

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 and 2005. For more information, please visit www.landfire.gov. Please direct questions to helpdesk@landfire.gov.

Potential Natural Vegetation Group (PNVG)

R1SABU Saltbush

General Information

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

Modelers

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Reviewers

Vegetation Type

Shrubland

General Model Sources

- Literature
- Local Data
- Expert Estimate

Rapid Assessment Model Zones

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

Dominant Species*

ATRIP
ALLE
HARA
DISTI

LANDFIRE Mapping Zones

3 6
4
5

Geographic Range

Typically found in central and southern central valleys of California, and near the Salton Sea. Found extensively in UT, NV, and portions of AZ.

Biophysical Site Description

Occurs on poorly to moderately drained saline and/or alkaline soils. Usually occurs in two phases a xerophytic phase in basins and valleys and a halophytic phase in playas and sinks. Elevations range from - 80 to 1200 meters.

Vegetation Description

Vegetation is dominated by several *Atriplex* spp. Throughout its range. Other genera include *Haplopappus*, *Allenrolfea*, *Distichlis*, and *Sporobolus*. Variations in vegetation occur throughout the region, based on soil drainage. This type correlates with Kuchler's (1964) Saltbush-Greasewood (type 40) and CES302.749 Sonora-Mojave Mixed Salt Desert Scrub (NatureServe 2004).

Disturbance Description

Fire regime group III, infrequent fire with mixed severity. Fire return interval is correlated to precipitation and the availability of fine fuels to carry fire. Fire would typically occur during moist years when fine fuels were persistent into late summer.

Adjacency or Identification Concerns

Likely adjacent to barren areas and California grassland types. This area is probably less than 3 percent of the landscape in California, but would be significant if combined with similar vegetation types in NV and UT.

Scale Description

Sources of Scale Data Literature Local Data Expert Estimate

In California patches are small in size from 100's to 1000's of acres. There are several journal articles which predict mapped areas of this vegetation, with larger patches occurring in NV and UT. Disturbance

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

size could encompass entire patches under certain conditions.

Issues/Problems

Difficult to locate quantifiable information regarding fire regime. Not sure about the time steps associated with each class and percent cover breaks. Unsure of whether insects and/or weather would create disturbance impacts that need to be modeled. Suspect that there is disturbance associated with flood events, not sure how to incorporate that into model since that it would cause an increase in recruitment.

Model Evolution and Comments

Would like to have the Great Basin group review and refine model, to see if California type compares with that found in the Great Basin. Suggested reviewers: Dave Germano (dgermano@csu.bak.edu), Steve Laymon (slaymon@ca.blm.gov), Ellen Cypher (ecypher@esrp.org) and Bill Laudenslayer (blaudenslayer@fs.fed.us)

Succession Classes**															
<i>Succession classes are the equivalent of "Vegetation Fuel Classes" as defined in the Interagency FRCC Guidebook (www.frcc.gov).</i>															
<p>Class A 10 %</p> <p>Early1 PostRep</p> <p>Description</p> <p>Immediate post fire class, vegetation is dominated by forbs, resprouting grasses, and some shrubs. This type typically occurs where fires burn relatively hot in classes B and C.</p>	<p>Dominant Species* and Canopy Position</p> <p>ATRIP DISTI</p> <p>Upper Layer Lifeform</p> <p><input type="checkbox"/> Herbaceous <input type="checkbox"/> Shrub <input type="checkbox"/> Tree</p> <p>Fuel Model no data</p>	<p>Structure Data (for upper layer lifeform)</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th></th> <th>Min</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>Cover</td> <td>5 %</td> <td>20 %</td> </tr> <tr> <td>Height</td> <td>no data</td> <td>no data</td> </tr> <tr> <td>Tree Size Class</td> <td colspan="2">no data</td> </tr> </tbody> </table> <p><input type="checkbox"/> Upper layer lifeform differs from dominant lifeform. Height and cover of dominant lifeform are:</p>		Min	Max	Cover	5 %	20 %	Height	no data	no data	Tree Size Class	no data		
	Min	Max													
Cover	5 %	20 %													
Height	no data	no data													
Tree Size Class	no data														
<p>Class B 45 %</p> <p>Mid1 Open</p> <p>Description</p> <p>Canopy cover is open with Atriplex dominating the site. There is some vegetation in the understory including Distichlis and other forbs. Fire could occur in this class during wet years and would be stand replacing if it occurred with a wind event.</p>	<p>Dominant Species* and Canopy Position</p> <p>ATRIP DISTI</p> <p>Upper Layer Lifeform</p> <p><input type="checkbox"/> Herbaceous <input type="checkbox"/> Shrub <input type="checkbox"/> Tree</p> <p>Fuel Model no data</p>	<p>Structure Data (for upper layer lifeform)</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th></th> <th>Min</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>Cover</td> <td>20 %</td> <td>40 %</td> </tr> <tr> <td>Height</td> <td>no data</td> <td>no data</td> </tr> <tr> <td>Tree Size Class</td> <td colspan="2">no data</td> </tr> </tbody> </table> <p><input type="checkbox"/> Upper layer lifeform differs from dominant lifeform. Height and cover of dominant lifeform are:</p>		Min	Max	Cover	20 %	40 %	Height	no data	no data	Tree Size Class	no data		
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Class C 45%

Mid1 Closed

Description

This type occurs when there are consistently dry years with little persistent fine fuels to build a receptive fuelbed. It allows for dense stands of Atriplex to form. The vegetation is relatively stable in this state.

Dominant Species* and Canopy Position

ATRIP

Structure Data (for upper layer lifeform)

	Min	Max
Cover	40 %	70 %
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 0%

Late1 Open

Description

Dominant Species* and Canopy Position

Structure Data (for upper layer lifeform)

	Min	Max
Cover	0 %	%
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 0%

Late1 Closed

Description

Dominant Species* and Canopy Position

Structure Data (for upper layer lifeform)

	Min	Max
Cover	0 %	%
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

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Disturbances Modeled

- Fire
- Insects/Disease
- Wind/Weather/Stress
- Native Grazing
- Competition
- Other:
- Other

Historical Fire Size (acres)

Avg: no data
 Min: no data
 Max: no data

Sources of Fire Regime Data

- Literature
- Local Data
- Expert Estimate

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

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 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.

	<i>Avg FI</i>	<i>Min FI</i>	<i>Max FI</i>	<i>Probability</i>	<i>Percent of All Fires</i>
<i>Replacement</i>	100	60	200	0.01	70
<i>Mixed</i>	235	10	40	0.00426	30
<i>Surface</i>					
<i>All Fires</i>	70			0.01427	

References

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