

## Vegetation Management Section

### Maintenance Programs

#### Woody Vegetation Management

The Department of Transportation bases its brush and tree management program primarily on the roadside safety of the traveling public along its controlled access highways. The Department has for years allowed for a safety recovery zone, based on Federal Highway Administration and AASHTO guidelines, of 40 feet from the edge of the travel to allow errant vehicles to recover.

Many acres of forested areas along these wide rights-of-ways have been left during highway construction. In addition, reforestation and regeneration of tree species have created a woods line which is generally 40 to 50 feet from the edge of the travel way as required by safety setback guidelines. As limbs from this tree line protrude out to reach additional sunlight towards the pavement edge, the routine mowers back off which allows the tree line to creep into the safety recovery zone. The Department because of this, and also sign clearance, must manage this woods line edge by some method.

Following are the methods that the Department has as options to manage the woods line edge.

1. The use of A-boom mowers has for a number of years been the routine method of limb removal along the tree line. Additionally, the use of spot herbicide applications has been used to control tree limb growth.
2. The Department contracts a method of limb removal by utilizing machinery equipped with a series of high speed rotary saws on a heavy-duty skidder apparatus known as the Right-of-Way Trimmer. This method cuts the limbs smooth with a power saw as it moves along the right-of-way. The Department continues to look at this method for use along some sections of highway.
3. The Department is also in the process of formulating a contract for the removal of a width of the tree canopy to set the woods line back to the original desired safety recovery distance. This would mean the removal of 10 to possibly 20 feet of wooded buffer area to set the woods line back. This would allow the trees to again develop a natural woods line edge, which would not have to be interfered with for some time.

Woody vegetation management by the Department of Transportation is driven by roadside safety. The preservation of a safety recovery area for errant vehicles is a high priority. Several methods are available and have been used by the Department as noted. The Department continues to look at other alternates that will allow for management of the woods line edge while taking into consideration roadside appearance and the long-term preservation of roadside trees.

- **Foliar Brush Control**

Mechanical mowing remains the most frequently used method to control woody brush on rights-of-way. Mowing with a sequential Foliar Brush Control application has proven the most efficient and cost effective approach for controlling brush. The preferred process recommends mowing smaller brush late in the growing season or in winter followed by a herbicide treatment the following year after the plants resprouts and begins to "sucker" at the cut location. This process will control the root system and generally reduce the mowing requirements for several years. This sequence should be closely followed to avoid the need to cut or treat large brush.

- **Dormant Stem Treatment**

Over the past several years, the Department has utilized Dormant Stem Treatments during the

winter months. This has allowed the Department to expand the window of opportunity to control brush, without causing "brown out" to the treated vegetation. This type of brush treatment has also allowed better utilization of available personnel and equipment during normally less productive winter months.

- **Kudzu Control**

Probably the most aggressive vegetative pest in the roadside environment is kudzu. This invasive vine not only affects the highway system, but also adjacent properties and landowners. The Kudzu Control Program may consist of a cooperative eradication agreement between the Department and the adjacent landowner(s), in which each party agrees to control the undesirable vegetation on their respective property. The Department also targets suppression of kudzu growth in and around highway signs, bridges, guardrails, and other essential structures.

- **Fence Treatment**

The Department maintains thousands of miles of controlled-access highway routes which are bordered by fences. A Fence Treatment Program targets control of undesirable vegetation growing along these fence lines. In most cases, this is woody vegetation, such as various types of vine growth and/or small tree saplings. A fence treatment herbicide program is often used in conjunction with manual vegetation removal by inmate labor.

- **Stump Treatment**

A lesser-utilized, but promising woody vegetation control method is referred to as a Stump Treatment Program. This method is utilized where hardwood brush/trees are mechanically cut back, normally to ground level, and a systemic herbicide solution is applied directly to the cut surface. The objective of this treatment is to prevent the cut surface from regenerating new hardwood sprouts.