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Beyond Zoning: Land Use Controls in the Digital Economy

*A Proposal for Modernizing Oregon's
Statewide Planning Program*

by John A. Charles

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I. Introduction

Since 1973, Oregon has administered a statewide land-use regulation system. A primary reason this policy was enacted was the belief that urban development must be contained in order to preserve rural farm and forest land. Implicitly, the policy assumes a real or forecasted shortage of such lands in Oregon, or a shortage of commercial products grown on those lands.

This view is consistent with the political tenor of the era in which the program was enacted. In 1973, there were widespread concerns about the possibilities of ecosystem collapse and global famine. Professor Paul Ehrlich had published *The Population Bomb* in 1968, predicting large-scale starvation and social unrest from overpopulation. In 1972 a group of academic researchers published the book *The Limits to Growth*, which predicted that the world would run out of important commodities by the end of the century.

But 25 years later, it turns out the prophecies of doom were wrong. Cropland worldwide increased from 1.32 billion hectares in 1973 to 1.34 billion hectares in 1993. Food prices did not soar due to shortages. In fact, food prices have been steadily declining, and are generally the lowest in history. Despite the addition of 1.5 billion people to developing countries during the period from 1972-1992, the number of people in those countries with food inadequacy declined to 20 percent of the total population, compared with 35 percent two decades ago.¹ And contrary to the prediction in *The Limits to Growth*, the world did not run out of oil in 1992.

Oregon is now a very different place. We have entered the information era, where wealth is increasingly generated from the processing of knowledge, not raw materials. The natural resource industries—farming, forestry, fishing, mining, and ranching—represent a much smaller part of the overall economic picture than they used to, and this trend is likely to continue. Some analysts have suggested

that in a digital economy, “geography is irrelevant”, because the physical features of the landscape are no longer barriers to many types of economic enterprises.

Instead of shortages, we are enjoying the benefits of resource abundance. This is due largely to the productivity gains unleashed by the worldwide trend towards market deregulation that has occurred in the last two decades. Market forces provide both the incentives for creating new products and the discipline for weeding out wasteful investments.

This shift towards rapid, decentralized decision-making poses major challenges to Oregon's land-use regulatory program, where the paradigm of centralized control still reigns. As one pro-planning newspaper acknowledged recently:

“Perhaps for the first time in history, it is not necessary to accept as inevitable the shift of population from country to city. Technology now affords us the opportunity to locate many jobs anywhere we want them.

Thus, those who once had to go to the city to pursue a career now theoretically could stay where they would prefer to be if we gave them the opportunity that is now available. But to rise to the challenge and take advantage of the opportunity requires different ways of thinking, planning and doing business.”²

For 25 years, the primary method for implementing our land-use laws has been to restrict the supply of land for urban development through exclusionary zoning. Essentially, this system segregates people by economic sector and by soil type, and restricts urban development to less than 3 percent of the total land base in Oregon.

In a digital economy, it's difficult to justify such segregation. A business using computers, fax machines, teleconferencing, and other tools of the information era is capable of creating wealth with few, if any, negative effects on the environment or the community. Why should such busi-

Oregon needs to re-examine the fundamental assumptions underlying the current regulatory system, and consider new methods for addressing the potential land-use conflicts of a rapidly-changing economy.

nesses—and the residences to support them—be banned by government officials simply because other land-uses have traditionally taken place on certain pieces of property?

Oregon needs to re-examine the fundamental assumptions underlying the current regulatory system, and consider new methods for addressing the potential land-use conflicts of a rapidly-changing economy.

II. What IS the Digital Economy?

Author and consultant Don Tapscott, in a book by the same name, describes the digital economy by saying:

“Today we are witnessing the early, turbulent days of a revolution as significant as any other in human history. A new medium of human communication is emerging, one which may prove to surpass all previous revolutions—the printing press, telephone, television, computer—in its impact on our economic and social life. Interactive multimedia and

the so-called information highway, and its exemplar, the Internet, are enabling a new economy based on the networking of human intelligence.”³

The key characteristic of the digital economy is change. Virtually everything we've come to accept as “standard” in organizational structure, technology and education will become obsolete.

Government land-use plans, however, are not designed to accommodate change; they are designed to make change fit the plans. To land-use regulators, the future must be *“brought under control, managed, and planned—preferably by “experts.” It cannot simply evolve.”⁴*

Gov. Kitzhaber summarized this philosophy when he addressed his Growth Management Task Force at its first meeting: *“If I had the power, I'd turn off the spigot and keep Oregon as it is today.”⁵*

However desirable that might seem to the governor, it is not an option. Oregon is changing every day, and the question serious policy makers must ask is, *“How do we reconcile the preservationist orientation of government planning with the dynamism of the digital economy?”*

This paper analyzes the major assumptions behind Oregon's statewide planning program, and offers five proposals for bringing state land-use regulation more in sync with the 21st century economy.

III. Exclusionary Zoning on Farm and Forest Land: For What Purpose?

A. Farmland

With the passage of SB 101 in 1973, the Oregon legislature created a state policy to preserve *“the maximum amount of the limited supply of*

Figure 1

Average Per Acre Value of Farm Real Estate in Oregon

	1992	1993	1994	1995	% change '92—'95
\$	607	663	747	844	39%

Source: Statistical Highlights of U.S. Agriculture, 1995/96, National Agricultural Statistics Service, USDA

agricultural land” in Oregon. Statewide Planning Goal three, “Agricultural Lands”, requires that all agricultural lands be inventoried and preserved by adopting exclusive farm use zones. Local counties are responsible for planning and zoning, subject to final approval by the Department of Land Conservation and Development.

The statewide policy for use of agricultural land states that:

“Open land used for agriculture is a vital natural and economic asset for all the people of the state;

Preservation of a maximum amount of agricultural land, in large blocks, is necessary to maintain the agricultural economy of the state and for the assurance of adequate healthful and nutritious food;

Expansion of urban development in rural areas is a public concern because of the conflicts between farm and urban activities; and

Incentives and privileges are justified to owners of land in Exclusive Farm Use zones because such zoning substantially limits alternatives to the use of rural lands.”⁶

In conjunction with other related policies such as preferential farm tax rates, this law has resulted in the preservation of more than 17 million acres of agricultural land. That amounts to half of all the

privately owned land in the state.

Though these legislative “findings” are accepted by many as truisms, there is little empirical evidence to support them.⁷

Oregon Does Not Have a Shortage of Agricultural Land

Oregon's land-use system simplistically assumes that all farm land is a scarce commodity, and seeks to maintain that land in its present use. The problem is, local planning boards have no real way of knowing whether 17 million acres of agricultural land is the “appropriate” amount to keep in production, or whether it should be some other number. Unless additional analytical tools are used, this will be unsolvable problem, one which will always place elected officials in the defensive posture of having to amend zoning codes when proposed nonfarm land-uses appear to be more appropriate.

The only real way to determine whether Oregon should be producing more or less of farm commodities is to look at the market prices of both raw land and farm outputs. Prices are the most objective way of measuring the relative scarcity of goods and services. An asset's value is determined by the discounted present value of its future return. In other words, if the marketplace believed that agricultural land was going to be in short supply in (say) ten years, then owners would bid up prices today.⁸

But prices as actually measured indicate that farm real estate has relatively low value, at least when it is zoned exclusively for farm use. In 1995, the average per-acre value of farm real estate in Oregon was \$844. This is not much different than farmland prices elsewhere in the country. Even in California, the nation's number one agricultural producer, the average value was only \$ 2,215 per acre⁹.

At the edge of urban growth boundaries, these values jump to \$18,000 or more in the Portland metropolitan area, which reflects both the value of land for rural uses and a speculative premium value based on the presumption that it will eventually be used for some urban purpose. But raw land inside the growth boundary, zoned for single-family residential development, was selling for \$150,000 an acre in downtown Portland and about \$120,000 an acre near the edge of the boundary in 1996.¹⁰ The difference of \$100,000 per acre for urban land versus non-urban land is an unmistakable sign that Oregon has a relative surplus of farmland.

