

The Sonoran Institute

The Fiscal and Economic Impacts of Local Conservation and Community Development Measures

A Review of the Literature



Partners in Community Stewardship

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of
Local Conservation and Community Development Measures
A Review of the Literature

Prepared by Luther Propst and Mary Schmid
The Sonoran Institute
7650 E. Broadway Blvd., Suite 203
Tucson, Arizona 85710
(520) 290-0828

Commissioned by the Greater Yellowstone Coalition
P.O. Box 1874
Bozeman, MT 59771
(406) 586-1593

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About the Sonoran Institute

The Sonoran Institute is a nonprofit organization based in Tucson, Arizona, dedicated to promoting community-based strategies that preserve the ecological integrity of protected lands and at the same time meet the economic aspirations of adjoining landowners and communities. Underlying the Institute's mission is the conviction that community-driven and inclusive approaches to conservation produce the most effective results. The Sonoran Institute is committed to testing a wide range of approaches to community-based conservation, and adapting these approaches based on real experiences. The Institute also is committed to widely disseminating both its findings and the tools it develops. The Sonoran Institute operates in western North America, and works primarily with communities adjacent to protected areas and public lands with significant natural values.

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SUMMARY OF REPORT ON THE FISCAL AND ECONOMIC IMPACTS OF LOCAL CONSERVATION AND COMMUNITY DEVELOPMENT MEASURES

Since the 1950s, many communities in the United States have experienced rapid and largely unplanned growth, which has often produced development that is not only unsightly and insensitive to local traditions, but is also fiscally draining and economically inefficient. Rural America began experiencing substantial population growth over the past two decades, and is now feeling its impacts. While some of the impacts of growth are positive, others include traffic congestion, loss of downtown businesses to highway strip development, waste management problems, increased crime, loss of farmland, higher housing costs, and loss of community character.

Communities in the Greater Yellowstone region have recently begun to share in this population growth, and are just now facing pressures for growth and change that other communities have already undergone. As a result, a number of Greater Yellowstone communities are currently considering fresh approaches for managing development. As residents evaluate these new approaches, there is a pressing need for objective information about the fiscal and economic impacts of the various local measures that influence the characteristics of future development.

Numerous studies have addressed the fiscal and economic impacts of various strategies used by localities throughout the United States to meet the demands of rapid growth. Communities in the Greater Yellowstone region have the opportunity to learn from the experiences of other communities about managing growth to produce a vital economy, a sound environment, and an unparalleled quality of life. However, many of the studies are unpublished or not well known outside of narrow academic or professional circles.

The Sonoran Institute recently completed a report describing lessons from local conservation and community development measures tested around the country. The paper reviews research that examines the fiscal and economic consequences of various land use planning techniques and strategies, as well as the impacts of unplanned growth.

Approximately 200 articles and other publications were reviewed, with an emphasis on studies of actual experiences in real communities. This literature includes economic studies of: the impacts on town and county budgets of alternative forms of development (e.g., compact development versus linear sprawl); the economic impacts of zoning and other land use regulations; and the economic impacts of a community's appearance, architecture, and natural environment.

The lessons are encouraging for residents of Greater Yellowstone communities who are seeking to influence the future of their communities. Examples from the report include:

- The National Association of Homebuilders has concluded that values of building sites in the vicinity of park and recreation areas are often enhanced by 15 to 20 percent, with a high level of sustained value over the years.
- Retail businesses along tree-lined streets in several cities realize gross profits averaging six percent greater than businesses located on less attractive, treeless streets; trees can account for 9 to 23 percent of the sale price of residential or commercial property.
- A study by the Cooperative Extension Service of the U.S. Department of Agriculture and the American Farmland Trust showed that for every dollar of taxes paid, \$1.36 was required by an average residential unit for public services, while only 21 cents in services was demanded by an average farm. In fact, development of rural land to residential use consistently creates a revenue shortfall for local governments, since the costs of public services needed by residential development generally exceed its revenues.
- In Huntsville, Alabama, a study demonstrated that the infrastructure costs of a specific proposed development would be close to \$5 million, and that the city would have to spend \$2,500 to \$3,000 per acre per year to provide it with public services. In comparison, acquisition costs for the acreage would be \$3.3 million, and maintenance would only cost \$75 per acre annually.
- A study by a professor at the Massachusetts Institute of Technology concluded that states with stronger environmental policies consistently out-performed the weaker environmental states on a variety of economic measures, and also showed the greatest gains in economic growth between the 1970s and 1980s.
- A walking, bicycling, and horseback trail in Seattle, Washington has increased the value of nearby property an average of six percent.
- A study by the Center for Rural Massachusetts found that homes in subdivisions with relatively small lots and protected open space appreciated at significantly higher rates than comparable homes in subdivisions with relatively larger lots but no protected open space.

