"How we used to work side by side! And how I've worked since then trying to create according to our plan that we'd bring, against all odds, our full power to every subject."

—*Adrienne Rich*, The Dream of a Common Language

Life Support

Have you ever seen those "sampler" packages of Oregon specialties at gift shops and "Made in Oregon" stores? They'll have some filberts, some blackberry wine, a piece of myrtlewood, a can of salmon, or who knows what other local delectable delights. There's no pretense of being all-inclusive; no volcanic ash, Mayor Ivancie, coastal fog, roses, umbrellas, slugs, or countless other essentials that define our territory. No, there's just enough goodies to tip your tongue off (and perhaps your eyes and nose) that this is a special place, and maybe induce you to come back for more.

In the same way, the journey of words and pictures you are about to embark upon makes no attempt to be comprehensive. It is, instead, an anthology—or "sampler," if you will—designed to give you a glimpse into how we might apply the notion of a bioregion and the idea of community self-reliance in viewing some of the systems that comprise our everyday life support. The common theme running through this section is our awareness of our land and our resources, and how we can best plan for their future use so as to preserve and enhance our economic and ecologic base.

Anyone who has traveled far or lived elsewhere knows that Nature has made our region beautiful and our people fortunate. It is the challenge of our time to make our decisions wisely, to appreciate sustainability as well as expediency, and to ensure a beautiful region and a healthy future for ourselves and our children's children.

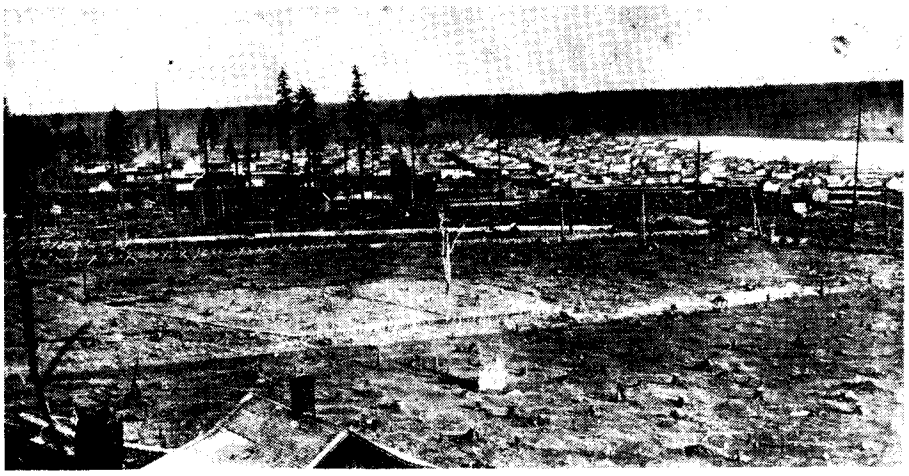
Ancil Nance

A PORTLAND VISION . . .

Specifically, some of the issues in planning will be: Transportation and the densities needed to support it; Housing, its cost and availability; Alternative Energy, its impact on traditional zoning and building codes; Neighborhood Commercial areas, their revitalization; the Comprehensive Plan, its enforcement and flexibility. None of these issues will excite crowds of people to descend on City Hall. Solutions to each of these concerns will require determination and persistence and compromise because they all directly affect the course of daily life.

—Joan H. Smith, 1981 President, Portland City Planning Commission

Energy



Oregon Historical Society

Portland, ca. 1857

Wood provided 80-90 percent of the energy used in the United States in the 1850s. In Portland at that time, virtually *all* the energy used was provided by wood. Burning its way through the local wood supply, Portland quickly earned the nickname "stumptown." Photos from that period unglamorously portray white-painted stumps in a wood smoke haze.

Energy conservation in the uninsulated, drafty woodframe houses consisted of shutting up rooms and closing down the house at night with shutters. Even the wood stoves of the day were not very energy efficient. It is estimated that the amount of wood required to heat one house then could heat six houses today.

In the early days wood stoves were imported from the east coast and brought to Portland by ship, but by the 1870s local manufacturers were using metal produced at the Oregon Iron and Steel Company to build stoves here. As one early advertisement noted, "By purchasing a Dexter Stove, it keeps the money in this state, and the prices are no higher than from eastern shores. It is made from iron from the Oswego mines."

Although wood provided most of the home heating energy for the pioneers and some industrial applications in early Oregon, there were other sources of energy coming into use at the same time. Over half of the horsepower-hours of energy produced in the U.S. in 1850 actually did come from horses (another one-eighth came from humans). Two-thirds of all mechanical work was done by windmills and falling water. Water-powered wood mills cut the boards for Oregon's earliest frame houses. The first steam-driven mill, with a circular saw, was built in Portland in 1850.

Refrigeration in early Portland was accomplished with ice. Two artificial ice factories and one company dealing with natural ice brought here from the mountains of Idaho were Portland's suppliers.

Gas lighting was introduced to Portland about 1859 with the formation of the Portland Gas & Coke Company. On January 10, 1859 the Territorial Legislature granted a franchise for the construction of a gas plant, making Portland Gas & Coke a de facto public utility. This legislative action, one month before Oregon became a state, has since been investigated (in 1907) but never challenged in court.

In 1882 the East Portland Gas Light Company was formed to provide service to the growing east side area of Portland. In 1892 the two companies merged to form the Portland Gas Company. About this time electricity was replacing gas as a lighting source so the company successfully switched to marketing gas for cooking and water heating, and eventually house heating. Following the Lewis and Clark Exposition in 1905, Portland's population and demand for gas increased and the gas plant was converted from water gas operation (gas made from coal) to oil gas. With demands for gas overtaking capacity and a sorely felt need for development finance capital, the company recapitalized with the aid of American Power and Light Company—a subsidiary of the Electric Bond and Share Company of New York, organized in 1905 to assume control of General Electric's weaker utilities—to eventually become the Northwest Natural Gas Company.

Completion of the Northern Pacific transcontinental railway in 1883 changed Portland's energy picture dramatically. Portland observed that event as the "Villard Celebration," in honor of Henry Villard, founder of the Northern Pacific and a mover and shaker in national electric utility corporate expansion.

Only when the extensive cutting of the forests raised the price of wood did the demand for coal begin in the East. Coal consumption tripled in the U.S. between 1850 and 1861, and by 1885 it surpassed wood as the dominant fuel. Portland's use of coal lagged behind the rest of the nation's. Customs records reveal that in 1861 about 1,386 tons of bituminous coal were imported, mostly from Australia. Some Portland coal also came from such nearby locations as Coos Bay, Oregon, and Bellingham, Washington.

The last half of the 19th century was a period of national experimentation for the emerging coal and oil industries. By-products such as kerosene, heating oil, and gasoline were the name of the game.

The Pacific Coast Steamship Company's steamship, "State of California," arrived in the port of Portland on its maiden voyage in the summer of 1879. The history of electricity in Portland dates from that arrival. As the event was reported by the *Oregonian* of May 25, 1879:

> *Wednesday evening the steamship State of California was illuminated by the famous electric light, of which so much has been written. The novelty of the light attracted a large crowd of our citizens, and during the evening probably 500 persons visited the vessel . . . The light is pure white and gives day colors to all objects viewed by it. It is not so clear as daylight, but the "counterfeit" is almost perfect. The light is far more brilliant than that produced by gas, but yet not painful to the eyes when steadily bent on it. The lights are furnished by a small engine. The electric light is as much superior to gas as gas is superior to coal oil.*

During the 1880s and 1890s the various actors in the early electric utility development movement merged interests, a pattern occurring elsewhere in the country. In March 1884, P.F. Morey and George W. Weidler jointly organized the United States Electric Lighting

and Power Company, the first corporate predecessor of the present Portland General Electric Company (PGE). PGE received its major outside financing from Old Colony Trust of Boston and the General Electric Company, also of Boston. Between 1892 and 1906 PGE expanded its operations by acquiring other local power companies and in the latter year took its largest corporate leap, forming the Railway Light and Power Company to provide electricity for Portland's street railway mass transit system.

In the early 20th century Portland had a diversified and rather experimental energy system. Electric streetcars were carrying 70 million fares a year by 1919. Electric utilities, mostly financed by out-of-state corporations, were expanding rapidly. The automobile, with its total dependence on outside energy sources, was well on its way to replacing the electric streetcars—terminating what had been called the best urban railway system in the country. Heating oil, later to become a major source of home heat in Oregon, was first delivered in Portland during this period. Coal was imported into the area for industrial applications and occasional home heating use. Pacific Power and Light for years operated an electric generating plant (south of the Hawthorne Bridge) that used sawdust.

With World War I, Portland suffered its first energy crisis. The Great War had a big effect on the local economy. Oil and coal were needed for the war effort and so, no longer energy self-reliant, Portland felt the squeeze without its imported energy supplies.

Energy resource development and consumption altered dramatically in the 1920s and '30s, not only in Portland but throughout the Northwest. Energy production in the United States became dominated by a few very large corporations. By 1932, over 90 percent of the electricity generated in the United States was sold for private profit; 75 percent of the private power output was controlled by 16 giant holding companies. Portland's electric and gas utilities were integral parts of the interstate holding company networks.

Electricity was primarily benefitting urban residents. In 1932 only one rural house in 10 had electricity, compared to over 70 percent of urban and suburban homes.

The Bonneville Power Administration (BPA), chartered in 1937, was established largely as a broker for the energy produced through massive federal dams on the Columbia. The BPA was specifically forbidden to operate or invest in generating facilities of its own. The Roosevelt Administration had become actively involved in the push for public power in the Northwest, aiding in the takeover of private utilities and the formation of locally controlled public utility districts (PUDs).

World War II once again changed the energy face of the Pacific Northwest. The region's strategic position on the Pacific Rim, combined with an enormous surplus of cheap hydroelectricity, made the Northwest an excellent location for many of the Nation's industries—particularly aluminum. Increasing population growth coupled with electrical dependence (one of the largest in the world) caused demand for energy to double over 10 years, leading to projections that the region's hydropower capacity would peak by the mid-1970s. Shortages were anticipated as early as 10 years later.