Raw Land is Becoming Less Important, Not More, as a Factor in Total Agricultural Production

Focusing state land-use policies on land preservation *per se* is misguided, because land is only one of several major inputs to the agricultural process, and not even the most critical. In the United States, other factors together ***“contribute about three times as much as land to total agricultural production. This being the case, the ‘adequacy’ of land cannot be determined independently of the cost and productivity of the land relative to the costs and productivities of other factors.”***¹¹

The impressive gains in productivity from the so-called “Green Revolution” came from manipulating other inputs—such as plant genetics and fertilizers—not from adding more land to the agricultural base.

According to indices of the United States Department of Agriculture (USDA),

The Next Agricultural Revolution

A major research breakthrough is shaping agriculture as significantly as did the development of pesticides and the mechanization of labor. The use of genetically improved seeds — known as *transgenic crops* — is growing by the day. This year, it is estimated that 50 million acres of transgenic crops will be planted worldwide.

Transgenic crops are engineered to grow with fewer inputs, while producing greater yields. Potatoes will be one of the first crops used widely in the Columbia Basin. Seeds developed by Monsanto Corporation are beetle-resistant and need only sunlight, water, and fresh air to protect themselves from beetles.

The environmental and economic effects of this development will be enormous. Currently, farmers must spray potato fields with pesticides to control the beetle and potato leafroll virus. In the Columbia Basin alone, it takes about 3.5 million pounds of pesticides, yet less than 5% of the pesticides reach the targeted pests.

Application of these chemicals costs growers between \$15 and \$30 per acre. With genetically improved seeds, profits will go up, while chemical inputs will go down. “A revolution in agriculture is under way,” Wojciech Kaniewski, a Monsanto biotech researcher, said at a recent conference.

Corn is another crop with enormous potential. Field research demonstrates that transgenic corn — grown without pesticides — can produce 21.6 more bushels per acre than sprayed corn. This represents a productivity gain of 18.5% for American farmers, who grew an average of 117 bushels per acre during the years 1993-96.

Currently, 19 private companies are developing biotech products. Crops that will be available in the near future include virus-resistant sweet potatoes, naturally colored cotton fibers, and virus-and insect-resistant tomatoes.

Source: Capital Press, March 28, 1998; Agricultural Statistics, 1995-96, USDA.

the American agricultural sector was 158 percent more productive at the end of the 1980's than at the beginning of the 1960's.¹²

It is often asserted, however, that these productivity gains peaked in the 1980's, and that raw land will become increasingly more important in the future. Like many doomsday predictions, this one is strikingly reminiscent of the remark made by Charles Duell, U.S. commissioner of patents, who said in 1899, ***“Everything that can be invented has been invented.”***

Fortunately, rumors of the demise of

agricultural research are premature. An analysis of yields of 12 field crops conducted by the USDA, including oats, barley, rice, peanuts and potatoes, showed that the years in which record yields per acre were achieved occurred *after* 1991 in all cases except one (winter wheat, 1983). For eight crops, the record yields were achieved in 1994.¹³

In some areas of crop research, soil is not even a factor. For instance, hydroponics (the practice of growing agricultural commodities in nutrient solutions) is already commercially viable. A company in DeKalb, Illinois—PhytoFarm—pro-

duces lettuce and other garden vegetables in a 50,000 square-foot factory at the rate of one ton of food per day. At this rate of production, the population of the entire world could be fed from hydroponic farms covering an area roughly one-tenth the size of Texas. This would represent only about 1/1000 as much land as is needed for agriculture at present.¹⁴

World Commodity Prices Reflect Surpluses, Not Shortages

If we were facing a real or perceived food shortage, it would be reflected by a rise in the price of food. But in fact, food prices have been steadily dropping for years (*Figure 2*).

These trends highlight one of the central problems with Oregon's zoning system: it is divorced from the real world of market pricing. If markets indicate an oversupply of commodities, farmland zoning designations are meaningless because agricultural production will not be profitable. In such circumstances, farmland owners need other land-use options.

B. Forest Land: Regulating for Shortages in a World of Plenty

Oregon's approach to forest land is similar to that of farm land. LCDC's Goal 4 (Forest lands) seeks to preserve forest lands and protect the state's forest economy. Under this goal, the continuous growing and harvesting of forest tree species is to be the leading use of forest land. Approximately 10.7 million acres of private land are zoned for commercial forestry, and another 16.8 million acres of timber land are publicly owned.

As with Goal 3 (Agricultural Lands), forestry zoning represents an unrealistic fear of shortages. The United States is not likely to face a timber crisis. In fact, the annual net growth of timber has outpaced tree harvest in the United States by a substantial margin since 1952.

What most people fail to realize is that

Figure 2.

World Commodity Prices and Index, 1980 and 1992

<i>Commodity prices</i> <i>(In constant U.S. dollars)</i>	<i>1980</i>	<i>1992</i>	<i>Percentage change</i>
Cocoa (kg)	3.6	1.0	-71.5
Coffee (kg)	4.8	1.3	-72.6
Rice (mt)	603.0	269.7	-55.3
Wheat (mt)	265.1	166.1	-37.3
Sugar (kg)	0.9	0.2	-78.0
Oranges (mt)	542.7	459.0	-15.4
Linseed oil (mt)	968.6	372.7	-61.5
Soybeans (mt)	411.6	221.0	-46.3
Lamb (kg)	4.0	2.5	-37.9
Bananas (mt)	526.6	443.9	-15.7
Fish meal (mt)	700.3	451.8	-35.5

Source: World Resources Institute, *World Resources 1993-1994*, p.262

many timberlands that were cut over earlier in this century are all producing timber again. By the mid-1990's, the number of wooded acres in the nation was *three times* what it was in 1920. Land use patterns in New Hampshire and Vermont are illustrative: New Hampshire was about 50 percent forested in 1850, but is about 86 percent forested today. Vermont had only about 35 percent of its land mass in forests 100 years ago; today, it's about 76 percent.

Timber Prices Show Increased Abundance, Not Scarcity

As with agricultural commodities, prices can tell us a great deal about the relative level of scarcity of timber commodities. Economist Stephen Moore has analyzed these prices, and concluded that over the past decade, the **real prices of paper and lumber fell by 10 and 30 percent, respectively**. When these prices are indexed to wages — a measure of how much a consumer can buy — **1992 lumber prices were 66 percent lower than the prices in 1950, 82 percent lower than prices in 1900, and 90 percent lower than prices in 1800**. Factors such as improved silvicultural techniques and technological

innovation have resulted in greater abundance of wood products, making them more widely available.¹⁵

Oregon's Public Ownership of Timber Lands Makes Forestry Zoning Redundant

Of Oregon's total land area of 61.4 million acres, nearly half—27.5 million—is forest land. Sixty-one percent of the 27 million acres is in public ownership. That being the case, there is no rationale for government to manipulate the supply of timber through regulations on private timberlands, because the state can already accomplish the same goal through public lands. Land-use planning advocates who fear that we will not have sufficient timber resources in the future should make that case to public land managers such as the State Board of Forestry, the U.S. Forest Service, and the Bureau of Land Management, not private timber land owners.

C. Farm and Forest Employment is Becoming Relatively Less Important Over Time

Exclusionary zoning on farm and forest land is frequently justified on the basis that these lands are essential to the economic health of Oregon. However, the empirical evidence shows that these lands are becoming *less important, not more*, as factors in state employment.

Total employment in the agricultural sector in 1994 was approximately 91,856, or 5.2 percent of total employment in the state. Employment in the wood products industry was approximately 102,200, or 5.8 percent of total employment. These are significant numbers, but not dominant when compared with all other sectors. In fact, no single sector of the economy is dominant, because the nature of the activity is so diverse.

The authors of one recent analysis noted that *“Nonmanufacturing industries now account for over 75 percent of economic activity in the state. The prominence once held by the natural resource based industries has not declined, so much as been diluted by the diversification of the economy into nonmanufacturing sectors, as well as the emergence of new manufacturing sectors, such as the high technology industries of the Metro region.”*¹⁶

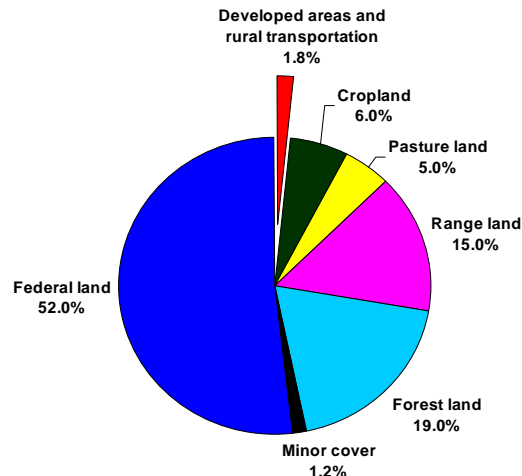
It is unlikely that the agricultural or wood products sectors will regain their positions of prominence. Several years ago, the Oregon Employment Department forecasted employment growth by major occupational groups through the year 2005. All of agriculture, forestry and fishing were expected to grow by only 2 percent; other sectors were expected to grow by an average of 16.6 percent, with professional and technical leading the way at 26 percent.

