



## DESTRUCTIVE EFFECT OF CHIP MILLS IN APPALACHIA

The Mixed-Mesophytic Forest of central Appalachia, is the most diverse forest land in the world. The term "Mixed-Mesophytic" was first used by Lucy Braun to describe the woodlands area of the Appalachian Mountains extending from Pennsylvania to Georgia. ASPI is located in the geographic center of this forest and is highly committed to its preservation. To illustrate the richness of this forest's diversity one can use a comparison. Appalachian Kentucky's forest lands contain over 200 species of trees while the entire European continent has about 80 species.

Early in America's history, settlers entering the majestic forest of the southeast encountered this diverse array of trees including hardwoods like maple and oak and softwoods like longleaf and yellow pine. Little by little, these forests were cleared using nothing more than hand saws and horses to accommodate a growing population. Today, many of these forests have recovered to a point where they can once again perform their natural functions - from protecting streams to absorbing carbon to providing necessary habitat for species that depend on them.

The recovery of these forests has not gone unnoticed by the logging industry. Hand saws and horses, however, have been replaced by high-tech, high-speed machinery capable of accelerating clearcutting to incredible levels. One development driving this process is the proliferation of ultra-efficient chip mills, which are being built at an alarming rate around the country. The southeast, with 140 chip mills, is the hardest hit region of the country. Southeastern chip mills produce about 25% of the world's paper and paperboard, making the region the largest pulp producer in the world. In America, 70% of the pulp demand is supplied by forests in the southeast. Chip mills cut up forests - public and private, hardwood and softwood - into chips at an astonishing rate for use in the manufacture of paper, plywood, particle board, and rayon, as well as for export overseas. Sensitive forest habitat is transformed into a barren landscape which may be cut again in as few as ten years to feed the chip mills.

The diverse forests of the southeast are quickly being converted into plantations of fast-growing trees that are unfit for use by any industry but the chip industry. Stable jobs in industries such as hardwood furniture manufacture fall to these cut-and-run, quick profit operations. Even worse, birds and wildlife suffer from this conversion - biodiversity in pine plantations can be as much as 95% lower than in natural forests.

### Chip Mills: What Are They?

Many of us who live along tree-lined streets have been awakened early in the morning by the high-pitched scream of branches being fed into chippers by road crew workers. Chip mills are much like an industrial-scale version of these chippers, or the chipper you may have right in your own garage. They are designed to efficiently turn all trees - hardwoods and softwoods - into chips for the paper and pulp industries. Existing mills produce between 300,000 and 475,000 tons of chips per year. In the near future, as efficiency continues to improve with new advances in technology, this rate will more than double. Permits currently pending in Florida indicate that the new mills will each produce 750,000 tons per year. A chip mill can chip all the forest within a 75 mile radius, plus all the trees which can be brought in from satellite logging outposts. The only major limiting factor is the cost of transportation, by far the highest operation cost for these low-investment businesses.

## Chip Mills Fed By Devastating Clearcuts

Because of their speed and efficiency, chip mills can impact forest ecosystems at unprecedented rates. Almost one million acres of southeastern forest are cleared every year to feed the 140 chip mills currently operating in the southeast. An additional 7 mills are either planned or under construction. Other logging industries in the southeast can, and often do, selectively log - only the older, straighter trees are cut, leaving the younger, smaller trees to grow so they can be logged in the future. Selective logging creates its own habitat problems, but doesn't have nearly the negative impacts of chip mills.

*Timber industry analysts and the US Forest Service admit that removals of softwoods (pines) exceed growth throughout the region. They also predict that if current trends continue, removals of hardwoods will exceed growth within the next ten years! Because of these impending shortages, chip mills are now spreading north into Missouri, Ohio, Illinois, Indiana, and Pennsylvania. Dogwood Alliance Report (see reference).*



PHOTO BY: Chuck Liddy

Chip mills, which can convert trees of all types and sizes into two-inch long chips, promote clearcutting in which all the trees in the forest are cut down and removed. Every tree, branch, and sapling greater than three inches in diameter can be fed into the mills, leaving virtually nothing behind to support wildlife. Birds and animals that rely on the forest for food sources, nesting, and reproductive opportunities are left with nothing but an empty field of stumps and weeds. The soil on clearcut grounds, no longer protected by the forest canopy, is washed into waterways by rain and runoff from melting snow. Fish eggs are choked by the high levels of silt, and fish reproductive success drops with subsequent changes in river depth and temperature.

## Pine Plantations Are Ecological Desserts

After native forest containing a mix of hardwoods like oak and maple are clearcut, they are often replaced by even-spaced rows of fast-growing pines in traditional tree farm fashion. Studies have shown that 95% of species diversity is lost after conversion to pine plantations. Replacing rich, species-diverse forest with fast growing, single-species tree farms spells disaster for the many species which depend on older, diverse forests for their survival. Birds dependent on older forest include pileated woodpecker, cerulean and worm-eating warblers, and the scarlet tanager. The conversion of their native habitat to pine plantations, combined with the increasing acreage of forest being clearcut for chip mills, could prove too much for sensitive species to withstand. An estimate by the US Forest Service indicates that 36% of native pine forests in the southeast have been converted to these pine plantations. By 2020 the Forest Service estimates that 70% of native pine forests will be replaced with tree plantations.