Taken collectively, these studies support the premise that environmentally sensitive land use planning need not have a detrimental effect on real estate values, economic vitality, or the local tax base; in fact, the opposite is often the case. The lessons contained in these studies may help Greater Yellowstone communities successfully manage rapid growth and change as they choose their own futures.

-Greater Yellowstone Coalition
February, 1993

INTRODUCTION

Many of America's rural areas have experienced substantial population growth during the past two decades (Lessinger, 1987; Beatley, Brower and Brower 1988). As the number of retirees increases and the baby boom generation matures and spreads out across the country, this trend can be expected to increase (Bryan 1982). Advances in communications technology which allow businesses to locate far from traditional urban business centers also fuel this trend. Many formerly pastoral communities are experiencing the impacts of rapid growth -- such as traffic congestion, waste management problems, rapidly increasing housing values, increased crime, loss of productive farmland, loss of downtown businesses to highway strip development, and loss of community character (Hodge 1981; Buchta 1987; Break 1988).

Rocky Mountain states have shared in the urban to rural migration (Blevins and Bradley 1988; Egan 1991). Population growth has been particularly rapid in the Greater Yellowstone area: the 1990 census shows that the 20 counties in three states surrounding Yellowstone National Park would have been the fastest growing state in the Union if they were a separate state.

As a result, several Greater Yellowstone communities are just now facing pressures for growth and change that many communities throughout the United States have already undergone. For example, the population of Teton County, Wyoming nearly doubled in the 1970s, and grew by more than 26 percent in the 1980s (Lane Kendig, Inc., 1991). In Jackson Hole, the community's economic and demographic character has changed as new residents and second home buyers flock there. Land and housing prices have tripled over the past 15 years, forcing more than a quarter of the local work force to commute from more affordable neighboring counties. Despite the national slump in housing and resort property prices, Jackson Hole's population is expected to increase an additional 25 percent during the 1990s (Wyatt 1992).

Many communities in the United States have experienced largely unplanned growth, which has produced development that is not only unsightly and insensitive to local traditions, but also fiscally draining and economically inefficient. Communities in the Greater Yellowstone region have the opportunity to learn important and timely lessons from these communities about managing growth to produce a vital economy, a sound environment, and an unparalleled quality of life.

This paper presents lessons from local conservation and community development measures tested in other parts of the country. These lessons may help Greater Yellowstone

communities successfully address the pressures for rapid growth and change as they choose their own futures. The paper reviews research that examines the fiscal and economic consequences of various land use planning techniques and strategies, as well as the impacts of unplanned growth. The paper does not address the diverse and significant non-economic impacts of rapid growth and growth management measures.

Approximately 200 articles and other publications were reviewed, with an emphasis on studies of actual experiences in real communities. This literature includes economic studies of: the impacts on town and county budgets of alternative forms of development (e.g., compact development versus linear sprawl); the economic impacts of zoning and other land use regulations; and the economic impacts of a community's appearance, architecture, and natural environment.

A future report will discuss the implications of this information for the small but growing "gateway" communities located within and around the Greater Yellowstone region.

LITERATURE REVIEW AND ANALYSIS

THE VALUE AND COSTS OF COMMUNITY CHARACTERISTICS

The literature discussed in the following sections demonstrates that much of the urban to rural migration (of both businesses and residents) is due to the desire for an improved quality of life, which is influenced by community characteristics. Community characteristics which contribute to a good quality of life are therefore economic assets. The value of many positive characteristics is difficult to quantify (e.g., peace and quiet), as are the costs of some negative characteristics (e.g., fear of crime, stress from traffic congestion). Certain economic benefits and costs, however, are easier to measure (e.g. the payroll of a new business; the costs of increased crime).

