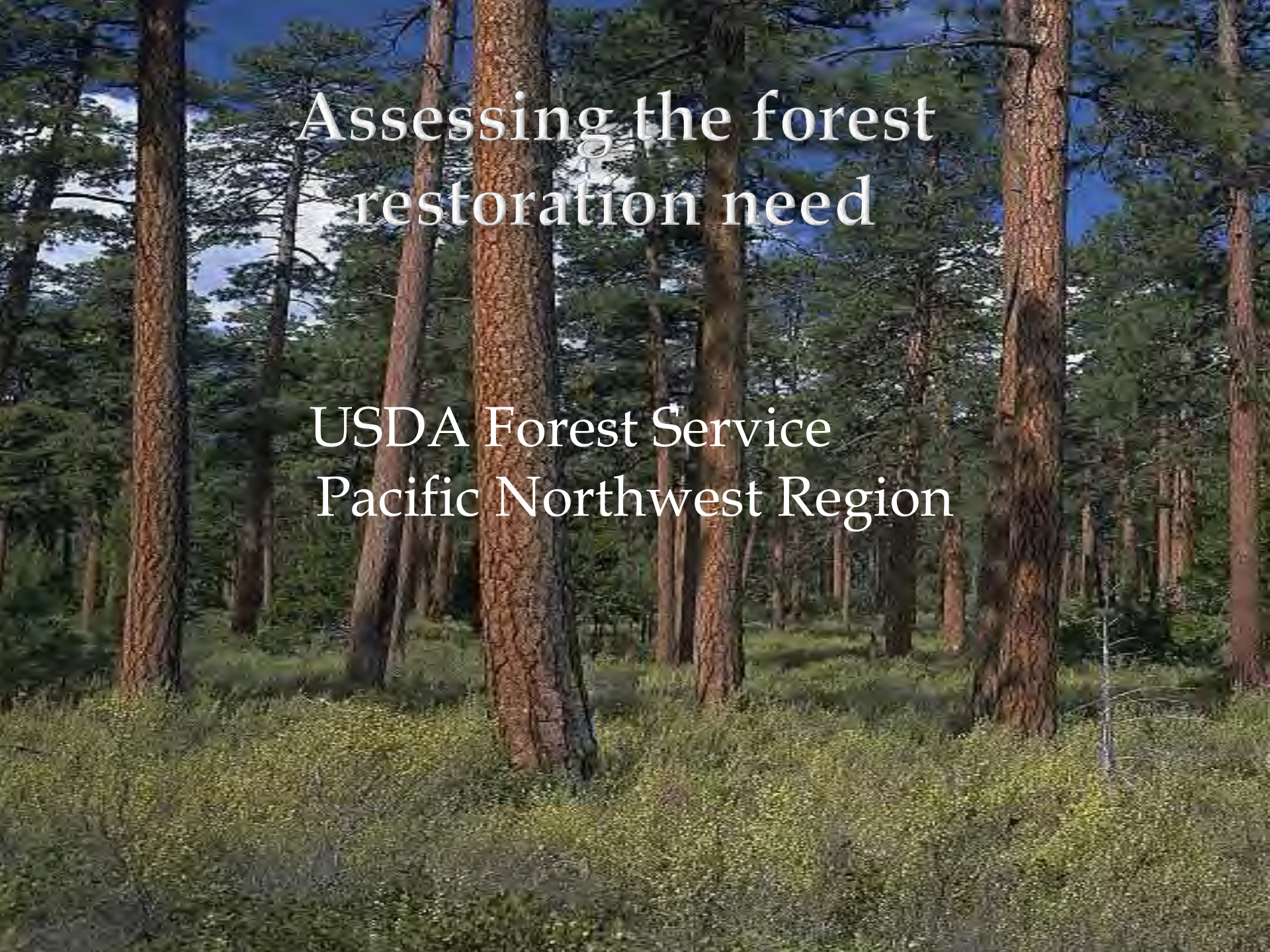


Assessing the forest restoration need

USDA Forest Service
Pacific Northwest Region

Restoration

Restoration. The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed.

Ecological restoration focuses on reestablishing the composition, structure, pattern, and ecological processes necessary to facilitate terrestrial and aquatic ecosystems sustainability, resilience, and health under current and future conditions.

The Need for Restoration

- Recognition that landscapes are departed because of fire exclusion, insect outbreaks, invasive species, climate change, and other factors
- This has culminated in a call for action, supported by the public
- The question arises: What is the magnitude of the need for restoration?