## Local Economies Suffer When Chip Mills Come To Town

During and after their stay in a town, chip mills produce a boom-and-bust economy, bringing limited benefits to communities in which they are built. A typical chip mill employs only 6 to 10 people and pays them from \$8 to \$14 per hour. Because mills are almost fully automated and computerized, they can be run without

management level workers on site and without the skilled labor required by competitors such as the furniture industry. Low labor costs allow chip mills to undercut the competition's wages and gain a competitive advantage in the marketplace.

**More Efficient Every Year.** One chip mill executive bragged, "We get more efficient every year. We produce more in fewer hours with fewer people." While this may be great for chip mills, it can be disastrous for the local job market. A million dollars invested in a chip mill will generate one job, while the same amount invested in the furniture industry can create up to 40 jobs.

Technology enables chip mills to chip hardwoods, the very high quality trees furniture makers and local saw mills depend on. *The hardwoods consumed by a single chip mill in one month could run an average size saw mill for an entire year.* The resource base upon which these higher-employment industries depend is being fed into the chip mills, leaving little choice but to lay people off. For example, a chip mill that employs 10 people could displace a furniture factory that employs 200 people using the same 200 truckloads of logs. To make matters worse, chip mills export a large proportion of our chipped forests overseas - hardwood chip exports have risen 500% from 1989 to 1995. That means lost job opportunities for American workers. In addition, erosion caused by clearcutting for chip mills deposits increased silt in streams, harming fish populations and fishing opportunities.

### **Benefits Are Few And Far Between**

While many logging companies serving chip mills do provide some jobs to local communities, the logging industry accounts for less than 1% of the economy of the southeast. The 80-100 jobs created by logging for a chip mill are spread out over 75-100 square miles, providing little support to any single town or county. Chip mill jobs are short-lived as well - the life span of a chip mill can be as few as 3 years. Chip mill owners may abandon mills after the profitable trees are cut. Communities are left with a ravaged ecosystem, a depleted resource base, and fewer job opportunities.

### **Taxpayers Subsidize Chip Mills**

The full cost of logging a forest is often not paid for by mill owners. The public or adjacent land-owners foot the bill for filtering dirty water, restoring clearcut public lands, and maintaining wildlife on public and private lands. When road improvements are needed to bear the increased weight and traffic of logging trucks, taxpayer money often subsidizes the project. In North Carolina, the Department of Transportation plans to spend nearly \$1 million to upgrade the highway system to accommodate the influx of hundreds of Willamette lumber trucks serving a nearby chip mill.

Subsidizing logging sets a wasteful cycle in motion. It creates artificially cheap wood products, like paper and plywood, which consumers have less incentive to use efficiently because of their low cost. Increased consumption is encouraged, which leads to more demands on the already strained resource, to more chip mills to supply inflated demand, and to more damage to the environment and to competing industries.

### **Cumulative Impacts Study Needed**

Logging for chip mills has already been shown to have significant environmental impacts. According to the only large scale Environmental Impact Statement (EIS) done on chip mills in the southeast, three proposed mills on a 12-mile stretch of the Tennessee River would have seriously jeopardized the health of the river and the surrounding forests. This type of study needs to be done for all chip mills in existence, as well as for all future chip mills. Currently, an EIS done for a chip mill only studies the environmental impacts of building the mill itself, while ignoring the impacts of the logging which will feed the mill. Including the impacts of logging in the

EIS would result in a better analysis of the extent of environmental degradation caused by chip mills. An EIS is also needed to measure the cumulative effects of the southeast's 140 mills.

**Not Too Late.** Many of the same companies that share blame for overcutting the forests of the Pacific Northwest are now shifting some of their operations to the fertile southeast. In fact, since 1985, more than 100 chip mills have been erected in the southeast as a result of this shift. It is not too late to prevent the region from falling victim to another round of short-sighted clearcutting. The Federal Administration needs to study the cumulative impacts of the chip mills in the southeast before any new mills are allowed. For each new mill that is proposed, the EPA needs to conduct an assessment of the potential environmental damage of the entire logging operation, not just the construction of the mill.

## What Can Be Done To Save Our Forests From Chip Mills?

It would be unjust for our work to simply identify the problem of chip mills. Having done that, solutions must be provided. The following provides a discussion of some solutions.

*Reduce consumption of paper.* At home and at work, Americans have many wasteful habits and paper is one of them. One way in which we can do this is by avoiding the use of disposable paper products (napkins, paper towels, paper plates, etc.). One additional measure is to purchase tree-free paper products.

*Reuse and recycle.* When purchasing paper products search out ones which have at least 50% post-consumer content. Recycle junk mail, don't throw it away.

*Do not allow any new chip mills to be constructed.* As mentioned earlier no EIS has been completed on the total impact of a chip mill. Until such an effort is completed no new chip mills should be granted permission for construction.

*Write your state and national Congresspersons, Governor, and state environmental protection agency.* Voice your concern over the growing proliferation of these chip mills. Note the economic and environmental pitfalls.

We are grateful to the National Audubon Society, 1901 Pennsylvania Avenue NW, Washington, DC, 20006, 202-861-2242 for granting permission to copy a major portion of their Fact Sheet, Cashing in Their Chips: Chip Mill Industry Gambles With the Future of Our Forests.

Reference: Chip Mills, Pulp Mills, and Clearcuts: A Threat to Forest Communities. Dogwood Alliance, PO Box 1598, Brevard, NC 27812, 828-883-5889.



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