1. The Value of Quality of Life

A community's quality of life affects not only its residents' well-being but also its ability to attract and retain residents and economic activity. Swanson (1984) found that most of the recent urban to rural migration consists of urban dwellers moving to the country for a better quality of life, rather than for economic reasons. Quality of life is also an important factor in retaining existing businesses and attracting new ones. Many studies demonstrate that businesses and individuals are basing locational decisions increasingly on community characteristics not directly relevant to business (U.S. Subcommittee on Fiscal and Intergovernmental Policy 1979; McNulty et al. 1985; Adamchak 1987; Buchta 1987; Rudzitis and Johansen 1989).

In the Greater Yellowstone region, Johnson and Rasker (draft) surveyed businesses in three counties in Montana, and found that qualitative factors such as crime rates, rural values, recreation opportunities, and environmental quality were more important than traditional business factors in location decisions.

Power (1980) and the Resources Agency of California (1991) argue that enhancing the appearance and amenities of a community to achieve a high quality of life is essential to local economic development. Valley National Bank (1980) reports that a survey of economists indicates that Arizona's economic development over the past 30 years is due to its image as a highly favorable place to live, work, vacation, retire to, and locate plants and corporate headquarters. McNulty et al.'s (1985) survey of the efforts in numerous cities to employ amenities in their economic development programs illustrates how "amenities make direct, important contributions to economic development as well as to the quality of life for city residents."

In contrast, Power (1980) uses a study of Montana's economy to demonstrate how a reduced quality of life can limit growth and lower economic potential. Vaughan and Vogel (1979) show that salaries have to be higher in areas with high levels of noise and air pollution, lack of open space, and so forth, in order to compensate for the sacrificed quality of life.

Economists have attempted to quantify the value of various amenities by measuring their effect on land prices (e.g., Diamond 1980) and property prices (e.g., Anderson and Crocker 1971). For instance, Diamond shows that a lower crime rate results in higher land values, while higher levels of particulate pollution depress land values. While pointing out inconsistencies in some such studies, Smith (1978) uses a theoretically consistent model to show that people, especially middle and upper income families, are indeed paying substantial premiums for amenities such as clean air and convenient access to work.

2. The Costs and Benefits of Specific Community Characteristics

a. The Value of Natural Amenities (Scenic Beauty, Wilderness, Rivers, Wildlife, etc.)

Communities possessing natural amenities have found that these assets are often essential components of tourism and economic development strategies. For instance, Maine has attracted economic growth due to its natural beauty and rural lifestyle (Beatley, Brower and Brower 1988). The state of California (Resources Agency of California 1992) has recognized that "careful management and stewardship of environmental resources is an inextricable element of long-term economic development."

A poll commissioned by the President's Commission on Americans Outdoors showed scenic beauty to be the single most important criterion for tourists in selecting a site for outdoor recreation (Scenic America 1987). Boyle and Bishop (*in* Brabec 1990) found that visitors to the Lower Wisconsin River would be willing to pay about \$18 more per visit not to see unsightly development along the river.

Niemann and Chenoweth (1985; and Landscape Architecture 1985) performed a landmark evaluation of the value of visual resources within natural areas. Their work provided the basis for including scenic beauty as a major factor in determining market value of wilderness lands, resulting in the U.S. Forest Service compensating landowners \$25 million rather than the initial offer of \$13.5 million, based mainly on timber value, for 24,400 acres of land acquired for the Alpine Lakes Wilderness Area, Washington.

King, White and Shaw (1991) examined the influence of urban wildlife habitats and natural open space on property values in Tucson, Arizona, and found evidence of a positive influence. In a study to determine what value people place on the *existence* of wildlife even if they do not use it, Stevens et al. (1991) found that substantial existence value is associated with wildlife, and may be quite large relative to use value. However, they point out that the "willingness-to-pay" bids used in their study bring up many questions about the

validity of this measure, since it may have asked people to choose between ordinary goods (income) and a moral principle.

