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## **FOREST MANAGEMENT**



Saskatchewan's Mistik Management has launched a project for larger cutblocks with patch retention to address concerns about fragmented forest management.

By Tony Kryzanowski

Listening to our American neighbours talk about forest management in Canada, you'd think we operate a government sanctioned free-for-all of cheap wood. But forest management companies like Saskatchewan's Mistik Management Ltd are good examples of just how difficult, time consuming and expensive the job really is. Although Mistik Management sets a high standard, the company's integrated forest management philosophy is not unique.



Mistik Management district superintendent Harry Ward (right) and contractor Ron Bundschuh. Mistik is involved in harvesting larger blocks with retention patches (above) in an attempt to mimic forest fires. "Our ultimate goal is to retain as close as we can to a natural forest," says Ward.

The common theme within many Canadian woodlands operations is respect for the rights and activities of all forest stakeholders, not simply aiming for a hugely profitable bottom line in an annual report. Located in the community of Meadow Lake in northwest Saskatchewan, Mistik Management provides employment for as many as 600 people as part of its harvesting and forest management activity within the Mistik Forest Management Agreement (FMA) area. The area is huge, measuring 3.3 million hectares- approximately half the size of the province of New Brunswick. About 50 per cent is considered productive timberland and Mistik harvests 5,000 to 7,000 hectares-less than one-half of one per cent-each year. Comprised of a mix of hardwood and softwood, about two-thirds of the annual cut is hardwood destined for the Millar Western pulp mill in Meadow Lake.

The other third is softwood earmarked for the NorSask Forest Products sawmill, also in Meadow Lake. There are plans to build an oriented strandboard plant in the community, which will consume the surplus hardwood from the existing and proposed FMA, as well as from private woodlots. With the majority of American and Scandinavian forest resources on private land, the added expense of integrated resource management can be less of a concern in those regions. Foresters can plan with one goal in mind-maximum productivity. But because most forested land in Canada is publicly owned, foresters here must juggle many issues in a much more complex system of integrated resource management.

For example, Mistik Management has made a conscious decision to consult with other forest stakeholders. Since 1991, it has embarked on a co-operative planning process involving seven locally directed co-management boards and two advisory boards within its FMA. Consultation was an essential element for the successful management of this forest area because there has been human activity in the region for an estimated 8,000 years.

Current activity in the region includes forestry, mining, agriculture and tourism. Today, the FMA has a population of about 25,000-ancestors of Cree, Dené, Metis and Europeans. The map of the Mistik FMA mirrors the old fur blocks that established boundaries for hunting and trapping by local Indian bands and Metis settlements.

"In consultation with elders, Mistik has made agreements with several community-based 'co-management' or advisory boards in the FMA who wish to share decision-making about timber, wildlife, fishing, hunting, tourism and recreation resources in their fur conservation areas," says a Mistik document. "By sharing responsibility for the forest resource, Mistik manages the forest in a balanced way, so that the forest provides the benefits people expect over the long term. The basic principle-called integrated resource management -considers all the resources, managed together for today and tomorrow."

The guidelines within the company's 20-year forest management plan look as far as 220 years down the road, not just to the next growing cycle. In 1997, Mistik became the first-ever Saskatchewan forest management company to receive ministerial approval of an Environmental Impact Statement on its 20-year management plan. It's all well and good to set these high standards, but it is up to the workers in the field to take the necessary steps to make it happen.

At Mistik Management, they take their jobs very seriously, have no illusions about the complexity of the task at hand and realize that the science of integrated resource management is a work in progress. "I honestly expect that there are a lot of things that we're going to learn as we go along," says Mistik Management district superintendent Harry Ward, concerning a recent company decision to harvest larger blocks in certain areas with retention patches in an attempt to mimic forest fires.

"We are going to come across things that nobody's even thought about. You know it's almost one of those warm, fuzzy things that feels good, and it looks good, so it must be right. It's one of those ideas that everyone is in favour of, as long as it's not in their back yard." He adds that the principles stated in Mistik's 20-year management plan demonstrate that forestry companies must have the ability to change when faced with obvious detrimental outcomes of existing forest management practices. For example, 10 years ago Mistik's cutblocks were smaller, rectangular and harvested on a two or three pass rotation.

