



Research Brief for Resource Managers

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Contact: Jon E. Keeley, Marti Witter, Liz van Mantgem

Phone: (559) 565-3170, (805) 370-2333

Email: jon_keeley@usgs.gov, marti_witter@nps.gov, evanmantgem@usgs.gov

Central and Southern California Team, USGS Sequoia and Kings Canyon Field Station, Three Rivers, CA 93271

The 1967 Handbook for Type-converting Chaparral

Bentley, J. R. 1967. Conversion of chaparral areas to grassland: techniques used in California. USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, Agriculture Handbook No. 328.

Of California's 11 million acres of chaparral, just a fraction was considered appropriate for type-conversion to grassland in this 1967 USDA handbook (Table 5). To reduce cost, effort, and environmental risk, type-conversions were supposed to be restricted to flatter chaparral areas with good soil depth and in strategic, fire breaking locations. Successful conversion to grassland should result in increased water flow, better forage growth and better fire control. Once chaparral was converted to grassland, it was expected to be fairly stable and easy to maintain.

Five general steps in the conversion process are recommended in 35 pages: 1) Evaluation - Is this for livestock forage, for fire control or something else? Could it negatively impact the watershed? 2) Selection - Use soil ratings, optimal water capacity measures, 0-55% slopes and appropriate "brush" compositions [i.e. chamise-chaparral vs. mixed-chaparral] to choose your site. 3) Brush removal - A combination of methods is recommended, like cutting, grubbing, or mechanical removal, as well as crushing, burning and herbicides. 4) Establishment of a grass cover - The preferred technique is to start with a clean seedbed, then drill-seed perennial grasses. Lastly, 5) eradication or control of "brush" regrowth - Bentley recommends using anything but fire because repeated burning was thought to harm the new grasses.

Management Implications
• This 1967 handbook recommends a standardized type-conversion process in five steps.

Table 5.—General priorities of chaparral areas of different site characteristics and brush cover for conversion to grass

Table with 5 columns: General priority of area for conversion, Soil productivity rating, Slope gradient class, Volume of brush, Stand of resistant species. It lists 11 rows of data corresponding to different site characteristics and their conversion priorities.