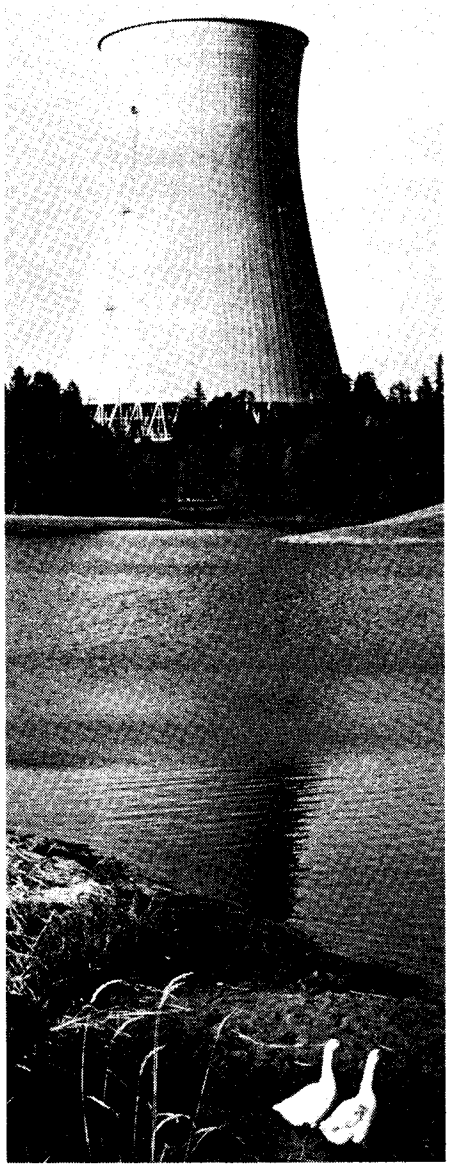
In 1957, 21 Washington public utilities formed the Washington Public Power Supply System (WPPSS), pooling their resources to meet immediate energy demand. Coal and nuclear, they predicted, were the energy of the future.

By 1970, the region's utilities had unveiled the Hydro Thermal Power Program (HTPP) as a strategic response to regional growth. The program called for the construction of one new major coal or nuclear plant almost every year, for a total of 26 by the year 2000. Forecasts estimated this new construction would triple the region's power supply. Three coal and five nuclear plants began the first phase of HTPP in the early '70s, but the program's optimistic projections were short-lived. Skyrocketing construction costs drained the financial resources of the utilities, drove up the cost of energy to the consumer, and delayed the construction of additional plants.

From 1962 to 1977 Oregon's population grew 31 percent; in the same period our total energy consumption increased about 80 percent. When the gasoline and fuel crisis hit with the Arab oil embargo in 1973, it hurt.

The Northwest's previous struggle through a fuel crisis in 1917 was a minor matter in comparison with the gas crisis of 1973. An event thousands of miles away had a dizzying number of unexpected and incalculable consequences. The winter of 1973-74 was also a dry one, which reduced hydroelectric generating capacity. Prices went up everywhere and we learned, like children suddenly without allowances, about the real costs of energy and material consumption and waste.

In response to the energy crisis, then-Governor Tom McCall entered the scene, becoming the national energy folk hero as he actually tried to do something about it. In 1974 he formed the predecessor to the present Oregon Department of Energy (ODOE), often referred to as the Energetics Office. Also called the governor's "Think Tank," or the first state office of consciousness change, the office published several reports, such as "Cosmic Economics," before the office itself was transformed



Ancil Nance

into ODOE.

Energy held tremendous social organizing power. The growth in the 1970s of energy research and development projects, as well as public education and participation in energy policy, was unprecedented. Energy became a public obsession, moving into the forefront of social concern and daily conversation. Institutions and public interest groups, journals and computerized data bases by the tens, hundreds and thousands were created. Energy changed our way of perceiving ourselves.

In 1977 physicist Amory Lovins' now-classic essay, "Energy Strategy: The Road Not Taken?" appeared in *Foreign Affairs*. In it, Lovins sought to clarify the energy debate by describing what he saw as our two mutually exclusive choices for the future: a "hard" path emphasizing expanded use of centralized nuclear and fossil fuel-generated electricity or a "soft" path emphasizing conservation and rapid development of a variety of renewable energy sources "matched in scale and quality to end-use needs." Lovins argued persuasively for the soft path on social, political and economic grounds—and the discussion touched off in large part by his article led to a number of later energy studies, including Oregon's Alternate Energy Development Commission Report.

Governor Victor Atiyeh formed the Alternative Energy Development Commission in 1979. The Commission was comprised of task forces charged with developing comprehensive resource development strategies on each of six renewable energy sources: conservation/solar, wind, geothermal, alcohol fuels, biomass and hydropower. The Commission's final report, published in August 1980, summarizes the potential of renewable energy in Oregon:

The Department of Energy predicts non-transportation energy demand to grow by 3700 AvMW of electrical energy and 93 trillion BTU per year of thermal energy through 2000. Although estimates would seem to suggest that alternative energy sources could more than meet Oregon's requirements, the costs and constraints convince the Commission that no single renewable resource option could be expected to contribute a substantial share of projected demand. Collectively, however, the contributions from all these resources can meet a significant portion of future energy demand.

The city of Portland responded to the energy crisis by obtaining in 1975 a $225,000 grant from the U.S. Department of Housing and Urban Development to study the sources and uses of energy in Portland's residential, commercial, industrial, municipal and transportation sectors. The study presented methods of conservation which would result in a 34 percent energy savings, saving the city a potential one billion dollars per year by 1995.

Shortly after the study's completion, the City Council appointed 15 citizens to an energy policy steering committee to review the suggested conservation action and to develop a comprehensive energy policy for the city. The policy finally developed—and adopted as Ordinance 148251 on Mayor Neil Goldschmidt's last day in office—contains six major policy areas:

1. The city shall implement conservation actions directly within city government and encourage conservation actions by the private sector.

2. All building in the city shall be made as energy efficient as is economically possible as determined by the costs of conservation actions and the price of energy. The retrofit of existing buildings for energy conservation shall be accomplished through voluntary actions, with mandatory requirements imposed five years after the adoption of the policy.

3. The city shall develop land use policies which take advantage of density and location to reduce the need to travel, increase access to transit, and permit building configurations which increase the efficiency of space heating in residences.

4. The consumption of nonrenewable resources for residential and business use shall be reduced by encouraging the applications of renewable and alternative energy sources.

5. The consumption of nonrenewable fuels for transportation shall be reduced through actions which increase the efficiency of the transportation system within the city.

6. City bureaus shall reduce energy consumption by investing in energy conservation opportunities and changing operational procedures to the most energy and cost-efficient extent possible.

The passage in early 1981 of the Pacific Northwest Electric Power Planning and Conservation Act, otherwise known as the Regional Power Bill, may put us in an enviable position for the development of a more locally controlled economy. Substantial evidence exists that a strong effort to implement cost-effective conservation and small-scale renewable energy would be fully capable of meeting the region's future power needs. If we succeed in holding the federal government strictly accountable in implementing the conservation and renewable energy provisions of the Regional Power Bill, it is conceivable that the Pacific Northwest could become the first region in the country to make the commitment to a renewable energy future.

Although many of the early settlers in this region were self-reliant, many others, and many more who barely set foot on this land of ours, have invested in the resources of the area. The founding of Oregon's basic life support systems (energy, water, food) has been a game of monopoly. The state can be viewed as a colony, with invested interests bartering our resources in international marketing schemes. The result of this outside investment coupled with imported energy is a thin economic base, controlled by decisions made far from here.

The conclusions of the Oregon Alternative Energy Development Commission and Portland's energy policy steering committee move us a step closer to a locally controlled renewable energy base and a locally controlled economy. When the people affected by our energy and economic decisions are the ones who make those decisions, our degree of community self-reliance, and our ability to control our own lives, will vastly increase. —*Steve Johnson*

Food/Agriculture

The energy crisis of the early '70s made a substantial impression on the American psyche well beyond the shortage of oil. The entire issue flew in the face of the myth of plenty and the false security that had been a generation in the making. Americans suddenly saw the price of food soar while once-overflowing store shelves grew empty. But it wasn't

Ancil Nance

Housing development in the Tualatin Valley

the farmer who reaped the benefits of higher prices. Consumers learned that packaging, processing, transporting and retailing operations accounted for 94 percent of the rise in food prices.

For every dollar spent on food, half is spent moving that food around. United States agriculture is the most productive per worker in the world, yet it is the least cost effective in terms of energy spent for calories consumed.

Our ability to sustain current production levels is in question from an energy standpoint as well as an environmental one. It has been estimated that we have lost one-third of the topsoil from United States cropland in use today. An inch of topsoil takes between 300 and 2,000 years to be replaced. According to United States Department of Agriculture (USDA) figures, the state of Washington loses about 20 pounds of topsoil for each pound of wheat produced. Ground water depletion, acid rain and increased usage of synthetic fertilizers and pesticides have contributed to reduced soil productivity by destroying organic matter. Increasingly sophisticated technology, introduced to improve crop yields, has escalated the costs of farming while eliminating jobs.

Rising land values, limited loan availability, and the acceleration of capital requirements have created a trend: farmland concentrated into fewer and fewer hands. The USDA estimates that more than two-thirds of all United States farms have disappeared since 1920 while the average farm size has tripled. Twenty-five percent of American agriculture is controlled by conglomerates such as International Telephone and Telegraph (I.T.&T.) and Ralston Purina through vertical arrangements (contracting or direct ownership of production), declares *Agri-Finance* (Feb. 1981). Before leaving office with the Carter administration, former Secretary of Agriculture Bob Bergland released a report pronouncing many of the existing farm programs not only obsolete but also skewed to favor the larger operators. Tax breaks, federal loans and price support programs have all been used to expand the land holdings of industrial farms and encourage non-farm land investments, undermining the family farmer. Productivity gains and economic benefits have been used as justification for this type of agriculture, yet numerous studies, including several USDA reports (Feb. 1967, Jan. 1981, July 1981) find the smaller family farm (approximately 450 acres for a moderate-sized wheat/barley farm in the Pacific Northwest) to be a more efficient farm production unit, providing more jobs and greater support for the local economy, and more environmentally sound than its industrial counterpart.

Another agricultural trend is that of

Carlotta Collette

Streets of Plenty

In front of our house there's a big plum tree. With little attention from any of us it annually drops thousands of plums. Each year we put up a sign—FREE PLUMS—and our neighbors come and gather their fill. There are always more than enough to go around, and besides, there are two more trees like this one in the back. Nearly everyone in Portland knows a tree like ours, or a berry patch and a clump of peppermint. Their abundance is fairly predictable and they endure. They grow here, in our city. Their produce does not need to be trucked in (and harvested before it's ripened) from California or Mexico. In small ways they help to sustain us.