Using case studies—including the Hells Canyon dam on the Snake River, the White Cloud Peaks area in Idaho, and the Mineral King ski resort adjoining Sequoia National Park—Krutilla and Fisher (1985) analyzed the valuation of amenity resources in natural environments, emphasizing the difference between the value of a natural area's extractive resources (e.g., timber) and its amenity resources, which can only be realized if they are *not* extracted. They point out that when the financial subsidies many resource development activities receive (such as preferential tax treatment, subsidized capital, and access to public resources) are taken into account, along with the economic losses caused by the destruction of natural areas, preservation was in many cases the best economic choice. The case studies repeatedly demonstrated that:

Careful, rigorous analysis of the developmental scheme--comparing both benefits and costs, including publicly assumed costs on behalf of private developers--was sufficient by itself to produce a negative judgement without having to resort to the estimated environmental amenity resource values that would be precluded by the developmental alternative (p. 273).

An important general result of Krutilla and Fisher's analysis of Hells Canyon was to show that the annual benefits of retaining the canyon in its natural state would appreciate in time, because the demand for environmental amenity resources has been increasing while their supply remains fixed.

b. The Value of Aesthetics in the Built Environment

Duerkson (1986) discusses the increasing emphasis on aesthetics in land use controls, and how this presents the opportunity to satisfy community demand for higher-quality community appearance. The cities of Austin, Texas and Denver, Colorado have enacted view preservation ordinances which explicitly enunciate the economic benefits of protecting scenic views of significant, such as the city capitol as well as views of natural beauty. These benefits include encouragement of business and tourist activity, which stimulate the overall local economy (Lassar 1987). New Hampshire has also recognized its scenery as an economic as well as natural asset (Merrill 1987).

c. The Value of Community Open Space

The economic benefits of natural open space such as river and wilderness areas were discussed earlier. Open space within a community has numerous positive impacts in addition to recreation and scenic values. There are many kinds of community open space, including parks, parkways, botanic gardens, riverfronts, and plazas. Greenbelts (open land

set aside on the outskirts of a community, often including farmland) and urban fringe farmland are other forms of community open space.

One of the most often-cited economic and fiscal impacts of community open space is that it increases the value of adjacent property, thus benefiting landowners, the real estate market, and the local tax base. The National Association of Homebuilders stated that values of building sites in the vicinity of park and recreation areas are often enhanced by 15 to 20 percent, with a high level of sustained value over the years (Little 1969).

Many studies of neighborhoods around the country report the positive property value effect of proximity to various kinds of open space, including: community parks (Weicher and Zerbst 1973; Hammer, Coughlin and Horn 1974; More, Stevens and Allen 1982); urban water parks (Darling 1973); beaches and bodies of water (Diamond 1980; Li and Brown 1980); an arboretum (Kimmel 1985); trails (Seattle Engineering Department 1987; Mazour 1988); and greenbelts (Correll, Lillydahl and Singell 1978). Nelson (1986) provides explicit evidence that privately-owned greenbelts, comprised of farmland, also positively influence nearby land values.

Property value increases are likely to be highest near open space which: does not include highly developed facilities; has limited vehicular access, but some recreational access; and has effective maintenance and security (National Park Service Rivers, Trails and Conservation Assistance 1991). For example, Weicher and Zerbst (1973) found that properties directly adjacent to an active park which faced heavily-used recreational facilities sold for less than those a block away, while those facing passive parks sold for 7 to 23 percent more than those a block away.

Beasley, Workman and Williams (1986) estimated the economic benefits of urban fringe farmland, and found residents willing to pay significant amounts to avoid non-agricultural development, particularly high-intensity development. Nelson (1990b) discusses the various components of farmland value (e.g., food and commodity production, general welfare functions such as flood absorption and scenic vistas, etc.) and points out that "market" value is incapable of internalizing the true benefits of farmland since it cannot accurately reflect the value future generations may place on it. Farmland and other open lands on the urban fringe also supply significant local employment (American Farmland Trust 1992).

e. The Economics of Traffic

Traffic congestion can negatively affect local economies, particularly tourist and recreation businesses. Cicchetti and Smith (1976) found that one direct economic cost of traffic congestion is a reduction in people's willingness to pay for recreation services when the quality of those services has been diminished by increased congestion.

