

SYSTEMATIC APPROACH TO ROADSIDE BRUSH CONTROL¹

by Roland W. Brown, Jr.

Central Maine Power Company's line clearance program is very compatible with this year's Conference theme "Conserve Energy — With Trees." CMP's line clearance program was developed to minimize tree-caused service interruptions, promote good public relations, and achieve effective, efficient and economical line clearance results, which ultimately not only preserves electric energy, but conserves the energy required to maintain the lines which carry this vital product to the users.

Maine has a total of approximately 17.5 million acres of forest land which is about 90% of the State's total land area.

The Central Maine Power Company operates and maintains approximately 15,300 miles of distribution line which provides electric service to 328 Maine communities in a 10,600 square mile area. The majority of these lines are located within the road limits and are bordered by a variety of vegetation from woodlots to urban shade trees and everything in between.

CMP uses three basic methods to control unwanted brush and trees along the lines. They are the trim, groundcut, and treatment methods. The trim method eliminates the branches and dead limbs which are critically near the conductors. The trimming is accomplished by experienced tree workers with the aid of mechanical pruners and aerial lift equipment. Although the trim method eliminates conditions which threaten customer service, this method alone does little to prevent future critical conditions over the long run. The trim method is effective and valuable to the program when it is used in conjunction with the groundcut and treatment methods. The trim method keeps trees cleared which, because of size, denial of permission, or some other reason cannot be groundcut or totally removed.

The groundcut method eliminates the tree and brush which will grow critically close to the conductors within the year. This method, in conjunc-

tion with a stump treatment application with a suitable herbicide, removes potential hazards and helps extend the length of the control cycle. Trees and brush with diameters exceeding 4 inches are often left to fuel the abutting landowner's wood stove or fireplace.

The treatment method eliminates much of the regrowth resulting from the groundcut method. This method provides the most effective long-range control of unwanted brush thus reducing the need for repeated mechanical maintenance. The treatment allows a gradual conversion from the tall-growing brush, specifically our common species of hardwoods, to grasses which are not affected. Braken ferns usually grow in abundance. In fact, the two dominant forms of vegetation following the initial treatment are grasses and ferns, with many wild flowers following them a close second.

Follow-up treatments two or three years after the initial ones are of a selective type. Only the remaining scattered clumps of resistant brush species are treated. The grasses, ferns, flowers, and low-growing shrubs fill in the newly treated areas and provide a natural cover which helps control the reseeding of unwanted brush thus reducing the need for repeated maintenance.

In addition to providing effective roadside brush control for power lines, there are several other benefits brought about by the treatment method. They are: 1) less ice formation along roadsides due to the gradual elimination of brush which in turn allows sunlight onto the roads, 2) more rapid drying of roads in the spring and more room to plow out heavy snows, and 3) better visibility on curves and intersections. Other benefits would include the gradual elimination of poison ivy and ragweed and far more permanent control than the mechanical methods can provide.

Planning. Planning is the function of determining in advance what the line clearance contractor should accomplish and how the goals are to be at-

tained. Our line clearance specifications are clearly defined and provide the guidelines for our planning.

For vertical-type line construction, clearances are 7 feet each side of the pole line. For horizontal-type line construction, clearances are 11 feet each side of the pole line. The area over the lines are cleared so that branches weighted with ice and snow will not sag onto the conductors. We require that all dead wood and broken limbs capable of falling onto the conductors be removed.

We further require that small-diameter trees, such as birch and poplar, located outside the standard clearance area, but capable of leaning onto the conductors, be removed. Large-diameter, rigid trees located within the standard clearance area, but not capable of leaning into the conductors, may remain. We require that the branches on these trees be trimmed to prevent interference.

The planning phase of the brush control program is accomplished by a local line inspector who field-checks the lines in the areas scheduled for maintenance work. The lines to be maintained are listed on a survey sheet by road name and pole numbers indicating where the contractor's services are needed. Our survey sheet (example) also serves as the contractor's work sheet.

Organizing. After the lines have been surveyed by the field personnel, the work sheets are arranged and reviewed by our field supervision to determine the types of crews that will be required to accomplish the work (aerial trim, groundcut or treatment).

Once the work is organized according to priority and crew types needed, it is coordinated with other interested parties for possible contribution. For example, the telephone companies, towns, state, and others sometimes participate in the brush control effort. Coordination is now, more

than ever, increasingly important in order to minimize duplication of effort by the right-of-way users thus minimizing the energy required to maintain the rights-of-way.

Directing. Directing is the function of running the organization as it actively carries out the plans. Our field supervision directs the crews to the work locations via the work sheets. The importance of a good field inspection is obvious as this is the basis of the line clearance program. The contractor returns the work sheets to CMP upon completing the work.

Controlling. Controlling is the function of restraining and regulating the various factors so that the projects are completed as planned, organized, and directed. This amounts to seeing that each person does the right thing, at the right time, at the right place, and with the right resources. And, as a fail-safe plan, we have developed a procedure to handle customer objections and complaints when one of the above is not achieved.

Another important function in the final-step, controlling, is the field evaluations carried out by the right-of-way coordinator, the contractor, and a local field representative. The line clearance work is evaluated with the aid of a field evaluation sheet. The lines are checked for adequate clearances, neatness, and over-all control results. This ultimately, in addition to the way we fare during storms, lets us know how well we are doing.

A systematic approach to roadside brush control is vital today in order to control unwanted vegetation thereby preserving a reliable source of electric energy while, simultaneously conserving the energy required to meet this ever growing challenge.

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