ROADSIDE VEGETATION MANAGEMENT PROGRAM STUDY

A new perspective on roadsides requires improved design as well as safe, efficient, and environmentally sound management strategies.

Goals and Objectives

After the RVMC and PALs Committee were established, a study was begun to determine the vegetation management issues and to recommend an approach for better resolving these issues.

The goals of the study were to:

- develop and recommend an efficient process for quality roadside design and management, and
- develop alternative vegetation management strategies that most effectively meet Caltrans' needs.

The objectives were to:

- increase public safety
- increase worker safety
- improve environmental quality
- reduce herbicide use
- decrease life cycle costs
- improve public perception

Vegetation Management Challenges

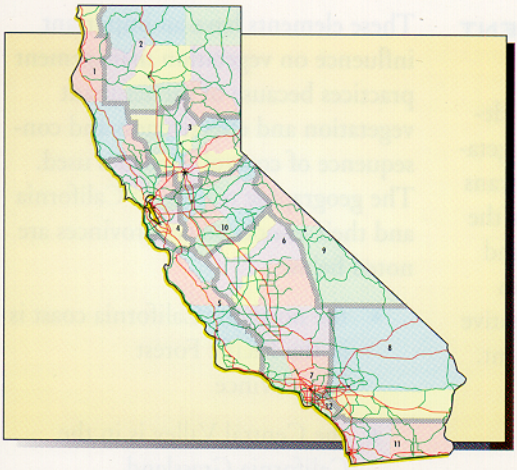
The first step of the study was to determine the extent and type of vegetation management challenges Caltrans faces, the strategies being used by the districts to meet the challenges, and the efficacies of those strategies, in addition to other potential alternative methods of vegetation management.

Environmental Diversity

The most effective approach for roadside vegetation management depends on many variables that affect the roadway and right-of-way. California has tremendous geographic, physical, and environmental diversity, representing those found in nearly every part of the world. This diversity is expressed and defined as several distinct ecoprovinces. The location, climate, landform and geology, soils, vegetation, wildlife, fisheries, water quality, and typical land uses of each ecopro-vince are discussed in more detail in the draft EIR for Caltrans' vegetation control program (Jones & Stokes Associates, 1991).

These elements have an important influence on vegetation management practices because of the resultant vegetation and effectiveness and consequence of control strategies used. The geographic regions of California and their associated ecoprovinces are noted below.

- the northern California coast is in the Pacific Forest Ecoprovince
- the Central Valley is in the California Grassland Ecoprovince
- portions of the Cascade Range in California and the Sierra Nevada are in the Sierran Forest Ecoprovince
- the eastern Coast Ranges of northern California and the central and southern California coastal areas are in the California Chaparral Ecoprovince
- California's portions of the Modoc Plateau and the Great Basin are in the Intermountain Sagebrush Ecoprovince
- the Mojave Desert, Death Valley, and Imperial Valley are in the American Desert Ecoprovince



The road miles managed by Caltrans' 12 districts have doubled over the last 50 years.

Variations in the Right-of-Way

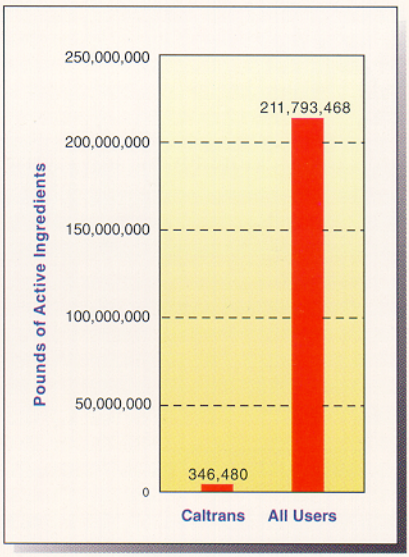
California is not only environmentally variable but is culturally and economically diverse as well. Sprawling cities, remote towns, and myriad industries place ever-changing and unrelenting demands on California's highway network, which ultimately influence the form and design of the highway. Caltrans is required to manage vegetation along each of these assorted highway corridors. Right-of-way elements can vary greatly, depending on the characteristics of the roadway, roadside, and adjacent land. For example, components of the roadway such as the traveled way, median, and shoulder, while standardized and interrelated, can differ depending on the ecoprovince, traffic volume, and associated safety considerations. Additionally, there are differences in other features such as overpasses, undercrossings, interchanges, ramps, rest areas, and safety devices that affect vegetation management methods. For example, eradicating vegetation that grows around and under Caltrans' current standard guard rail is difficult and time consuming without the use of herbicides.

Statewide Vegetation Management Challenges

Despite the diversity of California's ecoprovinces and districts, several common challenges are apparent. The top statewide management issues, which reflect the investment of the majority of Caltrans' effort in vegetation management, are:

- managing vegetation along the road edge, in drainage ditches, and other unpaved areas
- managing vegetation around safety devices and signs
- managing erosion on slopes
- maintaining highway plantings and desired vegetation
- managing vegetation in paved areas, such as pavement cracks
- maintaining shoulder backing integrity
- maintaining environmental quality

Caltrans' expenditure for meeting vegetation management challenges was nearly $60 million in 1996. Herbicide use is only a small and decreasing component of this effort relative to the amount used by all other agencies and industries.



Total pounds of pesticides reported to the California Department of Pesticide Regulation for 1995.