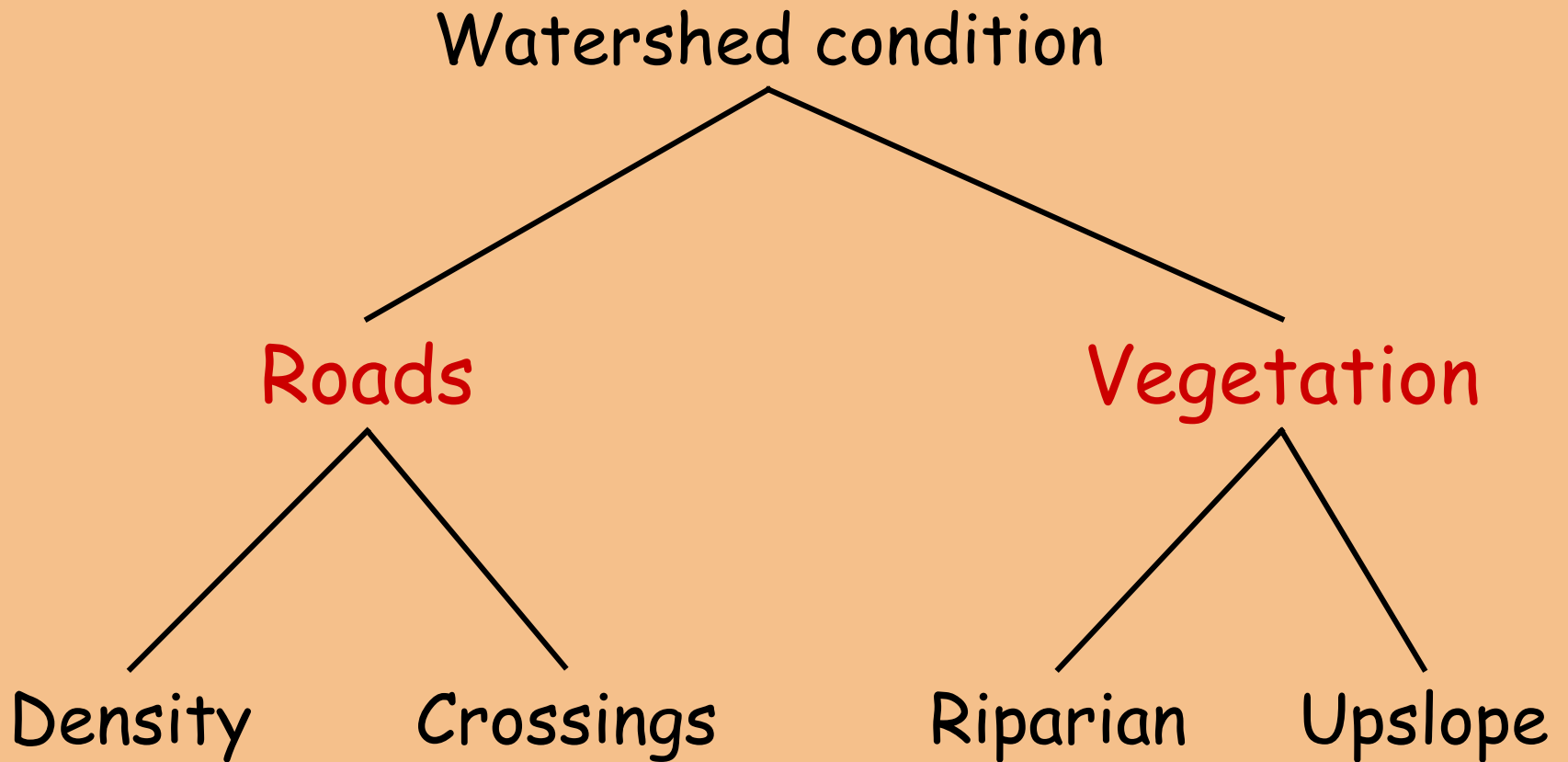
Watershed condition



Step 1. Evaluate attributes



Step 2. Aggregate



Step 2. Aggregate