The coming land revolution we've barely begun to consider is the agriculture of densely settled areas. Tree crops, mini-orchards, and year round vegetable plots tended with intimate human care can transform our city and suburban streets and lawns into wonders we can barely imagine today. —Dave Deppen.

How do we accomplish this?

We could just plant more fruit trees and peppermint, making a simple gesture to produce a token crop. But with a more studied approach, the trees and shrubs and perennials could serve purposes other than just food production. There is the weather to consider, and the feel of things. Plantings can move the wind around and away from buildings, direct water into the ground, rather than over and off it, temper the sounds of the streets and filter the dust that rises.

There's more to all of this than just plunking a few trees down on the boulevard. There's got to be a design to it. The plants need to be looked at for all they can do, each one fit like a jazz musician into the band, each one giving a virtuoso performance of its own while "jamming" with the other elements.

This approach is a science that carries many labels, among them, *sustainable agriculture, edible landscaping*, and the newest title, *permaculture*. The idea is to get the right plants (often natives to the climate) working together in the right spot, to produce the most food, while restoring some of the balance visible in forests and at their edges. Healthy rich absorptive soil, harbored beneficial insects and birds, quiet, and a sense of permanence are all evident in such places. These stable systems are filled with diversity and every species is to some degree interacting with every other.

Here in the Pacific Northwest, Tilth, the regional association of organic growers, has compiled a book, *The Future Is Abundant* (see Resources), to guide us through designing such harmonious environments. They describe our region and those plants which hold the most promise for it. They teach us how to use trees, shrubs, and conventional crops integrated in ways that assure the continuity of the garden and the people who rely on it.

—*Carlotta Collette*

declining farmland, which is now reaching crisis proportions analogous to the energy situation 10 years ago. A 1981 report entitled the National Lands Study, undertaken by the USDA and the President's Council on Environmental Quality, found that the United States has been converting agricultural land to non-agricultural purposes at a rate of about three million acres per year, a third of which is *prime* agricultural land. Rapid population growth, economic instability and energy cost inflation have precipitated public concern that the United States might not be able to provide food, fiber and fuel for all its citizens. The key issue is more efficient use of the land for both productivity and permanence.

Many of the trends identified nationally have their counterparts here in Oregon: fewer farms, larger-sized farms, fewer jobs, and declining water supplies. At the same time our as-yet-plentiful natural resources, the relative youth of our cities, and the environmental awareness demonstrated by Oregonians and the state legislature makes our situation a bit more hopeful.

In 1975, 55 percent of the fresh produce sold in Oregon came from California—yet reduced water supplies, high erosion rates and urban sprawl make California's future food production capacity shaky at best. In the Bay area alone, a region which produces fully half as much as our entire state, 25 percent of the farmland has been lost to urban sprawl in the past 30 years.

While Oregon cannot grow many crops year round, it has been suggested that we could grow much more and a greater variety than we do at present. "I think the Northwest is capable of producing 80 percent of the food we need here in the Northwest," states Margaret McCrea, a Portland area food distributor and owner of Garden Variety Produce. "In fact, I think by the year 2000 we could be exporting some of our food to California." Margaret has begun to share her vision of a regional food system with interested Portland area farmers, but it is these same family farm operations that are feeling the pinch the tightest.

The Portland Tri-County area, containing 50 percent of the state's population, accounts for a majority of Oregon's small- to moderate-sized farms—especially those in the 70- to 90-acre range. In Multnomah County

the number of farmed acres dropped from 71,000 in 1954 to 43,000 in 1978. In Washington County the acreage has dropped from 200,000 in 1964 to 153,000 in 1978. And between 1959 and 1974 farmland declined by 144,157 acres in Clackamas County. As prime agricultural lands are taken out of production, marginal, desert-like lands in the eastern part of the state, requiring extensive irrigation, are pulled into production—largely for grain export.

According to the Oregon 2000 Commission, more than half of the harvested cropland in Oregon is irrigated, compared to 14 percent nationally—a figure that is expected to rise. A 1981 report by the Idaho Citizens Coalition, *Water, Energy and Land*, revealed the folly of this course by tracing the impact of expanded irrigation on water supplies, farmland and energy usage in the region. At present, virtually all the water in the Snake/Columbia river system is claimed for hydropower production. Water diversions for irrigation—as well as urbanization and other energy development projects—result in significant reductions of hydropower potential. As this cheap and renewable energy source is redirected, more expensive power supplies such as coal and nuclear fuel are drawn upon, translating into higher electricity rates.

Increased costs for electricity have compounded the problems of family farmers, as irrigation development requires enormous amounts of electricity to pump water onto the land and then often over long distances to the farm site. The "technology and large-scale farming to which [irrigation] is suited require capital investments on a scale available only to large corporate entities or wealthy individuals" (*Water, Energy and Land*). Unknowingly, Oregonians—through publicly owned water supplies and increased electrical rates—have subsidized industrial farming and the decline of family farms. Competing demands for a finite water supply make agriculture's dependence on energy-intensive irrigation self-defeating.

Historically the second largest industry after timber, accounting for 16 to 20 percent of Oregon's wealth, our agriculture has an impact far greater than the number of workers directly employed in farming. The Oregon State University Extension Service estimated the economic impact of agriculture to be three times the total amount of gross sales, $1.5 billion in 1979. Since 1963, land use regulations such as special assessments of farm lands, specific land use planning goals and zoning have been used to conserve agricultural lands.

In 1975 an Urban Growth Boundary (UGB) was established in an effort to contain urban sprawl and protect agricultural lands. The tradeoff is that agricultural lands within the UGB are subject to eventual development with increasing inner-city neighborhood density. The Land Conservation and Development Commission (LCDC) guidelines are an exemplary effort to deal with land use issues, and here, as in other areas, Oregon is seen as a national model. Yet the land use planning process has its limitations as well. As one agriculture extension agent puts it, "planners love to draw lines"—yet those lines don't always make as much sense in the field as they do on paper. Some high grade agricultural land will be lost to urbanization; other less productive land better suited to construction, outside the UGB, will be zoned exclusively for farming.

Land use zoning is a sensitive political issue. An increase in personal law suits may cause politicians to shy away from zoning before the method is given a chance to succeed. Even so, more than zoning is needed to protect Oregon's agriculture. "It's one thing to zone," says Lorna Stickle, a senior planner with the Multnomah County Planning and Development Division, "and another thing to have a healthy agricultural economy." A supportive infrastructure equals a secure land base in importance. Some methods for strengthening our agricultural economy include: 1) reductions in property taxes; 2) stricter standards for defining "farm use" (restricting speculation); 3) tax incentives; 4) emphasis on research and technical assistance for small and middle-size farmers; and 5) market outlets.

Market outlets are a particularly important issue for Portlanders as processing, marketing and trading aspects of the food system are the areas where the biggest profits in food are made. Eighty-six percent of all food sales in Portland flow into the hands of four retailers—Fred Meyer (25 percent); Safeway (23 percent); Thriftway (25 percent); and Albertsons (14 percent)—creating a monopoly-like situation where overpricing is likely to occur. A direct marketing system with food cooperatives, farmers markets and U-Pick farms (like those found around the city) are an effective means of supporting local family farms that in turn offer diversity and competition to the retail food market.

Over 25 food buying clubs and three storefront stores in the tri-county area account for a small but growing percentage of the total market. Joining or starting a food co-op is an effective individual strategy for expressing consumer choices, saving money, and building strong bonds with one's neighbors.

Since the mid-'70s a revival in urban gardening has swept the country. According to a 1980 Gallup poll about half of all American households currently grow some of their food at a total saving of approximately 13 billion dollars a year. In Portland, over 1200 inner-city residents participate in the Park Bureau's gardening program, with 18 gardens city-wide. The waiting list for garden plots topped 400 during 1981. Lots of open space remains on both Park and County lands for additional gardens.

Several efforts to organize a Portland farmers market are in the works; the most promising is a wholesale produce warehouse that the City is developing. Planned construction of the facility is scheduled for early spring of 1983 in inner Northeast and wholesalers associated with the project have expressed interest in having a farmers market on the site.

The many noteworthy projects being pursued throughout the city—and many more that are only now becoming possible—are only pieces of a larger puzzle. A coordinated approach to the concept of a stable, regional agricultural system that integrates competing needs and strategies on both a neighborhood and area-wide level is desperately needed. Local government plays a vital role in this development, creating the opportunities and incentives that will enable us to make use of our resources in an environmentally sound, economically viable and adequately productive manner. Oregon has the potential to take the lead in this critical area, offering a challenge to the rest of the country to follow. —*Laura Stuchinsky*

A PORTLAND VISION . . .

An ideal society would be one where people did not have to worry about basic human needs. They wouldn't have to worry about where their next meal is going to come from. A loss of a job or a sudden illness wouldn't devastate their family or cause them to lose their home.
—June Tanoue, Tri-County Food Bank

Housing

We are experiencing a housing crisis. So is the rest of the country. To understand our housing problems locally we need to take a brief look at the national situation—an insufficient supply of good quality, suitably located housing that people can afford and remain in with reasonable security. The housing problem is particularly severe for lower income and minority households, and in urban areas where changing economic and fiscal conditions have resulted in significant disinvestment or gentrification.

"The single-family, free standing house is a peculiar development based on a unique combination of cheap capital, energy, land and materials," writes Bruce Stokes of the Worldwatch Institute in a September 1981 report. The median price of a new home has *tripled* in the U.S. in the last decade. The average size of a new home, a traditional measure of housing quality, fell in the U.S. from 1,527 square feet in 1978 to 1,464 square feet in 1980—the first time this measure has reversed direction in an industrial country.

Never before has the entire intricate financing system, both the public and the private portions, been so threatened. Money market funds and bank deregulation have drawn money away from mortgage financing. The changes in tax law have eliminated the advantages that residential investment has historically held. In fact, the new investment tax credits for the rehabilitation of buildings, which cannot be used for residential structures, make the allure of commercial redevelopment so strong that even the most committed professional housing rehabber will be drawn to office projects instead. The hidden subsidies of federal mortgage loan guarantees are threatened as well, and the veteran loan programs are pricing themselves out of the market. The situation is so severe that even if interest rates do come down, we may still find that the whole structure of the housing industry has been damaged and may take years to recover.

