

Managing for resilient forests in a warmer climate

Climate-resilient forestry is mostly fine-tuning of existing forest management practices.

Guiding principles

- *Keep forest land in forest.*
- *Manage for healthy forests.*
- *Understand and map your property in detail.*

Reduce non-climate stressors

- Detect and eradicate non-native plant species.
- Manage roads and steep slopes to reduce runoff and erosion.

Ensure successful regeneration

- Consider what kind of site preparation is beneficial and feasible.
- Plant in the fall if possible.
- Pamper seedlings and saplings — focus on soil moisture retention.

Plant drought-tolerant species to ensure long-term survival

- Plant Douglas-fir (grand fir) on the west side, ponderosa pine (Douglas-fir) on the east side.
- BUT less drought-tolerant species are OK in appropriate locations.
- Consider assisted migration.
 - Current species, different seed zones (yes)
 - Different species adjacent to their current distribution (maybe)
 - Different species a long distance from their current distribution (no)
- Consider planting drought-tolerant understory/edge species: salal, Oregon-grape, serviceberry.

Manage stand density assertively

- Plan for one or two thinnings as needed to meet objectives.
- Implement variable density thinning, depending on objectives.
- Remove or pile slash.

Diversify landscape pattern and forest structure

- Spatial distribution of vegetation age
- Spatial distribution of structure (large trees, small trees)
- Closed canopy, open canopy, multi-layered canopy

Implement fire-safe practices (see Firewise USA)

- Allow for access and egress for yourself and firefighters.
- Use open spaces as fuel breaks.
- Remove fine fuels (< 3 inches diameter) around structures.
- Keep vegetation sparse near structures to reduce fire spread.

Manage for carbon uptake and retention

- Young stands have a high rate of carbon uptake, old stands have a high rate of carbon storage. A combination of young and old stands is a good strategy, while reducing risk to carbon losses from insects, disease, and fire.
- Soils contain most of the carbon in forest ecosystems, so keep organic material on site if possible.