Rapid Assessment Reference Condition Model

The Rapid Assessment is a component of the LANDFIRE project. Reference condition models for the Rapid Assessment were created through a series of expert workshops and a peer-review process in 2004-2005. For more information, please visit www.landfire.gov. Please direct questions to helpdesk@landfire.gov.

Potential Natural Vegetation Group (PNVG):

R#TAOAco **Oregon Coastal Tanoak**

General Information

Contributors *(additional contributors may be listed under "Model Evolution and Comments")*

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Vegetation Type

Forested

Dominant Species*

PSME
LIDE3
TSHE

General Model Sources

- [x] Literature
- [x] Local Data
- [x] Expert Estimate

LANDFIRE Mapping Zones

1 8
2 9
7

Rapid Assessment Model Zones

- [ ] California
- [ ] Great Basin
- [ ] Great Lakes
- [ ] Northeast
- [ ] Northern Plains
- [ ] N-Cent.Rockies
- [x] Pacific Northwest
- [ ] South Central
- [ ] Southeast
- [ ] S. Appalachians
- [ ] Southwest

Geographic Range

This PNVG occurs in Southwest Oregon, in Coastal Coos, Curry & western Josephine Counties, and reaches into northern California to del Norte and possibly Humboldt counties. This model was specifically created for the Oregon range, but may apply to the California populations.

Biophysical Site Description

This type occurs where annual temperatures are 45-53 F (49 avg.); annual precipitation 60-120 inches (95 avg.); soils - sedimentary (often sandstone) types, generally 37-52 inches in depth (though shallower on the Dothan sandstones); elevation - 1000-3500 feet. All aspects, generally less common on south- and west-facing slopes. Slope position is generally mid and lower slope (Atzet, et al 1996).

Vegetation Description

Plant Association Groups included in this type are:
Tanoak Canyon live oak, or saddler oak
Tanoak big leaf maple-swordfern
Tanoak - GASH
Tanoak- Evergreen Huckleberry (Redwood)

This group incorporates the range of redwood in Oregon. Port Orford cedar is common. Evergreen huckleberry (VAOV2) is usually present. Western Swordfern (POMU) is usually present. Other associates are California Laurel (UMCA), Pacific Rhododenron, (RHMA3), Salal (GASH), dwarf Oregon Grape (BENE).

Disturbance Description

Local Ecology plot data (Southwestern Oregon Forest Service) shows 250 year average stand age, suggesting a mean stand replacement fire return interval of 250 years. Mixed severity fire ranges from 15-40

*Dominant and Indicator Species are from the NRCS PLANTS database. To check a species code, please visit http://plants.usda.gov.

years.

Surface fire may be locally common (due to aspect, topography etc.), but it is generally uncommon due to moist weather (humidity, fog) conditions which allow fuel build up resulting in mixed severity fire. Mixed severity fire maintained tanoak as a principal canopy intermediate. Stand replacement fire often results in rapid resprouting and tanoak dominated sites for a decade. Mixed severity fire results in all size conifer mortality in higher intensity portions of fires.

Adjacency or Identification Concerns

Bounded to south by California Redwood types and Douglas-fir/Hemlock wet mesic type to north. Mixed conifer - SW is the dominant type to the east.

Scale Description

Sources of Scale Data ☐ Literature ☑ Local Data ☑ Expert Estimate

Pre-settlement fires were long duration (months) with 100 to 10,000 acres (fifth field watershed size analysis area). (Agee 1993).

Issues/Problems

Wind/ice stress could have been added to the model.

Model Evolution and Comments

One reviewer suggested combining plant communities in this area on moisture and elevational gradients rather than the mixed hardwood vs. mixed conifer groups of an earlier approach. In the proposed system, coastal tanoak would be combined with other wet inland series, not the dry inland series; and fire return intervals are likely closer to 70-90 years than the current model's 250 year return for replacement fires.

Succession Classes

Succession classes are the equivalent of "Vegetation Fuel Classes" as defined in the Interagency FRCC Guidebook (www.frcc.gov).

Class A 10 %

Early1 PostRep

Description

Early seral dominated by resprouting tanoak. Conifers reseeding in gradually (0-25 years). This stage may reset by a reburn of the flammable shrubs, or may be delayed if the shrub layer (greenleaf and hairy manzanita) is thick.

