

Is there support for a wood waste drop-off point in the Applegate?

BY TOM CARSTENS

History. Some of you might remember the biomass drop-off service that was provided in Murphy in the 1990s. Biomass One, the wood waste electrical generating facility in White City, picked up woody biomass and urban wood waste that residents dropped off there in lieu of open slash burning or land fill deposits. Community support for the operation grew gradually from 4,900 green tons dropped off in 1994 to 9,700 green tons of waste in 1999. A large portable grinder (see photo 2) processed the wood waste, then Biomass One trucked the chips to White City where they were converted to electricity. Unfortunately, the operation had to be halted for safety concerns. Occasionally large metal items would be accidentally left in the wood waste, the grinder's centrifugal force could potentially sling this metal quite a distance, which might have endangered vehicles on Highway 238. According to Gordon Draper, vice president of Biomass One, a grinding site needs to be a safe distance from a highway and with about an acre's worth of buffer around the grinder. Gordon says that his company would love to come out and start picking up our wood waste again if we could find a suitable site. Right now, Biomass One makes a monthly pickup at Jo-Gro in Merlin (9,100 green tons annually) and could swing easily into the Applegate Valley to haul off more stuff. According to Gordon, he wouldn't charge for the service. A sorter would be required to screen the material (get that metal out!) and stack it for loading into the grinder.

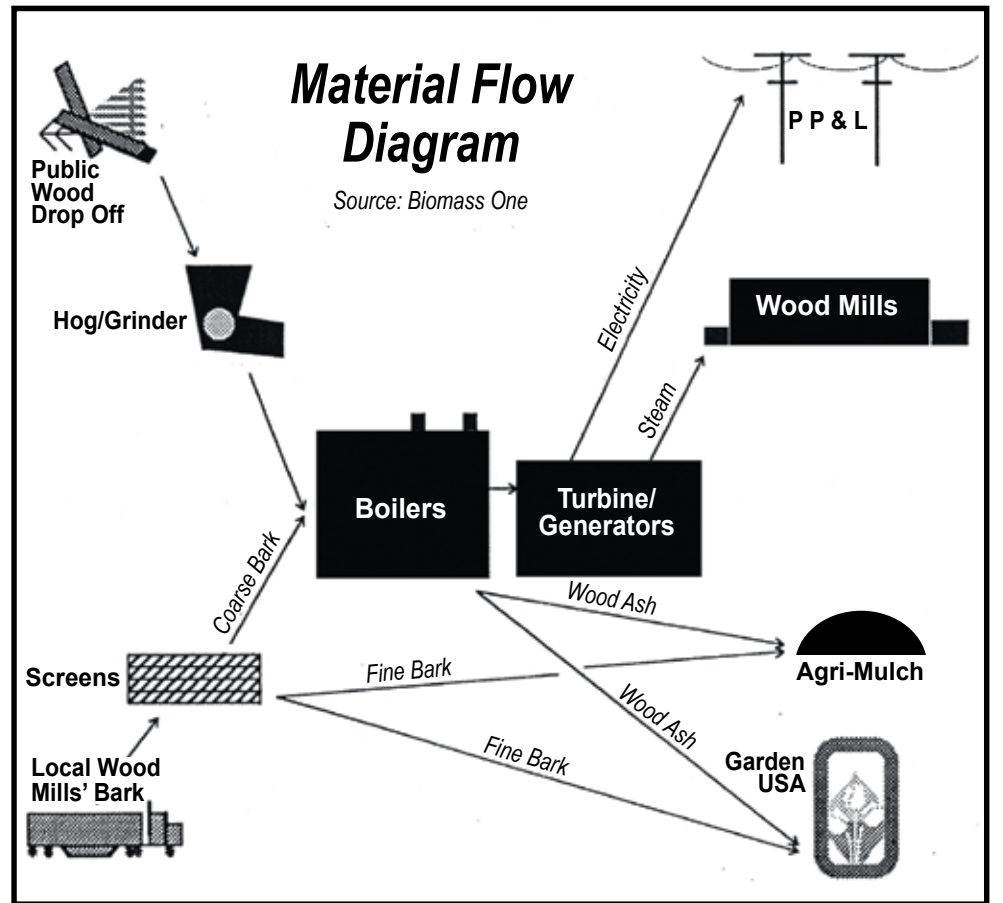
fill, foundations, etc., and by farmers and the landscape industry for soil enhancement.

Biomass One produces 35 tons of this ash per day—that's 35 tons of junk that are not fouling our air. Biomass One claims that one ton of open burned slash wood releases 17 pounds of particulate matter and 140 pounds of carbon monoxide into the air; whereas that same ton burned in a biomass boiler produces only about an ounce of particulates and just 1.7 pounds of carbon monoxide.