Assessing the magnitude of the need

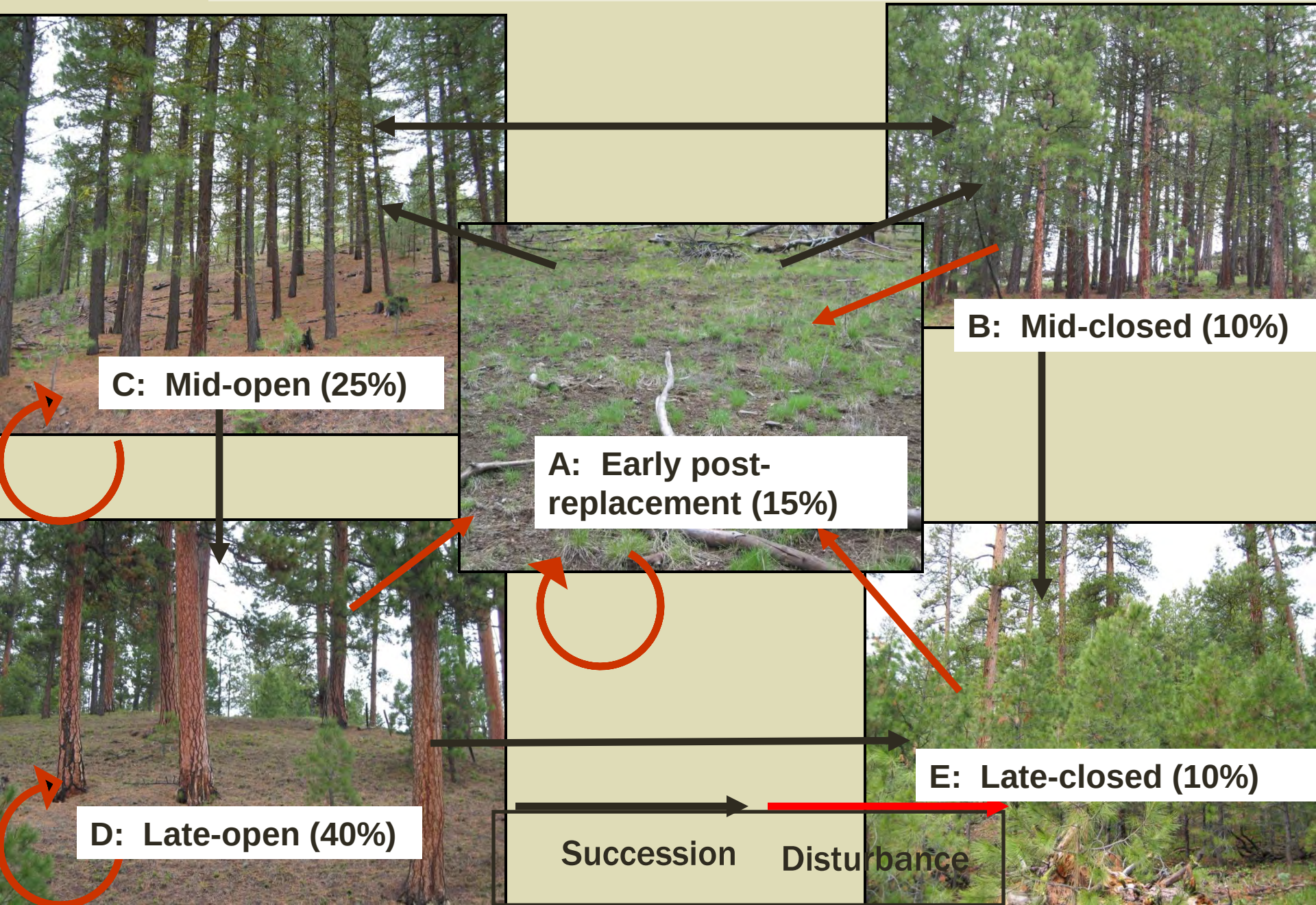
- A quick but meaningful assessment requested by the Regional forester
- "Shorthand" needed to describe the restoration need
- Fire Regime Condition Class (FRCC) fits this need well

Class	Ref	Cur	Sim
Early Seral	15	0	0
Mid Closed	10	45	10
Mid Open	25	0	0
Late Open	40	0	0
Late Closed	10	15	10
Uncharacteristic	0	40	0
Sum	**100**	**100**	**20**

