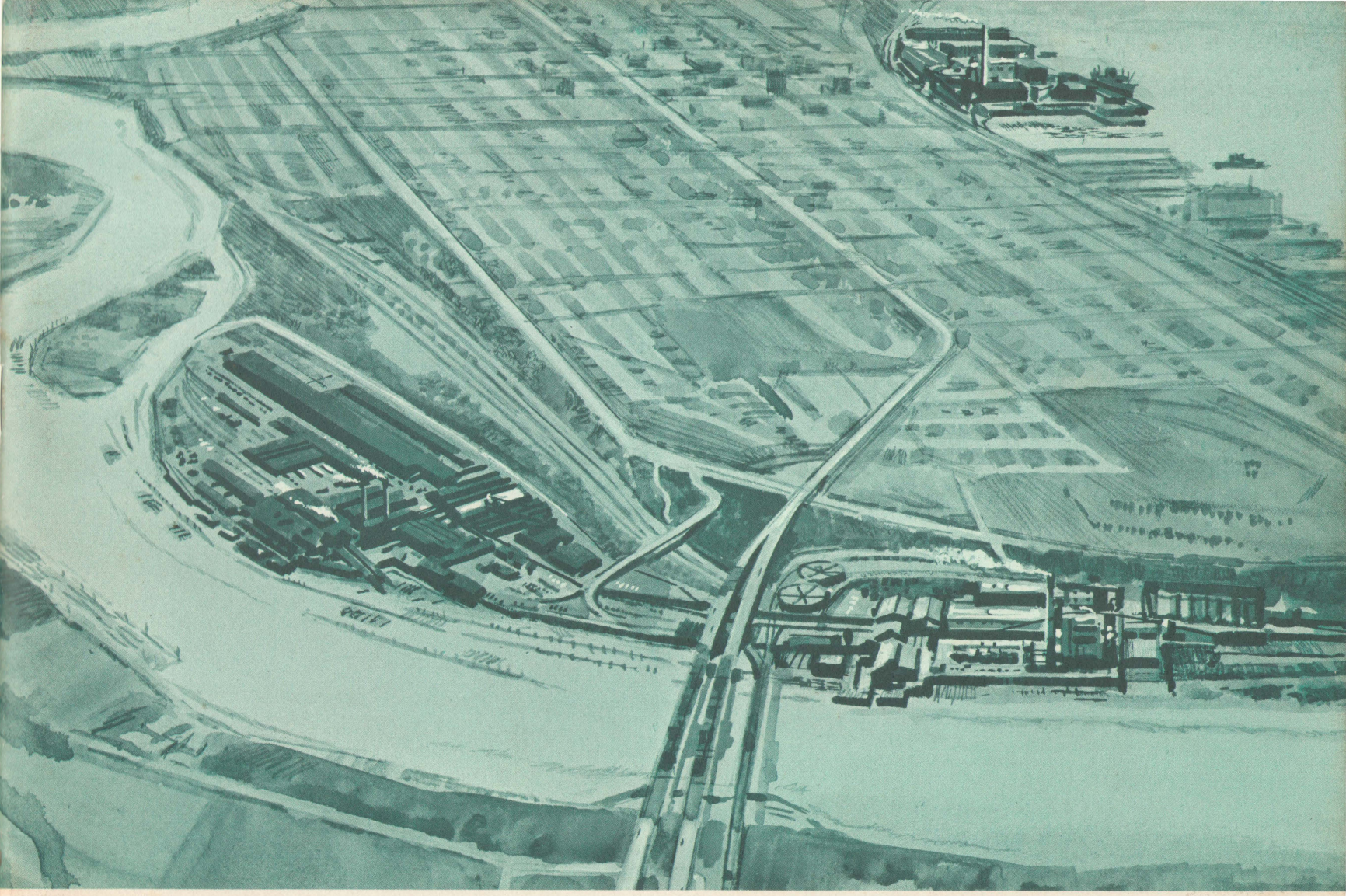


Your tour of the Everett Branch of Weyerhaeuser Company

Welcome to the Everett

Deer on a Weyerhaeuser tree farm.

Branch of Weyerhaeuser Company

The Everett branch of Weyerhaeuser Company is a production unit which makes full use of trees from Washington forests. Our facilities include three tree farms, a large lumber manufacturing operation, two pulp mills and a Pres-to-log plant. These units work cooperatively to provide the endless flow of material needed to supply modern America.

From our tree farms comes a log supply intended to last forever through sustained yield forest management. Rate of harvest is determined by rate of growth, assuring continuing crops of trees to meet the needs of generations yet unborn.

Lumber for homes and commercial construction flows from sawmill production lines. Dry shavings are pressed into Pres-to-logs. Pulp is made from wood chips and shipped out to be converted into an amazing variety of consumer products.

