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):

R0LPDFnr **Lower Subalpine Lodgepole Pine**

General Information

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

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Vegetation Type

Forested

Dominant Species*

PICO
PSEUD7
ABLA
PIEN

General Model Sources

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

LANDFIRE Mapping Zones

10 21
19 22
20 29

Rapid Assessment Model Zones

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

Geographic Range

This PNVG spans the entire northern and central Rocky Mountains, from Montana south into Wyoming and eastern Washington east into Montana and Wyoming.

Biophysical Site Description

Lower subalpine zone on gentle to moderately steep terrain (e.g. 10-60% slope).

Vegetation Description

This PNVG corresponds to dry, lower subalpine habitat types (Pfister et al. 1977). Relatively dry sites are generally dominated by lodgepole pine and relatively moist sites are dominated by various combinations of mixed conifers (e.g., lodgepole pine, Douglas-fir, Engelmann spruce, and subalpine fir).

Disturbance Description

Fire Regimes IV and II, moderately long- to long-interval (e.g., 50-300 year) stand replacement- and mixed-severity fires.

Mountain pine beetle would affect the system by both replacing patches (causing transitions to early-development, class A) and by opening up the canopy, causing transitions to mid- and late-development open classes (C and D). Blowdown and other weather-related disturbances would also affect this PNVG.

Adjacency or Identification Concerns

This type is generally below the upper subalpine PNVGs (e.g., R0WBLP, Whitebark Pine-Lodgepole Pine, Upper Subalpine) in elevation and just above mixed conifer types, including lodgepole pine, Douglas-fir, larch, grand fir, and aspen mixes.

Note that west of the Continental Divide, western larch is also a major seral dominant, and it also occurs in

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

other lower subalpine and mesic montane PNVGs. If larch is present, the PNVG R0WLLPDF-- Western Larch, Lodgepole Pine, Douglas-Fir should be examined.

Scale Description

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

Patch sizes are generally 100's to 1000's acres in variable mosaics.

Issues/Problems

Model Evolution and Comments

Workshop code was LSAL1.

Peer review incorporated on 4/11/2005. Comments note that for mapzone 10 (northern Idaho), the insect and pathogen activity may be higher and the proportion of late-development conditions may be less than in the rest of the Northern and Central Rockies Model Zone. Mixed severity fire may be as frequent as 40 MFI in some parts of the Model Zone.

Succession Classes

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

Class A 20 %

Early1 PostRep

Description

Shrub and tree sapling dominated early successional community after replacement and relatively severe mixed severity fires. In some early seral conditions there may be higher fine and coarse fuel loads owing to past fire-generated snags and downed wood, making this class burn more readily.

Indicator Species* and Canopy Position

PICO
PSEUD7

Structure Data (for upper layer lifeform)

	Min	Max
Cover	0 %	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

Class B 35 %

Mid1 Closed

Description

Shade intolerant- and mixed conifer saplings to poles.

Indicator Species* and Canopy Position

PICO
PSEUD7

Structure Data (for upper layer lifeform)

	Min	Max
Cover	40 %	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

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

Class C 15 %

Mid1 Open

Description

Primarily shade intolerant saplings to poles.

Indicator Species* and Canopy Position

PICO
PSEUD7

Structure Data (for upper layer lifeform)

	Min	Max
Cover	0 %	40 %
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

Class D 10 %

Late1 Open

Description

Moderate- to large-diameter, shade intolerant and mixed conifer species in small to moderate-sized patches, generally on south aspects.

Indicator Species* and Canopy Position

ABLA
PIEN
PSEUD7

Structure Data (for upper layer lifeform)

	Min	Max
Cover	0 %	40 %
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

Class E 20 %

Late1 Closed

Description

Moderate- to large-diameter shade intolerant and mixed conifer species, in moderate- to large-size patches, all aspects.

Indicator Species* and Canopy Position

ABLA
PIEN
PSEUD7

Structure Data (for upper layer lifeform)

	Min	Max
Cover	40 %	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: 4

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

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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	170	50	200	0.00588	72
Mixed	450	40	500	0.00222	27
Surface					
All Fires	123			0.00811	

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