For at least the last thirty years, *all* housing in this country has been subsidized. The great suburban housing boom of the '50s was fueled by veteran's loans and the Federal Housing Administration (FHA). The middle class urban redevelopments of the '60s were built on tax abatements and interest subsidies. Even the upper class condo rush of the '70s was supported by loan guarantees and tax deductions.

The housing problem is largely a function of the way housing is produced, financed and owned, i.e., for private profit rather than social use. Government housing policy has operated primarily to reinforce the commodity nature of housing (e.g., through promotion of mortgaged homeownership, tax expenditures, urban renewal, and even subsidized housing production) and has not solved the housing problem.

The median price for a new, single-family home in the tri-county area was $73,600 in 1979. This means that only 19 percent of the population could afford to enter the home-buyer's market.

Who is left out of the home buyers' market? Store clerks, nurses, barbers, day care teachers, retired folks, and so on. Due to interest rates and current lending practices for home buyers (income requirements, etc.) each saving of $1,000 on the sale price of a house, according to "1000 Friends of Oregon," effectively allows another 20,000 Oregon households to participate in the home-buying market. Despite the crunch, new families are arriving all the time, needing more housing. In addition, the children of the "baby boom" are old enough now to be looking for homes to raise their own children. Where will they live?

Putting subdivisions out in the country may seem at first like a practical and pleasant solution. But in the long run, it costs everyone more money. It costs the state's economy, as well as the taxpayers, when the surrounding land is no longer available for agriculture or timber, diminishing our state's income potential.

Urban sprawl also costs taxpayers extra. Patches of new developments—houses, condominiums, etc.—scattered across the countryside cost us all more money to provide services than for closer-in development.

In 1976 the Oregon legislature made the Land Conservation and Development Commission (LCDC) a legal entity. LCDC's Land Use Goals and Guidelines, notably Housing Goal 10, require each local jurisdiction to do its part towards solving the housing needs of Oregon residents of all income levels, as far as is reasonably possible. This means that cities and counties must provide adequate land for a variety of housing types, including single family homes, apartments and mobile homes, to meet the demands for such housing in the region.

Portland's housing programs have been recognized nationally for their innovation and efficiency. Our single family rehab program has served as an example to the nation. Our insistence on the matching of public and private loan funds has allowed us to do many more housing units than other cities have. Our recognition of single room occupancy hotels as viable living situations has now been accepted by Congress. Our add-a-rental experiment has been hailed in the Christian Science Monitor *as an example that others should follow. I am convinced that our sense of innovation has not died, that we will find ways to solve our problems, that we will succeed. It will take an unusual level of commitment and coopera-*

tion among all the forces in the city, but it can be done. We have no choice. For without a strong housing stock, Portland can not long remain a livable city.

—City Commissioner Margaret Strachan

The purpose of Portland's housing programs has not simply been to provide decent housing for our citizens, but also to keep our city livable and affordable for all groups so that we do not just become a city of the very rich and the very poor, so that our schools can remain open and our tax base can stay solid.

The city of Portland contains 160,000 housing units. Of these, over 25,000 are substandard. In the best of years we have seen approximately 2,000 housing units rehabbed. At that rate it would take us 12 years to eliminate our substandard housing units. But every year, another couple of thousand housing units reach the end of their useful lives. We've been doing little better than keeping even.

On July 1, 1981 the City Council created the Office of Housing Policy (OHP) under the auspices of Commissioner Strachan. The new OHP has responsibility for the development, refinement and implementation of city housing policy; coordination of all city housing programs and projects; development of an annual housing management plan; and staffing the new Housing Advisory Committee. It also serves as the principal liaison to all federal, state and local housing-related agencies, and coordinates collection, analysis and dissemination of housing and population-related information.

The cost and quality of a home are determined by the type of land it stands on and the materials, energy and financing that go into building it. In the last year, concern over rising interest rates has obscured the fact that inflation has struck all housing resources.

In a prize-winning June 1981 essay for the California Affordable Housing Competition, Tom Bender, a former RAIN editor, makes an important distinction between the *economic* costs of housing (the labor, energy and materials put into construction of a house), and the *monetary* costs (finance structures, government policies and traditions of the housing market) that increase housing costs many fold. He proposes a system of "durability incentives" which, by improving the *economic* productivity of housing construction, could lead to an eventual 80-90 percent reduction in the economic cost of housing. After all, "the longer a building lasts, the less it costs per year it's used."

Once again we see the tremendous role government can play in expanding opportunities for affordable housing. Bender also proposes sweat-equity housing grants (rather than transfer payments); a no-interest revolving loan fund (which would reduce the total purchase cost of a home 65-75 percent by eliminating finance charges); community housing exchanges ("through virtual elimination of realtor's fees, this service would realize savings over a person's life of 25-50 percent of the sales price of a home"); and renter's equity (a mechanism that "would allow for 60-80 percent of a person's rent payment to accumulate ownership equity for them rather than for investors").

Bruce Stokes is right on target when he says "building better housing for all

David Brown

Cooperatively financed row-houses, S.E. Oak St.

Ancil Nance

first requires better management of shelter resources. Few governments have begun to plant the trees needed for lumber, to plan the public services, or to develop the land-use policies essential for meeting future housing demand. Concentrating government expenditures in this way will ultimately generate far more housing than comparable government expenditures to build new homes."

A progressive program for housing and neighborhoods might be based on such principles as: (1) reducing speculative, private ownership; (2) increasing public control of housing finance capital and reducing the dependency of housing on private mortgage credit; (3) increasing social control of housing production (including land, materials, design and development); (4) increasing the viability of lower income neighborhoods and expanding housing mobility for lower income and minority households; (5) increasing popular control over housing decisions (at the building, block and neighborhood level); and, (6) increasing public funding for housing and community development by relocating existing revenues and developing more progressive forms of taxation.

Examples of strategic housing organizing efforts which reflect these principles include: campaigns for progressive rent control and condominium conversion control, and demands for a set-aside of development profits from publicly-assisted projects for purposes benefiting lower-income families.

The Metropolitan Service District (Metro) has projected a 40 percent population increase for the region by the year 2000. How can we "encourage the availability" of needed housing?

- By making fees charged to new housing reasonable and fair.
- By revising ordinances and standards for housing which are unnecessary or wasteful.
- By revising the ways communties plan and pay for major extension of services and facilities.
- By experimenting with mixed-use zoning, clustering, and Planned Unit Developments.

There are other important ideas to consider as well:

- Design new residential developments/units to make maximum use of solar exposure.
- Encourage common-wall or attached dwellings.
- Add-a-rentals
- Infilling
- Cooperative living arrangements (e.g., "shared housing")
- Creative financial/ownership mechanisms (e.g., "mingles")

Increasing housing density does not have to mean sacrifices in our quality of life. When Frank Ivancie was running for Mayor of Portland and stirring people up about the Comprehensive Plan, he was envisioning row houses, ghettoes and other remnants of the old "public housing" idea. Actually, the key to making densities workable is design and quality. If you provide for various kinds of setbacks, courtyards, gardens and such, high densities can be quite pleasant.

Even more pleasant, higher housing densities further our potential for community self-reliance by making possible greater energy efficiency and decentralization of energy sources. Common wall construction, for example, saves on building materials and saves on heating costs.

Individuals interested in more energy-efficient homes can explore building their own passive solar homes, weatherizing existing homes, or attachment of a food and heat-producing solar greenhouse. Portland Sun and Eliot Energy House (see Resources) offer classes to help do-it-yourselfers.
—*Mark Roseland*

Transportation

Twenty-seven percent of all energy consumed in Portland is used for transportation. Autos guzzle almost 40 percent of the 6.7 billion barrels of oil used in the United States every year. In 1978 foreign imports of petroleum products accounted for 43 percent of the country's total petroleum consumption. In 1972 it was only 29 percent, and Oregon, now as then, must import *all* of its petroleum products. The growing dependency of our nation on foreign energy sources has compounded our vulnerability to other nations.

So, transportation is an energy issue. It's also a political issue, a land use issue, and an economic issue. The city of Portland's Energy Policy addresses the need for revised transportation options through five of its general goals:

1. To locate more single-family residential areas near major industrial employers and near where "new" regional transit facilities are to be sited;
2. To provide more crosstown transit service from residential areas to commercial centers and major industrial facilities;
3. To increase development of labor-intensive industries, commercial centers, and high- and medium-density apartments along major transit corridors and near where "new" regional transit stations are to be sited;

4. To discourage the development of auto-oriented uses in the commercial areas and encourage uses which promote walking and mass transit; and
5. To provide support for alternative forms of urban travel, such as bicycling and walking, by constructing bicycle/pedestrian paths which link residential areas to employment centers and commercial areas.

The economics of natural and human resources in this country relate integrally to a major sector of transportation, the automobile industry. This dominating force in our economy creates employment for one in every five Americans, yet it drains not only the planet's fossil fuels but also 60 percent of our country's synthetic rubber, 50 percent of its malleable iron, 33 percent of its zinc, 25 percent of its steel, and 17 percent of its aluminum.

Finally, transportation is a communications issue; often what is carried is nearly invisible, at the very least intangible. We move paper, and we move people about in order to move paper. Could advancing electronic technologies handle the job? An article in *Fortune* (6/18/79) describes, for example, the U.S. Postal Service mail system as "a ridiculous arrangement that employs internal combustion engines and human backs to lug around information, an essentially weightless commodity."

Transportation system decisions may involve complex solutions such as an urban mass transit system, for which long term consequences are hard to gauge, or more simple alternatives. The U.S. Department of Energy's publication, *The Energy Consumer*(9/80) has estimated that "if only half of the 52 million Americans who now drive to work alone would double up, the country would save 14.7 million gallons of gasoline each day." Davis, California, has demonstrated that bicycles can, under some conditions, be a viable option for local transportation. The city's bike path system and education program have resulted in more bikes than cars being driven in the city. By using bikes for one-fourth of all trips within the city, Davis residents are saving roughly 64,000 gallons of gasoline annually.

The key to transportation planning, then, is to look at both larger- and smaller-scale strategies and to balance local and regional priorities with personal ones. —*Steve Johnson*

Communication

Since the early 1960s the dominant trend in the Uited States labor force has been the growth of information-related occupations. By the mid-1970s almost half the country's labor force worked in information-related occupations, which accounted for nearly half the gross national product. Sociologist Daniel Bell has predicted that over 90 percent of the labor force will be providing services by the year 2000, with only 10 percent of the labor force in the United States producing hard goods.