Lumber

Kraft Pulp

Sulphite Pulp

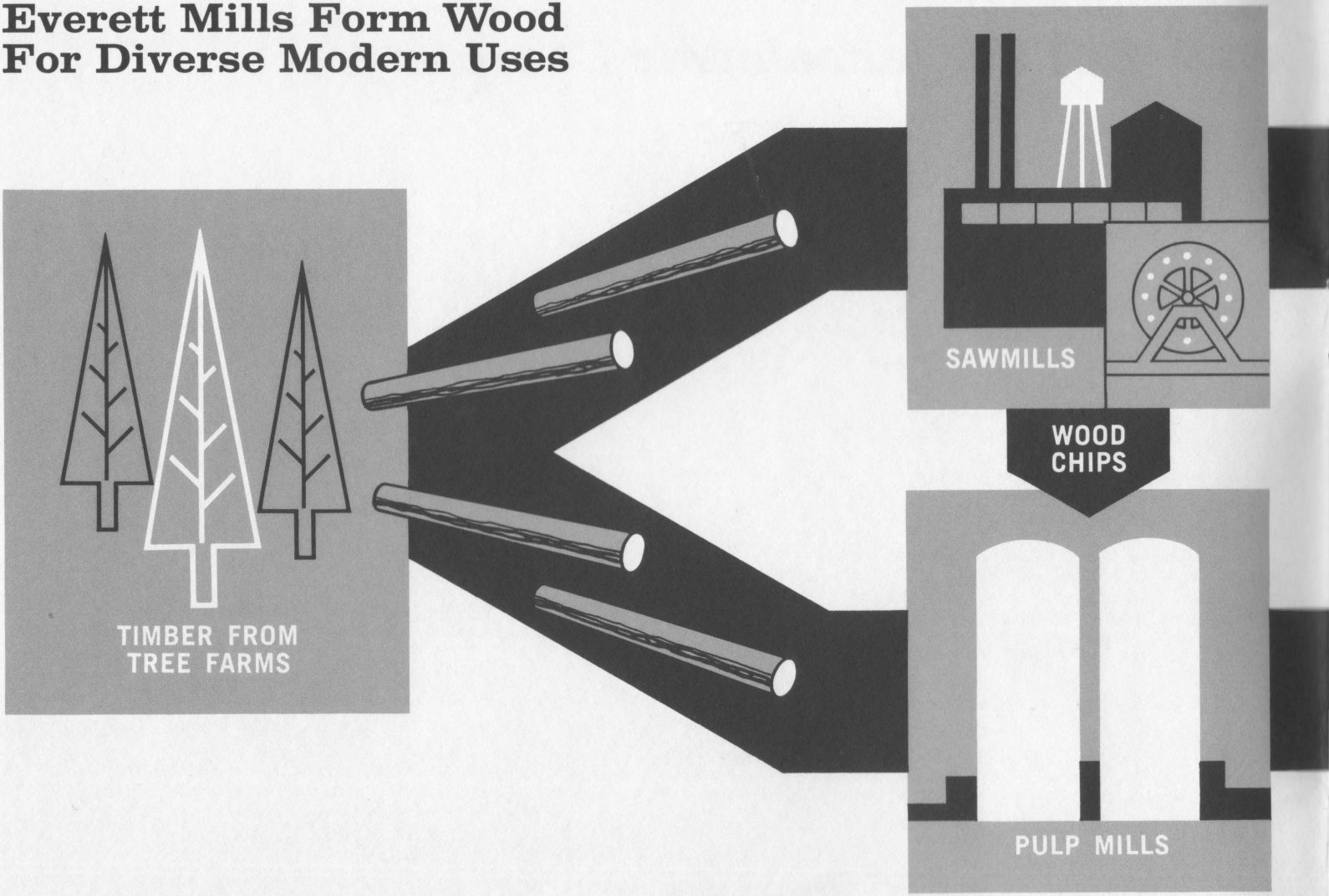
Pres-to-logs

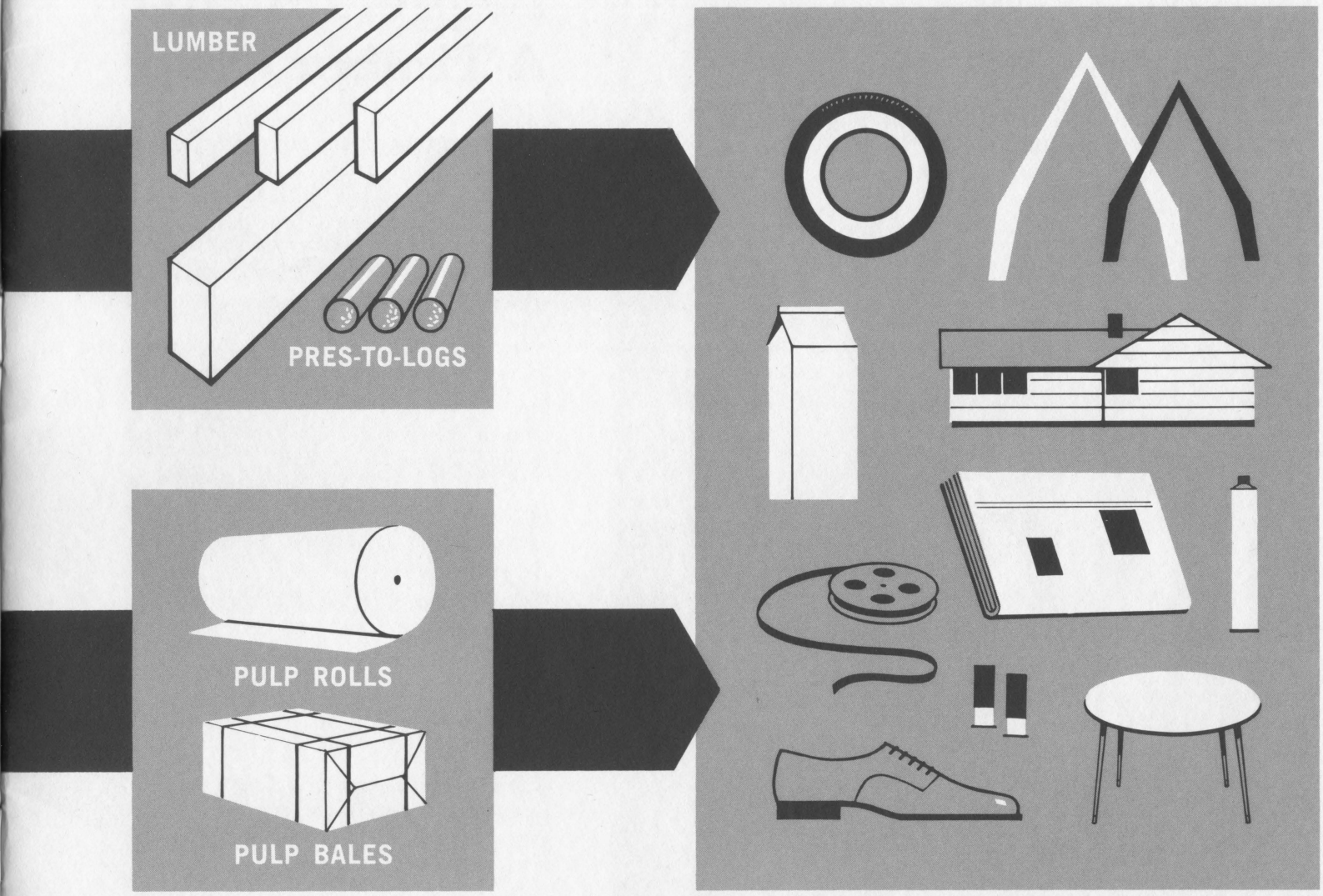
Vail Tree Farm

McDonald Tree Farm

Skykomish Tree Farm

Everett Mills Form Wood For Diverse Modern Uses




LUMBER
PRES-TO-LOGS
PULP ROLLS
PULP BALES

Loggers Reap A Timber Crop

Forest management starts with the harvest of mature trees. A wealth of old growth timber on the Vail, McDonald and Skykomish tree farms provides logs for the Everett mills. As these old growth forests are logged new forests take root, either by natural seeding or with man's helping hand.

The Vail and McDonald tree farms are located in the Centralia-Chehalis area of Western Washington. The Skykomish Tree Farm lies just east of Everett in the Cascade Mountains.

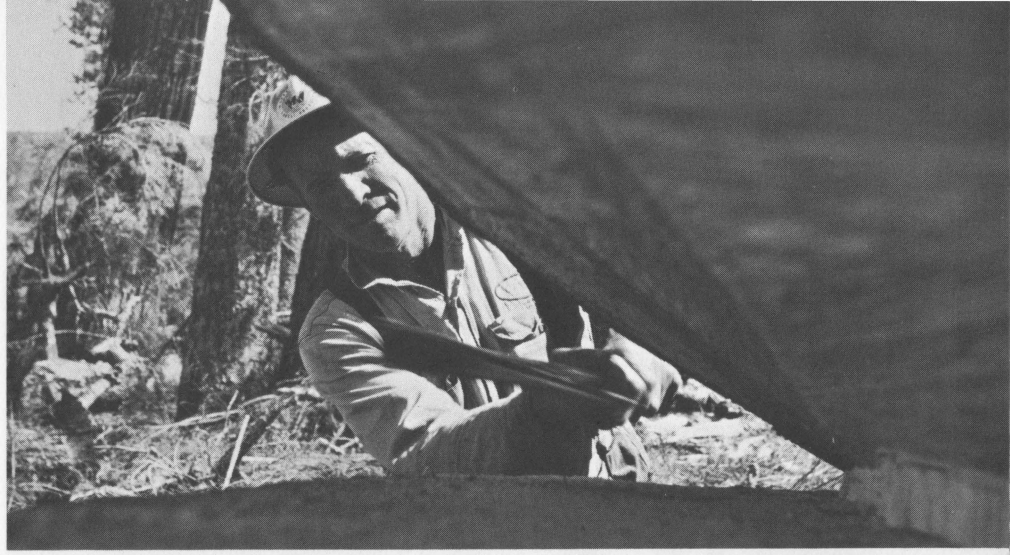
Teams of skilled loggers enter the tree farms on a network of roads built by Weyerhaeuser Company. These private roads also provide access for fire and insect control. Company foresters and fire

A forest giant on the Vail Tree Farm crashes earthward, on its way to the Weyerhaeuser lumber operation at Everett

wardens work closely with state and federal agencies to prevent and suppress forest fires. Research scientists wage constant war against the insects and diseases that are today's worst enemies of the forests.

Two very different methods of tree harvesting are in use today. One is selective cutting of only a few trees in an area. The other method is cutting every tree in a block. Both methods give the same result: the growth of a new crop as quickly as possible. Which method is used depends upon the tree species.

The most plentiful and widely-used tree in the Western forest is the Douglas fir. This tree grows in thick, dense stands where all the trees are about the same age.



A skilled logger finishes the undercut which determines the direction the tree will fall. Bucker cuts logs to length.

Forest Harvest is Taken to Everett

All Douglas firs in a block are harvested at the same time since block cutting accomplishes two things: it recovers all usable logs and provides a good seed bed for the new crop. New Douglas firs need an abundance of sunlight in order to grow. They will not grow in the shade of other trees.

