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## Loggers suffer one-two punch with mill and biomass plant closures

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PHOTO / TIM GREENWAY

**Tom Cushman**, owner of **Maine Custom Woodlands**, on a feller buncher in the woods in Gray.

Tom Cushman steps out of his office, a large piece of logging machinery known as a feller buncher that can cut six or seven small trees at a time, severing the trunks at stump level and setting them aside for a skidder to haul out of the woods to a staging area for later sorting, de-limbing and, in some cases, chipping. It's getting close to quitting time on a 12-hour day, but downhill from Cushman there's still a lot of action going on as a crane plucks logs that have already been de-limbed, twirls them effortlessly, sorts and stacks them for delivery to various wood markets in Maine.

"We try to get the highest and best use out of the harvested timber that we can," Cushman says, explaining how the cutting operation in any given woodlot is guided by a "harvest prescription" that spells out what types of trees will be harvested, which ones will remain in place, and other forest management goals spelled out in that plan.

As owner of Maine Custom Woodlands, Cushman oversees a skilled workforce of 22 employees that includes licensed foresters and experienced loggers trained to operate expensive and sophisticated machinery that fell, skid, haul and deliver logs or low-value tree trimmings to pulp and paper mills, biomass plants and sawmills in Maine. It's become an increasingly capital-intensive business since he founded his Durham-based company in 1993, with the cost of a new feller buncher approaching \$500,000, a grapple skidder running from \$150,000 to \$325,000 and a chipper ranging from \$50,000 to more than \$250,000 depending on size.

Even in the best of times, logging is not for the faint of heart. "There are so many factors

you have to deal with,” Cushman says. “You try to plan for market conditions but you have no idea what the weather conditions will be when the markets are peaking, or if the market demand will be strong when the weather conditions are ideal.”

But these are not the best of times. Maine's pulp and paper mills, a major segment of the state's \$8 billion wood products industry, have been in a freefall. The pending closure of Madison Paper Industries mill in May, putting more than 200 out of work, will be the fifth paper mill in Maine to shut down in two years. That leaves just six mills still operating in the state — and one of them, the Verso Paper Corp. mill in Jay, shut down a paper machine last October and gave layoff notices to 300 workers as part of the parent company's restructuring that led to Chapter 11 bankruptcy in late January.

A new complication is the closure in March of Covanta Energy's biomass power plants in West Enfield and Jonesboro, resulting in the loss of 44 jobs at those facilities. Although Covanta left the door open for those plants to reopen — “if the economics improve” — a key factor in the closures are Massachusetts' new more stringent renewable energy standards that took effect on Jan. 1 and deemed Covanta's standalone utility plants as ineligible for rate subsidies. ReEnergy Holdings, which runs the state's four remaining biomass plants in Livermore Falls, Stratton, Ashland and Fort Fairfield, faces a similar threat when Connecticut's renewable energy credits expire at the end of 2017.

For Cushman, whose company derives roughly half its income from biomass sales and the other half selling to pulp mills, firewood dealers and sawmills, the collapsing Maine markets make an already challenging job that much harder.

“I'm on edge,” he says. “Trying to plan and see what the markets six months, 12 months, 18 months are going to look like, it's not getting any easier. We need all of those markets to be strong.”

Eric Kingsley, a partner and vice president at Portland-based Innovative Natural Resource Solutions LLC, has been extensively involved in forestry-related issues as a researcher and consultant since the 1990s. He says the shutdown of the two Covanta biomass plants is a serious setback that's likely to put even more logging jobs at risk than the 10% to 15% workforce reduction forecast for this spring during last November's forum on Maine's pulp and paper industry.

“In the last roughly 24 months, if you include Madison, Maine has lost markets for 3 million tons of woody materials,” Kingsley says. That's roughly a 20% decline in the 14.6 million tons of wood harvested in Maine in 2014 reported by the Maine Department of Agriculture, Conservation and Forestry. Importantly, he adds, the closure of the Madison Paper Industries mill eliminates the last major market in Maine for spruce and fir, the dominant tree species north of Route 2.

While the saw log market remains for the larger spruce and fir trees, he says, the smaller trees typically find their way to pulp and paper mills or became biomass, the

low-grade wood derived from limbs and tree tops. Both of those markets historically created an opportunity for landowners to make some money at the same time they're thinning their forests to enhance the growth of highest-value trees. The looming spruce budworm infestation that's expected to hit Maine in the coming years adds another complication, since thinning spruce-fir trees is one of the strategies being recommended for minimizing the extent of the outbreak.

"The market one would rely upon [to sell spruce-fir harvested in a preventive spruce budworm thinning] is all but disappeared," he says.

The tightening of renewable energy standards in southern New England, meanwhile, highlights a weakness of Maine's biomass market — namely, its dependence on favorable wholesale electricity prices and support from state policies in southern New England that had offered above-market rates for renewable power. Massachusetts' subsidy ended in December, causing Covanta to idle its two Maine biomass plants in March. Similar new rules are scheduled to take effect in Connecticut at the end of 2017, triggering worries that some or all of ReEnergy's four biomass plants will shut down 2018 if conditions do not improve.

