Natural disturbances and other burning issues

Foothills Model Forest

Fire is a natural process. It has shaped the landscape of the foothills forests along the eastern slopes of the Rocky Mountains. The creatures which make up the forest ecosystem have evolved with, and adapted to, fire. Many wildlife species, such as deer, need young habitat created through disturbances like fire or forest harvesting. Early aboriginal peoples set fires in the Athabasca River valley to create grazing lands for the animals they hunted.

Foothills Model Forest researchers have been studying natural disturbances because it is believed that emulating natural disturbances is one of the best means to maintain biodiversity. For example, large forest fires are one of the best ways of achieving successful lodgepole pine regeneration. Foresters are learning from nature and are designing cutblocks so that lodgepole pine can be reforested through natural regeneration. Experiments have been undertaken to see if we can emulate fire through prescribed burns and harvesting in order to understand the relationship between fire, vegetation and wildlife.

Decades of fire exclusion have had significant influences on the landscape and biodiversity in the region. At present, many of our forests are more mature than they would have historically or naturally been.

Research indicates that sub-alpine areas historically had large intense fires every 110 to 160 years, while montane areas and the lower foothills experienced smaller fires every 60–100 years. To restore or maintain fire as an essential ecological process, Foothills Model Forest partner Jasper National Park is using prescribed burns and other techniques as a means of fuel and habitat management.

With nearly 2.75 million hectares serving as a living laboratory, the Foothills Model Forest is the largest such site in the world. The research being conducted will help develop models and other tools to effectively guide forest management today, and in the future.

If A Tree Falls In The Forest?

Yes, we hear it. Natural and man-made disturbances such as fire, flooding,

insect outbreaks, tree harvesting, reforestation, and animal grazing have helped shape the landscape in west-central Alberta and are part of the life cycle of forests. Fallen and dead trees create important habitats for plants and animals and provide a natural recycling of soil nutrients. Studies such as the Natural Disturbance Project help us to understand the type, size and frequency of both man-made and natural disturbances and the role they play. The research results from these studies allow land and resource managers to ensure the overall health of our forest areas today and in the future by engaging in long-term planning and operational activities such as prescribed burns, harvesting and reforestation strategies which better approximate natural disturbances and effectively maintain forest biodiversity. The Foothills Model Forest and its partners are conducting important research into the ecological, economic and social values of our forests, to develop information and tools for use by land and resource managers to ensure the long-term health of our communities and forests. *"Borrowing knowledge from the study of natural patterns demonstrates a new level of respect for nature, which is the ultimate tool for managing forests sustainably."* **DAVID ANDISON, LANDSCAPE ECOLOGIST AND LEADER OF THE NATURAL DISTURBANCE ACTIVITY TEAM** If you would like more information on the Foothills Model Forest or the Natural Disturbance Project, please visit our Website at **www.fmf.ab.ca** or call (780) 865-8329.

PHOTO COURTESY OF PETER GLENN, JASPER BOOSTER

Forest management through prescribed burns, tree harvesting and reforestation plays an important role in maintaining forest health and diversity.
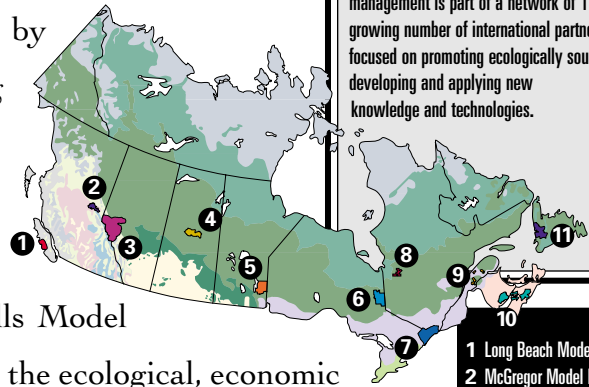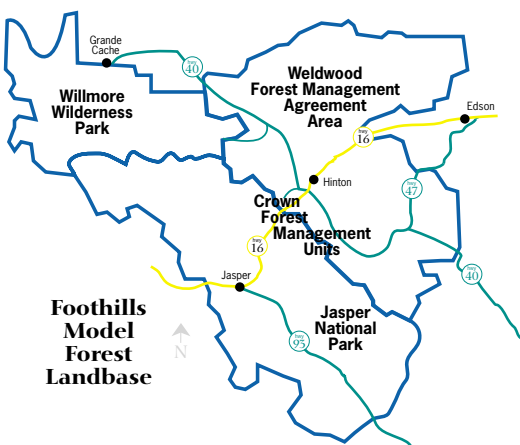
PART OF A GROWING NETWORK

The Foothills Model Forest organization comprises a diverse group of over 40 partners, including principal sponsors Alberta Environment, the Canadian Forest Service, Jasper National Park, and Weldwood of Canada Limited (Hinton Division). With some 2.75 million hectares (27,500 square kilometres) under study, the Foothills Model Forest landbase is the largest such site in the world.

This working model of sustainable forest management is part of a network of 11 Canadian and a growing number of international partnerships. They are focused on promoting ecologically sound forest practices and developing and applying new knowledge and technologies.

MODEL FOREST NETWORK

RÉSEAU DE FORÊTS MODÈLES

1 Long Beach Model Forest
2 McGregor Model Forest
3 Foothills Model Forest
4 Prince Albert Model Forest
5 Manitoba Model Forest
6 Lake Abitibi Model Forest
7 Eastern Ontario Model Forest
8 Waswanipi Cree Model Forest
9 Bas-Saint-Laurent Model Forest
10 Fundy Model Forest
11 Western Newfoundland Model Forest

Grande Cache
Willmore Wilderness Park
Weldwood Forest Management Agreement Area
Edson
Hinton
Crown Forest Management Units
Jasper
Foothills Model Forest Landbase
Jasper National Park

foothills
model forest
a growing understanding