Logging technology has provided modern machinery to supplant the era of the horse and the "misery whip" (hand crosscut saw). Chainsaws, cats and metal spar trees make today's logger more productive and certainly less weary at the end of the day's work.

At harvest time trees from the Vail and McDonald areas are first felled, de-limbed and bucked into suitable lengths. They

In many areas portable steel spar trees support the cables by which logs are dragged in from forest hillsides for loading.

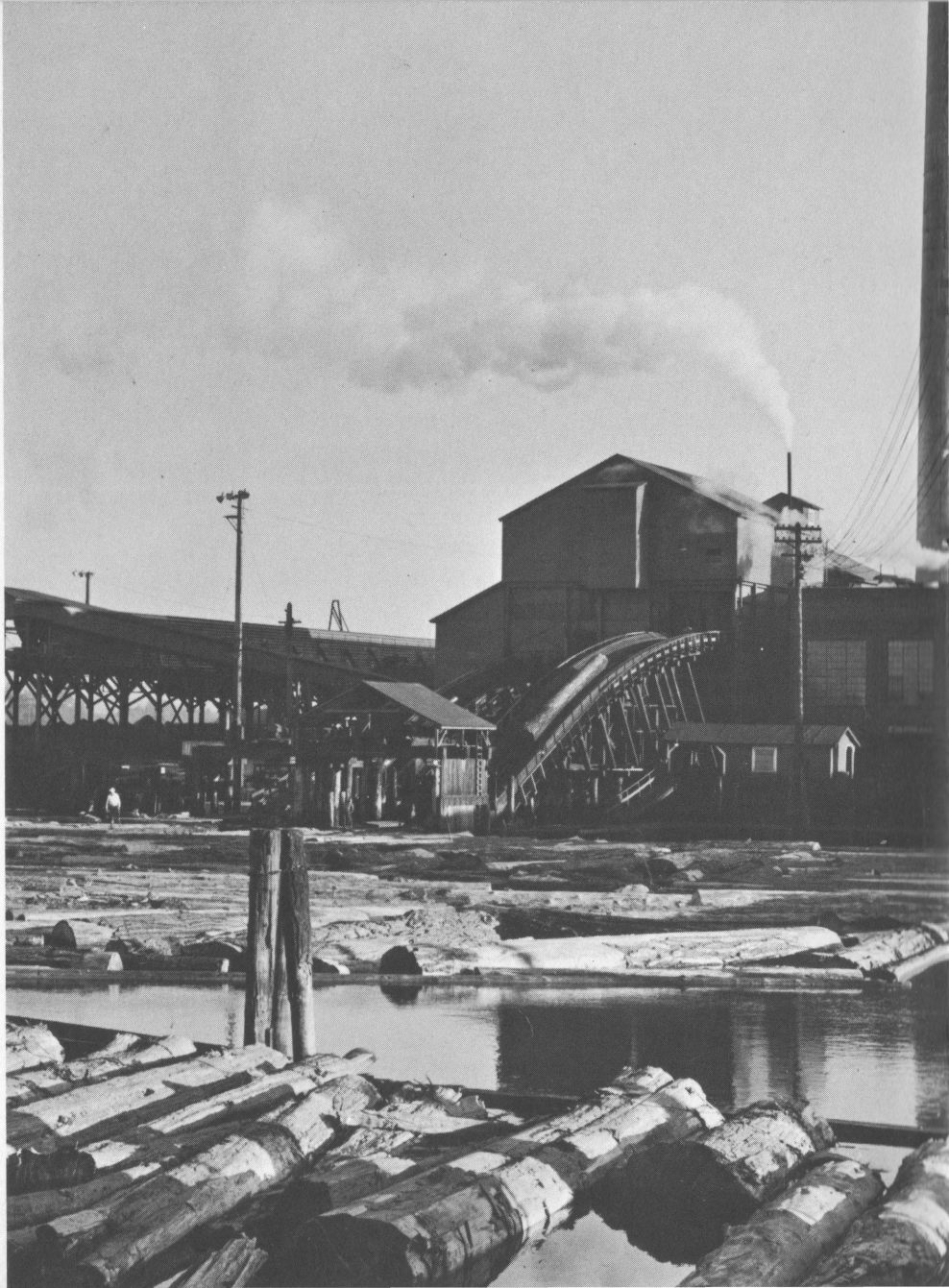
are then taken to a loading area where they are hoisted onto huge logging trucks. These trucks transfer their load to railcars which then transport the logs to South Bay near Olympia. The logs are then rafted and towed by tug almost 100 miles up Puget Sound to the Everett mills. Most of the logs go to the sawmill. Other logs unsuitable for lumber are made directly into chips for the pulp mills.

Huge logs are loaded on company trucks for trip from the woods. To finish the journey tugs tow them to Everett.

Lumber Mills Process Logs

Modern lumber mills are able to utilize just about every part of a tree except the wind blowing through the branches. No sawdust burners are seen at the Everett mill today since the entire log is used for lumber, Pres-to-logs, or pulp chips. Wood not suitable for these uses is mixed with bark and provides fuel to power the plant's steam boilers.

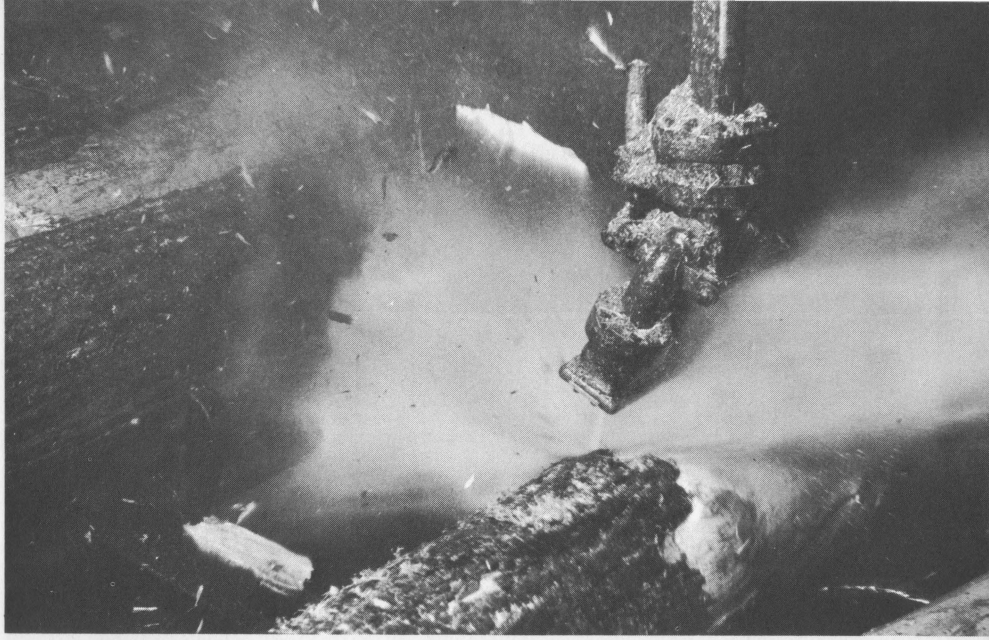
Lumber is produced here in sizes ranging from common lath to construction timbers 40 feet long and more than 2 feet square. Lumber in various grades and patterns becomes engineered construction framing, interior finishes, decorative paneling, siding, doweling, molding and other items. Production averages over one million board feet per day—enough to build 100 average-sized homes.