The importance of farm and forest land to total employment is even weaker if examined on the basis of jobs produced per acre. The state has approximately 17.5 million acres of farm land. This means that the agricultural sector creates an average of about 0.0052 jobs per acre.

The wood products industry utilizes a

Figure 3

Oregon Land Cover, 1992



Source: Statistical Abstract of the U.S.

land base of approximately 18.3 million acres that the Oregon Department of Forestry considers capable of producing timber for commercial harvest. That means the industry accounts for 0.0055 jobs per acre.

All other sectors of the economy produce 1,577,971 jobs, yet occupy only 1,105,200 acres (including land used for housing). This results in 1.42 jobs per acre—**more than 250 times as many jobs as the average of commercial farming and forestry.**

At the high end of the spectrum, Intel Corporation employs 11,300 people on 92 acres. That works out to 123 jobs per acre. All of these jobs are in suburban communities, the kind that advocates of zoning frequently criticize as “wasteful urban sprawl”. But by virtually any comparative measure—market value of land per acre, jobs produced per acre, or average wages—this type of development has higher economic value than most rural uses.

If Oregon regulators really desire efficient land use, they should eliminate zoning barriers that prevent landowners from making investments that raise the total productivity of their own lands.

D. Zoning is Not Necessary to Preserve Open Space

Another reason frequently given for farm and forest land regulation is the protection of aesthetically pleasing landscapes. The popular perception is that urbanization is diminishing the amount of available open space, and that we will soon be surrounded by “urban sprawl.”

In fact, the opposite is true. In the United States, protected wild areas—publicly-owned lands designated for non-consumptive uses such as hiking or boating—have increased dramatically since 1959. The ratio of protected areas to urban and agricultural lands grew from 6.4 percent to 22.9 percent during the period of 1959-1987.¹⁷ Meanwhile, the percentage of lands that are developed — despite the suburbanization boom of the last 50 years — is only about 6 percent. In Oregon, the total is even smaller—roughly 1.8 percent.

A significant amount of land (both public and private) has been withdrawn from commercial use in Oregon during the past 25 years, and that amount is growing all the time. In 1984, Congress *doubled* Oregon’s Wilderness System (federal lands reserved primarily for non-motorized recreation) by

protecting more than 1,000,000 acres of federal land. Federal, state and local governments have also **withdrawn 3,827,000 acres of timber land from commercial harvest through statute, ordinance or administrative order.**¹⁸ These lands have been set aside for various non-consumptive purposes, such as endangered species habitat and watershed protection.

Congress has also taken action to protect wild lands and waterways through the federal Wild and Scenic Waterways program. In 1988, at the urging of Sen. Mark Hatfield, Congress added 1,800 miles of federal rivers to the program in Oregon alone—**giving Oregon approximately 17 percent of all protected river miles in the entire country.**

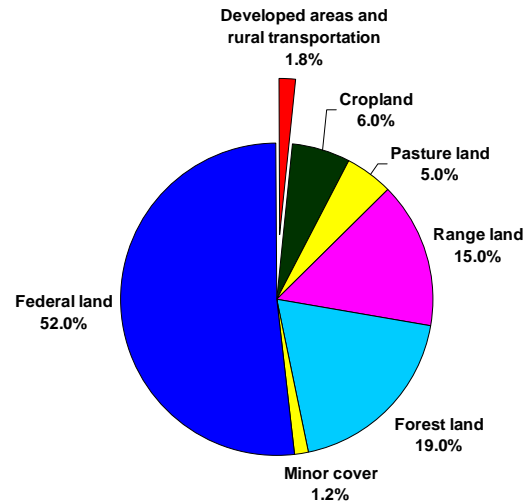
In addition to redesignating existing public resources, the federal government has ongoing grant programs that will ensure the continued purchase of lands for public purposes. For instance, the federal Land and Water Conservation Fund generates an average of nearly \$900 million annually from offshore oil and gas leases, and these revenues are dedicated to the purchase of wildlands. During the past 15 years the fund has accumulated \$13.6 billion, but Congress has only appropriated 32 percent of the funds, so there is considerable potential for increased land purchase in the future.

President Clinton recently requested \$1.3 billion from this fund for land acquisitions for national forests, parks, scenic areas and wildlife refuges. Grants in the Pacific Northwest would include:

- \$2 million for the North Cascade National Park;
- \$2.9 million for the Olympic National Park;
- \$800,000 for the John Day Fossil Beds;
- \$2.5 million for West Eugene Wetlands;
- \$1 million for the Columbia Gorge National Scenic Area; and

Figure 4

Oregon Land Cover, 1992



Source: Statistical Abstract of the U.S.

\$1 million for Opal Creek.¹⁹

Aside from these federal sources, voters in the Portland metropolitan region have also chosen to tax themselves in order to create a fund to buy open land for the Regional Greenspaces Program administered by Metro. Since the bond measure was passed in 1995, Metro has spent about \$25 million to acquire nearly 2,500 acres throughout the metropolitan region. This represents 41 percent of the acquisition goal of nearly 6,000 acres with an expenditure of 22 percent of the total bond funds.²⁰

Ironically, the one type of open space that is critically important to many Oregonians—privately owned land in residential neighborhoods—is rapidly becoming endangered, not in spite of Oregon's land-use laws, but *because of them*. Oregon policies promote artificially high levels of residential density within the Urban Growth Boundaries that surround all urban areas. In order to achieve these densities, local government officials, especially in the Portland region, are deliberately zoning residential neighborhoods for very small lots, averaging 6,500 square feet for single family dwellings. They also frequently give tax breaks to developers to build high-density projects.

As a result, residents in the Portland region who do not already have large yards are unlikely to find them in the future, even if they are willing to pay for the extra land.

IV. Why Zoning is a Poor Tool for Allocating Land Resources

Aside from being a tool to preserve farmland, zoning is often defended on the grounds that individual landowners, driven only by self-interest in the market-place will have no concern for broader community values, therefore government must intervene with comprehensive land-use plans to correct for so-called “market failures”.

Unfortunately, 82 years of nationwide experience with this approach²¹ demonstrates that regulatory intervention suffers from a number of “government failures”, including:

(1) The Knowledge Problem. Every parcel of land has a myriad of potential uses. The task of determining the ideal use for each parcel, in jurisdictions that may be thousands of square miles, is simply too daunting. It requires more information than

could ever be processed by a central body, and even if it could be, it would quickly become outdated.

(2) The Political Problem. Because government officials lack adequate knowledge, their decisions are inevitably subjective. In the words of one legal scholar, resource allocation through zoning *“is a process by which some are punished and others rewarded for reasons which have no relation to objective merits but have relation only to government policy.”*²² This leads to wasteful spending on lobbyists, consultants and litigation, and inevitably corrupts the political process.

(3) The Scarcity Problem. Zoning (at least in Oregon) creates an artificial scarcity of buildable land. It is illegal to build on or subdivide most private land in Oregon—unless the development is directly related to commercial farming or forestry at a scale (lot size) larger than most individuals can afford. This creates a cartel of property owners who own buildable land, which makes that land much more expensive than it would be otherwise.

Even in Multnomah county, by far the most urbanized county in Oregon, fully 95 percent of the private land is zoned to exclude residential housing developments. The results are overwhelmingly negative for most citizens. According to consultants who recently analyzed land use trends for the Portland area regional government, Metro:

*The [Metro] model incorporates and illustrates many of the impacts that one would expect when one assumes substantial growth and or limited expansion of land supply: reduced average lot sizes, a greater proportion of households in multifamily housing, decreased percentage of households owning their own homes, increased percentage of household income spent on housing, and increased number of housing units that will require subsidy.”*²³

(4) The “Commons” Problem. When property rights are not clearly defined,

individuals have incentives to maximize their own gain at the expense of others by over-utilizing common property resources. This dilemma was eloquently described 30 years ago in a famous *Science* magazine article by ecologist Garritt Hardin, entitled *“The Tragedy of the Commons”*.