Departure = 100 – 20 = 80; Veg-Fuel CC = 3
(CC1 – 0-33; CC2 – 34-66; CC3 – 67-100)

Ponderosa Pine – Douglas-fir
Fire Regime Group I – Frequent Surface & Mixed

FRCC Standard 5 Box Model: *PP/DF*



Fire Regime Condition Class (FRCC)

- Ecological measure of the departure from the natural range of variation (NRV)

- Accepted interagency method since 2002

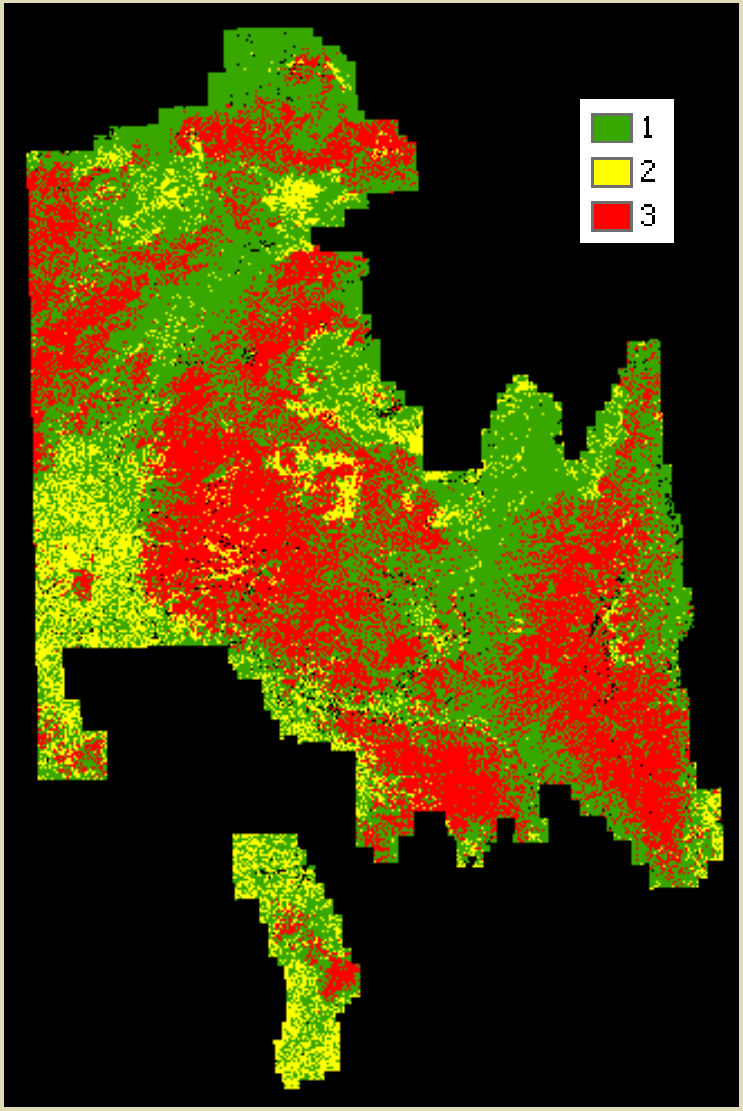
Fire Regime Condition Class (FRCC)

- Determined seral stage departure from NRV at appropriate scale
- Then sought to identify just how many acres actually needed to be treated, by seral stage, to move the watershed into sustainable range of variation

