Mixed Conifer Forests 101

What and Where are They?

Vegetation Classification

- **Series Level—Climax/late successional tree species in that environment, e.g. Ponderosa Pine, Grand Fir, Mountain Hemlock**

- **Plant Associations (Climax overstory/understory community)**

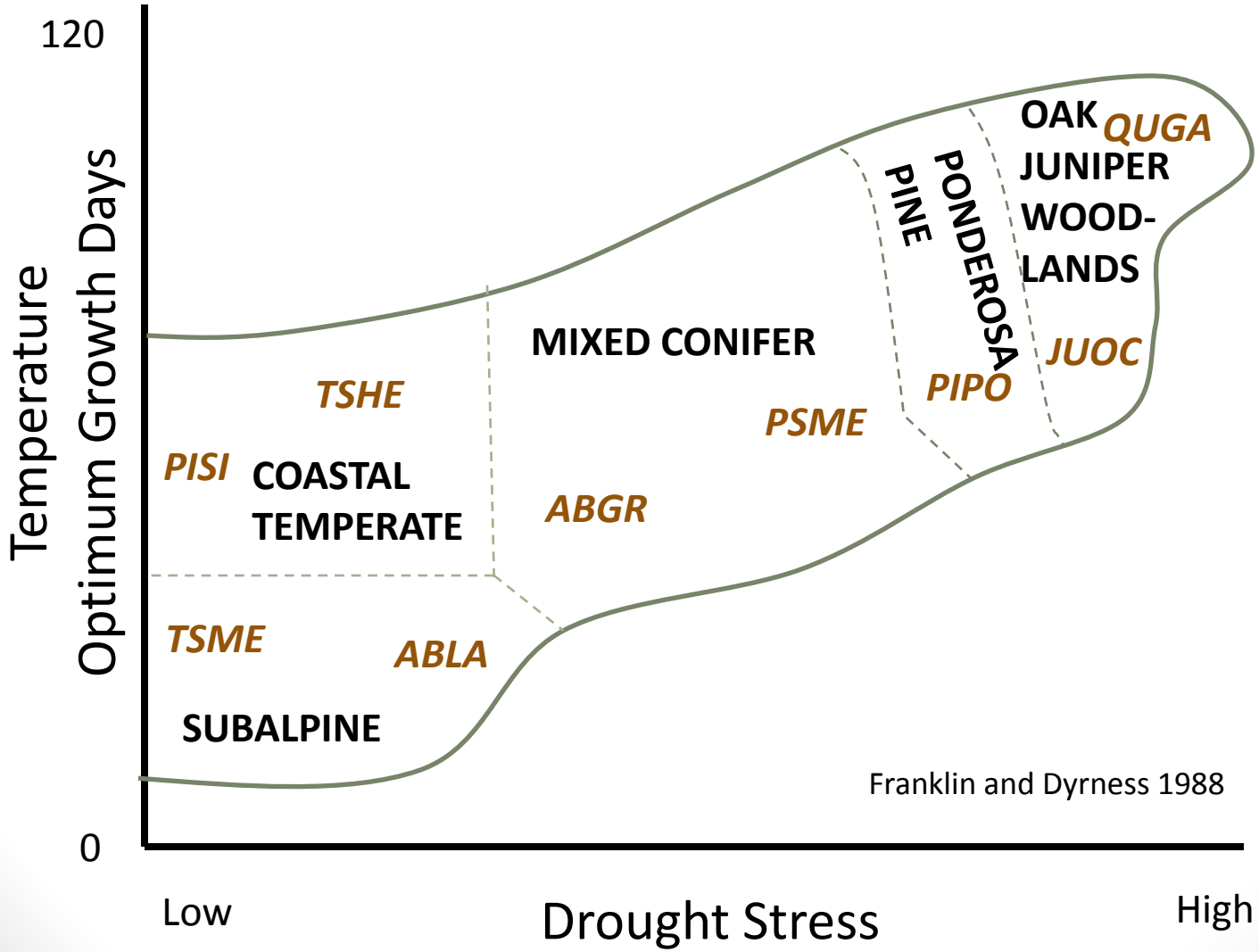
- **Various subdivisions and aggregations of the above**

