

Table S1. Description of the fractional cover and height components used to characterize Western U.S. rangelands.

Component	Level	Parent Component	Description	Units
Shrub	Primary	Self	Vegetation with a persistent woody stems <6-m in height. Includes young trees whose height at maturity may be >6-m. Includes mountain mahogany (<i>Cercocarpus ledifolius</i>), but excludes <i>Pinus</i> spp. and <i>Juniperus</i> spp..	%
Sagebrush	Secondary	Shrub	Most species of sagebrush (<i>Artemisia</i> spp.) including big (<i>A. tridentata</i>), low (<i>A. arbuscula</i>), black (<i>A. nova</i>), three-tip (<i>A. tripartita</i>), silver sagebrush (<i>A. cana</i>), and sand sagebrush (<i>A. filifolia</i>). Excludes the low stature prairie sage (<i>A. frigida</i>) and white sagebrush (<i>A. ludoviciana</i>).	%
Big Sagebrush	Tertiary	Sagebrush	Primarily big sagebrush (<i>A. tridentata</i> spp.) but, due to spectral and ecological similarities, may also include three-tip (<i>A. tripartita</i>) and silver sagebrush (<i>A. cana</i>).	%
Herbaceous	Primary	Self	All grasses, forbs, moss, and cacti which were photosynthetically active at any point in the year of mapping.	%
Annual Herb.	Secondary	Herbaceous	All grasses and forbs which were photosynthetically active at any point in the year of mapping and whose life history is complete in one growing season.	%
Litter	Primary	Self	Dead plant and animal organic matter, standing dead woody material, biological soil crust, or lichen. May be standing or on the surface. Excludes senesced plant material which was photosynthetically active in the year of mapping	%
Bare Ground	Primary	Self	Exposed soil, rocks, sand.	%
Shrub Height	Secondary	Shrub	Average height of shrub cover measured on a representative shrub individual.	cm
Sagebrush Height	Secondary	Sagebrush	Average height of sagebrush cover measured on a representative sagebrush individual.	cm

Figure S1. Level III ecoregions boundaries across the study area.

