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Prescribed Fire

In a society that has in the past viewed forest fire as an enemy, the deliberate use of fire may seem strange. Prescribed fire, as the name implies, is the use of fire in a manner prescribed by fire managers. This prescription must meet two requirements: first, the fire must be set in weather that is appropriate for its confinement and control; second, it must achieve the objectives of the burn.



An operational prescribed burn in jack pine logging slash in northern Ontario.

Reasons for the use of prescribed fire vary depending upon the use of the land concerned. Prescribed fire is used to reduce the fire hazard on forested areas which have been harvested. These areas contain logging slash as a result of cutting. If this slash is left untreated it poses a real fire threat for a number of years. In such a situation, fire is being used to stop fire by burning off unwanted slash material.

Prescribed fire is a viable and economical site preparation tool in forest management. Logging operations often leave debris covering potential seedbed or planting spots on the ground. Even if the debris is minimal, for the best seedbeds it is usually desirable to remove most of the organic matter found above the mineral soil. This procedure helps to ensure seedling survival since roots can become established quickly in moist mineral soil before drought sets in. Prescribed fire as a site preparation tool can remove slash and surface organic matter, thereby creating a suitable surface for future forests. An added advantage of the method is that it makes possible the reduction of competing vegetation and nutrient rejuvenation of the soil. Since large areas may be covered with minimal burning time, this technique is very economical in comparison with other methods of site preparation. In addition, prescribed fire may be used in conjunction with mechanized site preparation.

Wildlife managers may use prescribed fire to increase the amount and quality of browse for wildlife such as deer. In such cases, fire managers remove minimal amounts of the organic layer but try to kill the surface vegetation. This usually causes suckering or sprouting of many plants, especially hardwoods, which are the food source the wildlife managers are seeking to create.



This 7-year-old jack pine plantation is the final result of a successful prescribed burn. Note the good height growth by comparing tree height with the people in the picture.

Prescribed fire is a management tool which can be used for many purposes by the fire, forest and wildlife managers of Ontario. With proper planning and dedication on the part of the land manager, prescribed fire can be a valuable management tool.

Copies of this leaflet may be obtained from the Centre's Information Office.

D.J. MCRae

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