We are moving from an industrial-based economy to an information-based economy. The importance of this fundamental shift is aptly stated by information specialist Anthony Oettinger:

Information is a resource just as

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Mother's Day Trolley, 1936

energy is a resource. Both are vital to the well-being of individuals and organizations in today's world. As with energy, politics and technology are changing the ways in which information is produced, stored, communicated, processed and used. . . . How essential are information resources? Who produces or controls them? Who can get them, and on what terms?

Materials, energy and information are mankind's basic resources. Without materials there is nothing. Without energy, everything stands still. Without information all is chaos. Information makes it possible to use all other resources effectively and efficiently.

Dramatic innovations in communication satellites, wideband transmission networks, cable television systems with "interactive capability," "viewdata" and "teletext," microcomputers and computer conferencing—and their usage—will become an accelerated trend. More people will begin to work, shop, pay bills, "attend" classes and public meetings from their homes through telecommunication. While such a trend may be viewed by many people as threatening our lifestyles and even our privacy, the information-based economy holds great potential to *upgrade* public access to knowledge, decentralize the decision-making process and dramatically alter the requirements of our current transportation system.

The "telecommuting" lifestyle is already being lived by some. Peter and Trudy Johnson-Lenz, RAIN board members, describe their electronically based consulting business in the following excerpt from an article in the *Christian Science Monitor*:

We haven't commuted in years. Instead we communicate to work via computer from our home office, interacting daily with people around the country and a few folks abroad. We don't have to deal with traffic jams, bad weather, parking, dressing up, or lengthy meetings. And yet we maintain a lively professional and social life electronically.

We can "telecommute" because we are using a computer as a means of communication, rather than for processing data, keeping records or any of its more traditional uses. We work and play in a computer network, using a computerized conferencing system to send and receive electronic mail, attend ongoing conferences and meetings on a variety of subjects, write and distribute material, play games, and participate in other information exchanges. In short, we communicate with other people on many different topics, and we use a computer to organize that communication, rather than relying exclusively on mail, telephone, or face-to-face meetings.

The Portland region plays an active role in the rapidly developing high technology sector of the nation's economy. We are also beginning to understand the implications of trends in telecommunications for people on the local level. The Portland eastside cable franchise, for example, with its provisions for public community access channels and interactive polling, is considered to be a model for municipal policy on an emerging technology. The City Club Vision Report included a telecommunication *scenario* for the year 2000 that underscored the potential impact on transportation, decision-making and neighborhoods.

Overall, however, we have only a dim understanding of how rapidly we will be affected by these trends in telecommunications. Perhaps no one such issue will be as dominant in the next decade as the trade-off between telecommunications and transportation, the difference between moving more people around or moving information. Current regional forecasts for transportation requirements in the year 2000 make virtually no assumptions about the impact of such developments. And yet by 1985, the implications of telecommunications on transportation will be quite noticeable, according to industry specialists. Perhaps, more than any other major issue facing Portland, such implications will require careful education and "demystification" so that public and individual planning can truly reflect the opportunities at hand.

—Steve Johnson and Steven Ames

Arts

Artists—including those in the visual as well as performing arts—are often fugitives among the rest of us.

They exist—in our most romantic descriptions—at the very outer edges of our sensibility, reflecting back a composite or just a segment of the society, transformed. We call it culture: it's the thread of our spirits that's pursued, then molded, into shapes and colors, sounds and movement. The thread extends from us through the transformation and back to us, renewed and striking. We may not always approve, but we are at least made more alert to the possibilities. If the arts are not encouraged, our image of ourselves as a society is limited. So culture should draw together the worlds and visions of all of its people. Patronage of only the most conventional work would establish a culture that's predictable.

Historically artists sought patrons for their sustenance. Called "angels," they "blessed" the artists they approved. Work that pleased was rewarded. That which did not was not. The audience was small, the benefitting artists few. Most art still goes largely unsupported, or is supported by the artists themselves who choose "dumb jobs" that earn them the money to write or paint, compose or perform. To "make it," it's assumed, "good artists" go to New York or Los Angeles. Both cities promise success—the arts version of self-reliance and self-sufficiency—being able to live off your art.

But what options, short of leaving town, have Portland's artists to choose from? Many artists are finding their support and encouragement among other artists. They are forming collectives and ensembles to strengthen their economics by sharing space to create and exhibit, rehearse and perform. Artists in groups find that they can reduce their vulnerability and the economic dependency of the arts community as a whole. They can also serve as their own critics to stretch their work and permit the exploration of more risky visions.

Portland as a community is enriched by several of these strong arts collectives and ensembles. (See Resources for arts information.)

But perhaps more important than the move among artists to join forces is Portland's reciprocal move to put its artists on the "public turf." Portland needs its creative community and knows it. Five years ago when the downtown transit mall was finally opened, the "ceremony" became a blowout celebration of, for, and by the arts. It was so much fun that it became an annual event. Artquake, the last big fling of the sunny season, gets us out in the streets for one more song and dance. Then, it

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helps us move our attention back indoors to the painters, sculptors, musicians, dancers and others that create "the art scene." Unlike most urban arts festivals, Portland pays its artists, musicians and performers. In fact, Artquake is the largest employer of the arts in all disciplines in the state. Artquake producer Karen Whitman argues, "People who elect to be artists shouldn't have to leave the community to be successful."

As a growing audience, excited by events like Artquake, *demands* and *supports* more art and music, more theater, more of all of the richness that these offer, Portland's reputation for livability will include ovations for its resident artists. —*Carlotta Collette*

Economics/Work

Our economic base is as much a key to our life support system as our land and resources; they are virtually inseparable. Yet essential as it is to our existence, few of us seem able to elucidate the role of economics as clearly as Bob Baugh. Bob was recently elected Secretary-Treasurer of the Oregon State AFL-CIO, after serving as a researcher for the International Woodworkers of America. He is also a member of the American Federation of Teachers. In the following conversation we asked Bob to clarify some connections for us.

RAIN: Being newly elected to the Oregon AFL-CIO, what challenges do you see for labor in the next few years?

Baugh: The economy in general. In the Pacific Northwest, what do people do for work? In Oregon, nearly 40 percent of the manufacturing jobs are in the wood products industry. Right now we can see that anywhere from 1/4 to 1/3 or more of these people are out of work, and a lot of this is going to be permanent. We've got a lot of permanent plant closures. What will these people do? Real unemployment in this state—any economist or labor researcher will tell you—we're probably looking at 15-20 percent actual unemployment in Oregon.

RAIN: Where do you see the role of government, in terms of the marketplace?

Baugh: The government plays a tremendous role in the economy of the country and the state in how we spend our dollars, the choices we're making today. Do you build mass transportation or do you build MX missiles? That raises all kinds of questions—how many jobs does that produce? We know transportation produces many, many more jobs. And the benefit that comes back to society—money spent on a missile system that nobody in society ever uses (and if we ever use it, we're never going to use *anything* again!) or building a mass transportation system that generates income, which people will use, which moves goods to market, and so on? That's the role that government plays in the marketplace, and it plays that role in a much more *rational* fashion everywhere else in the world, as far as I can see, whether you are talking about rightist dictatorships, leftist dictatorships, socialist or capitalist countries. We probably have less control than anyone. We're involved in it but we're not involved in it. We turn over the money, but the decision-making power lies elsewhere, in the private sector, without government and com-

munities really having a say in what's going on.

What responsibility does a corporation have to the community in which it exists? I think that's the crucial question that faces us for the '80s. Our needs are real basic. We need shelter, we need food, we need clothing, we need education, we need "quality of life." They need profits. Sometimes these can work hand in hand, but I think we're seeing too many cases where they don't. That private motivation for accumulating capital interferes with the needs of working people and the community.

RAIN: What does it mean, in terms of community self-reliance, to have substantial amounts of our capital tied up outside the region? In particular, what does it mean for us that *Georgia*-Pacific and *Louisiana*-Pacific control Northwest lumber? Or that the Fred Meyer department store chain may be sold to a New York firm?

Baugh: A lot of people are starting to ask questions. For instance, does it make sense for the Port Commission to be building a K-Mart in The Dalles? The local people said, "Wait a minute! This is going to destroy the downtown area! Is this the way to spend our public funds that we pay for with our taxes?" It went to a referendum and was defeated, but this is one of the public uses of capital that has happened, sometimes to the detriment of existing businesses and facilities in the community.

In the forest industry, the big companies have chosen to export 20 percent of everything they cut. Now sawmilling creates 2½ times more jobs than log exports. Plywood manufacture creates four times as many jobs as log exports. I sit here and look around and I see all these wood products mills closing, people thrown out of work, causing tremendous human suffering and social consequences, and it *costs* the state money—for the people who end up in jail because they turn to crime, for the people who become mentally ill and end up in hospitals for the drug abuse, the child abuse. We pay for that, but we don't have that in the social ledger. That's a question that's got to be raised.

Weyerhauser and Georgia-Pacific, they'll export the product, the log, then close a mill here and say "gee, we don't have any timber supply." Well, to me it's a question of how you utilize the existing supply as much as how much supply you have in the long run. They're *choosing* to do that. What do they do with the profits? They don't spend them here. They've reinvested the profits they made here in plants overseas and in the South . . . Weyerhauser is not just "the tree growing people," they're "the tree growing people all over the world." They've got property in Indonesia, in South America, it's just incredible how much stuff they own. Same with Georgia-Pacific, Lousiana-Pacific and the others.

Why is U.S. Steel closing all its mills? Last year when they closed 14 mills, 12 of them were making money. But 50 percent of their capital and an increasing proportion is now invested in petrochemicals, because they make a 25 percent return every year. Monopoly. Monopoly with diversification. And so what do they do? They drain the assets off one side of the corporation, or refuse to reinvest in a needed technology to keep up, and invest it somewhere else where they're going to make a bigger buck.

If I was a business manager for the United States I'd say that's bad investment policy for the long run, the long-range objective, which should be the viability of our society and economy as a whole. And that's bad investment policy. But we don't have a business manager for the United States, and the government refuses to take the role.

I think it's a perfectly legitimate question for us to say: "How should we be spending our money?" Should the state spend its pension fund to buy Fred Meyer? Real good question. Or should it go into securing mortages for low- and moderate- income people so they can build homes? Or should it be going into transportation? Or the development of alternative energy? Real legitimate questions. There's a crisis of capital; there isn't enough, and the government and pension funds are major sources for the capital that exists. The question is, how do you spend it?

