Appendix 3. Constraints and preference weights used in treatment allocations.

Table A3.1. Sets of constraints defining where treatments can occur for different treatment actions and landowners.

Landowner	Action	Patch size	Where
FEDERAL	Thinning	Normal distribution N(50, 10)	Ponderosa pine with dbh > 25 cm
			Lodgpeole pine with dbh> 25 cm
			Dry mixed conifer with > 25 cm
			Multistory canopies
			Closed canopies (>60% cover)
			Time since last thinning action>14 years
	Mastication	40 ha	Forested areas with fuel models SH5, SH7 or TU5
			Time since last mastication > 9 years
	Prescribed fire	40 ha	Dry mixed conifer with dbh > 25 cm
			Ponderosa pine with dbh > 25 cm
			Single story
			Open canopies
			Time since last prescribed fire > 9 years
TRIBAL	Thinning	30 ha	Lodgepole pine with age >70 years
			Mountain hemlock with age >70 years
			Moist mixed conifer with age >40 years
			Dry mixed conifer with age >40 years
			Western hemlock with age > 60 years
			Western white pine with age >60years
			Pacific silver fir/Douglas fir with age > 60 years
			Western larch/lodgepole pine with age > 60 years
			Alpine/high elevation with age >70 years
	Clearcutting	20 ha	Lodgepole pine with age > 130 years
			Mountain hemlock with age > 130 years
			Moist mixed conifer with age > 70 years
			Dry mixed conifer with age > 70 years
			Western hemlock with age > 120 years
			Pacific silver fir/Douglas fir with age > 120 years
			Western white pine with age > 90 years
			Western larch/lodgepole pine with age > 90 years
			Other alpine forest types with age > 130 years
	Prescribed fire	81 ha	Ponderosa pine
			Douglas fir
			Dry mixed conifers
INDUSTRIAL	Partial harvest	Weibull Distribution W(32,0.6)	Any forest type with dbh > 25 cm

Table A3.2. Sets of preference weights for different management actions and actors. Weights are additive and calculated for all individual decision units (IDU) that meet the criteria for treatable

area. Potential fire severity is calculated for each IDU using static fire simulation (ERC, wind speed and wind direction for every IDU of 60, 29km/h and 220°, respectively). Fuel model SH2, SH5, SH7 and TU5 correspond to moderate, high and very high load dry climate shrubs, and very high load dry climate timber-shrub, respectively (Scott and Burgan 2005).

Landowner	Action	Where	Weight
FEDERAL	Thinning	Ponderosa pine	1100
		Dry mixed conifer	1000
		Lodgepole pine	900
		Basal area greater than 20.67 m2/ha	500
		Canopy cover greater than 60%	500
		Federal WUI	500
		Potential owl habitat	-100
		Moist mixed conifer	-20
		Potential mixed Severity Fire	300
		Potential stand replacing fire	400
	Prescribed fire	Thinning or clear cut in the previous four years	3000
		Ponderosa pine with single layer and low canopy cover	2000
		Dry mixed conifer with single layer and low canopy cover	1000
		Fuel model SH145, SHU147 or TU165	-300
		Federal WUI	-500
		Potential owl habitat	-100
		Moist mixed conifer	-20
		Potential mixed severity fire	100
	Mastication	Federal WUI	500
		Distance to major roads less than 400 m	200
		Potential owl habitat	-100
		Time since wildfire greater than 19 years	100
		Fuel model SH145, SHU147 or TU165	100
		Fuel model SH142	50
		Moist mixed conifer	-20
		Potential mixed severity fire	100

TRIBAL	Thinning	Slope is less than 30%	2
		Distance to roads less than 600 m	1
		Distance to streams less than 300 m	-3
		Beaver planning area	3
		Upper Warm Springs planning area	3
		Badger planning area	1
		Mill Creek planning area	1
		Shitike planning area	1
	Prescribed fire	Clear cut in the previous 5 years	2
		Time since last wildfire greater than six years and less than 11 years	1
		Ponderosa pine	3
		Douglas fir	3
		Dry mixed conifer	2
		Fuel model SH145, SH147, SH142, TU165	3
		Distance to streams is less than 300 m	1
	Clear cut	Slope is less than 30%	2
		Distance to major roads is less than 600m	1
		Beaver planning area	3
		Upper Warm Springs planning area	1
		Mill Creek planning area	1
		Shitike planning area	1

LITERATURE CITED

Scott, J. H. and R. E. Burgan. 2005. Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model. Gen. Tech. Rep. RMRS-GTR-153, USDA Forest Service, Rocky Mountain Research Station.