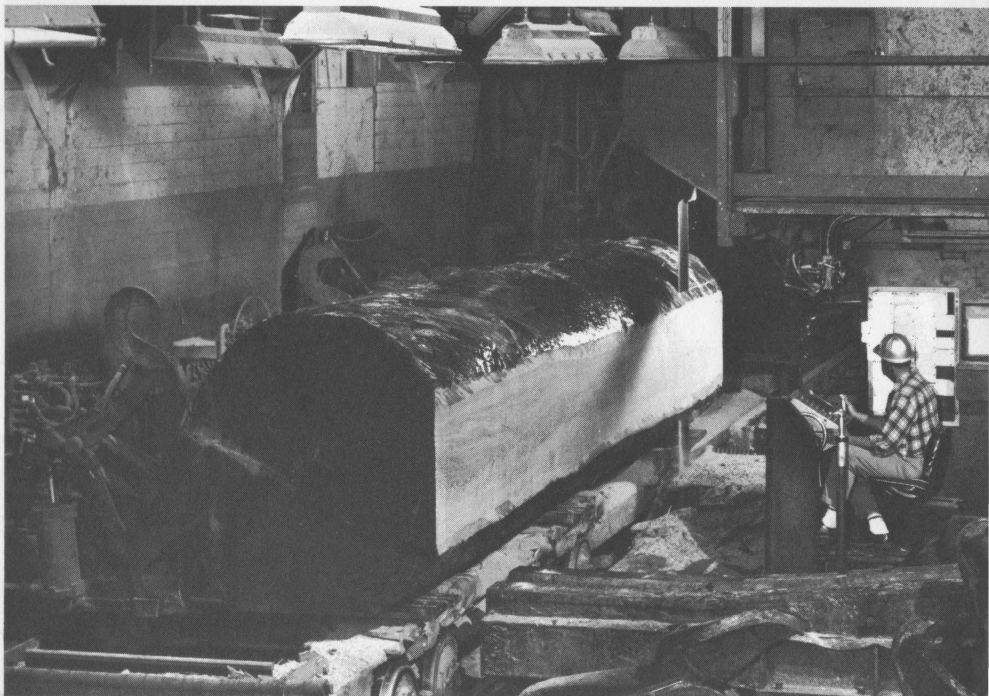


At Mill B in Everett logs are guided from the pond onto the bull chain, and up into the mill for hydraulic bark removal.

Everett's Mill B was the first all-electric sawmill in the West, and at the time of its completion in 1915, was the largest sawmill in the world. Continual improvements and the installation of new equipment have kept it operating at top efficiency cutting Douglas fir, hemlock, and cedar. The Everett lumber operation is still one of the world's most efficient forest products plants.

Logs for the mill arrive by water from Vail and McDonald tree farms and by truck from Skykomish Tree Farm. They move from our log pond up the bull chain into the barker. Here bark is blasted from the logs by a stream of water under pressure of 1500 pounds per square inch. The bark is later used for fuel in the plant's steam boilers.





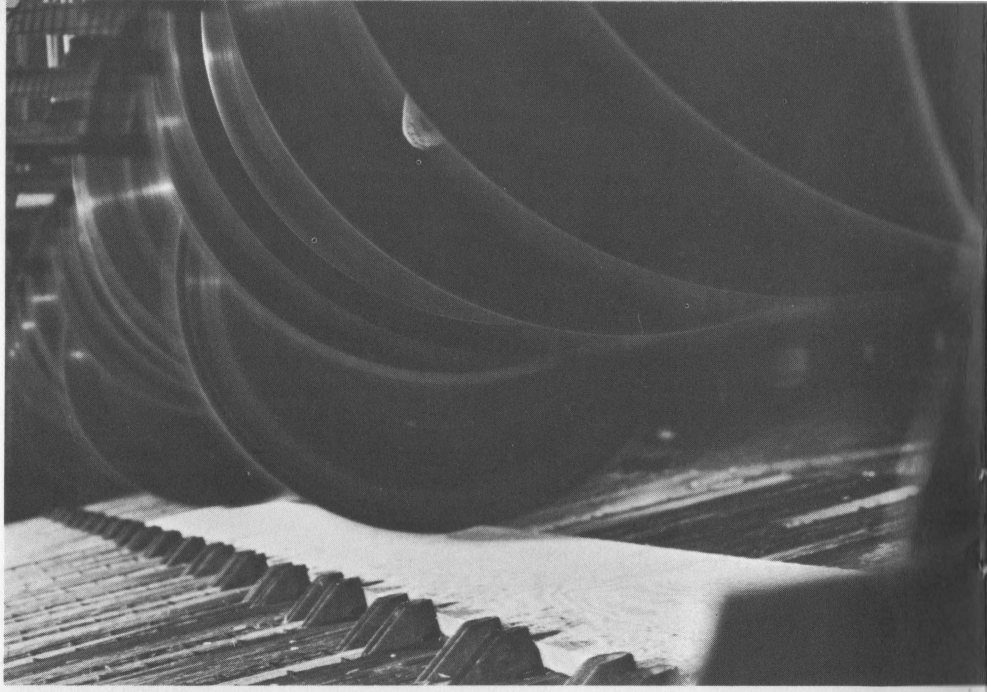
Bark is blasted off by jets of water at 1500 pounds pressure. First log cut is made by head saw rotating 120 miles per hour.

Saws and Planers Shape the Lumber

First step in the manufacturing process takes place at the head saw – a 62-foot band of steel turning at 120 miles per hour. Here the log is cut into large pieces called "cants" which pass on through a series of round saws, band saws and gang saws, and finally emerge from the mill as lumber.

Thirteen Pres-to-log machines operate 24 hours a day to produce the popular clean-burning fuel. More than ten million Pres-to-logs are produced each year for nationwide markets.

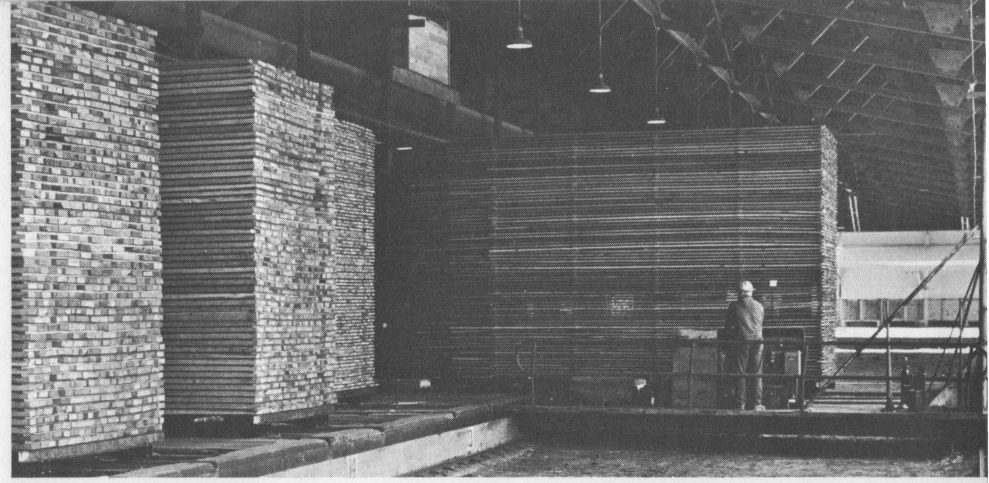
Lumber was the great versatile material that helped build colonial America, made possible midwest farm shelters and supported the westward expansion. Today wood continues to provide material for