A Definition of Mixed Conifer Forests

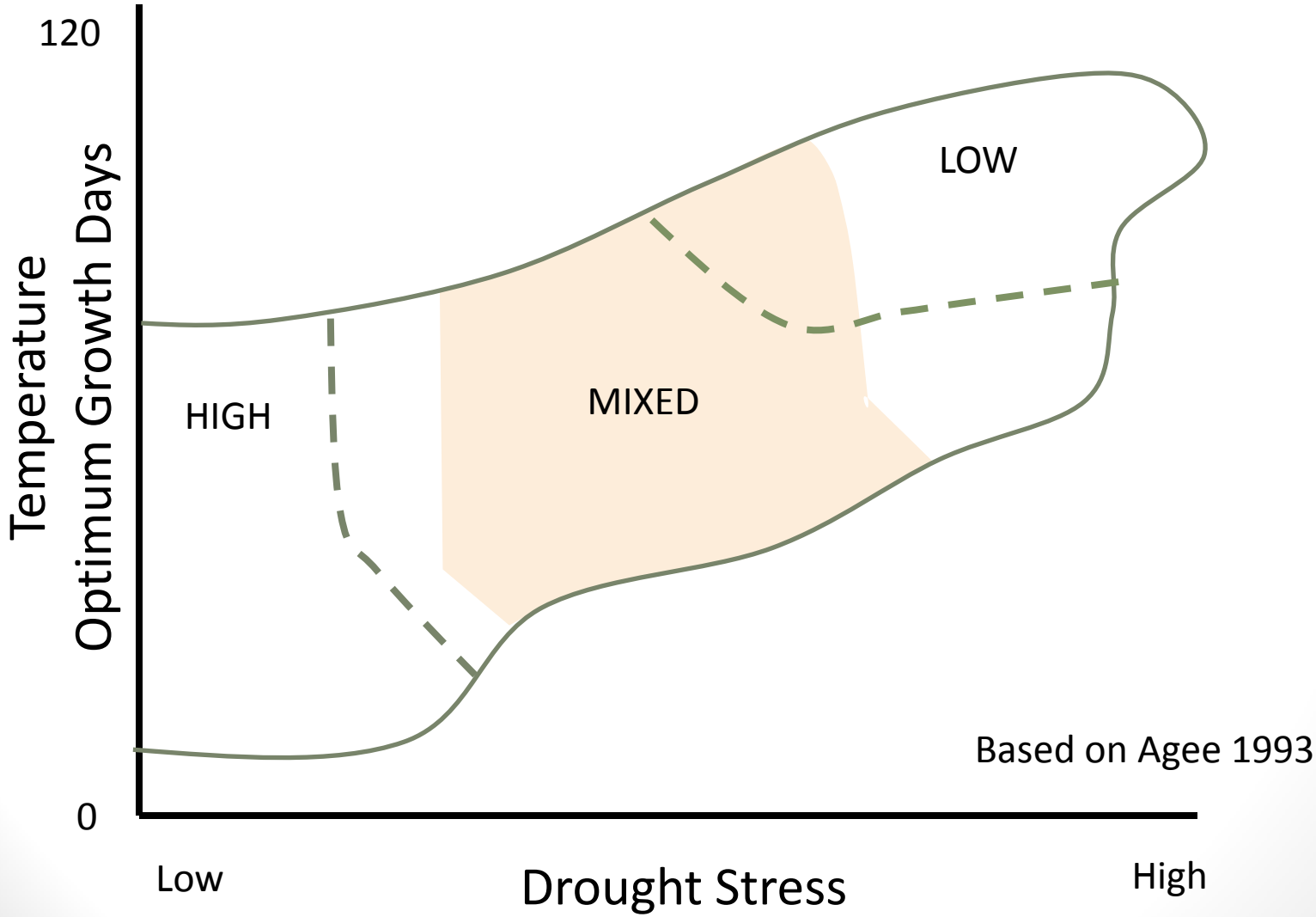
Diverse Forest Type where:

1. Grand fir, white fir, Douglas-fir are the late-successional species (e.g. Series)
2. Typically contain old shade-intolerant/fire-tolerant species:
   - Ponderosa pine, Douglas-fir, or western larch
3. Low to mixed-severity fire regime
4. Not too hot and dry, not too cold and wet
5. More productive than Ponderosa Pine

