Chapter 3: Old Growth, Disturbance, Forest Succession, and Management in the Area of the Northwest Forest Plan

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Timber Management Threat to Old Growth
Dynamics of Old Growth Since 1994

Dynamics of Old growth in Late Successional Reserves 1994-2013

- Currently 6-12 million ac of OG on federal land (definition dependent)
- Gains and losses
- Losses to fire were expected
- Regionally variable
- Small net overall decline (~3%)
Diversity of Old Growth

Moist Forests

No Recent Fire

History of Low severity fire

Dry Forests
Regional Variation in Historical Fire Regimes

- **Fire Frequency:** 10 to 1000 years
- **Severity:** Low to High
Biodiversity is More than the Old-growth Stage of Succession

Multiple Successional Pathways: Moist Forests

Early Successional Stages

Old Growth
Ecological Effects of Fire Suppression

**Dry Forests**
- More dense old growth
- Less fire-resilient old growth
- Larger patches of high severity fire
- Less early seral/non-forest

**Moist Forests**
- Less Early Seral
- Reduced Landscape Diversity
Restoration in Moist Forests

Plantations in a late-successional reserve

Variable Density Thinning
Managing for Resilience to Fire and Climate Change in Dry Forests

- Thinning and prescribed fire
- Promoting large fire-resistant trees
- Reducing fuel continuity
- Patchwork of open and closed forest
- Use topography as a guide
Summary

- Old growth ecology and conservation differs regionally
- NWFP stopped logging of old growth—slight declines
- Conservation is more than protecting old growth
  - Importance of other successional stages
  - Important role for fire in dry and some “moist” forests
- Active management to restore structure and function inside and outside reserves
  - Approaches differ by fire regime and forest type