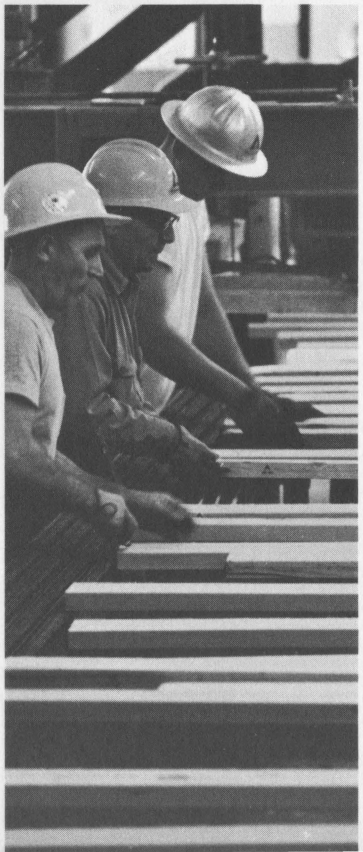


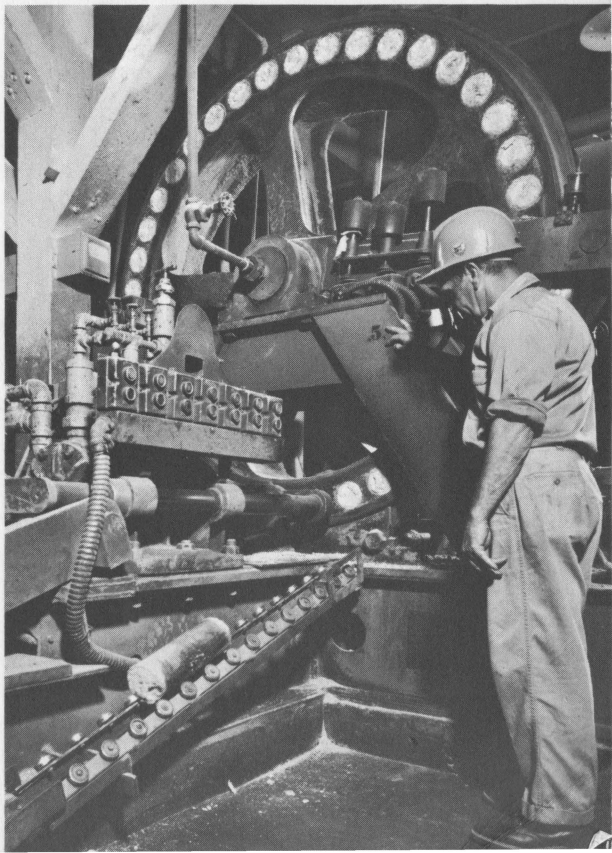
One or more of 22 round saws can be lowered selectively to trim lumber to best lengths indicated. The gangsaw cuts as many as 200 pieces at once.

our homes and dozens of commercial, farm and industrial applications.

The usefulness of lumber increases as changing needs demand. To meet these needs, Weyerhaeuser research laboratories continually seek new ways to utilize one of the most useful and beautiful of our natural resources – wood from the Western forests.



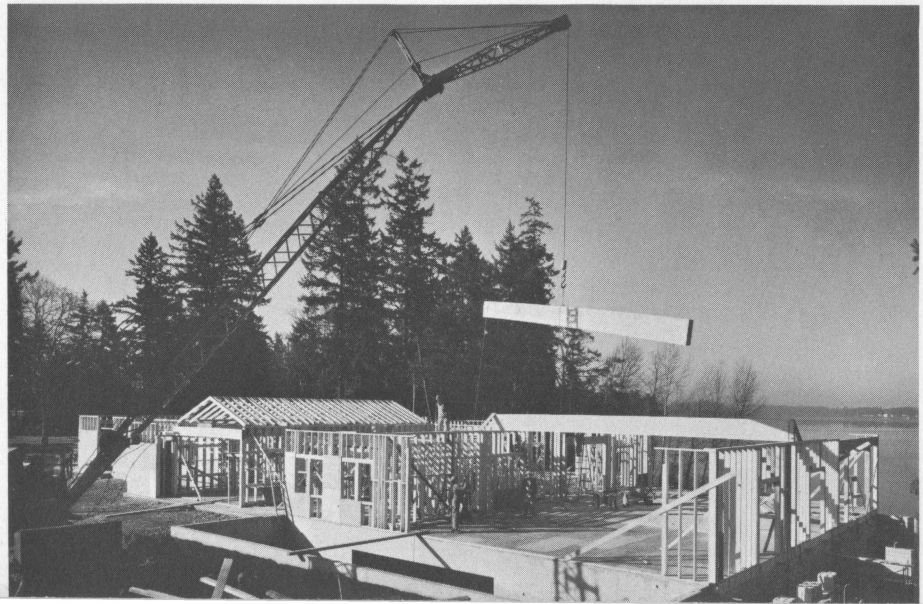




Rough lumber comes in stacks from kilns. Stack spacers permit air to circulate during drying process. Lumber is then planed on all four sides in one operation and graded. Pres-to-logs are formed from shavings.

Wood Helps Build Our Modern World

Endurance and warm beauty make wood a favorite building material; uses include cedar siding and fir sash for homes; hemlock decking and panels for decorative ceilings and walls; beams and framing for homes, industry, institutions.

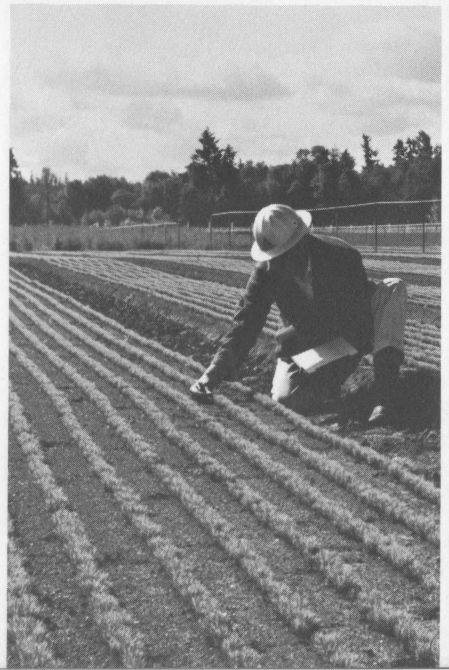


Planting Assures Tomorrow's Trees

Sustained yield forest management is practiced on the tree farms of the Everett branch. Each year when a crop is harvested from part of our land, provision is made to reforest that area. By cutting only as much as we're growing, we will have a crop of trees ready for harvest each year forever.

Much reseeding is done by nature when planned blocks of trees are left standing where the wind will blow their seed into cut-over land. However, many areas require help in the form of helicopters spreading seed, or the planting of small trees by hand.

Through sustained yield we will provide a continuing flow of logs to support our operations, assure a continuing payroll in our branch communities and renew our resources for America's growing population.



Seeds for tomorrow's trees are usually spread by helicopter. In hard-to-seed areas seedlings from company nurseries are sometimes hand planted.

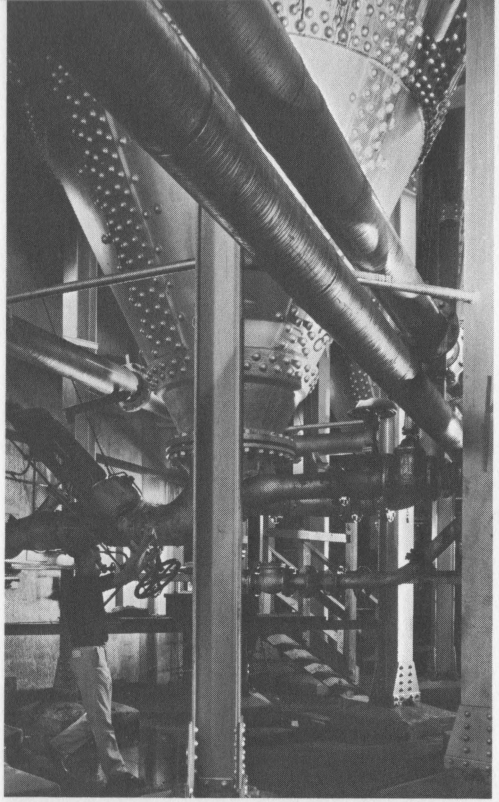
Pulp Also Flows From the Forest

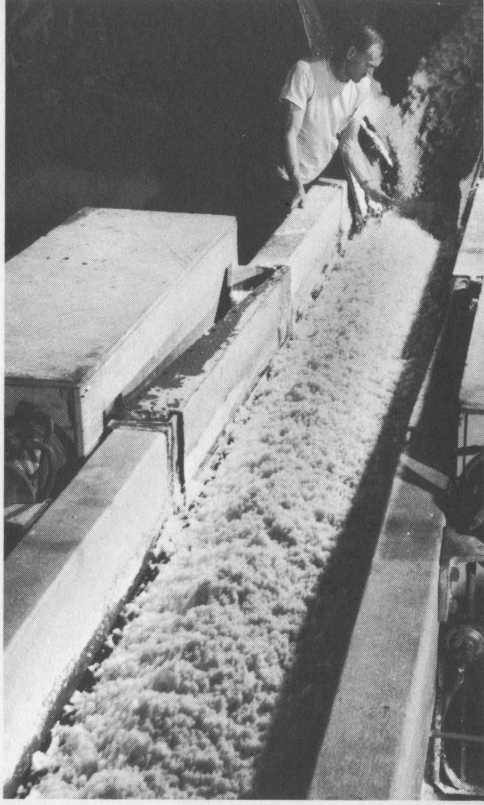
Pulping is a process which first removes the chemical bond which holds wood fibers together. By thus freeing these fibers, we are able to use them in many ways in the manufacture of products essential to our everyday way of life.