Zoning takes private property and converts it to a type of community property. This encourages everyone to promote their own self-interest by regulating the property of others, thus creating a “commons” problem where it didn’t exist. An effective land-use control system would *reduce*, not increase, conflicts related to the enforcement of property rights.

(5) The Environmental Problem. Zoning focuses on land use, not the *effects* of land use. Thus it misses the mark as a pollution control technique. As urban writer Jane Jacobs wrote years ago, *“The notion that reek or fumes are to be controlled by zoning and land sorting classifications at all is ridiculous. The air doesn’t know about zoning boundaries. Regulations specifically aimed at the smoke or reek itself are to the point.”*²⁴

Traditional zoning frequently makes environmental problems *worse* by implicitly assuming that people who create nuisances while using their land are incapable of controlling those effects, therefore they should be allowed to use surrounding properties (which they don’t own) as *de facto* buffer strips—so long as other property owners with identical zoning designations have the same rights. This allows property owners to export their nuisance effects, such as pollution, without consequence. This is the policy basis for the creation of so-called “industrial sanctuaries” in urban areas, as well as Right-to-Farm statutes in farm zones that specifically prohibit neighbors from filing nuisance claims against farmers who fail to control offensive activities.

While the creation of industrial or agricultural “war zones” may have seemed appropriate in the early 1970’s, a large segment of the public now believes that

those who create environmental hazards should be held accountable, by internalizing the cost of pollution control to their own operations.

(6) The Exclusionary Problem. When stripped of its pretensions about “rational land allocation”, zoning—as actually practiced by political officials—is simply a means of preserving the status quo. This practice is inherently elitist, and has resulted in thousands of neighborhoods being zoned to prevent low or even moderate-income people from living there. Indeed, the very court case that firmly established the legality of zoning—*Euclid v. Ambler Realty Co.*—clearly stated the cultural bias against apartment dwellers that persists to this day. In that case, the court stated that:

*“With particular reference to apartment houses, it is pointed out that the development of detached house sections is greatly retarded by the coming of apartment houses, which has sometimes resulted in destroying the entire section for private house purposes; that in such sections very often the apartment house is a mere parasite, constructed in order to take advantage of the open spaces and attractive surroundings created by the residential character of the district.”*²⁵

Advocates of zoning in Oregon have succeeded in putting a warm and fuzzy “spin” on zoning by focusing almost solely on the perceived need to protect farm and forest land from development. But the evidence shows that there is no need to restrict development on such lands; therefore there is no need for zoning restrictions that simply reflect the aesthetic preferences of those in political power.

V. Alternative Approaches

In the 21st century economy, land-uses are likely to be much more varied than they have ever been. Technological innovation is breaking down geographic barriers at a rapid pace, with telecommunications capacity doubling roughly every 18 months. These innovations are giving Americans more

The St. Mary's Property: Soviet Agriculture Comes to Hillsboro

Perhaps no single development site reflects the inherent contradictions of Oregon's land-use system better than the 463 acre parcel of farmland near Hillsboro owned by the Sisters of St. Mary of Oregon. Owned by the Convent since 1957, the land is being farmed for wheat and clover. The Sisters would like to sell the property and use the revenues to subsidize their schools — St. Mary of the Valley and Valley Catholic High School — and to provide for their retirement program. A large development company, Genstar, has negotiated an option to buy the land and hopes to build a master-planned, 4,000-home community. The market value of the land, if rezoned, will be at least \$55,000 per acre.

As envisioned by Genstar, the community would include virtually everything that urban planners desire: the site is adjacent to existing urban neighborhoods, near growing job centers such as Intel and Tektronix, is easy to serve with sewer and water, will include a mixture of single-family and multi-family housing, and offers a full range of transportation options, including proximity to the west-side light-rail line. Though located outside the existing urban growth boundary, the project is hardly an example of "urban sprawl": it is more than half-surrounded by the urban growth boundary, and will be developed at a density of approximately 10 units per usable acre — higher density than many inner-city Portland neighborhoods.

The city of Hillsboro, to which the site would be annexed, supports the change in use. In 1997, the Metro council, which reviewed the site as part of its urban growth boundary analysis, included it in the urban reserve area that could potentially be developed. But Metro's decision was challenged by various interest groups as well as the Department of Land Conservation and Development and three other state agencies. The sole basis of the challenge: the conversion would violate Oregon's policy of farmland preservation.

While Oregon law does allow the UGB to be expanded onto farmland, this can occur only as a "last resort", after a jurisdiction has satisfied a complex array of legal requirements. In essence, the regulations force jurisdictions to weigh such issues as jobs-to-housing ratios, infrastructure costs, and soil capabilities, then decide the socially optimal outcome.

State land-use regulators argue that the best use of the land is for farming, but clearly their calculations do not include any consideration of how that decision will affect the nuns. The property is practically worthless as a source of farm revenue; based on the average market prices of wheat for the years 1991-95, it's unlikely that the annual net revenue on the farm exceeds \$26 per acre, or \$11,921 total (this mirrors the average net farm income of all Oregon growers in 1995, which was \$12,531. If forced to continue farming, the short-run opportunity costs to the nuns will be at least \$25 million; the long-run losses are incalculable, but would certainly be \$1.7 million annually if the funds were invested at 7% return.

State land-use officials would probably not fund their own retirement accounts with investments netting \$26 per acre, but then, they don't have to. The Oregon Public Employee Retirement System has a \$25 billion fund that is strictly managed by the state Treasurer and the Oregon Investment Council for *maximum return on investment*, subject to the prudent-person principle. As a result of the Fund's unusually strong performance in recent years, many public employees are taking early retirement.

The message from Salem is clear: for the PERS Fund, wealth-producing capitalism is the mandate; for Oregon farmers, it's centrally-planned poverty.

Sources: *The Oregonian*; 1995-1996 *Oregon Agriculture & Fisheries Statistics*; Department of Land Conservation and Development.

choices with regard to where and how they live, work and recreate. This means that people will increasingly scatter themselves across the landscape, continuing a trend that has been underway for most of this century.

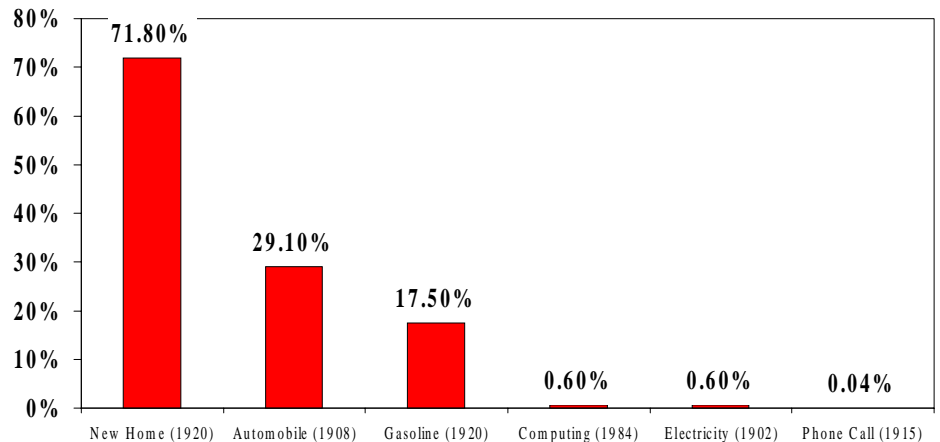
Indeed, the trend is likely to accelerate because the technologies that enable people to live and work in disparate locations are becoming less expensive all the time. In terms of *hours of work* needed to pay for consumer goods, the costs of the four major technologies that allow suburbanization—electricity, telephones, computing, and motor vehicles—are now a tiny fraction of when those products were first manufactured. In addition, the cost of housing has declined, encouraging people to seek larger homes on larger lots.

While the costs of “sprawl” are declining, personal income for Oregon families is rising at a rate faster than the Consumer Price Index. These factors, taken together, make it highly unlikely that people will voluntarily lower the quality of their lives by living on expensive, small lots in dense urban neighborhoods, if what they really want is something else. The explosive growth of both jobs and population in such cities as Sherwood, Wilsonville, Tigard, Hillsboro and Clark County, WA, since 1980 is evidence that the central city bias of Oregon land-use planning is no longer relevant to many Oregonians.