RAIN: What happens when plants close? What is the real impact on society?

Baugh: Who put in the sewers and paid for them, for a major manufacturing facility in the community? We did, the taxpayers. The company didn't. They're not going to pay off the property taxes. Who's going to pay off those general obligation bonds after they're gone, and they're not even there as a tax base to help pay for it? We still are, we're still held liable.

I think that's where the role of the trade union comes in. Two aspects. One is that you represent the people in those mills, so from that perspective you work through collective bargaining, etc., to protect the interests of the people you represent. But the trade union movement represents people who work, not just people who are organized. It's that simple.

I think we're in a period right now where we're going through a tremendous transition, in society, in the economy, and in the trade union movement. It has a lot to do with demographics. The people who came back from the Second World War, our parents, are approaching retirement. We're like the big pig in the middle of the snake coming through the system, people our age, between 25 and 35, and you're beginning to see changes taking place as people from that group move up and take leadership roles. In the trade union movement, there's all kinds of new people that are becoming officers. Just look in the state of Oregon, all new faces, new ideas. They're going to be making their own way.

I guess I'm a reflection of that. I'm 32, and I've just been elected officer of a state-wide organization, AFL-CIO. We grew up in the '60s and '70s like everyone else around here, and questioned the system, and now we're it! We are the system in many respects! What do you do with it? How does it work? Does it meet our needs? And these same kinds of people are also starting to take a longer look ahead. They may be buying homes, may be starting to raise families, just in that age where all of a sudden my job is becoming what I'm going to do for the next 10 years, it's my security and stability. How stable am I for the coming years, and how do I ensure that? Do I like what the government is doing? Do I like our economic policy? And if I don't, what do I think we ought to do? 'Cause it's going to affect me. I think we're going to move back from the "me-generation" to the "we-generation" in the next few years. I sure hope so. More and more people are raising those questions: who has the right to invest capital? And for what?

We have needs to meet in this society, and I think we should approach it rationally, and cautiously, and take long, hard looks and make good decisions, and we don't do that. We have the most irrational system for making decisions in this

country, where the people who own the capital make all the decisions, and their needs are not the same as my needs. And their goals are not my goals, nor are they the goals of most of the people in this society.

I'd like people to be healthy, and not hungry, and have clothes, and have a decent education, and have good jobs, so they can take care of themselves.
—*Mark Roseland and Steve Rudman*

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Welder, Oregon Shipbuilding Corporation, 1942

Women Workers in World War II

Almost 40,000 women worked in Portland-Vancouver area shipyards at the height of World War II. Traditional occupational barriers to the blue collar trades—sex segregation, socialization, and union policy against women—tumbled before the burgeoning needs of wartime industries.

In Portland, a city coming of age industrially during the '40s, shipbuilding concerns grew as government war contracts proliferated. Kaiser Industries, Commercial Ironworks, Albina Engine and Machine Works and Willamette Iron and Steel recruited women for unskilled, semi-skilled and skilled positions. After receiving technical training at Benson High School, women became shipyard electricians, machinists, welders, painters and draftspersons. By 1943, 700 women had completed the training course for machinists, but the largest number of skilled women were in the welding trade, which at the journeyman level paid $1.20 an hour. Welding was likened to embroidery, a skill women were *thought* to embrace.

Women in the shipyards gained earning power, economic security and valuable new skills. They were provided with a means to support their families and an opportunity to *produce* something. All of this stood in sharp contrast to the traditional, low-paying, service-oriented "women's jobs." Contrary to popular myth, the women shipyard workers were not just housewives working to be patriotic. More than half of them had been in the workforce before the war, and they sought the newly-available shipyard jobs for a variety of reasons, most of which were economic. In 1943, an informal survey of over 3,000 women employed at Willamette Iron and Steel revealed that over 50 percent of the women wanted to continue in the same kind of work when the war was over.

The wheel (cycle) of necessity continued. Childcare was crucial for working mothers throughout the community. Fifteen public school nurseries and a half dozen non-profit agency nurseries flourished during the war, funded primarily by federal subsidies. Kaiser Industries operated two child service centers (also federally subsidized) which gained national attention for their scale of operation and expertise. The Kaiser facilities were open 24 hours a day and served up to 400 children ranging in age from 18 months to six years. They offered infirmary care, immunization and even a home food service for working parents.

The end of the war brought new demographics and a return of old attitudes. The Kaiser yards closed and there were massive layoffs at all the other Portland-Vancouver shipbuilding operations. Women workers, so recently praised for their skill and dedication, were shunted aside, while only a small core of male shipyard employees was retained. Women filled the unemployment lines and the wartime childcare centers closed their doors.
Mimi Maduro

Ancil Nance

Aftermath—Mt. St. Helens eruption (May 18, 1980)

When the Company Closes . .

Plant closures and related unemployment result in another capital drain on an already hard-pressed state government. As unemployment increases, so does the need for social services, but these are the very agencies facing cutbacks. It is a contradictory and dangerous situation. The social services are absolutely necessary to counteract as best they can the terrible social and physical ailments that come with unemployment. Dr. Harvey Brenner has testified numerous times before Congress on this subject:

A one percent increase in aggregate unemployment in the U.S. over six years leads to:

- 37,000 total deaths (20,000 cardiovascular)
- 920 suicides
- 650 homicides
- 4,000 state mental hospital admissions
- 3,300 state prison admissions

The social costs of crime and death are part of a broader picture of family and personal crisis. Every community hit by closures finds rapid increases in spouse abuse, child abuse, alcohol and drug abuse, and broken marriages. The cost of this human suffering is staggering.

—International Woodworkers of America, Department of Research, Education and Collective Bargaining Coordination

Emergency Preparedness

Portland weathered volcanic ashfall from Mt. St. Helens in the summer of 1980 and disabling ice storms and power outages in the winters of 1979 and 1980. During the ice storms hundreds of people called city and county offices needing food, medication, batteries, diapers, and reassurance. In both years it was clear that a good deal of inconvenience, danger, fear, and disorientation could have been avoided if people had had basic information on survival techniques and alternative resources close at hand when the power went out.

In 1979 the City Club of Portland reviewed disaster planning, concluding that "the present situation is so serious

that an effective response to a disaster would be too much to expect." About 40 representatives of community service organizations, uncomfortable with the narrow scope and centralized approach of the City Club study, met to discuss an alternative approach to disaster planning. Terry Anderson wrote the report excerpted here.

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Vanport Flood, 1948: Rescuers form a lifeline

To base disaster planning on models of military mobilization or disease intervention (if it gets bad enough, we'll operate) encourages passivity in the populace by assurances that no one need fear or plan for emergencies because a system will be activated to service everyone efficiently and effectively. This attitude adds to complacency and unnecessarily undercuts self-reliance and community efforts to plan for emergencies.

We need to focus more on community organizing. We need a plan that is workable, flexible, and that operates not only in catastrophic circumstances but that also fosters and strengthens the community at large in a continuing way.

With most emergency preparedness efforts, people need to keep their skills honed either by annual drills and reminders, or by a real crisis. For this reason, self-reliance efforts related to emergencies need integral connections to more comprehensive neighborhood organizing efforts. Neighborhood crime prevention, community gardens, recycling and weatherization projects, food co-ops, and house sharing—all place a premium on the exchange of work and resources.

A different perspective employs a different metaphor—a web of interlocking networks rather than a command post. A different perspective also poses a different set of questions: What do people need (as opposed to how do we manage people)? How can we best use existing resources (as opposed to how can we co-ordinate resources)? What else is needed to augment these resources in times of cataclysm or prolonged distress?

Our perspective leads to these first threads of planning:

- people's capacity for self-reliance must be fostered;
- connections between people ("natural networks") and mutual assistance are an irreplaceable resource and should be nourished;
- the familiar should be retained whenever possible; neighborhood and cultural identification should be the first bonds formed in a larger system;
- certain populations (e.g., the elderly, the handicapped, single parents with children, the low income)—more vulnerable than others and whose chronic problems rapidly deteriorate to an acute condition—are critical or high-risk populations that need to be specifically addressed; and,
- technological over-dependency means people in general are more vulnerable whenever these systems (e.g., power, telephone, transportation) break down. Therefore basic survival information that takes into account a range of technological contingencies should be in the hands of all the citizenry through school systems, senior centers, and a public information campaign.

The thrust of planning therefore should be a "bottom-up" approach—moving from smaller units or areas of coordination to larger. Senior centers, schools, churches, and neighborhood associations are the logical first focal points in cooperation with volunteer emergency agencies, community service organizations and city and county field personnel. In each area of the county these are presently identifiable and familiar to many.

We can then explore ideas that fuse these principles into a plan. Form a task force in each quarter of the county to assess resources and needs and to take responsibility in a crisis. Form networks within and between the task forces. Disseminate information on urban survival to the public. Perhaps we can also establish a monitoring system (mailpersons, a buddy system, block homes), depots for wood and other supplies, and warm centers (a hot meal and social interaction).

Such an approach to crises allows for diversification of response according to the particular strengths and needs of an area. Each area forms its own network and retains a measure of autonomy in coordinating services. Coupling more localized planning with a broad informational campaign will foster a sense of personal and community responsibility.

It is true that such an approach means more work for each of us. Perhaps it is a matter of the will making a way.

—Terry Anderson

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S.W. 1st and Stark looking south.

Recycling

Garbage is not something you throw away. There is no such place as away. Disposal is a myth. When you dispose of something it goes someplace—a wastebasket, a toilet, a dropbox, a sewer line, a landfill, even an incinerator. It is moved from one place to another, maybe changed to another form, but it still exists.

Applying the current $27 per ton collection and disposal costs to our present volume, the annual national cost for solid waste management is about $7.8 billion. If the 1985 projected costs of $50 per ton hold true, the fiscal impact of waste management on local government will be devastating. Portland's collection and disposal figures, currently slightly less than national at $23 per ton, nonetheless show the same potential impact.

Current economics in this country necessitate that waste reduction receive attention. Surveys in Oregon, Washington, and California have shown that upwards of 75 percent of their citizens are in favor of recycling programs. Rising costs of raw materials and their growing scarcity speak to the importance of conservation practices, which have their precedents deeply rooted in our past.