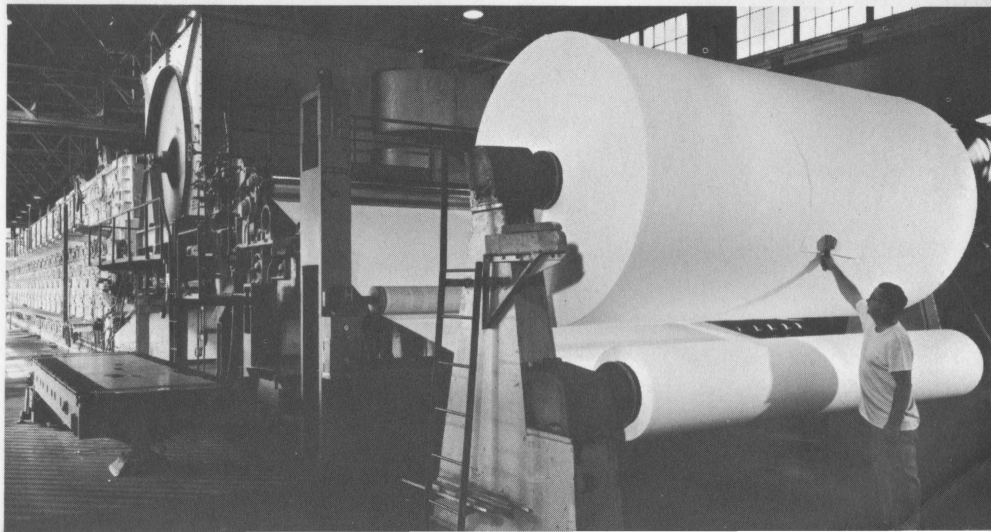
Our two Everett pulp mills make use of wood left over from the lumber manufacturing process and wood from logs not suitable for lumber. Wood chips slightly smaller than a book of matches each contain more than a million cellulose fibers which can be transformed by chemistry and engineering into an amazing variety of products.

Everett-made pulp is shipped to other Weyerhaeuser plants and to outside customers around the world.

Mountains of wood chips are the raw material for an amazing variety of products which are based on Everett-made pulp.







Pulping begins when wood chips are cooked under pressure in the huge digestor, a pressure vessel seven stories high. Later wet pulp passes through several bleaching stages. With water removed pulp comes from the drier in an endless bright sheet, ready for shipment to our customers.

Two Mills Produce Useful Pulp Fiber

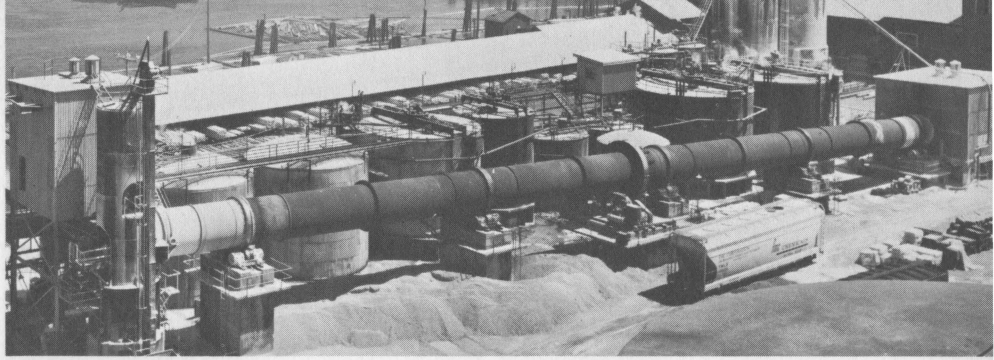
About half the weight of a piece of wood is cellulose fiber, 30 per cent is lignin, and the remaining 20 per cent is made up of sugars, resins, and small amounts of other materials. To make pulp the lignin is dissolved and the other impurities are removed.

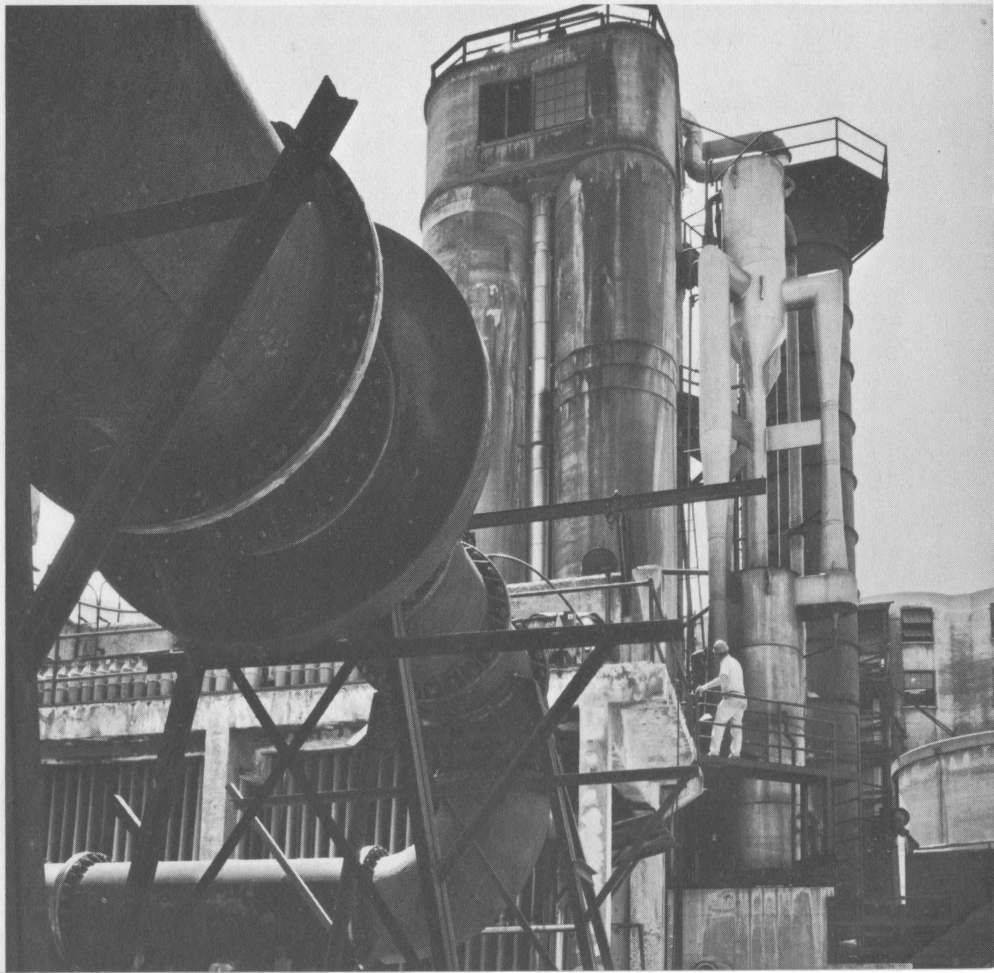
The two Everett pulp mills utilize different chemical processes: sulphite and kraft (sulphate). Sulphite pulp is produced by cooking wood chips in an acid solution, sulfurous acid and calcium bisulfite. After cooking 7 hours under pressure the lignin dissolves and the pulpy fibers are freed. The fibers are then washed, screened to remove dirt, bleached, washed again and rescreened. Kraft pulp-making differs in these respects: it is cooked in

Finished pulp looks like heavy white paper. It is shipped in either rolls or bales to a variety of markets around the world.

sodium sulphide and caustic soda, and the cooking takes only three to four hours.

