Enhancing the Transmission Corridors for all Stake Holders: A Cooperative Effort

Bob Brenton, Brenton VMS, Folsom, CA

Enhancement is the implementation of an Integrated Vegetation Management (IVM) plan to manage incompatible vegetation associated with transmission rights-of-way. Properly maintained rights-of-way are essential for the safety of the public and workers, to minimize vegetation-related outages, to provide access for inspection and maintenance of facilities and for the timely restoration of service during emergency conditions.

Interestingly enough rights-of-way that are managed for the above goals have some additional benefits for wildlife. Drs. Bramble and Byrnes who first began studying rights-of-way management techniques and their effect on wildlife in 1953 developed the concept of the wire zone/border zone method in 1982. The Wire Zone, which includes the ROW area lying under the transmission wire plus 10 feet on both sides is managed for low-growing shrub-forb-grass plant community (early successional) while the Border Zone, which is the portion of the ROW that extends from 10' outside of the wire to the edge of the ROW, is managed for taller shrubs, and brush plant community (transition zone). This is depicted in the figure below. Managing the wire zone/border zone utilizing an IVM approach results in greater plant and animal diversity.

IVM is a system of managing pest vegetation in which action thresholds are considered, then all possible control options are evaluated and finally the management tactics are selected and implemented. Vegetation management on electric transmission rights-of-way and roads includes a combination of mechanical, cultural, biological, and chemical methods that manipulate existing vegetation into relatively stable communities of low growing grasses and broad-leaf species. Control options are used to prevent or remedy unacceptable pest activity or damage. The choice of control options is based on worker/public health and safety, environmental impact, effectiveness, site characteristics, and economics. The Edison Electric Institute, the Utility Arborist Association and the Environmental Protection Agency Pesticide Stewardship Program support IVM programs key to the enhancing of the ROW.

The first step is to clear the right-of-way by removing incompatible vegetation. This is typically accomplished either mechanically or manually. Cutting or mowing vegetation perpetuates the growth of incompatible vegetation because of the biological response of resprouting. The right-of-way is then monitored for resprouting and reinvasion by incompatible vegetation. Once this occurs, the right-of-way is then managed, or enhanced, to provide the desired outcome. A number of factors are considered before the enhancement method or methods are chosen and implemented, and enhancement frequently includes the use of herbicide applications to selectively control the incompatible vegetation.

The long-term goal of a vegetation management program is to provide for public safety, worker safety, and environmental safety while providing for reliable service by converting right-of-way plant communities from predominately tall growing plant species to communities dominated by low growing plant species. This can be accomplished by selectively controlling incompatible plants while preserving low growing grasses, herbs and woody shrubs over a period of many years. With proper management, the low growing vegetation can eventually dominate

the right-of-way and retard the growth of the tall growing vegetation, providing control of incompatible vegetation and reducing the need for future treatments.