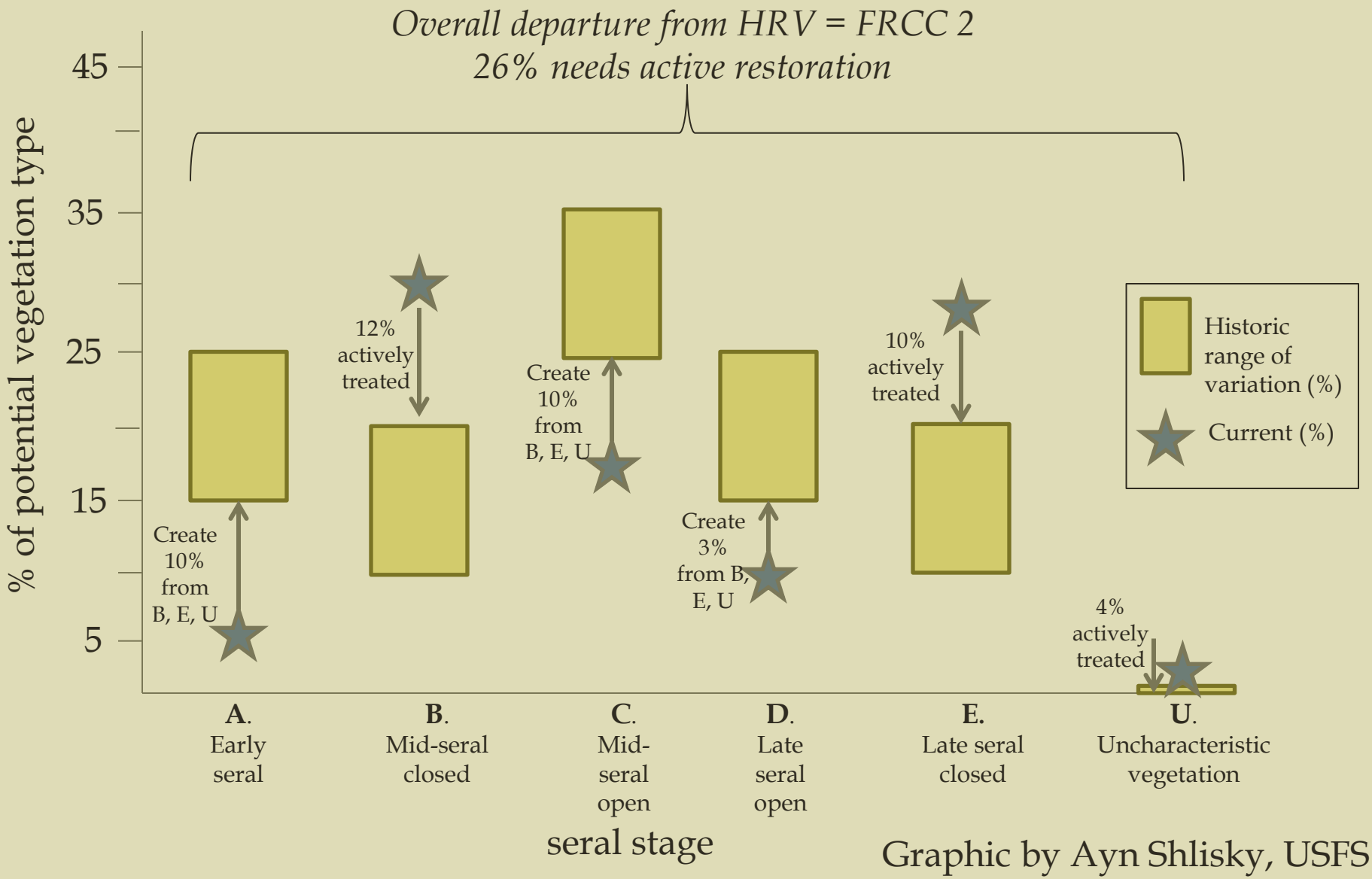
Used a refinement of Stand FRCC layer concept

- Suggests mgt scenarios:
  - CC1 = maintain/recruit
  - CC2 = reduce
  - CC3 = reduce

Percent Difference (%)	Relative Amount	Std-level FRCC
<33	Similar, Under Represented, Trace	1
33 to 66	Over Represented	2
>66	Abundant	3