Rough and Ready Lumber Mill in Cave Junction recently installed a small biomass plant to handle mill waste. Link Phillippi, president of Rough and Ready, says that everything about his operation has been positive so far. "You can't even smell the smoke!" he says proudly.

Waste to Energy. A second benefit is the dramatic reduction in construction wood waste that's now dumped into landfills. In addition to its own waste, Rough and Ready also takes about half of its hog fuel from nearby public and private forests. Typically, Biomass One consumes over 300 thousand tons of wood waste annually. Chip trucks loaded with this stuff would stretch from Medford to Redding. That's a lot of material that *isn't* going into our landfills!

Almost all of this biomass can be converted to electrical energy. Water jackets around the boilers produce steam that is used for two purposes. Some of the steam is used to power equipment on site or for use by lumberyards to heat kilns to dry finished lumber. Most



losing only around two million board feet to mechanical removal! As we've seen, the combination of a century of fire suppression combined with a virtual halt to traditional logging puts our forests at great risk to large, unnatural lightning-caused fires.

The U.S. Forest Service is interested in thinning these small diameter fuels and they have supported a special type of selective harvesting under what's called a "stewardship contract." They also have a special grant program to help new biomass plants get started. In fact, the feds,

According to Deputy Chief Chris Wolfard, Applegate Fire District #9 has already responded to four calls this year to contain slash pile burns that got out of control.

Drawbacks. Of course, there are some drawbacks to setting up a drop-off/sort point. It's a definite chore for us to load and unload a pickup with hard-to-handle slash; it's much easier to just burn it in place as we've always done. And with the price of gas going out of sight, the cost to haul this stuff might make it tough on our household budgets. Furthermore, a good-sized lot would



Benefits. There are some good things that might happen if we were to support a return to this kind of an operation.

Cleaner Air. For one, we would see a reduction in smoke and hazardous particulate matter that frequently clogs our valley's air. Slash burning generates some very small particles that can lodge in the lungs, creating health problems for some. Biomass plants are required by the Environmental Protection Agency to install efficient pollution scrubbers to eliminate this material. The ground-up waste, known as "hog fuel," is burned efficiently in large "boilers" or "fireboxes." Almost everything is burned. The tops of these boilers don't even need smokestacks. Any unburned particulate matter that remains is blown straight to state-of-the-art "electrostatic precipitators." These use a system of air circulation over charged rods and plates to remove fine particles from the smoke. This "boiler rock" ash is used by the construction industry for back

of the steam, however, is run through steam turbines connected to powerful electrical generators. The electricity produced is sent directly to the grid (see diagram above). This dual use of the steam is why these types of biomass plants are called "cogeneration" plants. Cooling towers save water by condensing the steam for recycling in a closed-loop water system.

Electrical production varies depending on the size of the plant. Rough and Ready Lumber produces 1.5 megawatts (MW), which is enough to power about 1,000 homes. Biomass One runs three big turbines and produces 30 MW. This is more than enough to power all of Medford's residential needs.

Reduced Wildfire Risk. Maybe the greatest benefit of all is the potential to stimulate commercial fuels reduction in our dangerously overgrown forests. The Southern Oregon Timber Industry Association estimates that the Rogue River National Forest is growing around 423 million board feet per year, while

the state, and the Oregon Energy Trust all have aggressive grant and tax incentive initiatives to encourage biomass processing. These incentives help offset the currently high costs of harvest and delivery.

According to the Oregon Forest Resources Institute (OFRI), our state now has about 50 industrial sites processing woody biomass, with more on the way. The Oregon Department of Energy (DOE) says that our state gets 6% of its energy from biomass, which is twice the national average. DOE claims that figure can double in the next 20 years if a larger portion of the woody biomass accumulating in our forests can be utilized. OFRI estimates that approximately two million green tons of biomass fuel could be harvested annually over this period. It's really the ultimate in renewable energy because this undergrowth keeps coming back!

Another side benefit to reducing our open slash burning would be the lower fire risk in our own neighborhoods.

have to be leased or purchased, a sorter hired, and a small dozer obtained.

Incentives. There might be enough in credits and incentives to pay for all this, though. A year ago, a renewable fuels bill, HB2210, was signed by the governor. Among other things, this law set up a tax credit of \$10 per green ton of slash that's converted to energy. As a scale of reference, this would be the equivalent of about \$97,000 per year at the rate we were dropping off biomass in Murphy in 1999.

Waste Potential. How much of this stuff do we have, anyway? A study conducted by TSS Consultants estimates that public and private sources in our valley could potentially provide around 95,000 green tons of biomass annually. This could take the form of woody material generated from thinning, logging, agricultural, or construction activity. Residential wood waste could be a big part of this. Recovery data tell us that a total of around 50,000 green

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