This lead to a very fragmented forest with a lot of public access. "It was identified in our 20-year management process that there were some concerns because we were very definitely altering the forest out there," says Ward. "Our ultimate goal is to retain as close as we can to a natural forest, understanding that we don't understand all the consequences of what we do." Through considerable input from its Scientific Advisory Board, Mistik has launched a three year project to harvest larger cutblocks, measuring up to 2,000 hectares in some cases, using a single pass system with about 10 per cent patch retention. "It localizes our activities in that we'll have far fewer places where we are actively logging," says Ward. "We will have a far

larger impact in those areas, but it is a very, very short impact in the total span of the forest."

Once logging is complete, roads are reclaimed and public access limited. Because of the cutblock size, Mistik will employ two or three contractors in one area. One of those contractors is Ron's Logging Ltd. Owned by Ron and Marilyn Bundschuh, the company has been in business since 1978. It operates a Timberjack 850 feller buncher, a Komatsu PC 220 carrier with a 2100 Limmit delimber, a John Deere 690 carrier also with a 2100 Limmit delimber, a John Deere 748G and a 748E skidder, a Komatsu D8S crawler and a John Deere 770 grader. Typically, the feller buncher will work about a week ahead of the delimbers, which follow along the feller buncher's path.

The delimbers delimb and process the logs to a maximum of 58 feet at the stump, then sort them into softwood or hardwood bunches. The skidders then skid them to roadside. Mistik Management depends on its contractors to fulfill its patch retention mandate and Bundschuh says this has slowed production somewhat. "It cuts production down on your buncher because you've got to leave these little patches," says Bundschuh. "But we're getting used to it. I like to go out and walk through the block before we start harvesting.

If there is less merchantable wood, I'll ribbon it off so that when the buncher comes along, he won't have to guess where he's going." That is particularly helpful on the night shift. Bundschuh says he will also ribbon off immature stands of white spruce in mixed stands. The only difficult situation is when a cutblock is also entirely hardwood. Then, it becomes a judgement call. "We have a handbook that lays out what we're looking for," says Ward, "and there have been a lot of short walks with contractors and their buncher operators, as well as discussions one on one. It's an educational process for all of us." Ward says that so far they have noticed that this method of patch retention has had a positive impact on deer movement. "We find deer in the middle of cut overs because they are using those patches for cover," he says. "If it was a total cut over, you would not find deer out in the middle."

He says patch retention also improves the viewscape. "You'd never end up in a situation where you're standing in the middle of the prairie out there," says Ward. "There is always enough vertical structure left to break it up." This past year, about 10 per cent of Bundschuh's annual allowable cut of 120,000 cubic metres was done in select harvesting of mature aspen and spruce, where a tree count revealed a considerable amount of immature spruce interspersed within the block. In that case, the feller buncher harvested a sixmetre corridor, then reached in on either side to capture mature spruce and aspen, while preserving the immature spruce and a small percentage of aspen to combat windthrow.

A nine-metre strip was left between each six-metre corridor that will likely be harvested in about 20 years. Because Mistik's objective is to regenerate the forest to a natural mixed wood stand, it discovered that the ground disturbance created by a feller buncher was preferable to a harvester/processor in this case, because it enhanced aspen suckering. Mistik recognized that production would suffer with this type of logging, so Bundschuh was paid a premium.

However, Mistik saves money in the long run with reduced silviculture costs by retaining the immature spruce and allowing them to attain their potential. So the next time you hear our American colleagues say that Canadian companies are getting off easy by acquiring a lot of cheap wood, think about companies like Mistik Management and extend its experience to every other major forestry company in Canada.

Consider the effort Mistik puts into juggling everyone's interests, applying sound integrated resource management practices and all the while keeping their industry clients happy with a consistent flow of quality fibre. The wood's not cheap because good integrated resource management costs a lot of money-and it's far from a free for all.

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This page last modified on Tuesday, February 17, 2004