Watershed condition

Roads

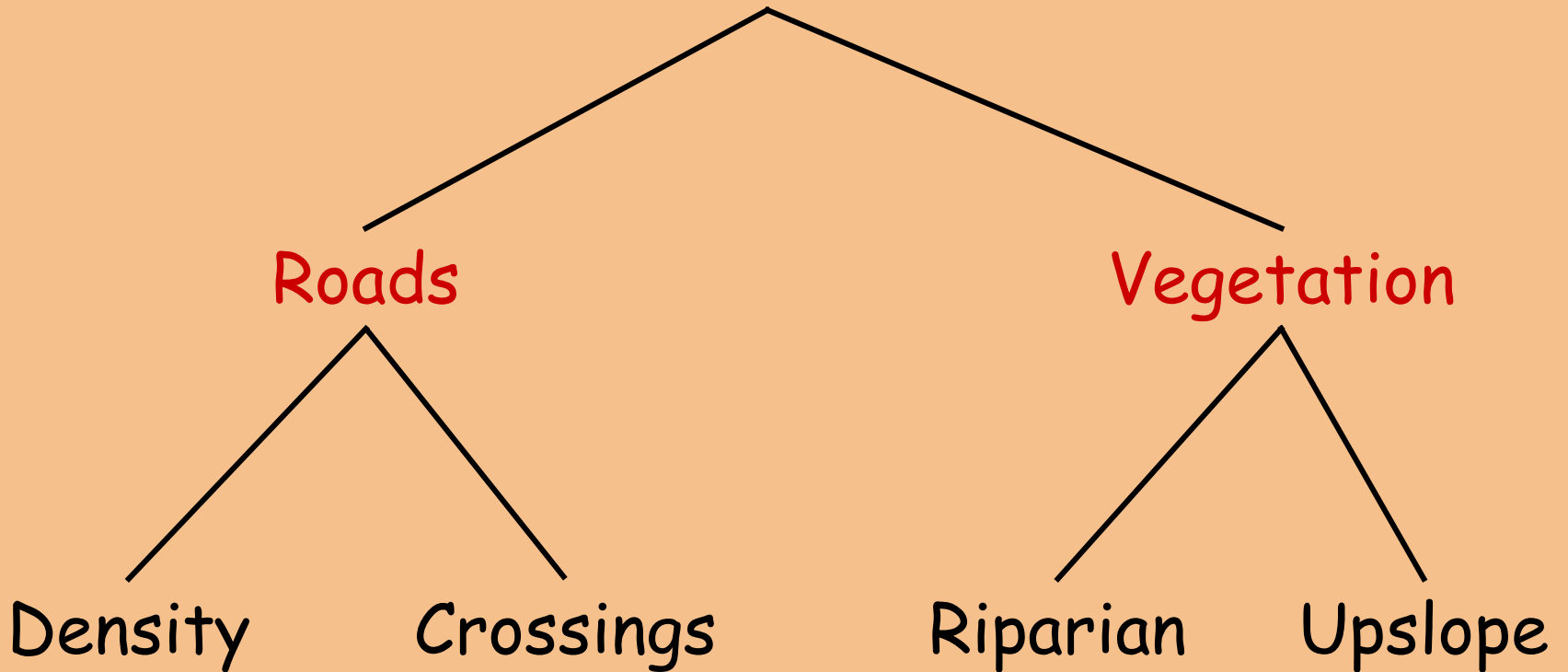
Vegetation

Density

Crossings

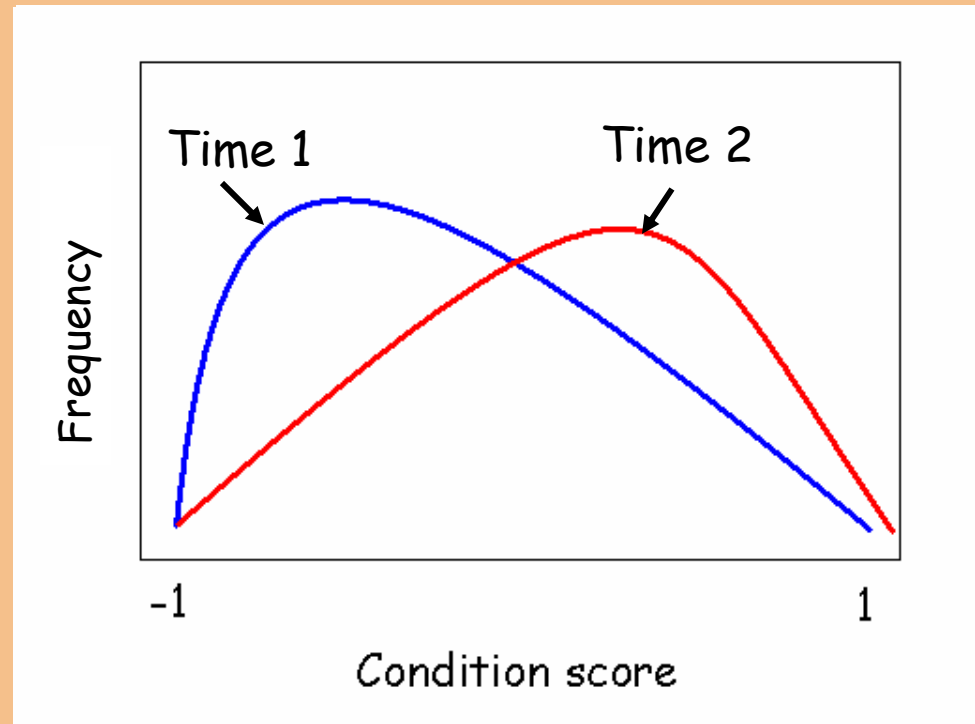
Riparian