Some of the new land-uses in the digital economy will create positive effects for the community, while others will create negative ones. Since it's impossible to plan for and regulate all these activities, we *should stop trying to do so*. We should instead focus our efforts on one primary task: **controlling negative spillovers**.

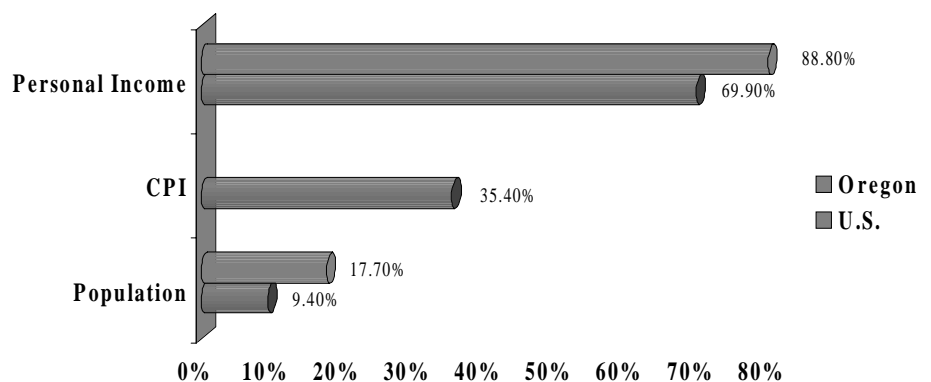
A spillover occurs when one individual takes an action that affects others. Sometimes spillovers are referred to as “externalities”, because the consequences of the action are external to the concern of the individual who caused them. Spillovers can be both positive and negative, sometimes even at the same time, depending on the circumstance. For example, an outdoor security light on the side of an urban home may be perceived as a

Figure 5
The Work-time Cost of Products, Today versus Yesterday



Source: Federal Reserve Bank of Dallas, 1997

Figure 6
Comparative Growth in Personal Income and Population 1986-1995 (Oregon and U.S.)



Source: Oregon State Audit, 1996

positive spillover to neighborhood kids who use the light to play basketball after dark in the street. But the owners of an adjacent home may consider it a negative spillover if the light shines into their bedroom while they are trying to sleep.

Reducing the role of government land-use regulation to that of controlling spillovers is likely to strike planning advocates as a hopelessly simplistic approach. It may be seen as reactive, rather than visionary, and the whole point

of government planning is to implement a vision. But we now know that previous government “visions”—such as setting airline fares, allocating interstate trucking routes, operating local transit systems, and marketing federal electricity—have been costly failures, and these failures are now widely acknowledged even by regulatory officials. As Betsy Moler, former Chairwoman of the Federal Energy Regulatory Commission, said recently on the subject of electricity deregulation, *“Regulators are referees now. They don’t set prices. They call balls and strikes.”*²⁶

Refereeing the game is an important role, and Oregonians should not be ashamed to reel in state land-use regulators so that they simply call the fouls. This report has identified five major policies for accomplishing this:

- 1) **Adopting the use of performance-based zoning for prospective land-uses;**
- 2) **Re-instituting the use of common law nuisance and trespass principles to control negative spillovers from existing land-uses;**
- 3) **Using market-based pricing of infrastructure to ensure that we all “pay our way” as we develop land;**
- 4) **Using public/private land swaps, asset sales and other innovative financing techniques to purchase land for public purposes; and**
- 5) **Ending government-sponsored economic development programs**

Controlling Spillovers in Prospective Land-Uses: Performance-Based Zoning

Performance zoning, also known as flexible zoning, is an approach to land control that focuses on the *effects* of land uses, rather than *categories* of use. The

Is the criterion applicable? CRITERION	Will the criterion be satisfied?		
	Yes	No	If no, please explain
NEIGHBORHOOD COMPATIBILITY 1. Social compatibility 2. Neighborhood character 3. Land use conflicts 4. Adverse traffic impact			
PUBLIC FACILITIES & SAFETY 5. Street capacity 6. Utility capacity 7. Design standards 8. Emergency access 9. Water hazards			
RESOURCE PROTECTION 10. Soils & slope hazard 11. Wildlife habitat 12. Historical landmark 13. Ecologically significant areas 14. Agricultural lands			
ENVIRONMENTAL STANDARDS 15. Air quality 16. Water quality 17. Noise 18. Glare & heat 19. Vibrations 20. Exterior lighting 21. Sewage & wastes			
SITE DESIGN 22. Site organization 23. Natural features 24. Privacy 25. Open space arrangement 26. Building height 27. Vehicular movement 28. Parking 29. Active recreational areas 30. Pedestrian convenience 31. Pedestrian conflicts 32. Landscaping/open areas 33. Landscaping/screening 34. Public access 35. Signs			

Source: *Flexible Zoning — How it Works*, Urban Land Institute

model for performance zoning was first developed by Lane Kendig in 1973 when he was Director of Community Planning for Bucks County, Pennsylvania. Since then, performance zoning has been reviewed extensively in the planning literature, and implemented on a limited scale in various parts of the country.

The guiding principles of performance zoning are as follows:

No land use is automatically excluded from a specific site. Rather, criteria are established which ensure that each land use will be compatible with adjacent land uses. Of course, the word “compatible” is open to interpretation. As used here, it means that one land-use will not adversely affect others—based on long-established principles of trespass and nuisance (described below). Criteria are established relating to such issues as traffic congestion, water runoff, noise, and building height, and a site plan is required to evaluate the applicant’s success or failure to address these criteria.

Any land use can be made compatible with any neighboring land use through buffering, design and the use of appropriate incentives. This assumption dramatically changes the role of government officials in development. It moves them out of the business of planning the economy, and into the more appropriate role of enforcing property rights when those rights are threatened by negative spillovers.

The private market is in a better position to determine the appropriate location of types of land uses than government officials. Every parcel of land has many potential uses. The attempt to lock certain uses into place on a zoning map is a futile and costly undertaking. Government officials should be concerned only with the performance of particular uses, not their location on a zoning map.

Performance zoning offers several critical advantages over traditional exclusionary zoning. First, it does not require planners and city officials to guess what the

Typical Set of Criteria Points and Decision Rules for Evaluating Performance-Based Standards

(1) *Neighborhood Compatibility:* Proposed uses are encouraged that will not conflict with existing uses in the district and will conform with the desired character and function of the district, as specified in the land use guidelines. (0 to 2 positive points are possible, with a multiplier of 4)

Staff guidelines:

- +8: High priority use: compatible with land use district guidelines and adjacent uses
- +4: Compatible with district guidelines and adjacent uses
- 0: Compatible with district guidelines

(2) *Incompatible Use Policy:* Proposed uses are discouraged that are incompatible with the preferred uses, or the desired character and function of the district, as specified in the land use guidelines. (0 to 2 negative points, with a multiplier of 4)

Staff guidelines:

- 0: Compatible with district guidelines
- 4: Not compatible with district guidelines
- 8: Extremely incompatible with guidelines and neighborhood

(3) *Capital Improvements:* Proposals that will implement capital improvement needs specified in the land use guidelines are encouraged. (-2 to +2 points, with a multiplier of 4)

Staff guidelines:

- +8: Large number of improvements needed, all provided
- +4: Some improvements needed, all provided
- 0: None needed, none provided
- 4: Some improvements needed, not provided
- 8: Many improvements needed, few or none provided

MINIMUM NUMBER OF TOTAL POINTS
NECESSARY FOR PLAN APPROVAL : _____.

Performance zoning typically requires developers and property owners to reach a minimum point total on the performance standards chart, but allows them flexibility in how to reach that number. This encourages creativity and cost-effectiveness on the part of developers. The use of multipliers for each performance standard allows the community to place the greatest weight on development issues of most concern to local residents.

Source: *Flexible Zoning — How it Works*, Urban Land Institute

future could/should look like. It simply establishes measurable performance standards that protect property rights, then requires all new development to meet the standards.

Second, measurable performance standards provide a more legally supportable basis for zoning requirements, as they demonstrate a direct link between the public purpose of the provisions and the requirements. This is exactly what the

Supreme Court has begun to require from local governments in recent land-use decisions.