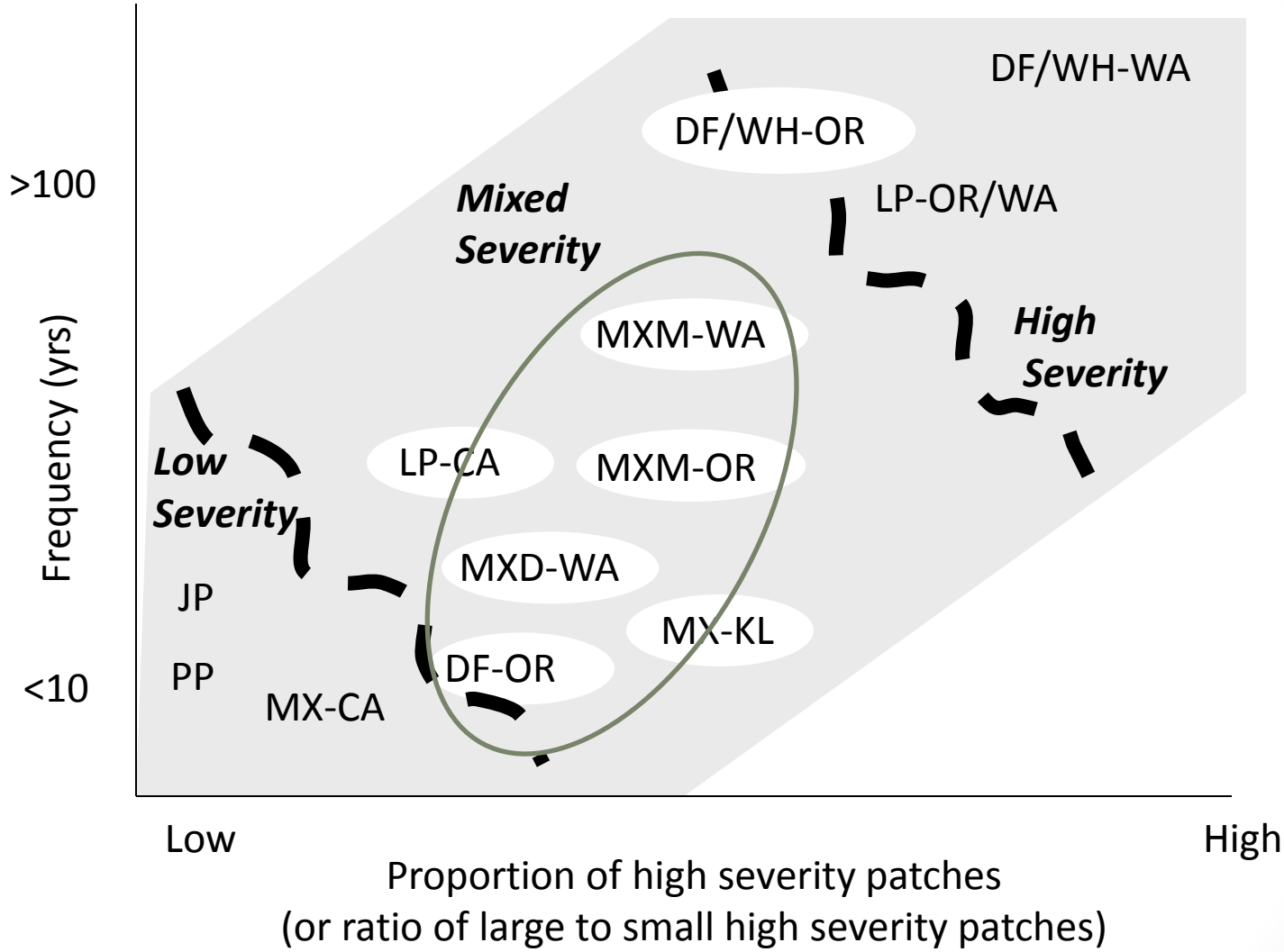
Environmental Distribution of Major Forest Types and *Series*