Upslope



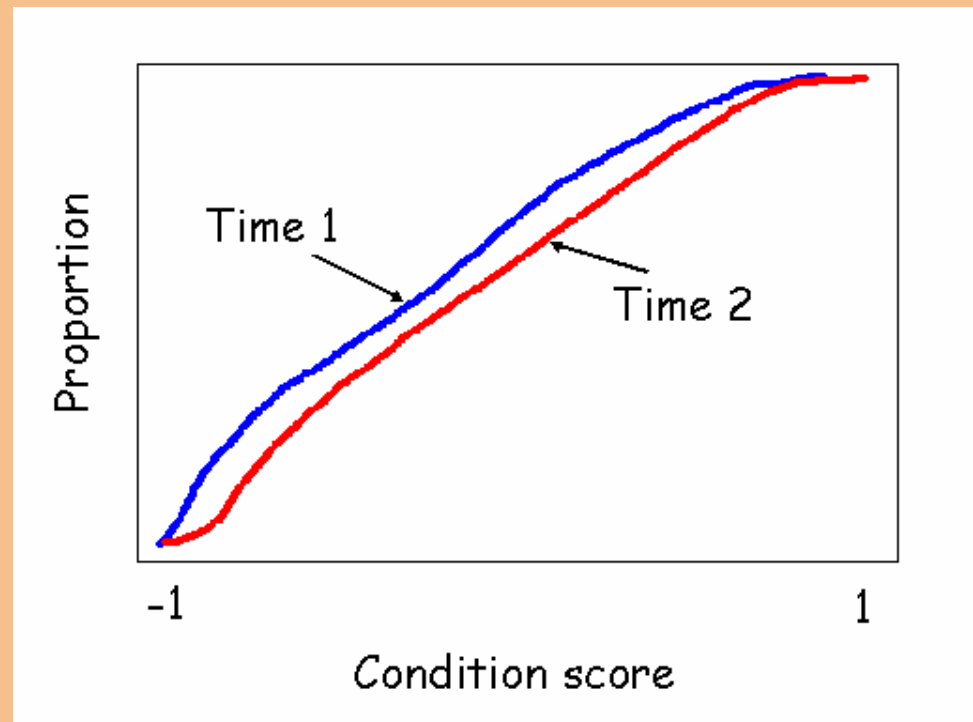
Aquatic Conservation Strategy

- ✦ 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.