Indeed, as several experts have written:

“What better way to show this link than by the use of performance standards? In a flexible zoning system, the nexus or essential link between the mitigating measure and the development impact must be established when the performance standards are initially designed and enacted, and therefore it is virtually woven into the very fabric of the performance criteria themselves.”²⁷

Third, performance zoning does not require local officials to pick winners and losers in the economy. By authorizing any use on any property, performance zoning allows property owners to focus their energies (and financial resources) on creating quality developments, rather than lobbying governments and filing legal appeals.

Where Has Performance Zoning Been Used?

Various communities in the United States have *abolished* traditional zoning codes and enacted performance zoning standards as a wholesale replacement. Performance zoning has been used successfully in such diverse places as Bath Charter Township, Michigan; Buckingham Township, Pennsylvania; Duxbury, Massachusetts; Fort Collins, Colorado; and Largo, Florida.

Implementing Performance Zoning in Oregon

Performance zoning is already being used in some Oregon communities as adjunct strategies to traditional prescriptive zoning²⁸. That use should be accelerated by the state legislature. The only way to ensure this is to prevent state agencies from requiring, and local governments from utilizing, exclusionary zoning or zoning

standards not clearly related to the control of negative spillovers. That means that the legislature should prohibit *at least* the following:

- **Lot size regulations.** As a general matter, there is no way that local planning boards can prospectively adopt lot size regulations and link those rules to a public purpose. All such decisions should be made in the context of specific land-use proposals, and regulations imposed only when necessary to control spillovers.
- **Density regulations.** As with lot size, it is impossible for regulators to know, in the abstract, what the “correct” density should be. Furthermore, it is extremely difficult to actually implement density controls.²⁹ Therefore, density should be negotiated directly with developers in the context of specific plans, and regulated only for the purpose of controlling externalities.
- **Income tests related to building permits.** It is none of government’s business how much money farmers or any other class of people make, at least for purposes of issuing building permits. Income bears no relation to the question of externalities; therefore it should not be a matter of land-use regulation.
- **Regulations that prohibit or require certain uses.** The market is far better at determining the appropriate uses for individual parcels of land. Under performance zoning principles, all uses are allowable, regulated only for the control of externalities.

If individual developers want to restrict the uses of properties that they sell within their own development, they are free to impose deed restrictions, as many already do in Oregon and elsewhere. Deed restrictions are frequently much more constricting to future prop-

erty owners than local government ordinances, but the scope of the restrictions is limited to property originally owned by the developer. As long as these restrictions cannot be forced on others in the community, they remain a valid tool for preserving the character of a neighborhood. People who object to such restrictions are free to purchase property elsewhere.

Back-up Policy Option: The Local Opt-Out

If policy-makers deem the above recommendations to be too big a leap within the current political climate, an alternative approach would be to *allow* communities to use performance zoning by opting out of the existing statewide land-use program. If neighborhood associations or entire jurisdictions believe that community values can be better protected through a system that focuses on the effects of land uses rather than categories of use, there is no compelling reason that government officials should deny them the opportunity.

In concept, this “waiver” approach is similar to 1995 legislation that authorized local school districts to establish “alternative schools” (commonly referred to as charter schools). This legislation recognized that *“one-size-fits-all school policy is detrimental to the goal of educating students,”* and that local districts should have the authority to experiment with different approaches, so long as charter schools are held accountable for their performance. The same approach could be applied to land-use regulations as well.

Regulating Existing Land-Uses: Common Law Approaches to Controlling Negative Spillovers

While performance zoning has many desirable attributes, one of its drawbacks (common to all zoning systems) is that it only affects new construction or remodeling of existing structures. There are many causes of negative spillovers that are linked

to *existing* land-uses, such as backyard burning or industrial pollution. These problems require solutions that go well beyond zoning.

One such policy is the vigorous enforcement of property rights through *common law doctrines of trespass and nuisance*. Common law can be traced back many centuries, to the English unwritten or customary law that from medieval times has governed the rights and responsibilities of property owners. English settlers brought the common law to what is now the United States and Canada, and it still applies except where it has been overridden by statutes (laws passed by elected bodies).

Rather than being written in statutes, common law property rights have evolved in the courts through the ages. Many provisions of the common law function as environmental protection laws.³⁰ Three are discussed below.

Trespass

Under the common law, if a harmful substance is allowed, intentionally or carelessly, to invade the property of another, there may be a trespass. This may occur by land, air or water. If the trespass occurs, the defendant is held responsible for damages.

Throughout North America, people have used the trespass doctrine as a pollution control strategy. In a turn-of-the-century case, a New York court issued an injunction against a town's sewage disposal practices. In emptying sewers into a creek that flowed through a farmer's land, causing filth to accumulate on the creek's bed and along its banks, the town had trespassed against the farmer. This violation of the farmer's property rights could not be permitted, regardless of the public necessity of the sewage works or the great inconvenience that could result from shutting them down.³¹

The Alberta Supreme Court in Canada held in 1976 that fly ash and sawdust from a lumber company constituted a trespass

against a nearby motel³².

Oregon courts have consistently found polluters liable for pollution migrating onto the property of others. In 1963, Harvey Aluminum Co., the largest employer in The Dalles (550 employees), was sued by several orchard owners who claimed that their crops had been damaged by fluoride emissions.³³ The court found the pollution to be both a trespass and a nuisance, and awarded the orchard owners approximately \$10,000 each in damages for the crop losses and ordered the plant managers to install emission-control equipment, at a cost to the owners of more than \$2 million. The company was given one year to install the equipment.

The parties ended up in court again several years later over a dispute about a settlement they had agreed to after the previous case. The court enforced the agreement, and required the company to compensate the orchard owners more than \$940,000.³⁴

In 1973, the courts found that the spraying of chemicals by helicopter onto a nearby pasture was an "ultrahazardous" activity and that the sprayer was liable for damage caused to plaintiffs' annual pole bean crop, regardless of the absence of intent or negligence³⁵ on the part of the pilot.

In 1992, smoke and its lingering odor on a landowner's premises, which resulted from a neighbor's field burning of grass stubble, was held to be a trespass³⁶. This case had a powerful effect on the grass seed industry. With the prospect of similar lawsuits ahead, the industry made intense efforts to find substitute practices; as a result, open field burning dropped from 159,137 acres in 1990 to 56,878 in 1997.³⁷

Nuisance

A second critical element of common law is the doctrine of nuisance. Under nuisance law, each landowner must strike a balance between the use of his own land, and the effects of that use on surrounding properties. One cannot use property in a way that restricts the rights of neighbors to

use their property.

In Oregon, courts have defined nuisance to be "*an offensive, annoying, unpleasant, or obnoxious thing or practice, a cause or source of annoyance, especially a continuing or repeated invasion or disturbance of another's right.*"³⁸

Nuisance law, unlike trespass, requires proof of harm. Nonetheless it can be a useful tool for halting a wide array of environmental hazards. People have used it to protect themselves from pesticide sprays, smoke, soot, dust, fumes and other air pollutants. Odors, noise and vibrations from industrial activities have also been held to be nuisances.

The advantage of the nuisance doctrine over contemporary land-use and environmental laws is that nuisance standards are flexible; the standards are very strict where there is clear harm to others, and lax where there are no victims. This allows societal resources to be focused so as to accomplish the most pollution reduction at the lowest cost.

For instance, Oregon courts have consistently ruled that such businesses as meat processing plants, funerals, and commercial stables are not necessarily nuisances *per se*—but they may become nuisances when operated in a manner where others are harmed, or when located in neighborhoods that are fundamentally incompatible with that use. Externalities such as noise pollution can be ruled nuisances if the noise-generating activities occur during hours usually devoted to sleep, even though that might not be so at other times.³⁹

In contrast, zoning and environmental licensing laws tend to be one-size-fits-all in nature, which results in the over-regulation of some activities and the under-regulation of others. For example, many (perhaps most) zoning ordinances exclude certain land-uses, no matter how benign those uses may be. This is increasingly becoming a problem for people who want to telecommute, operate a small business from their

home, or start a small farm. For these people, zoning laws represent a solution in search of a problem.

Unfortunately, the pollution-reducing potential of the nuisance doctrine has been sharply constrained by Oregon's Right-to-Farm land-use law. This statute prohibits most nuisance lawsuits against commercial farming and forestry operations. Although this is perceived as a farmer-friendly law, it is so sweeping in scope that it harms property owners of all backgrounds—including, on occasion, farmers themselves.