Dominant Fire Severity Regimes

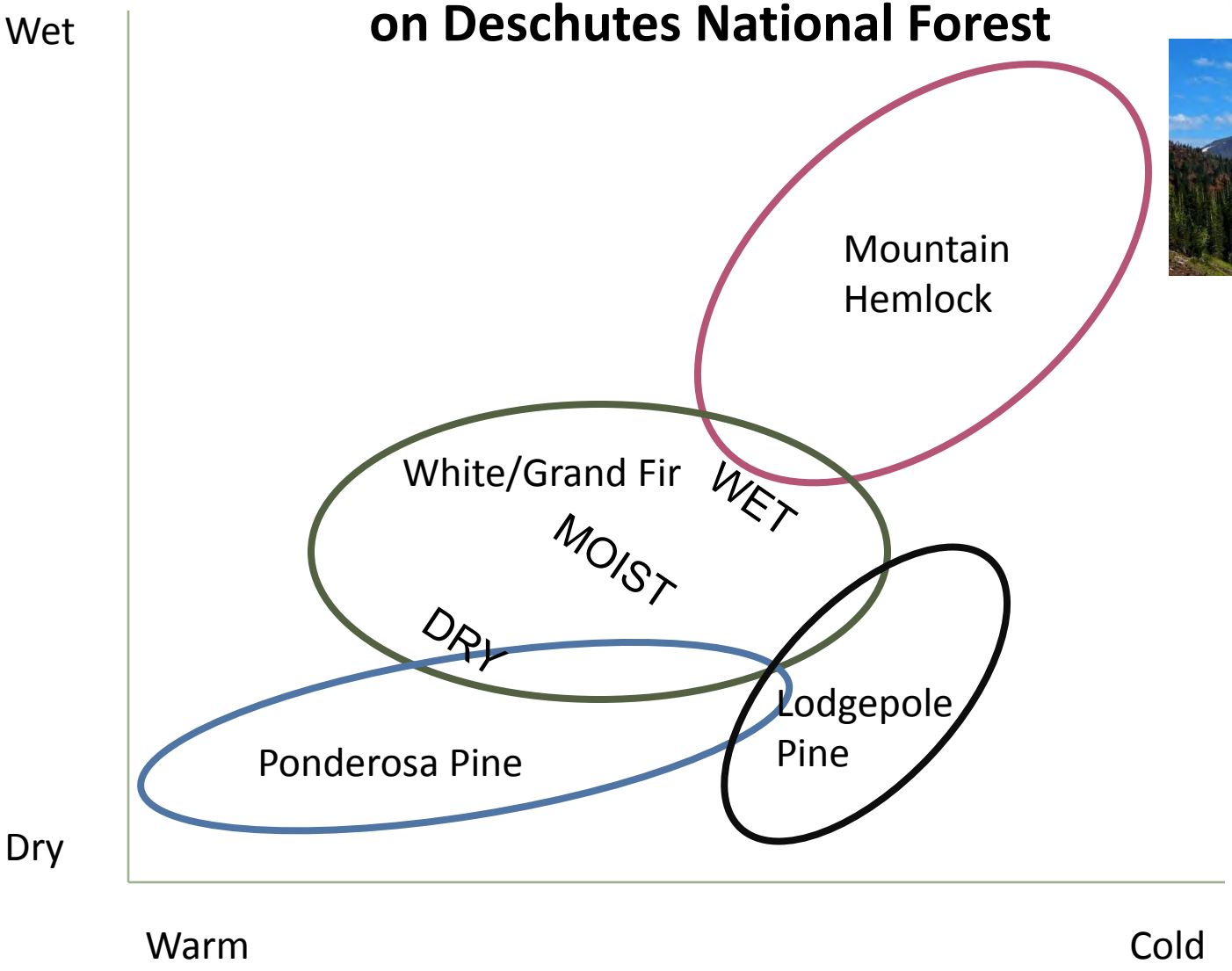


Fire regimes of Plant Association Groups In NWFP Area



Perry et al. 2011

Environmental Distribution of Major Plant Association Groups on Deschutes National Forest



