



## Chipping challenges

**Chipping the timber hit by the mountain pine beetle brings challenges--especially when it comes to equipment maintenance--but Rivercity Fibre has figured it out and is now an important part of the chip supply chain for the Domtar pulp mill in Kamloops, B.C.**

*By Paul MacDonald*

Rivercity Fibre Ltd of Kamloops, B.C., must have the shortest commute for its wood chips of any chipping business in the entire country.

Once timber is chipped at Rivercity Fibre, the wood chips are loaded on to trucks from Arrow Transportation Systems, and moved about 30 feet across Mission Flats Road, to the Domtar pulp mill in Kamloops.

“This is the handiest chipping location you’re going to get--you could not get any closer unless you were right in Domtar’s yard,” says company owner Jack Keep.

Some of the company’s chips faced a longer trip when Rivercity Fibre first set up operations two years ago. The company started out chipping for both the Domtar mill and Howe Sound Pulp and Paper, a pulp and paper operation down on the B.C. coast. But Rivercity Fibre is now chipping exclusively for Domtar.

“The original idea was to fill in the wood chip volume for both Domtar and Howe Sound Pulp and Paper because they were both short on chips,” explains Keep. “But it kind of went crazy from there.”

Crazy to the point where they were doing two 10-hour shifts, five days a week. One particular day, they sent some 87 truckloads of chips out the gate. They’ve since stepped back from that, at least slightly. They are now doing two 10-hour shifts, four days a week. And they are currently sending 60 truckloads a day across that road to the Domtar mill. And on an average day, they are sending 2200 cubic metres of mountain pine beetle-killed timber through the chipper.

When Rivercity Fibre started operations, they were a supplementary source of chips for Domtar. At the time, a large portion of the pulp mill’s chips were coming from a Weyerhaeuser sawmill in Kamloops (Weyerhaeuser also used to own the Kamloops pulp mill, but sold it to Domtar in 2007, as part of a larger deal between the two companies).

But Weyerhaeuser closed down the sawmill in 2008. “When we first started, Domtar only need a small volume of chips from us. But once the sawmill went down, we became one of the main suppliers to the sawmill,” explains Keep. The fact that other sawmills in the area took downtime, and cut back on shifts due to the downturn, reduced the regional chip supply further. “We just happened to be at the right place at the right time,” he says.

While Rivercity Fibre is working with a stationary chipper now, it originally started out chipping with a Peterson 5000 mobile chipper unit on their site.

It worked fine, but it was a temporary approach, says Keep. “We always planned on having a stationary chipper. It just took some time to put all the equipment together.”



That equipment includes a Progress 96” chipper from Progress Industries of Alabama, a Deal pocket rotary debarker that came out of Vancouver, and their wave feeder was from Comact in Quebec. “The rest is parts and pieces that we put together,” says Dean Rosenau, manager of the chip yard.

Since Rivercity Fibre is working exclusively with mountain pine beetle-killed timber for chipping, they report there is no problem finding timber. There’s plenty of beetle killed wood--literally hundreds of thousands of cubic metres--in the forests of the southern interior of B.C. Some of the beetle timber comes from the woods operations of forest companies--such as Aspen Planers and Interfor--that have harvesting and sawmill operations in the area.

“We’re getting the timber that does not work for them for sawlogs,” says Keep. In addition, the company also gets some wood from their successful bids on BC Timber sales. “There’s no shortage of beetle kill around this area.”

While there is no problem getting wood, the operation faces some unique challenges handling that beetle wood.

“What we’re dealing with is all dry wood,” says Rosenau. “It’s a lot tougher to work with than green wood.” It’s generally tougher to debark, and the fines percentage is a lot higher.

“We also have to fight the dust--that’s probably our biggest problem,” says Keep. “It’s harder on chipper knives--the knives can’t cut through it nice and clean, like they would with green wood. We’ve got to make sure we keep our knives sharp and watch our chip quality.”

They do chip quality checks throughout the day. And Domtar is happy with what they’re doing. “If we don’t get any phone calls from across the road, we know we’re delivering what they need,” says Keep.

Domtar is receiving a bit drier chips than they’re used to dealing with, but as Keep notes, that’s what is out in the bush. “There’s not a whole lot of green wood left out there.”

They run two butt ‘n top loaders, both Cat 325 machines, two Cat 966G wheel loaders and a Hyundai H770-7A loader in the yard. Woodland Equipment, the Hyundai dealer for B.C., supplied the H770-7A loader. Woodland Equipment is also the Peterson dealer for Western Canada, and supplied the Peterson 5000 mobile chipper that Rivercity Fibre started operations with.

