



2002



2018

2002

Coastal Sage Scrub















## Grassland









2018

## **RECENT AND PROJECTED NITROGEN DEPOSITION** AT CRITCAL LEVELS FOR SELECT VEGETATION COMMUNITIES

This series of maps illustrates the distribution of six vegetation types within a portion of the State of California and the areas where those types suffer an adverse effect from excessive nitrogen deposition coming from anthropogenic sources. Colored areas show the extent of each vegetation type within the study area. Those areas that exceed identified critical loads are shown as red in all maps. Areas of initial effect of deposition levels are shown as bright yellow only in the lichen map. Criteria for critical loads vary by vegetation type: loss of plant diversity for CSS and lichens, excess N in runoff for forest and chaparral, fire fuel load in grassland and desert. Nitrogen deposition was modeled for two years; 2002 is based on recorded emissions data and 2018 is based on projected emissions. Nitrogen deposition was not modeled for the entire state; the vegetation stops abruptly at the edge of the area where nitrogen deposition was calculated for this study.

	Chaparral	Coastal Sage Scrub	Desert	Grassland	Lichen	<b>Mixed Conifer Forest</b>
Critical Load (Kg N/ha/yr)	14	10	5	5	5.2	17
Total Area within Study (sq. Km)	33,104	6,837	63,907	37,067	49,716	49,716
Area Above Critical Load 2002	331	1,003	12,271	15,208	4,879	51
Area Above Critical Load 2018	41	176	1,235	1,982	1,147	11

Data Sources: Edith Allen (UC-Riverside), Mark Fenn (USDA-FS), Gail Tonnesen (UC-Riverside), Stuart Weiss (Creekside Center), California Department of Forestry FRAP