Kingsley says a 2002 study he did of New Hampshire's biomass energy industry indicates that biomass power creates up to five jobs per megawatt of generating capacity.

Using that standard, he says, Covanta's two plants, with 50 MW capacity, had been supporting as many as 250 jobs. Of those, approximately 200 would be loggers and truckers delivering low-grade wood to Jonesboro and West Enfield. ReEnergy's four biomass plants in Maine have a total generating capacity of 155MW, enough to supply power to 154,000 homes each year. All told, Maine's biomass industry accounts for 400 direct jobs at biomass plants and at least another 900 indirect jobs, and accounts for 25% of the state's overall power supply and 60% of the state's renewable energy portfolio, according to the Professional Logging Contractors of Maine.

Dana Doran, executive director of the Professional Logging Contractors of Maine, says his organization represents more than 2,500 loggers and truckers who are responsible for 75% of the timber harvested from Maine's forests annually. He acknowledges the 10% to 15% estimate for logging job losses that he gave in November is probably a conservative estimate, given the closing of Covanta's two biomass power plants in March.

"I'd say you are going to see an even greater percentage in terms of employers going out of business," he says, noting that many contractors who purchased equipment in 2015 may find it difficult to make the payments due to the double-whammy of declining markets for pulp and paper and, now, biomass. The impact of losing biomass markets, he adds, extends beyond the loss of logging jobs and lost revenues for landowners.

"The sawmills sell their residual wood waste to the biomass plants as fuel for generating

electricity," he says. "If they don't have those biomass plants to sell to, it becomes a cost, not a source of revenue, because now all that wood waste has to be sent to the landfill for disposal."

Doran says the Professional Logging of Maine has been lobbying lawmakers and the LePage administration to support two measures designed to help logging contractors and Maine's struggling biomass industry:

- LD 1481, a bill that would extend to loggers and farmers the sales tax exemption now provided to commercial fishermen on fuel purchases. If lawmakers approve the measure, estimated loss of revenue for the state's General Fund is pegged at \$8.5 million in 2016-17, \$10 million in 2017-18 and \$10.9 million in 2018-19. For Cushman, who says he's now spending \$10,000 to \$12,000 per week on fuel, the sales tax exemption would reduce his overhead costs by roughly \$30,000 annually based on current prices.
- LD 1676, a bill that would direct the Maine Public Utilities Commission to secure contracts for new or existing renewable energy resources with the highest likelihood of providing in-state economic benefits such as permanent direct jobs, property taxes to municipalities, in-state purchases of goods and service and grid reliability benefits. Doran says the legislation is explicitly designed to give Maine's biomass power producers a chance to compete for short-term energy contracts that would buy them time to identify longer-term solutions.

"Doing nothing means we may lose the biomass industry entirely," Doran says of the latter bill. "There's too much to lose, not only for hundreds of workers and their communities, but also for the environment, our forests and the future energy security of Maine."

The Legislature's Energy, Utilities and Technology Committee held a public hearing on LD 1676 on March 28. The 127th Legislature has until its scheduled adjournment on April 20 to take action on the bills.

What's at stake, Doran says, is nothing less than the future viability of Maine's biomass industry and the livelihoods of a significant number of loggers. "You need a market and you need a workforce," he says.

Kingsley agrees, saying: "Logging is a capital-intensive business. It takes \$1 million or more to set up a logging crew. When people leave the logging industry, we're not talking about a couple of guys with chainsaws and a pickup truck."

At the Maine Custom Woodlands' logging site in Gray, a crane operator sorts harvested trees with as much dexterity as if he was picking up twigs by hand. The crane grabs, swivels and drops logs into various piles according to grade with speed and precision. Brushier tree-top sections are fed into a chipper that shoots chips into a box trailer

parked alongside one of the log piles.

Each of his 22 employees, Cushman says, has skills that aren't easily replaced — noting that it takes about 12 months to get someone trained fully on a particular piece of machinery. On average they make \$50,000 to \$60,000 per year. “You have \$50,000 invested in each employee for every year they work for you,” he says.

Cushman notes that landowners also have a vested interest in supporting the state's biomass power industry and his ability to keep that skilled workforce busy year-round. If the state's biomass market collapses entirely, he says, landowners won't be able to thin their forests of the least valuable trees, or be assured that the broken branches and other unusable woody material isn't left behind on the forest floor after a logging operation is finished, thereby increasing wildfire risk and making it harder for new trees to take root and grow.

But for all of the challenges facing the logging industry right now, Cushman's not ready to write off any segment of Maine's \$8 billion wood products industry. “We have an unbelievable resource here in the state of Maine,” he says. “The forest industry is always going to exist in Maine. It's just that it might not look the same as it did during the 1960s pulp and paper era.”

On a more personal level, Cushman says despite the economic challenges and uncertainties he loves what he does for a living. “It's a rush, juggling a lot of things at once. I love to be in the woods. I can't sit behind a desk,” he says. “I'm not one of those guys old enough to retire. I've got to figure it out.”