For example, one of the most highly publicized land-use conflicts in the entire west at the present time involves the farm waste practices of the Circle Four Farms, the nation's largest hog-farming operation. Located near Milford, Utah, the Circle Four generates tens of millions of gallons of hog waste each day. The stench of this waste has forced some farm neighbors out of their houses, and generated a political controversy that has torn the town apart. As one neighbor put it, "**Look, we're farmers. We can put up with animal odors. We can't put up with a sewer in our homes.**"⁴⁰

Application of the nuisance doctrine would clearly place responsibility on the managers of the Circle Four Farms to clean up their act, but Right-to-Farm laws in Utah prevent local farmers from using this remedy.

Compensation

The issue of government compensation for the taking of private property has been debated intensely in recent sessions of the Oregon legislature, with no resolution. A return to common law principles would end the debate and instantly *sweep away virtually all takings claims*, for two reasons.

First, most such claims involve zoning ordinances that prohibit landowners from developing their property as they wish. This would rarely occur with performance zoning. And second, the Supreme Court is now requiring local governments to demonstrate that the regulatory exaction is directly linked to the potential harm caused

by the land-use. Performance standards are designed to meet such a test.

Thus, a strict property rights approach would greatly reduce the amount of legislative and legal confrontations, shifting resources towards other more socially useful activities.

Questions of compensation would still arise under this approach, but they would rightfully involve transfer payments from those causing nuisances to those harmed by them. Nuisance law would:

"force the offending landowner to internalize his externalities, by making internal changes in his method of operation which remove the offending activity or change its character so that it is no longer damaging to his neighbor. To the extent that these changes require capital outlays from the offending landowner they represent a kind of compensation to the injured landowners, because they remove the source of the complaint. By the same token, the offending landowner who is farsighted enough to buffer his activities to reduce or eliminate the annoyance to his neighbors has by his foresight perhaps forestalled litigation against him."⁴¹

Implementing a Common Law Approach to Controlling Spillovers

There are at least two barriers to implementing a common law approach to land-use regulation. The first is that the Oregon legislature has passed multiple statutes that allow landowners to export their nuisance effects without being held accountable. To borrow from the self-help literature, legislators have become the "enablers" for dysfunctional behavior by some landowners.

Examples include environmental laws that authorize DEQ to issue pollution licenses; open range laws (applicable in some counties) that allow ranchers to let their cattle roam at large with no liability

for damages caused by the cattle; and Right-to-Farm laws.

The second problem is that most people do not have the time, inclination or resources to initiate common law cases against their neighbors. In economics jargon, the "transaction costs" are too high. In fact, this is the very reason why so many planning professionals advocate zoning in lieu of prosecuting individual nuisance or trespass claims.

However, there are reasonable remedies for both of these problems. In the first case, the legislature should simply enact legislation that holds all property owners liable for activities resulting in a nuisance or trespass, *notwithstanding any other law*. The legislature needs to make it clear that polluters and others creating negative spillovers cannot hide behind a DEQ permit or any other artifact of the regulatory state.

The second problem can be overcome by creating a mechanism for government to prosecute property rights infractions. Just as homeowners do not have to pay the local police agency or district attorney's office when they prosecute an armed robbery on behalf of the homeowner, citizens should be able to use the enforcement capability of government to settle a property rights dispute arising from a spillover. Local governments (perhaps each county) should create an **Office of Property Rights Enforcement**. These offices would be analogous to local law enforcement agencies, in the sense that the services would be free to those seeking redress from a property rights violation.

This need not be a costly burden to local governments. If zoning is simplified in the ways suggested by this paper, significant savings will likely accrue to local governments due to the elimination of costly long-range planning exercises. These funds could be shifted out of planning and into property rights enforcement.

A legitimate concern with this ap-

proach would be the possibility of judicial gridlock caused by too many cases. This issue could be addressed by the use of special tribunals dedicated to the resolution of trespass and nuisance cases. One such institution already exists: the Land Use Board of Appeals (LUBA). If other elements of this proposal are adopted, LUBA's workload will shrink dramatically; its mission could be altered, if necessary, to rule on trespass and nuisance cases in a timely fashion.

Making Development “Pay its Way” Through Market-Based Pricing of Infrastructure

One of the standard justifications for Oregon's restrictions on farm and forest land development is the assertion that so-called “urban sprawl” imposes unreasonable costs on the community in terms of infrastructure development (e.g., roads, sewers, parks, etc.). Empirically, however, this is a difficult case to make. Development subsidies occur in many locations, regardless of density, design or lot size.

For instance, two of the most massively-planned “transit-oriented developments” in Portland—the River District project in downtown, and conversion of the former ODOT office to a housing development along the east-side light rail line—will cost the public more than \$171 million in grants, tax abatements, free infrastructure, and other subsidies. The primary reason such subsidies are necessary is that market-based rents will not support the high densities of these politically-driven projects.

At a national level, many studies have examined the question of infrastructure costs, and the results are mixed. As one writer put it in a well-publicized academic debate, *“Controlling for socioeconomic, there may be little cross subsidy (and hence inefficiency) in one density pattern versus another.”*⁴²

But whatever the costs are, they should be borne by those creating them. This is true not only for costs associated with *new* development such as roads and sewers, but for on-going variable costs such as traffic congestion, which is caused primarily by *existing* motorists. These costs can be collected through user fees that closely link consumer behavior with services rendered.

Oregon policy makers generally think about this issue only in terms of system development charges (SDC's)—payments collected from developers at the time of construction. While SDC's of some sort may be appropriate, they miss the problem of costs imposed by the ongoing behavior of people who live or work in the developments, and those costs can vary widely.

Most jurisdictions pay for variable costs of road use, parks and libraries by “averaging” these costs, then raising revenue through various taxes (e.g., property or gasoline taxes). Unfortunately, this creates another “commons” problem, in which people have no incentives to use resources efficiently because they are not being charged for them directly.

This problem can be overcome through the use of market-based pricing techniques such as congestion pricing of roads, emissions fees for motor vehicle pollution, parking fees at state and municipal parks, and deregulation of the transit industry⁴³. If applied rigorously across the board, the use of these fee mechanisms would eliminate the rationale for government regulators to either promote or discourage any particular development pattern.

Using Innovative Financing Mechanisms to Purchase Open Space for Public Purposes

Zoning is a convenient, but regressive, technique for preventing development on lands desired for open space. Fortunately, there are additional techniques available that could protect scenic corridors without depriving property owners of the economic value of their land.

Public/private land swaps

Approximately 60 percent of Oregon is owned by the government. Frequently these lands have financial value, but not much practical value (to citizens) due to inaccessibility or some other barrier to use. These situations present opportunities to swap land of comparable value owned by private landowners in more publicly-accessible locations.

One recent example of this technique took place near Welches in Clackamas County. The Salem District of the Bureau of Land Management took title to 3,532 of land located mainly along Highway 26, and exchanged 1,454 acres of timbered parcels with Longview Fibre Company. The exchange, authorized under the Omnibus Consolidated Appropriations Act of 1997, restricts timber harvests on the newly acquired public lands because they are located in the viewshed of the Mt. Hood Highway.⁴⁴

Two additional public-private land swaps in central Oregon are nearing completion. When finished, the transactions will involve more than 200,000 acres.⁴⁵

Funding public purchases by selling existing assets

In addition to land, Oregon governments own billions of dollars of other assets, including mineral deposits, roads, bridges, airports and transit systems. If the public desires to own more lands specifically for the purpose of scenic viewing, recreation or wildlife habitat, one solution is to simply rearrange the portfolio of public assets.

Through legislative action, various public bodies (e.g., Congress, the state legislature, or county commissions) could sell off assets and use the money to purchase new ones more highly valued by the public. In some cases, the sale of public assets would not only raise revenue, it would help solve a “commons” problem with the current use of the facility. An

example is the public ownership of ports. The Port of Portland has assets totaling \$795 million, and is also one of the region's major polluters. *Willamette Week* newspaper reported that the Port has filled major wetlands, and dumped airport de-icing effluent into the Columbia Slough. According to a U.S. Fish and Wildlife Service biologist, the Port has "***filled more wetlands along the Columbia River than any other agency or company and [has] not mitigated for those impacts.***"⁴⁶

Since little of what the Port does could not be done by private entities, most or all of the Port's assets could be sold off, and the revenue used for regional greenspaces acquisition (among other things). This would result in three distinct benefits: (1) increased protection of open space; (2) better compliance with environmental laws;⁴⁷ and (3) *permanent tax relief* for regional property owners who currently subsidize the Port.