In the 1890s the United States was transforming from a rural-agricultural to an urban-industrial society, and the quality of life in the rapidly expanding population centers was fouled by accumulations of garbage piled everywhere in city streets.

One of the earliest organized groups in this country to recognize the need for recycling was the Salvation Army, whose initial resource recovery activities centered in New York City in the 1890s. Another pioneer recycling program began in New York in 1896, initiated by Col. George E. Waring Jr., a prominent 19th century sanitary engineer. He began a system of primary separation which required householders to store organic wastes, paper, ashes, and other light rubbish in separate containers for collection.

As early as 1905, a Portland city ordinance dealt with the accumulation in city streets of "garbage, refuse vegetable matter, or filth of any kind . . .", and in 1910, a general ordinance of the city of Portland mandated the same type of source separation pioneered in New York City.

(Garbage—Not to be Mixed.)

Section 42. It shall be unlawful for any person or persons to mix or place in the same vessel or receptacle, tin cans, glass, crockery, or any other material or ashes, with any swill, vegetable or animal matter or other filth or garbage intended for delivery to scavengers for the purpose of being hauled or carted away from any house or premises within the limits of the city, [and] . . . when so hauled or carted away from any premises in the city, be kept entirely separate from all other substances, and shall be so kept when the same shall be dumped or unloaded.

In 1910 Portland's first garbage crematory, located at Guilds Lake (what is now the NW industrial area) was completed by Public Works Engineering Company. It was lauded in the mayor's annual municipal report as "sightly and substantial" and "appearing to be a modern up-to-date destructor." After undergoing six months of required testing, the garbage crematory was accepted by the Health Department and declared taken "in full control [by] the city." However, then Mayor George Rushlight noted the "systematic and wanton destruction of human foodstuffs" by the carloads "sent by certain food dealers to the crematory to uphold food prices." Rushlight deplored such action, asking the council to pass an ordinance to "prevent such criminal waste." The crematory incinerated almost 30,000 tons of garbage in 1910, averaging 66¢ per ton.

Because there were as yet no municipal landfills, the incinerator was working to capacity and beyond. In 1912 the voters rejected a bond issue to provide for a second "sorely needed" incinerator. A major problem arose with the need to shut down the facility for repair; because there was nowhere to dispose of the "vast and increasing garbage," the incinerator continued to operate until a fire caused its closure in 1914. During the next six weeks, the upper end of Marquam Gulch became the city's first experimental landfill.

Acute shortages of raw materials during World War I prompted the federal government to launch a recycling program. The Waste Reclamation Service was created in 1917 as a section of the War Industries Board and transferred in 1918 to the Department of Commerce. Portland's attention was turned to its waste stream. The precedent set by its 1910 waste separation ordinance helped establish a citywide waste recycling system. The scavengers were no longer alone in their efforts. Rubber, metals, and glass were reclaimed by patriotic individuals and groups to aid production in war industries.

In the city's 1921 annual report, C.A. Bigelow, Commissioner of Public Affairs, noted that

In conjunction with the treatment of garbage and city waste there was submitted to the Council and the Commissioners of the City of Portland a proposition by the Northwest Nu-Fuel Company. In their proposition they covered the disposal of household garbage or kitchen waste and all other waste food; also manure or stable waste, street sweepings, combustible and non-combustible debris and building materials; in fact practically all waste material. Their process provided for the full conversion of the fuel waste into commercial products, the principle one being fuel . . . in the manufacture of briquets. The other waste products are converted into fertilizer or chicken food. The paper and pasteboard is baled and sold to paper factories, while the greases are extracted and used in the manufacture of soap. The metal wastes are converted into babbit metal and in a similar manner practically all of the wastes are converted into some useful substance or sold for useful purposes.

There was no further mention of what happened to the proposition by the Northwest Nu-Fuel Company.

By 1926 two new landfills had opened, helping to alleviate the incineration problem. Over 95,000 tons of garbage at the cost of 45¢ per ton were disposed of in the landfills, while incineration at 88¢ a ton burned 11,000 tons in that year, a dramatic decrease in tonnage previously burned. Portland's populace showed a preference for burying over burning their garbage. But the landfills had problems of their own: odor, equipment breakdowns, spontaneous combustion, and shortages of covering materials.

The new and more accessible incinerator on the west side made garbage so easily disposible that people no longer took the time to separate their wastes. The annual report by the Bureau of Public Works reported that it had become impossible to enforce the ordinance covering garbage separation.

During the Depression, the efforts of many groups that had cooperated with the Waste Reclamation service were discontinued. Although individual scavengers and local waste reclamation efforts continued on a smaller scale, large scale conservation efforts would not emerge again until the 40s, when, during World War II, thousands of tons of material were recycled to support the Allied cause.

Following World War II Americans quickly fell back into their habits of wastefulness. The American dream of affluence and abundance—and with it conspicuous consumption—had been only momentarily interrupted.

But by the 1970s, when Portland was accumulating 1800 tons of garbage a day, a great number of people who were concerned about environmental degradation and dwindling resources began to regard recovery and re-use of solid waste as a relevant issue. Other problems such as the growing scarcity of landfill sites and escalating costs for collection, transportation, and disposal of garbage underscored the need for waste reduction.

Currently Portland's solid waste system, except for waste collection, is the responsibility of the Metropolitan Service District (Metro). In this endeavor, Metro is confronted by serious problems. By the mid 1980s, the present municipal landfills in the region will reach capacity. Recent federal mandates have closed open-burning dumps. Placement of new landfills has become difficult given the dilemma of locating an environmentally sound disposal site, compounded by strong public opposition to siting these facilities.

In 1979 state legislation SB925 passed, requiring that an effort in waste reduction take place where state assistance is provided to landfills. Having received a grant and a loan for the expansion of the St. John's Landfill, Metro is now committed to a waste reduction program as part of its contractual agreement with the state. Metro's waste reduction plan includes four major components: resource recovery, landfilling, transfer stations, and recycling. A yard debris program is a fifth component.

Until recently, Metro has concentrated on energy recovery from solid waste over materials recovery options. Energy recovery from solid waste is the designated function of a planned garbage-to-energy plant that burns garbage to create energy. Metro's proposed plant, to be located in Oregon City, is currently estimated to cost $171 to $210 million (depending on whom you talk to), will burn 560,000 tons of garbage a year. The energy created will be sold to nearby Publisher's Paper Mill to dry paper and generate electricity.

Dan Knapp of Urban Ore and Whole Earth Recycling in Berkeley, California, and a former member of Lane County's now defunct Office of Appropriate Technology, raises questions about the value of incineration as a tool, "since any garbage-to-energy plant will com-

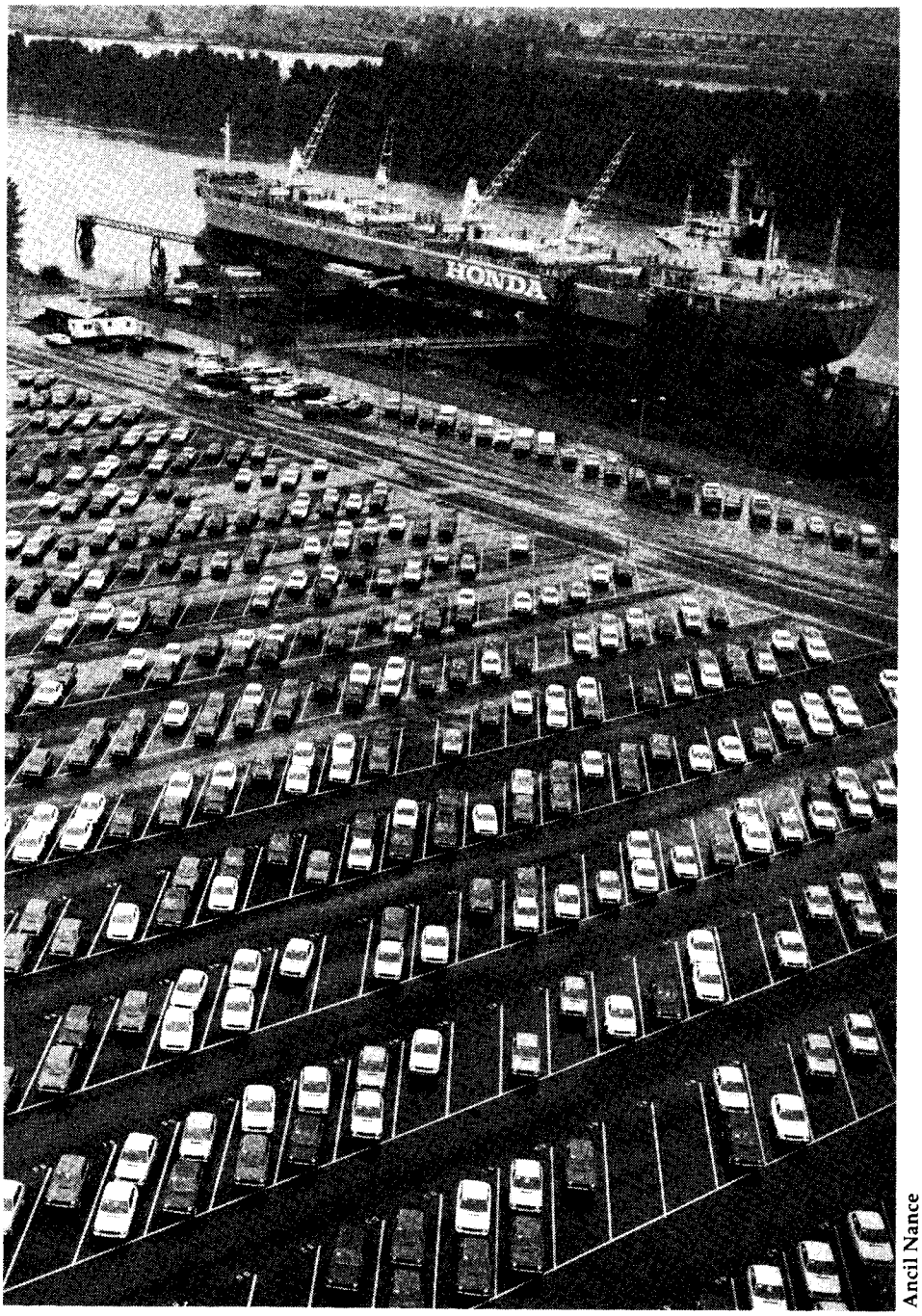
pete inevitably with recyclers for the same investment capital and feedstocks (highgrade paper, newsprint, cardboard, dimension lumber, firewood, compostable organics, clothing, furniture)." As a recycler, Knapp sees incineration as an unproven technology, asking, "Where are the garbage-to-energy plants that work without degrading, contaminating, or destroying valuable resources, creating toxic byproducts, or requiring vast and open-ended extensions of credit? . . . Why the rush to turn materials into energy when we are entering a period of scarcity of materials?" (From *Resource Recovery: What Recycling Can Do*, to be published by the Governor's Office of Appropriate Technology, State of California, as part of their Occasional Paper series.)