After cooking, screening, and bleaching, both kinds of pulp go to the fourdrinier machine where an endless pulp sheet is formed on a moving wire screen. The pulp sheet passes between press rolls and through a vacuum drier where the remaining water is removed. Finished pulp is either formed into a roll or cut into sheets and wrapped for shipping.





A 275 foot lime kiln (top) plays a part in the recovery of alkaline chemicals used in the kraft pulping process. At the Sulphite mill, the acid plant (below) is essential in making the cooking liquor.

Pulp Appears In Many Forms

Hundreds of familiar and some not so familiar items contain pulp products. These products range from capacitor paper in satellites circling the earth to rayon in drapes or in tires on the family car.

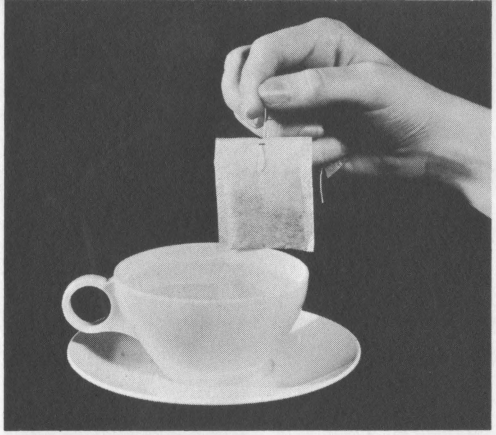
Pulp in a chemically changed form is in shaving creams, tooth pastes, face creams and even ice cream.

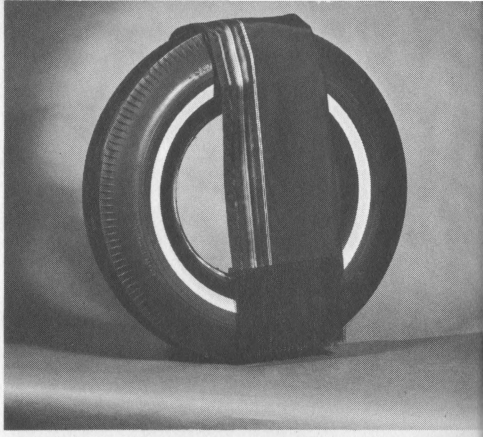
Sandwiches of resin-impregnated sheets of paper are formed under pressure into durable table and counter tops.

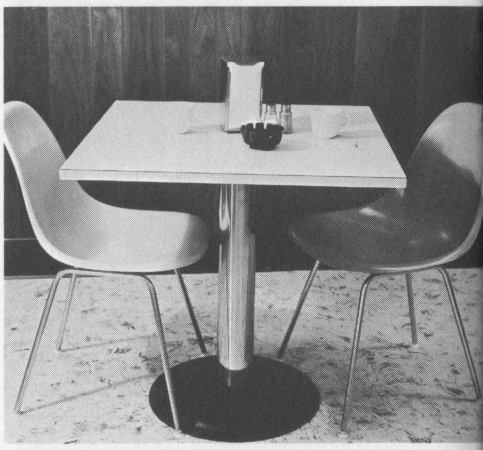
Pulp goes into cellulose sponges, insoles of shoes, bindings for note books, brief cases and luggage.

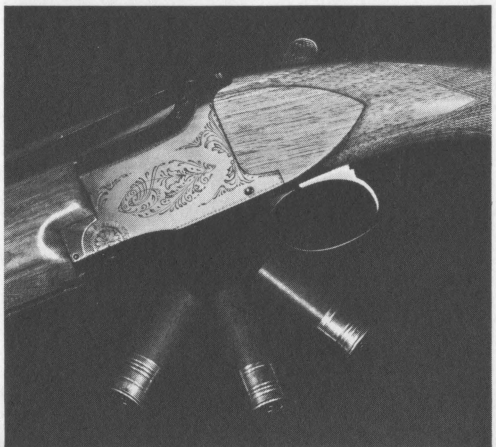
Filters of many kinds use pulp or paper products. Fruit juices and automobile oil are strained through pulp filters.

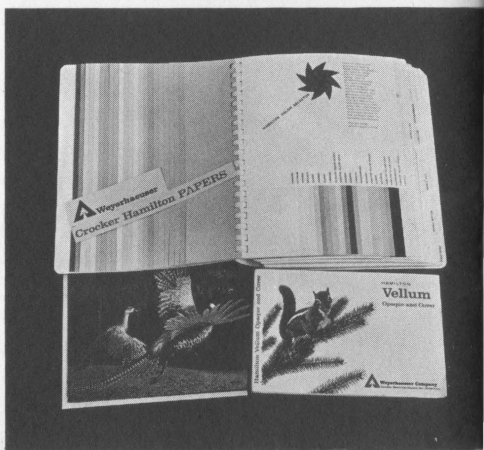
It's a versatile material – seen almost everywhere you look.









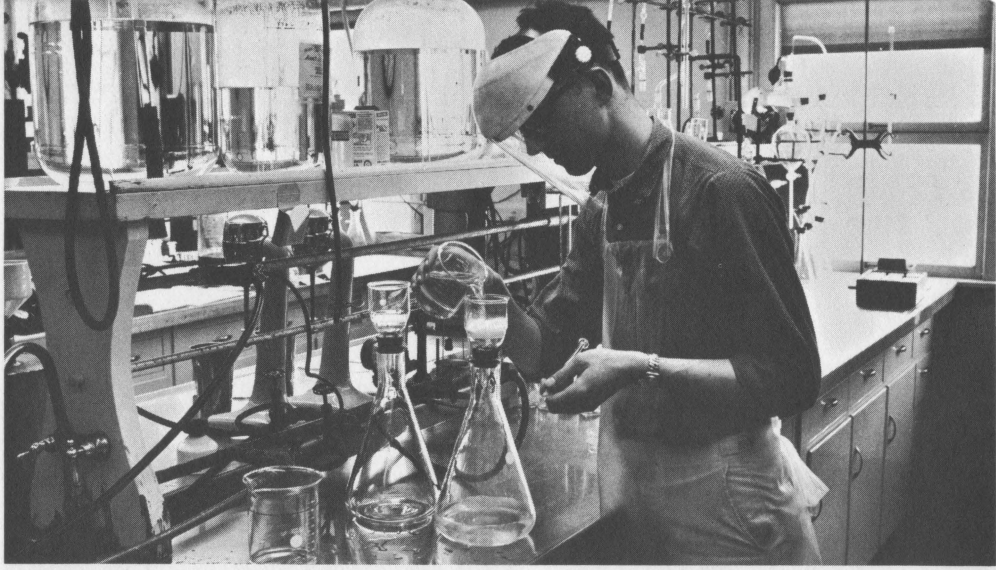


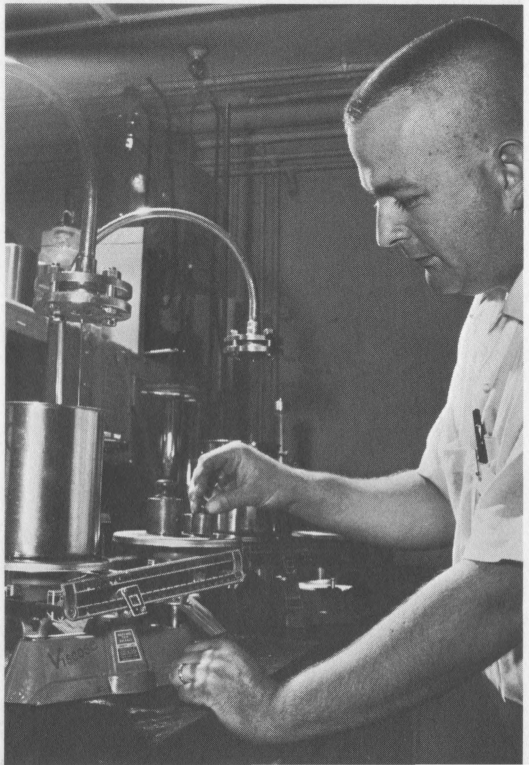
Pulp in various forms is used in countless paper products, melamine dinnerware, teabags, rayon, cellophane, table tops, and shotgun shells.