Indicator Species* and Canopy Position

LIDE3
PSME

Upper Layer Lifeform

☐ Herbaceous
☐ Shrub
☐ Tree

Fuel Model no data

Structure Data (for upper layer lifeform)

	Min	Max
Cover	0 %	%
Height	no data	no data
Tree Size Class	no data	

☐ Upper layer lifeform differs from dominant lifeform. Height and cover of dominant lifeform are:

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Class B 10 %

Mid1 Closed

Description

Douglas-fir gradually assuming dominance as age increases. With less frequent fire or lower intensity fire, closed conditions would occur. (up to 260 years old).

Indicator Species* and Canopy Position

PSME
LIDE3

TSHE

Upper Layer Lifeform

☐ Herbaceous
☐ Shrub
☐ Tree

Fuel Model no data

Structure Data (for upper layer lifeform)

	Min	*Max*
Cover	60 %	100 %
Height	no data	no data
Tree Size Class	no data	

☐ Upper layer lifeform differs from dominant lifeform. Height and cover of dominant lifeform are:

Class C 50 %

Mid1 Open

Description

Douglas-fir gradually assuming dominance as age increases. Open conditions maintained by mixed severity fire. Patches of dominant tanoak present. Other hardwoods include California Laurel (UMCA), Chinquapin (CACH6) Canyon Live Oak (QUCH2).

Indicator Species* and Canopy Position

PSME
LIDE3
TSHE

Upper Layer Lifeform

☐ Herbaceous
☐ Shrub
☐ Tree

Fuel Model no data

Structure Data (for upper layer lifeform)

	Min	*Max*
Cover	10 %	60 %
Height	no data	no data
Tree Size Class	no data	

☐ Upper layer lifeform differs from dominant lifeform. Height and cover of dominant lifeform are:

Class D 25 %

Late1 Open

Description

Douglas-fir is dominant. Hardwoods often reaching tree form.
Open conditions maintained by mixed severity fire. Patches of dominant tanoak present. Other hardwoods include California Laurel (UMCA), Chinquapin (CACH6) Canyon Live Oak (QUCH2).

Indicator Species* and Canopy Position

PSME
LIDE3
TSHE

Upper Layer Lifeform

☐ Herbaceous
☐ Shrub
☐ Tree

Fuel Model no data

Structure Data (for upper layer lifeform)

	Min	*Max*
Cover	10 %	60 %
Height	no data	no data
Tree Size Class	no data	

☐ Upper layer lifeform differs from dominant lifeform. Height and cover of dominant lifeform are:

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Class E **5 %**

Late1 Closed

Description

Douglas-fir is dominant. Hardwoods often reaching tree form. With less frequent fire or lower intensity fire, closed conditions would occur.
> 240 years.

Indicator Species* and Canopy Position

PSME
LIDE3
TSHE

Structure Data (for upper layer lifeform)

	Min	Max
Cover	60 %	100 %
Height	no data	no data
Tree Size Class	no data	

Upper Layer Lifeform

☐ Herbaceous
☐ Shrub
☐ Tree

☐ Upper layer lifeform differs from dominant lifeform. Height and cover of dominant lifeform are:

Fuel Model no data

Disturbances

Non-Fire Disturbances Modeled

☐ Insects/Disease
☐ Wind/Weather/Stress
☐ Native Grazing
☐ Competition
☐ Other:
☐ Other:

Fire Regime Group: **1**

I: 0-35 year frequency, low and mixed severity
II: 0-35 year frequency, replacement severity
III: 35-200 year frequency, low and mixed severity
IV: 35-200 year frequency, replacement severity
V: 200+ year frequency, replacement severity

Historical Fire Size (acres)

Avg:
Min:
Max:

Fire Intervals (FI):
Fire interval is expressed in years for each fire severity class and for all types of fire combined (All Fires). Average FI is the central tendency modeled. Minimum and maximum show the relative range of fire intervals, if known. Probability is the inverse of fire interval in years and is used in reference condition modeling. Percent of all fires is the percent of all fires in that severity class. All values are estimates and not precise.

Sources of Fire Regime Data

☑ Literature
☑ Local Data
☑ Expert Estimate

	Avg FI	Min FI	Max FI	Probability	Percent of All Fires
Replacement	250			0.004	10
Mixed	28	15	40	0.03571	90
Surface					
All Fires	25			0.03972	

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