Garbage-to-energy strategies are being pushed before the more appropriate technologies of reduction, reuse, and recycling of wastes have been given a chance to prove themselves. Burning garbage for energy, in fact, can curtail further efforts to implement more effective solid waste practices and actually reduce incentives to decrease solid waste, because the garbage burner requires a guaranteed supply of waste.

Strong local opposition by the people of Oregon City to the garbage-to-energy facility coupled with rising costs may prevent its ever being built, but even with full scale waste reduction efforts *and* a garbage burner, Portland's garbage will also have to be sent to landfills.

There are currently two general purpose landfills operating in the region: Rossman's in Oregon City and St. John's in North Portland. Both of these are expected to reach capacity in the 1980s.

The development of the Oregon City burner or the establishment of a distant mixed waste landfill (which will probably be sited 17 miles north of Portland in the northwest across from Sauvie's Island), will require the construction of waste transfer stations. These transfer stations will be enclosed facilities where garbage haulers and private citizens can dispose of their garbage which is then transferred in larger trucks to a landfill or garbage burner. The transfer stations will also allow for on-site recycling facilities.



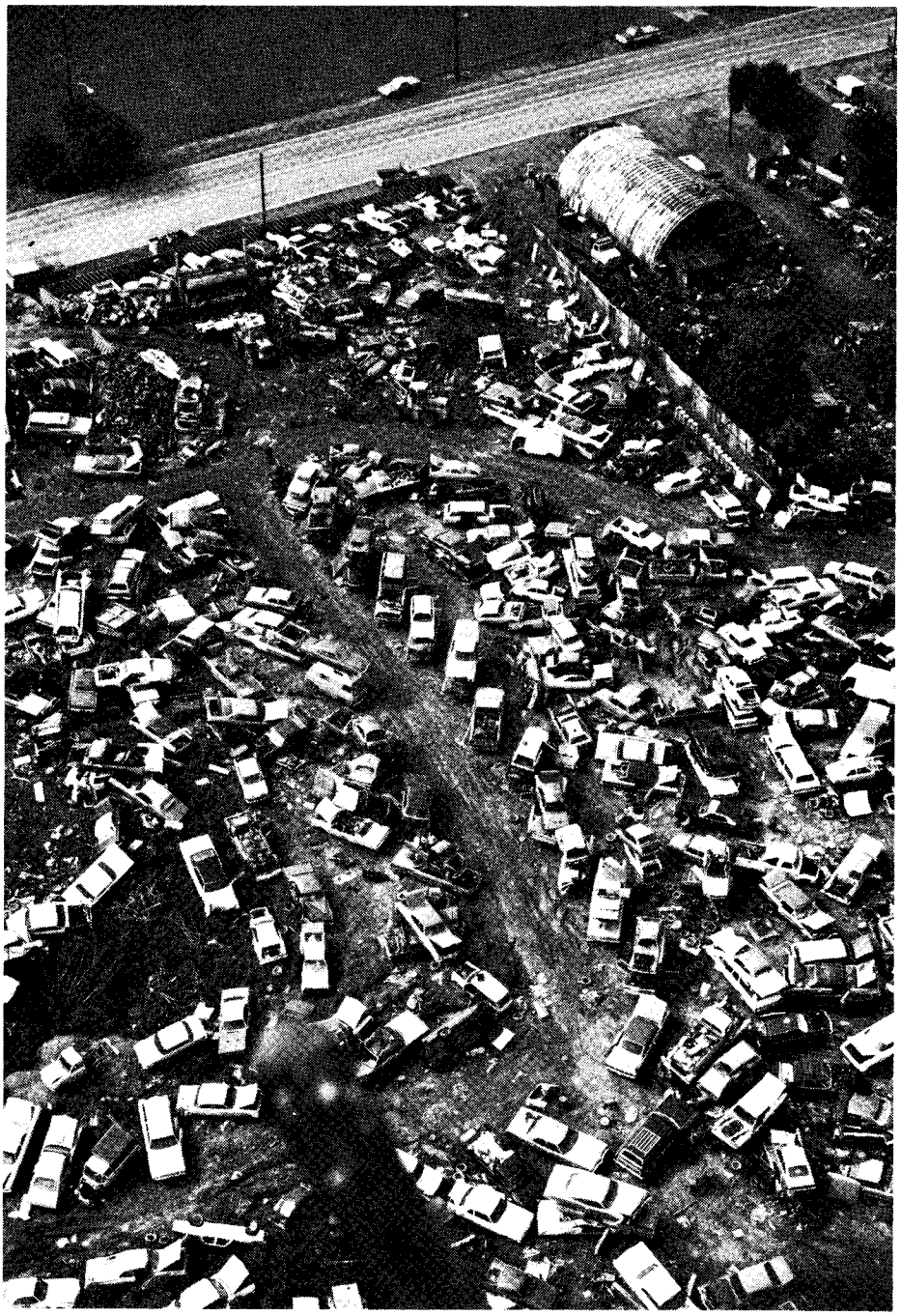
Ancil Nance

Many wastes requiring disposal represent valuable resources. By removing reusables from the waste stream, the amount that goes into the landfill is decreased. Collection and disposal costs are reduced. By recycling, valuable natural resources are turned back to production, reducing the quantity of virgin resources mined, pumped, or cut. Non-renewable resources will last longer, and less energy will be spent in the mining and processing of virgin materials.

Metro estimates that as much as 30 percent of an individual's garbage can be recycled. The most common recyclable materials include glass, newspaper, cardboard, tin cans, motor oil, and aluminum.

Portland's materials recovery programs (see Resources) are nationally recognized. Portland is cited in both the 1979 and 1980 Environmental Protection Agency surveys of recycling programs around the country. The EPA studies point to Portland's general public awareness about recycling. The Oregon bottle bill has gone a long way in raising consciousness about recycling. Portland is already where many urban areas dream of being.

A number of firms have long been established in the Portland area which



Ancil Nance

From the Bottom of the Heap

In Oregon, the Europeans were discriminated against economically when they came to this country—Italians, Russians, Germans, Eastern European Jews. Many couldn't speak English, so entry into significant business (banking, real estate) was impossible for them. They started off where they could begin small and grow: waste reclamation, the dirty job, the underbelly of society. Where the parking garage is on Jefferson and First, where the Marriott is now, there were a lot of small companies in the beginning: Acme, Zidel, California Bag and Metals.

Now in Portland it's a cash economy—there's all sorts of dealers who are open at seven AM . . . pickup trucks in line. No name on the truck, no business license, no (ha, ha) corporate taxes. They just simply take the cash, pay for the gas, buy some food, pay the rent. And you'd be surprised at their volume of materials.

—Jerry Powell

purchase, process, and grade waste materials for recycling. Calbag Metals, for instance, entered the market in the 1910s. There are several end-users of secondary materials located in the metropolitan area, principally of newspaper, corrugated paper, and glass. But most of our secondary materials are shipped for processing to the Far East: Japan, South Korea, and the Philippines.

A materials market study for Lane County (conducted by Jerry Powell of Resource Conservation Consultants) showed that the local economy doesn't benefit from shipping materials outside the area. It is important, therefore, to find ways of creating local markets for the use of secondary materials.

Powell says, "I think the key issue is to localize all levels of the economy; localize the consumption of goods—like the corner bakery, but also make sure that the bakery uses recycled fiber for packaging and then have that re-used as roofing felt that can be used on locally constructed houses. Otherwise we may be consuming local goods while producing international trash."

But there are still problems that recycling doesn't address, and recycling can only serve as a stop-gap measure to the real issue: not how to get rid of the garbage we produce, but how to reduce the amount of garbage before it enters the solid waste stream.

Unfortunately most people don't see the connection between what ends up in the garbage can and oil wars in the Middle East. The production of ever more to maintain a healthy economy, with increasing consumption as its end result, is promoted as a way of buying into the American dream.

To reduce the solid waste stream we have to reduce consumption. One of the best ways to reduce consumption is the production of higher quality goods, increasing the life of a product. Life cycle costing, the true pricing of an item over its lifetime, can help a consumer become aware of the cost effectiveness of what is being purchased.

Packaging is a major byproduct of our consumption patterns. Three and one-half tons of every 10 tons in the solid waste stream consists of flexible packag-

ing, plastic and aluminum pouches—all kinds of single service containers which are used once and thrown away. We could take steps to alleviate the situation. A Minnesota law requires that a product entering the market in a new package must be evaluated in terms of energy use and ease of recycling.

Several types of packaging are impossible or at best impractical to recycle. Multipackaging, or the use of more than one material (plastic over paper; paper on aluminum) is a recycler's nightmare. Plastic—which depletes non-renewable resources in its manufacture—is difficult to recycle because of a lack of uniformity in grades. Only one percent—or less—of all plastic is recycled.

It has been suggested that the best way to deal with garbage is to separate it according to end-use. For example, current farming techniques cause the daily loss of valuable topsoil. A voluminous amount of kitchen waste in Portland could become a useful resource if converted to compost. If the region had to depend exclusively on locally grown food, a recycling policy which mandated separation of organic wastes in order to implement large scale composting efforts would become very attractive.

Currently business and industry are not well set up to utilize recycled materials. Full scale recycling efforts will have to be carefully orchestrated in order to be successful, and necessitate an interplay between individuals, neighborhoods, local government, and private enterprise. We are a long way from this ideal at the moment. Making the leap from *what is* to *what could be* will require a lot of work, wit, organization and imagination. —*Nancy Cosper*

A PORTLAND VISION . . .

The question is, how do you choose from all the parts of the world the qualities that make you feel that you are being enhanced? There are places in the world where I'd have a better chance of being employed for doing what I want to do than Portland. But I stress cooperation and connections between things, and what has mattered to me about Portland is that the city is humane.
—Jack Eyerly