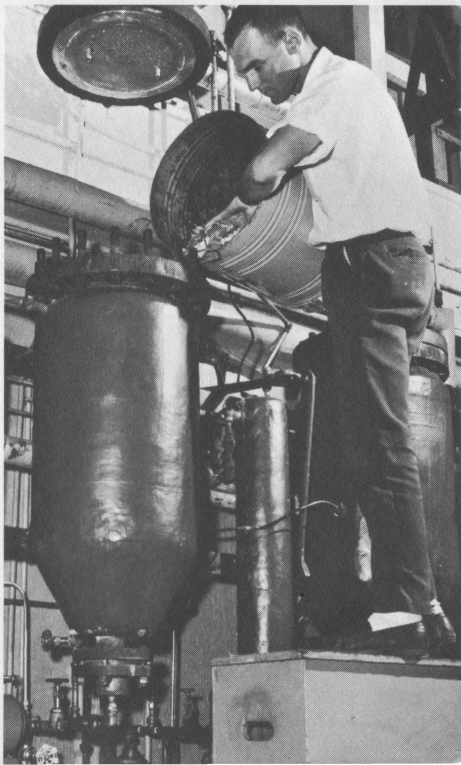
Pulp Research Seeks a Better Way

Continuing scientific research supports every pound of pulp made at Everett. Weyerhaeuser Company maintains pulp research facilities in several locations. In Everett a research group of scientists and technicians concentrates on bleaching processes, the development of pulp for plastic combinations, cellophane, cellulose acetate and other specialty pulp products and pulp analytical work.

These researchers seek to develop new and better pulp products and processes, as well as to assure the quality of present products.







Top, a chemical analysis on pulp; right, a performance test on pulp for cellophane; far right, an experimental pulp digestor used in the laboratory to develop improvements in pulp processes and grades.

Responsibility Accompanies Use Of Air and Water

As population increases and man's need for manufactured goods increases correspondingly, we face a mounting challenge of assuring clean air and water.

In protecting our natural heritage Weyerhaeuser Company has been a leader in conservation efforts and air and water protection. Millions of dollars have been spent in research and resource protection equipment at Weyerhaeuser plant locations.

Water protection is a prime concern of the Everett Branch since our Kraft mill rests on the bank of the Snohomish river and our Sulphite mill on Puget Sound. In cooperation with government regulatory agencies we have developed extensive controls to safeguard these waters.

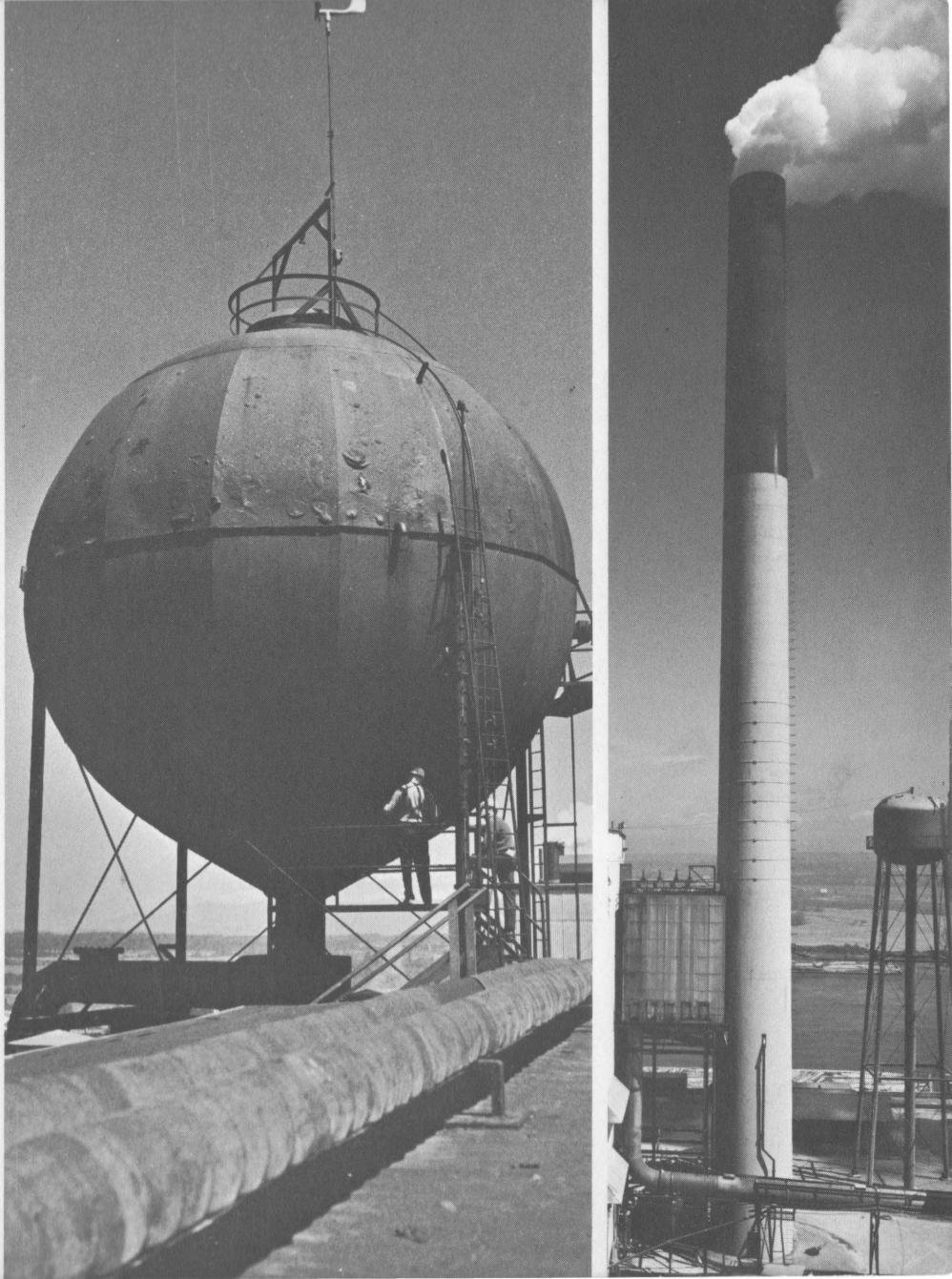
Sparkling water and magnificent mountains constitute a priceless natural heritage of our scenic Pacific Northwest.

At Everett a continuing effort is made to eliminate pulp mill odor and flyash from the atmosphere. In a kraft pulp mill, one of the major sources of odor is the digestor, where gases are generated during the cooking process. To effect control these gases are caught and oxidized in a chlorine solution to form a non-odorous, water-soluble material.

Additional odor control is achieved by oxidation towers which prevent the formation of odorous hydrogen sulphide from digestor residue. Oxidation control on the recovery furnace further reduces traces of odor.

Our outdoors is an important part of life in the Pacific Northwest. We are necessarily interested in protecting this heritage by every reasonable means possible.

Vaporsphere traps gases for deodorizing operation. Rectangular structure on stack is recovery scrubber which removes flyash from stack output.



Mother bear and cubs on a Weyerhaeuser tree farm.

On the front cover: Everett Mill B, left foregound; Kraft pulp mill, right foreground; Sulphite pulp mill, top.

Paper stock is Weyerhaeuser Company's Hamilton Starwhite 80.