Based on Simpson 2007

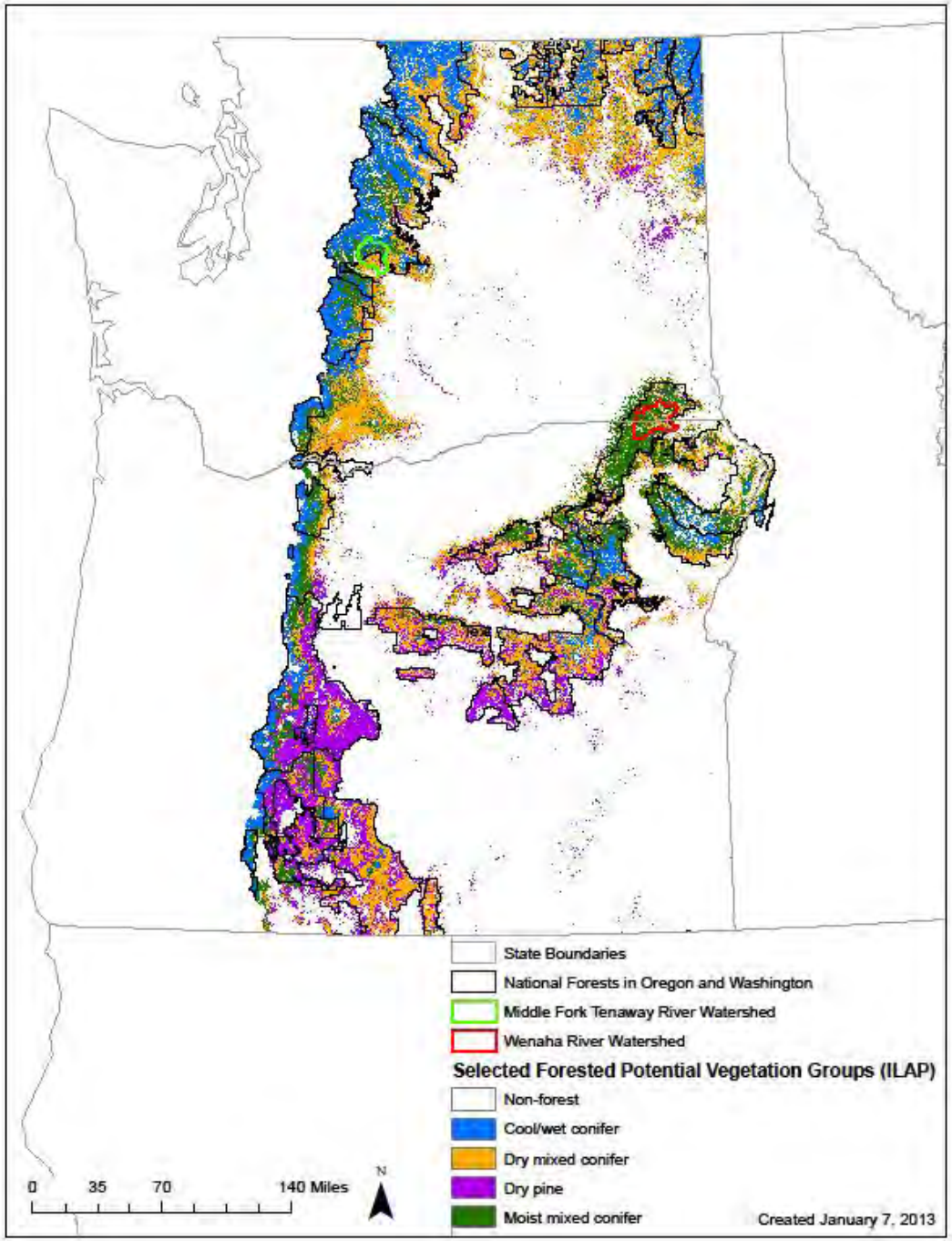
Old growth mixed-conifer Central Oregon

Xeric Dry-mixed conifer → ***Mesic Wet-mixed conifer***

Andrew Merschel

Potential Vegetation Type	Typical Range of fire return intervals	Range of fire severities
Ponderosa Pine (dry to wet), Dry/Moist Douglas-fir, Dry Mixed Conifer, dry Grand Fir	7-25 years	Primarily Low and mixed surface fire dominated
Moist Mixed Conifer, Moist Grand Fir, and Douglas-fir	25-50 years	Mixed, with some high and low
Moist to Wet Grand Fir, Moist Mixed Conifer	50-100 years	Mixed to high, with some low
Wet Grand Fir, Cool Dry Subalpine Fir	>100 years	High with some mixed

Major Potential Vegetation Groups ILAP



Area of Dry and Moist Mixed Conifer ~ 12 million ac