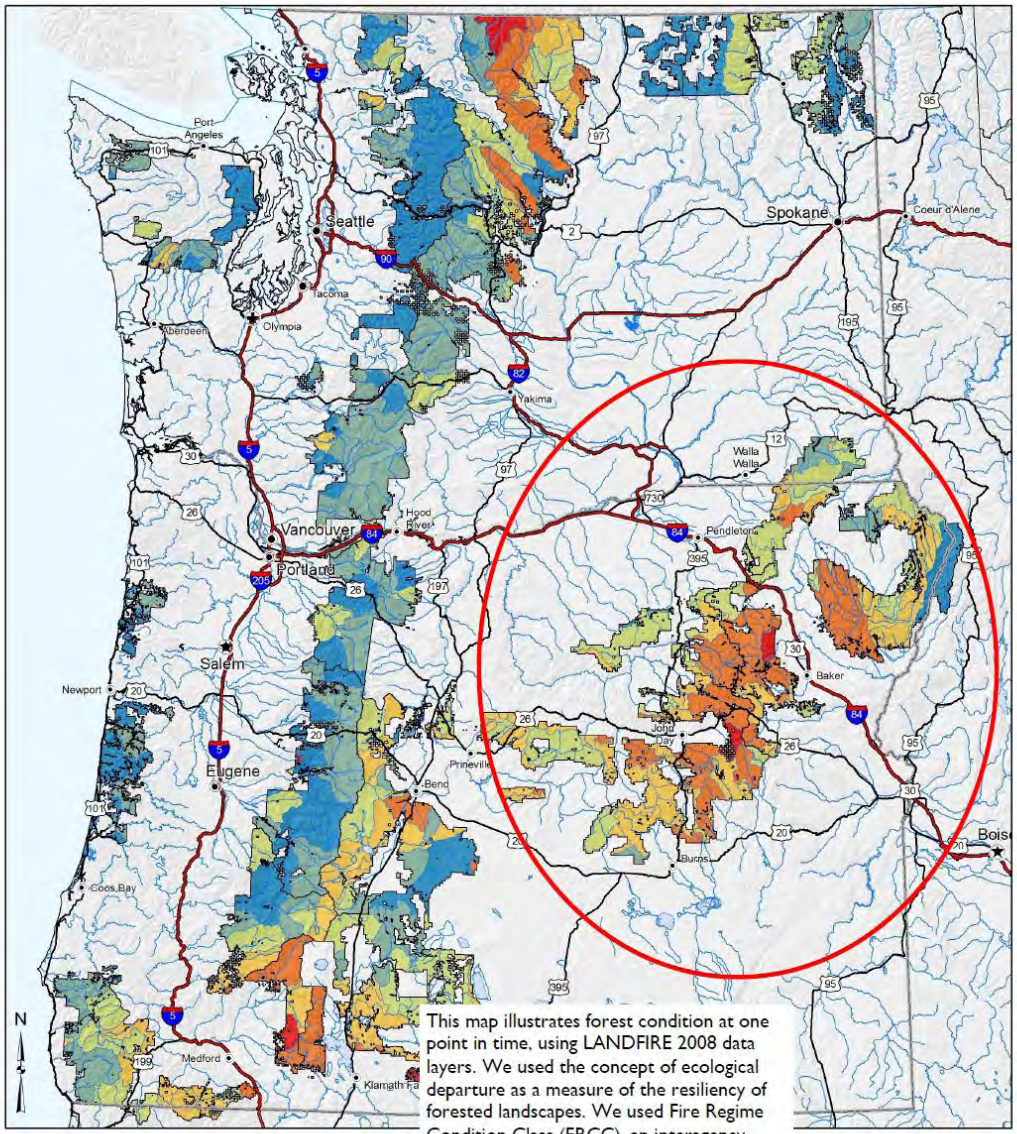


example of a potential vegetation type needing restoration through active or passive treatments by successional stage



Graphic by Ayn Shlisky, USFS

Active Forested Restoration Need by Watershed on Forest Service Lands, Pacific Northwest Region