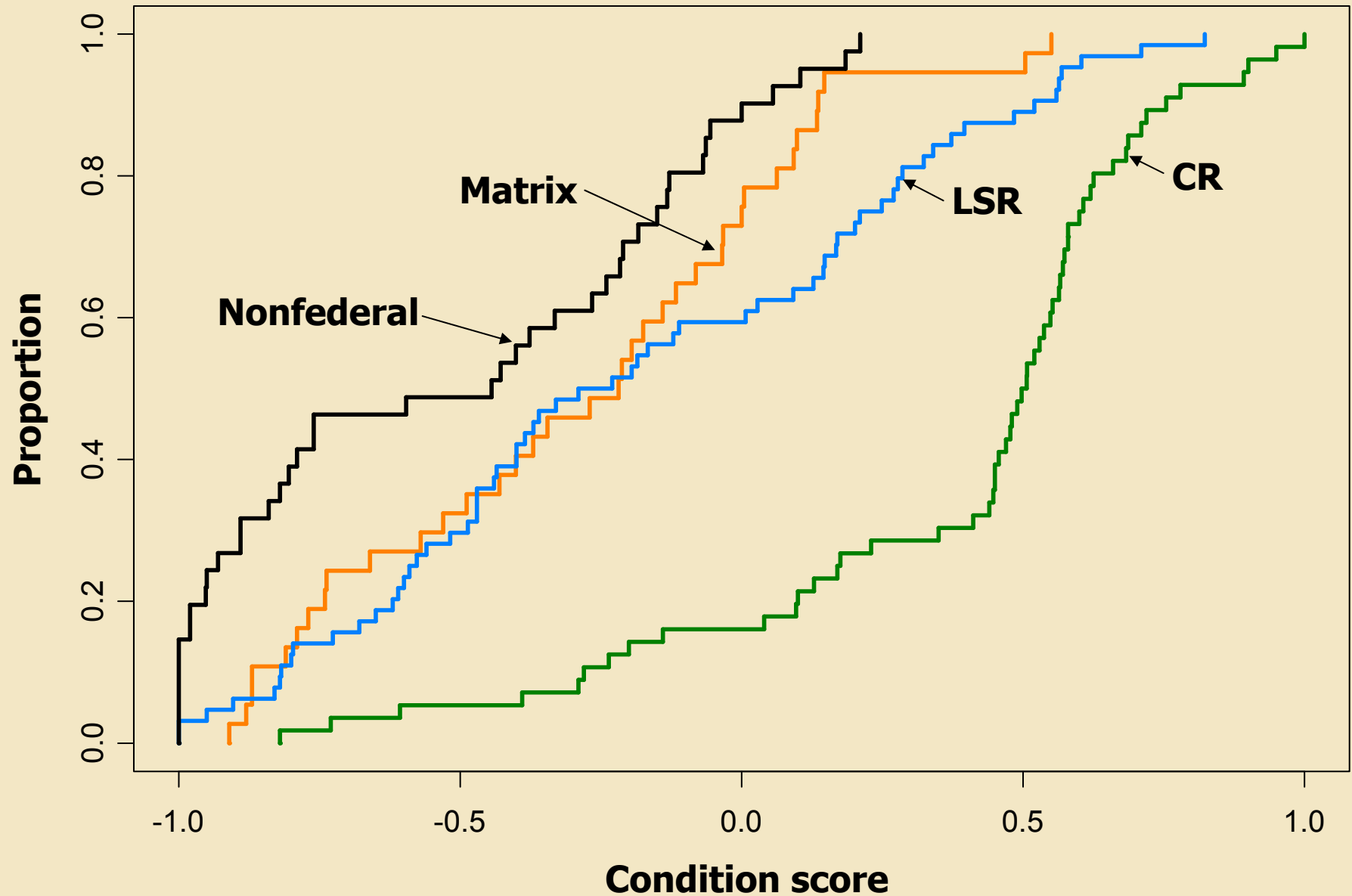


Aquatic Conservation Strategy

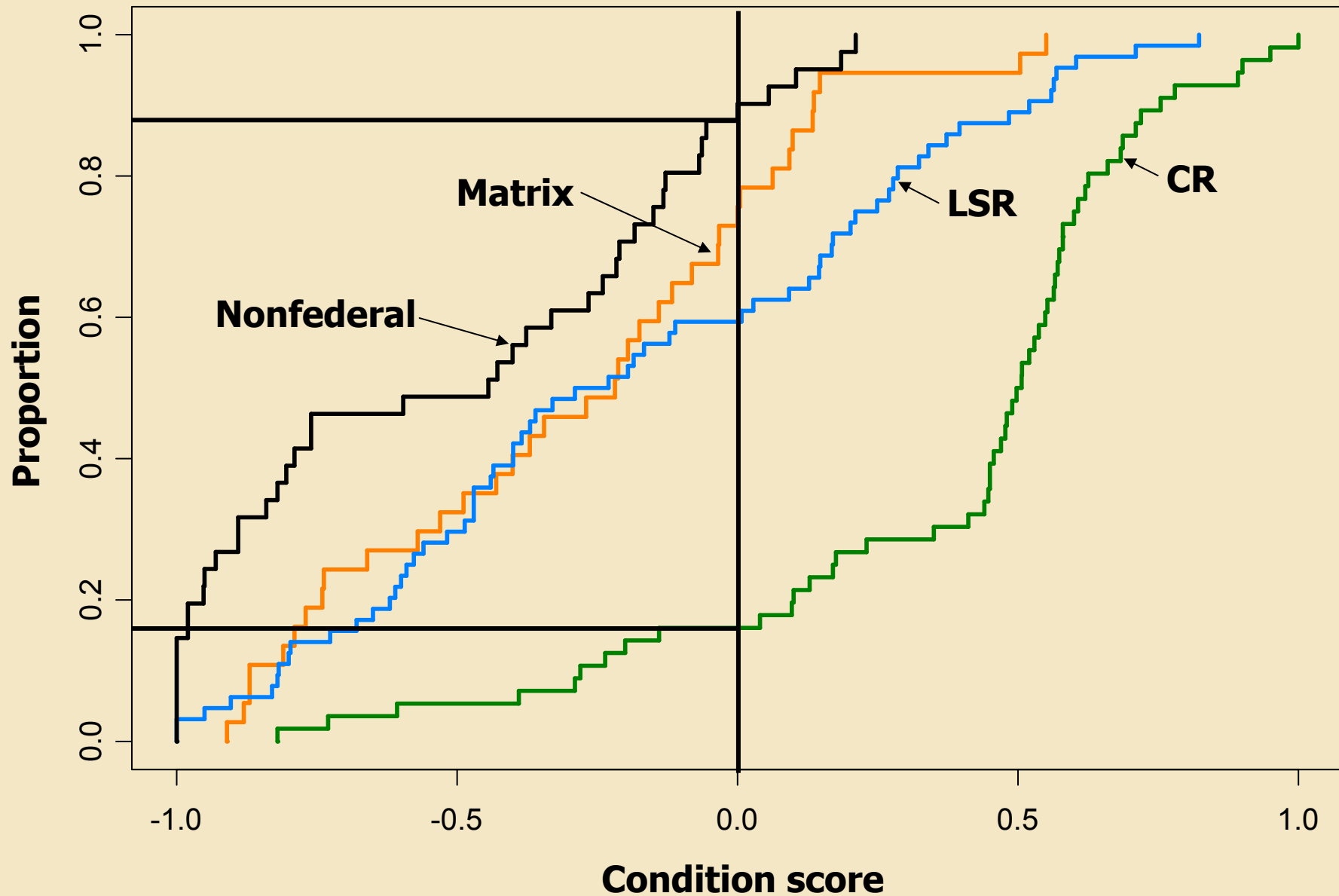
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Combined road and vegetation condition



Combined road and vegetation condition



Changes in condition scores (% of watersheds)

	--	-	0	+	++
Plan-wide	2	2	39	56	1
Key	2	0	24	72	2
Nonkey	2	3	48	48	0

Changes in road condition scores (% of watersheds)

	--	-	0	+	++
Plan-wide	0	0	66	32	1
Key	0	0	58	39	3
Nonkey	0	0	70	29	0

Changes in vegetation condition scores (% of watersheds)

	--	-	0	+	++
Plan-wide	2	2	41	47	8
Key	2	1	30	55	13
Nonkey	2	2	46	43	6

Why did condition change?

- ✦ Slight positive change attributed to vegetation growth (161 watersheds)
- ✦ Substantial positive change attributed to road decommissioning (3 watersheds)
- ✦ Substantial negative change attributed to wildfire (4 watersheds)



Factors that contributed to change



Vegetation growth ~ 8.1 %

Vegetation loss ~ 1.5 %

Roads decommissioned ~ 3,000 mi

Roads built ~ 350 mi

Factors that contributed the most to change...

- ✦ Road attributes tend to carry heavier weights than vegetation attributes
- ✦ Riparian attributes tend to carry heavier weights than upslope attributes



Greatest improvements in condition

- ✦ Decommissioning roads in riparian and hazard areas
- ✦ Increase abundance of large conifers in riparian areas



Conclusions

- ✦ Overall positive change in condition of roads and vegetation.
- ✦ More key watersheds increased in condition than nonkey watersheds.
- ✦ Strong positive changes in condition were attributed to management activities.
- ✦ Strong negative changes in condition were attributed to wildfire.