f. The Value of Trees in an Urban Environment

Many studies have shown that trees tend to increase residential and commercial property values (Payne and Strom 1975; Anderson and Cordell 1988, 1990; Ebenreck 1988; Martin 1989; Smith 1990). Trees also modify microclimates, resulting in reduced heating and cooling costs (Federed 1971; Fox 1990). In addition, Jordan (1984) reports that retail businesses along tree-lined streets in cities including Chicago, Cincinnati and Toronto realize gross profits averaging six percent greater than businesses located on less attractive, treeless streets; and that trees can account for 9 to 23 percent of the sale price of residential or commercial property.

g. The Economic Benefits of a Distinctive Community Character

A community's unique history, architecture, culture and natural resources create its distinctive character. The preservation of community character is an important element of successful economic development strategies (Buchta 1987; Brabec 1990). Many communities have taken advantage of their special assets to increase business investment and tourism industries. For example, since the 1920s San Antonio, Texas has recognized the San Antonio river running through the city as a great asset; its Riverwalk is considered the anchor of the city's \$1.2 billion-a-year tourism industry (National Park Service Rivers, Trails and Conservation Assistance 1991). Communities along the Illinois and Michigan Canal corridor have rehabilitated historic sites along the canal and even transformed eyesores into tourist attractions to successfully revitalize local economies (Mantell, Harper and Propst 1990).

THE FISCAL AND ECONOMIC IMPACTS OF DEVELOPMENT AND ALTERNATIVE LAND USES

1. The Fiscal Impacts of New and Alternative Patterns of Development and Land Use

Research indicates that development of rural land to residential use consistently creates a revenue shortfall for the local government (Caputo 1979; American Farmland Trust 1985; American Farmland Trust 1992; Brighton 1992). New residential developments generate revenue, but also require more public services (schools, public safety, waste management, street maintenance, government, etc.) and often new infrastructure (streets, water and sewer lines, etc.), the costs of which usually exceed the revenues. The greatest of these impacts is increased cost of school operation and transportation due to increased attendance (Center for Governmental Studies 1982; American Farmland Trust 1992).

Sternlieb (1973) notes that the construction costs of capital improvements such as schools or sewer facilities may represent only a fifth or sixth of the system's actual operating costs.

Much research (e.g., Downing 1969; Real Estate Research Corporation 1974; Friedman 1975; Downing and Gusteley 1977; American Farmland Trust 1985) shows that the negative fiscal impact of new residential development is considerably higher for low-density development, mainly due to the high cost of extending road systems, water supply, sanitary sewers, school transportation, fire and police protection, and gas, electricity, and phone service. These costs, as well as private transportation costs, can be reduced if new developments are located near existing community services and/or near each other.

For example, Peters (1990) reports that a study of the fiscal impacts of various residential development densities showed that developed house lots larger than one acre caused an average "revenue deficit" of \$490, while the deficit for quarter-acre lots was just \$114. The Real Estate Research Corporation (1974b) found that the total costs of high density development are less than those of low-density development, particularly in terms of the government's portion of total costs.

A report by the New Jersey County & Municipal Government Study Commission found that most multi-family housing is more fiscally advantageous than all but the most expensive single family developments. Although moderate-rent, three-bedroom units are in themselves deficit-producing (they require more school and other services), municipalities can include them without significant fiscal impact if they are juxtaposed with different unit types. The Commission determined that fiscal expenditures increase as a result of increasing population and physical growth, and are not significantly affected by what *type* of housing the new population is housed in (Mallach 1974).

As with residential development, overall fiscal impact must be considered when evaluating the consequences of new commercial and industrial development. Although both commercial and industrial development generally give towns a fiscal balance, they may end up costing more in the long run than first estimated, once secondary impacts - such as their significant demand for additional municipal services and the impact of residential growth stimulated by new employment - are considered (Smith, B., and Hiltner 1975; Smith, S., Marousek and Blayney 1984; Hamill et al. 1989; American Farmland Trust 1992). For example, a Vermont study found that towns with the most taxable commercial and industrial property have, on average, *higher* taxes (Brighton 1992). A review of over 700 studies of the impacts of industrialization on rural communities concluded that public sector financial gains were small or negative (Summers et al. 1976). Jones and Woods (1985) found the same to be the case in their study of new industry in a small town in Texas, although local officials believed the additional economic activity would outweigh the costs to schools and government.