It would be a luxury if they were able to change air filters on their equipment every week, as in a conventional chipping operation. “With the dry wood and the dust, it’s a given that the air filters get changed every day, and the rads are washed out every shift,” says Rosenau.

Aside from the day to day items, maintenance is contracted out to B.C. Cat dealer, Finning Equipment. “Finning takes good care of us,” says Rosenau. “They come in on weekends when we are down, to do the service work, repairs and take oil samples.”

Rivercity Fibre needs to have the equipment ready to go when the first shift of the week starts Sunday afternoon at 3 p.m.



Rivercity Fibre wants to make sure they receive good care for their mobile equipment. If equipment is down for any length of time, it can interrupt the flow of wood into the Progress chipper. “It’s a big deal,” says Keep. “If you have a big loader that is involved in the flow of timber to the chipper, and it’s down, then your chipper is essentially down. We can’t afford that.”

With the chipper itself, they do major maintenance work on the weekend as well. “The biggest things on the chipper are the knives and the anvil,” says Rosenau. “The anvil is checked every week. That anvil is a big part of your chip quality, and if you have problems, it’s going to distort your chip quality. If you stay on top of it, though, you can keep your quality up.”

Rivercity Fibre’s stationary chipping operation was set up in the fall of 2008, and Keep says it took some tweaking to get all the equipment running the way they wanted. “When you first fire the equipment up, it’s like anything--it takes time to work the bugs out,” he said. It really started to hit its stride in the spring of 2009, in part due to the work of their good chipper operators, Keep notes. “The operator is the big difference.”

Along with the switch to a stationary chipper from a portable chipper, Rivercity has also implemented a change in the wood they receive, going from essentially tree length wood to 20 foot cut-to-length pieces.

The shorter wood helps all the way around. “When you come down to it, long and dry wood just doesn’t mix well,” says Keep. “The shorter wood is way easier to handle. There’s less breakage, and it helps with handling wood in the yard, and yard clean-up.”

And as with the sawmills, it’s generally easier working with a consistent length log, even for chipping.

And it works for the loggers and truckers. The loggers are cutting to length for the sawmills, and they just cut to length and do a separate sort for Rivercity Fibre. “They don’t have to go changing the log length with their processors--it’s just a matter of what pile the log goes on, the pulp or the sawlog pile.” And the 20-foot length logs fit just fine on the B-trains hauling the wood.

The wood is hauled in by the truckers who are contracted to either the logging contractors or the forest companies. Rivercity Fibre wants to keep it simple. “With us dealing with so many different contractors and mills, it would be a nightmare for us to figure out the trucking.”

Timber comes from a radius of up to two hours’ drive from Kamloops, from Merritt in the south to Vernon to the east.

The cut-to-length timber allows them to store more wood in their 14-acre yard. On an ongoing basis, they’ll have about 20,000 cubic metres. After the winter of 2008-2009, at break-up, they had a large inventory, some 84,000 cubic metres. It was not clear who would be operating in the bush and who would not be operating, how much and when they could haul, and the transition of logging from one area to another. So they made sure they had plenty of timber on hand.

They’re basically still fairly new to Kamloops, explains Keep. “It can take some time to see what the pattern is, and how much you should have in the yard.” This past winter, they weren’t decking as much, keeping it at 50,000 to 60,000 cubic metres. That represents about a month’s production for Rivercity Fibre.



“It works well for us and for Domtar because we can go up and down in production,” adds Keep. “If Domtar gets a bunch of chips and doesn’t need as much from us, we can drop off production. If one of the sawmills that supplies them goes down, we can fill in.”

While there is comfort in having a buffer supply of wood, they generally often run a hot deck operation. More often than not, the wood is taken right off the logging trucks, and goes directly into the Deal debarker and the Progress chipper. Within an hour, what used to be timber is now chips, and sitting in the Domtar yard, ready to go into the pulp mill. Through the two shifts they operate, there are three Arrow Transportation trucks moving the chips over to Domtar.

Keep added that they usually keep a small buffer supply of chips in their yard, about 15 loads or so.

At this point, the Rivercity Fibre chipping operation runs fairly smoothly. Like all chipping operations, it has its day to day challenges, but Keep and Rosenau seem to have it down pat. But they note that with the equipment maintenance side of things, it’s a seven day week operation.

“From here, it’s a matter of running the operation and maintaining the equipment,” says Keep. There’s not much chance of them growing in size, simply because they don’t have the space.

Besides, Keep is not really that interested in growing the operation. In fact, when he first set up the Kamloops chipping operation, it was supposed to be modest in size, and help ease Keep’s way into retirement. He ran a large chipping operation in Williams Lake, three hours north of Kamloops, and was looking for a slower pace when he moved south.

“That sure hasn’t happened,” he says with a laugh.