Creative thinking by public asset managers would undoubtedly uncover many additional possibilities for asset transfers that could pay for greenspaces without the use of taxation or zoning.

Purchase of development rights

Public entities do not need to purchase land outright in order to protect open space. The government can simply purchase development rights from willing sellers, ensuring that land currently in farm production will remain so.

The Pennsylvania Agricultural Land Preservation Board administers such a program, and has purchased development rights to 927 farms in 39 counties, encompassing 117,934 acres.⁴⁸ Such a program in Oregon could be financed through the sale of public assets, as described above.

Development rights can also be purchased by private land trusts. More than 4 million acres of land are being preserved by almost 1,100 private land trusts in the United States, according to the Land Trust Alliance. This total excludes the acreage

being protected by The Nature Conservancy (TNC), which is the operator of the largest private system of nature sanctuaries in the world. TNC owns more than 1,600 preserves in the United States.

Oregon has at least 17 private land trusts that manage 12,569 acres, excluding the land controlled by the Trust for Public Land (TPL) and TNC. TPL owns or has under option 21 properties and has protected more than 64,000 acres in the state and along the Columbia River Gorge since 1979.⁴⁹ TNC has 51 preserves protecting 52,000 acres in Oregon.⁵⁰

Eliminating Government-Sponsored Economic Development Programs

While various branches of state government are ostensibly working to curb the negative effects of development, other branches are busy subsidizing it. The subsidies are administered in many ways, including the disbursement of lottery funds and transportation grants, property tax abatements, the use of government bonding authority, and under-pricing of infrastructure services. In general, these subsidies do not occur because local land-use plans call for them; they occur because elected officials find it politically advantageous to funnel public money to selected constituencies. This creates a political codependency that is hard to break.

The best solution would be to simply terminate economic development subsidy programs. Specific examples include:

- ***Repealing the state Strategic Investment Program (SIP).*** This program authorizes county commissioners to reduce the property taxes of certain large companies that have expensive capital assets, provided that some of the tax savings are devoted to other public purposes. In Washington County, the result has been a boost in high-technology construction, at the same time that the urban growth boundary is constricting the supply of available housing.

While the goal of property tax abatement is desirable, it would be much more equitable (and efficient) to simply lower property tax rates across the board, and make up the financial slack through market-based pricing of specific government services (through user fees). This would encourage entrepreneurial activity in all industries, but hold people more accountable for the demands they place on infrastructure such as roads and sewers.

- ***Abolishing state and local economic development agencies.*** Institutions such as the state Department of Economic Development and the Portland Development Commission inevitably favor certain sectors of the economy over others as they distribute public funds. This not only distorts the market, it makes it more difficult to control the effects of growth, because those businesses subsidized by government develop extremely effective political networks that shield them from necessary regulation (for example, many people have found, to their frustration, that trying to correct the egregious mispricing of water and power from federal dams is nearly impossible once the organized beneficiaries of those policies are in place).

The private sector would be much better off if we simply lowered tax rates and deregulated the economy. That way, all entrepreneurs could benefit, not just those chosen by public officials.

VII. Conclusion

Statewide land-use planning has been historically justified on the basis of at least four assumptions:

- farm and forest lands are scarce commodities that must be preserved through government regulation;
- urban development must be contained through zoning and urban growth boundaries;

- land-use regulation is necessary to protect open space and scenic vistas; and
- planning is necessary to ensure the efficient and rational use of land.

There is little evidence to support any of these assumptions. In fact, farm and forest lands are becoming *less* important due to increased productivity; the amount of land set aside for recreation and scenic use is *growing, not shrinking*, over time; and land-use planning encourages *inefficient* land-use patterns because zoning ordinances do not reflect market forces.

Oregon's system is an artifact of the 1970's, when doomsday predictions were fashionable and big government seemed the solution to perceived market failures. But today we know better. The large-scale government ventures into public transit, airline regulation, power marketing, welfare, and a host of other areas proved to be costly mistakes. Deregulation has subsequently given consumers many more choices at lower cost.

Even if Oregon's land-use system has accomplished some worthy objectives, we must ask whether the current approach is appropriate in a digital economy. What are the consequences if our policies remain static while the world is rapidly changing? As one of Oregon's most prominent planners put it several years ago:

“Senate Bill 100 has succeeded, and our success, given the reach of the planning mandate of that time, is not incomplete. It's time to declare victory on behalf of Tom McCall, L.B. Day, and others, have a picnic, put up a monument, add their history to the pageant at Champoege, and move on to finding our own champions and mandate for the issues of today.

To not recognize that their mandate does not extend to the challenges of our day is to put all that Oregon has accomplished at risk. To put the growth management issues of 1992 in the same

frame as the agricultural land preservation issues of 1972 is to invite disaster. If we treat the development of planning in Oregon over the next 20 years as simply a fine-tuning and blank-filling exercise of the outline handed to the state 20 years ago, we limit our view, [and] put our considerable accomplishments at risk...”⁵¹

That risk is already quite real at the local level, in the form of voter initiatives to control annexation. Many voters, anxious about the impacts of growth, no longer trust elected officials to determine where growth will occur, and have seized authority for themselves. In just the last several years, 13 local initiatives on behalf of voter approval have passed in Oregon.

Though many planners and planning advocates criticize the no-growth mentality of this movement, the root of the problem lies in zoning itself. Zoning creates a commons problem by taking private property rights and converting them into rights that can be controlled by the public. This gives voters who already have what they want—moderately-sized communities with many environmental amenities—strong incentives to manipulate the property of others in order to protect the status quo. The long-standing failure of Oregon government to adequately protect private property rights is now coming back to haunt land-use regulators whose political interests are not the same as local voters.

This trend may force policy-makers to reconsider the Oregon system, whether they want to or not. As Jon Chandler, governmental affairs director for the Oregon Building Industry Association, has put it, *“In the next five years our land-use system could cease to exist”* due to voter-approval annexation measures.⁵²

This report suggests that we need to make a transition away from the current land-use system that arbitrarily divides the state into sacred and profane places, and replace it with one that allows for working landscapes where humans can utilize natural resources while also preserving

them⁵³. The recommendations below are mechanisms for moving in that direction.

VIII. Policy Recommendations

(1) Oregon land-use law should be modified to parallel the common law doctrines of trespass and nuisance. Local governments should specifically be prohibited from imposing regulations governing lot size, density, use, or income, unless such regulations are demonstrably linked to the control of spillover effects. Replacing traditional zoning with *performance zoning* is one technique for accomplishing this.

In the alternative, if the legislature is unwilling to enact such sweeping measures, communities should be *allowed to opt out* of Oregon's existing land use system in order to enact performance-based zoning.

(2) State and local laws that protect landowners from common law nuisance or trespass lawsuits should be repealed, in order to encourage responsible land use by owners.

(3) Local governments should consider establishing an *Office of Property Rights Enforcement*, in order to better prevent negative spillovers from land uses. These offices should bring legal actions against landowners who export pollution or any other type of nuisance effect from their own property to the property of others.

(4) The construction and operation of infrastructure services should be financed through market-based pricing mechanisms to ensure that individuals bear the costs of their own behavior. These services should be provided, wherever possible, by non-government institutions operating in competitive markets, in order to avoid monopolistic pricing by government agencies.

(5) Local governments should consider the possibilities for public/private land swaps and the sale of public assets as methods for protecting important open spaces without taxation or land-use regulation.

(6) Government-sponsored economic development programs should be terminated.

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This Policy Insight was written by a group of independent French and German economists with differing views and political sensitivities but a shared conviction that the current deadlock must be overcome. Reform of the euro area is needed for three reasons: first, to reduce the continued vulnerability of the euro area to financial instability; second, to provide governments The Federation of Associations in Behavioral & Brain Sciences published Policy Insights from the Behavioral and Brain Sciences, which examines how research in cognitive psychology can inform practice and policy development in such areas as education, health, risk evaluation and mitigation, and law. A New volume of Policy Insights from the Behavioral & Brain Sciences highlights cognitive research. CITE THIS.