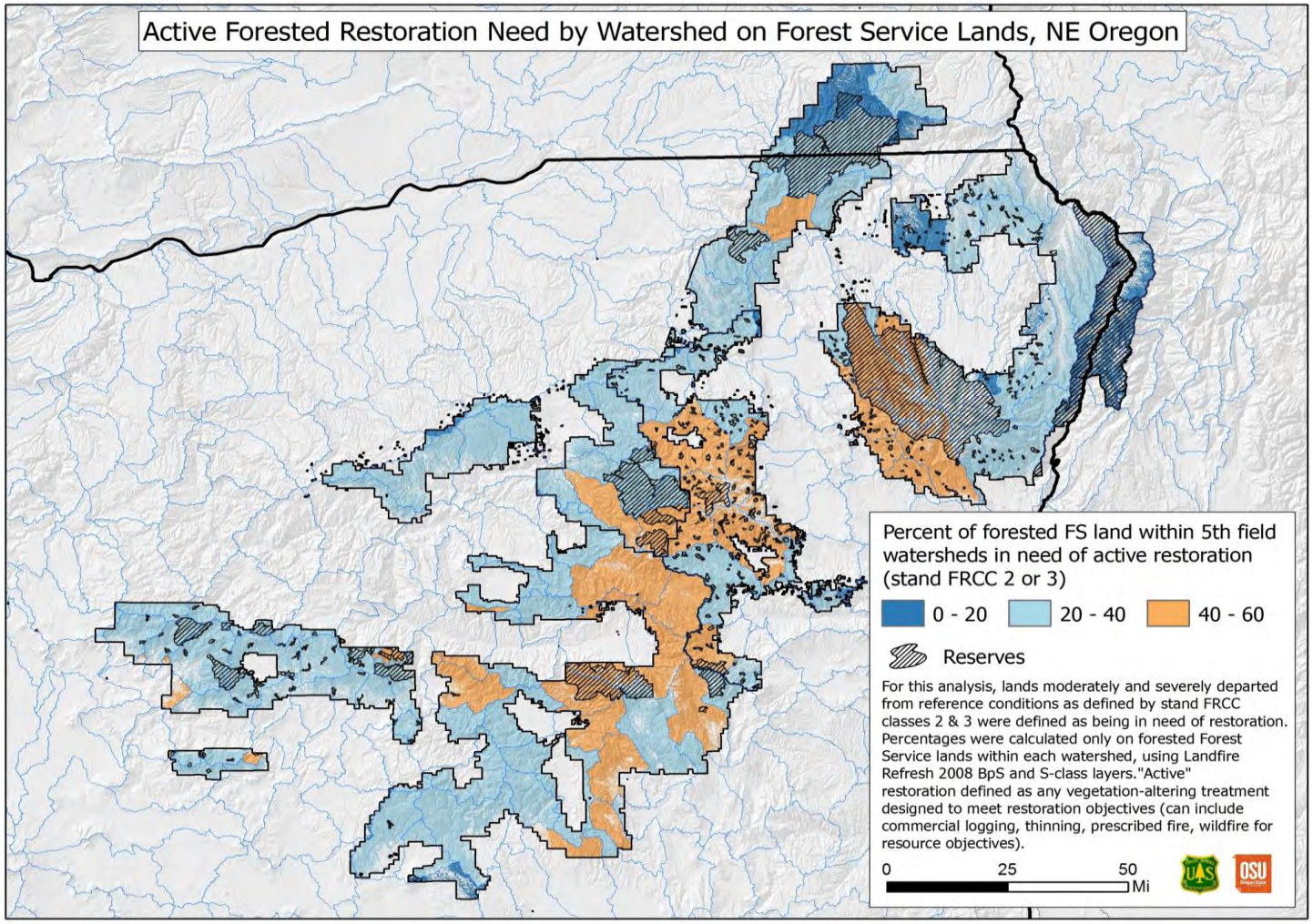
This map illustrates forest condition at one point in time, using LANDFIRE 2008 data layers. We used the concept of ecological departure as a measure of the resiliency of forested landscapes. We used Fire Regime Condition Class (FRCC), an interagency metric, to identify departure. The work is intended to identify the magnitude of the restoration need across the Region and not to indicate where restoration should occur in specific watersheds.

Percent of Forest Service land within 5th-field watersheds in need of active restoration

0 - 9	20 - 29	40 - 49
10 - 19	30 - 39	50 - 100

Spatial analysis and cartography by Chris Ringo, March 14, 2013

0 25 50 Mi



Metrics	National Forests Lands Only (Administrative Boundaries)														
	Malheur			**Umatilla**			**Wallowa Whitman**			**Ochoco**			**Total Pilot Area**		
	Reserve	Nonreserve	Total	Reserve	Nonreserve	Total	Reserve	Nonreserve	Total	Reserve	Nonreserve	Total	Reserve	Nonreserve	Total
Total National Forest Area	88,320	1,376,967	1,465,287	319,400	1,087,687	1,407,087	720,395	1,672,113	2,392,508	36,200	814,833	851,033	1,164,315	4,951,600	6,115,915
Forested Land (acres)	67,821	1,523,477	1,591,298	294,433	1,068,651	1,363,084	415,999	1,509,885	1,925,884	76,042	531,123	607,165	854,295	4,633,136	5,487,431
Forested Land Needing Restoration (acres)	52,038	1,062,371	1,114,409	187,606	594,842	782,448	265,121	958,853	1,223,974	53,402	321,226	374,628	558,167	2,937,292	3,495,459
Forested Land Needing Restoration (%)	77%	70%	70%	64%	56%	57%	64%	64%	64%	70%	60%	62%	65%	63%	64%
Forested Land Needing Active Restoration (acres)	28,170	579,671	607,841	99,067	313,666	412,733	134,727	518,427	653,154	28,174	170,921	199,095	290,138	1,582,685	1,872,823
Forested Land Needing Active Restoration (%)	42%	38%	38%	34%	29%	30%	32%	34%	34%	37%	32%	33%	34%	34%	34%

Restoration Map Team

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