

## Forest Management in Alberta: Harvest Planning and Operating Practices

The information provided in this fact sheet was primarily derived from a survey of Forest Management Agreement (FMA) holders conducted by Forest Watch Alberta in the fall of 2000. The survey was based on information contained in the most recent detailed forest management plans submitted by FMA holders to the government.

### Overview:

- Three FMA holders in Alberta have management plans that emphasize ecosystem management: Alpac, Daishowa-Marubeni International, and Weyerhaeuser. However, many of the ecological objectives of these companies fall short of what is required under the ecosystem management model. Furthermore, the implementation strategies are incompletely developed and there is considerable doubt as to whether the stated objectives can be achieved. In place of active ecosystem-based planning, these companies hope to achieve ecological objectives primarily through ad hoc measures.
- Canfor, Millar Western, and Weldwood, are in transition from sustained-yield management to alternative systems of their own design. These three companies plan to implement some of the elements of ecosystem management, but there remains a strong emphasis on the use of indicator species and habitat modeling to achieve locally-defined forest management objectives (contrary to the spirit and intent of the *Alberta Forest Conservation Strategy*).
- Sundance and Sunpine also appear to be in transition to ecosystem-based forest management; however, their plans provide little information on how this will be accomplished. Implementation does not appear imminent.
- Alberta Newsprint, Tolko, and West Fraser continue to pursue sustained-yield management (although Tolko is currently updating its plans).
- Although the government has accepted the goals and principles of the *Alberta Forest Conservation Strategy*, it continues to manage quota holders on the basis of sustained-yield management. The management guidelines currently in use were developed in 1994 and contain no mention of ecosystem-based management, nor do they incorporate any form of long-term landscape-level planning.

### Stand-level practices:

- Most FMA holders have adopted the objective of maintaining natural patterns in stand shape and size, in place of the “checkerboard” pattern associated with traditional practices. Companies generally plan to achieve this objective through whole-stand harvesting. The impact of linear disturbances such as seismic lines and roads, which reduce the average size of stands through fragmentation, remains an unresolved problem.
- In order to maintain structure within stands, as prescribed by the ecosystem management model, most companies plan to retain standing dead trees and downed logs on harvest sites. Some companies are also distributing logging

- debris on the harvest site; however, the burning of debris is still common. The retention of live clumps of trees after harvest has received the least attention, presumably because there is a direct impact on harvest volume. The management plans of most FMA holders have no target at all for residual structure, and the few that do, have targets of between 1-5% live-tree retention per harvest block. A notable exception is Daishowa, which has a retention target of 15%.
- The regeneration of most deciduous stands is accomplished through natural regeneration. Most coniferous stands continue to be regenerated using monoculture plantation techniques, including invasive site preparation, planting of genetically-selected seedlings, and mechanical or chemical control of competing vegetation.

**Landscape-level planning:**

- One of the key attributes to be maintained at the landscape level under ecosystem management is the natural age structure of the forest, and in particular, natural amounts of old-growth forest. However, most companies still have no plans for maintaining old-growth on the landscape. The few companies that do have old-growth retention targets plan to eliminate more than two-thirds of existing old-growth stands (of the species that they harvest).
- Maintenance of the natural proportions of stand types is another key objective of ecosystem management. Of greatest concern is the maintenance of mixed stands of aspen and spruce, as these mixedwood stands are being eliminated from the forest as a consequence of the current tenure system and provincial regeneration standards. A number of companies have expressed an interest in regenerating mixedwood stands, instead of monocultures; however, implementation does not appear to be imminent because the required cooperation and coordination between FMA holders, quota holders, and government has not been achieved.
- The final core element of ecosystem management at the landscape level is the maintenance of natural patterns in the spatial distribution of forest stands. This element is not being achieved because landscape patterns in stand age are not incorporated in harvest plans and because companies continue to use monoculture regeneration practices.

**Miscellaneous issues:**

- A serious deficiency common to the management plans of FMA holders is that they fail to account for changes to the forest beyond those resulting from harvesting operations. In particular, wildfire and oil and gas exploration and extraction will have an enormous impact on the ability of companies to achieve their ecological objectives and to maintain their wood supply. Yet these impacts are almost universally ignored by companies in their management plans.
- The cumulative ecological impact of roads, which may increase ten-fold in northern Alberta, is not addressed in any of the management plans.
- The establishment of large benchmark areas for risk management and for monitoring the impact of forestry operations has not occurred. Conversely, most coniferous operators do have plans to implement intensive forest management on their FMAs.