

Guidance on Landscape Assessment for the CFLRP Tier 2 Proposals

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A key objective of the Collaborative Forest Landscape Restoration Program (CFLRP) (established by Title IV of the Omnibus Public Lands Management act of 2009) is to move landscapes towards a more resilient, sustainable condition:

“One of the stated objectives of the act is to encourage a process that shows the degree to which restoration activities successfully achieve ecological objective...” (Schultz et al. 2012).

In practical terms, the key ecological objective, as illustrated in required CFLRP national monitoring, is to move landscapes toward a more sustainable state. This in turn means moving it towards the natural range of variation. A landscape functioning within the natural range of variation features functioning water and nutrient cycling, carbon cycling, and wildlife habitat, as well as disturbance processes. The prominent disturbance process in Northwest Forests is fire.

Fire regimes are the characteristic frequency and severity of disturbances, framed by broad potential vegetation types. Generally speaking, drier forest types historically supported fire regimes characterized by frequent but low intensity fire. Wetter types supported longer fire intervals with infrequent but severe fires. Mixed severity types are by definition somewhere in between.

Fire regimes also generate a characteristic mix of seral stages (from early to late) by potential vegetation type. Through tree ring research and state and transition modeling, we can predict the approximate abundances (and how they varied) of each seral stage by each potential vegetation type. Comparing these historic—or reference—conditions to the current mix of seral stages is known as departure analysis.

Note that fire regimes play out over broad landscapes—and longer interval systems generally play out over larger landscapes than shorter interval systems. This is why it is impossible to talk about the fire regime of an individual stand. *This is also why the objective of treating stands to move a landscape towards a more sustainable condition must be seen as part of a larger landscape if it is to have any meaning.*

In Tier 2 proposals, therefore, it is important to convincingly show how the proposed thinning, prescribed burning, and wildfire use is expected to move landscapes towards sustainability. A simple total of acres treated will not suffice. There has been abundant work done to show that many thousands of acres in the Region need treatment if they are going to be made sustainable. We cannot ask you to achieve all this. You can only show you are moving in the right direction.

So how do we know what acres in what seral stages in what potential vegetation types are in need of treatment?

There are several ways to do this. Experience has shown that it is not useful to insist on one “right” way to do departure analysis. Following are suggested approaches. Remember, the key thing is to demonstrate you will be moving the landscape in the right direction towards sustainability.

Use existing departure analyses done with state and transition modeling to determine reference conditions. Examples include the departure analyses done during LANDFIRE, FRCC, and ILAP work. More recent work (Haugo et al. 2015, DeMeo et al. 2018) significantly refined LANDFIRE/FRCC work by working out necessary successional pathways between the seral stages as well as the amounts of treatment or succession (rest and grow) needed. Summaries by 5th field HUC are available at <https://ecoshare.info/products/r6-analysis/outputs/>

Departure estimates for the Colville NF Plan Revision were worked out by Max Wahlberg and others.

Comparisons of current conditions with early air photos in the Washington East Cascades were developed by Paul Hessburg and colleagues and are a mainstay of the Okanogan-Wenatchee’s dry forest restoration strategy.

Derek Churchill, Josh Halofsky, and colleagues at Washington DNR are developing an updated, refined departure analysis for eastern Washington, although it may not be ready in time for Tier 2 proposals.

A thorough literature review of historic vs. forest conditions in your area may provide sufficient information to craft a strategy for landscape treatment. (This is the approach Region 5 has taken.)

You may have local assessments/analyses of departure that you can use.

In developing your proposals for treatments, we encourage you to work with your Area ecologists, colleagues in The Nature Conservancy, the universities, and the PNW Station to obtain the advice and information you need.

Remember, treating landscapes is a coherent strategy, not just collecting project treatment acres.