Muller (1975, 1976a) discusses the fiscal impact of different development types, including: new detached housing (its revenues and expenditures are higher than older

housing); garden apartments (frequently create a fiscal surplus because they tend to have fewer school-age children than detached housing); commercial (shopping centers and office buildings are likely to create a fiscal surplus); and industrial (capital-intensive facilities with high-salaried employees create a fiscal surplus, while labor-intensive ones create a deficit). Muller (1976b) points out that any new development has many, interrelated effects on the local economy. For example, new jobs from industrial development create an increased demand for housing, which increases housing values; this is beneficial to some segments of the population but not to others.

Dickinson and Blackmarr (*in* McEvoy and Dietz 1977) examined the economic impacts of large-scale development in several communities and found that initial estimates of benefits were often overly optimistic. Communities experienced negative impacts including: attraction of an excess of new workers, which increased public service and welfare costs; creation of jobs that didn't match the skills of local workers; and becoming straddled with the costs of maintaining expanded infrastructure and services long after the construction phase (and its economic inputs) was completed. They present four questions that help determine the real costs and benefits of new development: 1) does it require more in service costs than it produces in revenue? 2) what are the job skills, wages, sales and profits it will generate? 3) what will its environmental impacts be? and 4) what will its social impacts be?

Stone (1973) examined the different costs of various urban settlement sizes, densities and structures. He concluded that: large-scale development costs the most; very high and very low densities cost more than moderate densities; compact, rectangular community development is more cost-effective than linear and other designs (due to road network and travel cost reductions); small to medium-sized towns with employment areas distributed evenly cost the least; if a larger settlement is required, it is most efficient to plan it as a cluster of smaller settlements; and expansion of existing towns, except for filling in and rounding off, adds considerably to development costs.

Cuthbertson (1976) compared the fiscal expenditures and revenues of a conventional suburb with those of a "new town" designed to include commercial and industrial uses with a variety of residential types and open space, and found that the new town more than paid its own way, while the suburb failed to do so.

Possible negative economic effects from the siting of various land uses has been addressed. Several studies (Crecine, Davis and Jackson 1967; Rueter 1973; Maser, Riker and Rosett 1977; and Koehler 1987) concluded that locating non-residential and multi-family land uses adjacent to single-family homes has no significant effect on the value of those homes. However, Stull (1975), Lafferty and Frech (1978), and Jud (1980) found weaknesses in some of these studies, and instead obtained data indicating that certain land uses do have a negative effect on the value of neighboring residential property.

Stull found that increasing proportions of multi-family, industrial and vacant land cause single-family home values to decrease. Lafferty and Frech's results show that although certain land uses do have an inimical effect on the market value of neighboring single-family homes, if they are permitted but concentrated within distinct areas, suburban home values rise. Li and Brown (1980) found that nonresidential land use affects nearby housing values positively *and* negatively, depending on what that use is; similarly, in Stull's study area homeowners did not perceive commercial uses, industrial uses, multiple-family uses and vacant land as equally undesirable.

Methodology:

American Farmland Trust (1992) presents a simple, effective method towns can use to evaluate the costs and benefits of various land uses. Stephens (1975) describes a model used to evaluate the economic impacts of a planned resort in Colorado which can easily be adapted to other situations. Other guides to fiscal impact analysis are Sternlieb (1973), Burchell and Listokin (1978), Pierroz (1978), and Center for Governmental Studies (1982).

2. The Costs of Developed Versus Undeveloped Land

Although undeveloped rural land does not generate as much revenue as other types of land uses, many studies (Stone 1973; Berry 1978; American Farmland Trust 1985; Peters 1990; American Farmland Trust 1991, 1992; and Brighton 1992) show that rural land use makes a positive net fiscal contribution to a community, while residential development nearly always creates a revenue shortfall for the local government. This is because rural land requires fewer public services than does developed land, particularly educational services, which are the most expensive.

For example, a study by the American Farmland Trust and the Cooperative Extension Service of the U.S. Department of Agriculture showed that for every dollar of taxes paid, \$1.36 was required by an average residential unit for public services, while only 21 cents in services was demanded by an average farm (Peters 1990). Therefore, while rural land generates less in revenue, it also costs significantly less to service - i.e., "cows don't go to school" (American Farmland Trust 1991).

The National Park Service Rivers, Trails and Conservation Assistance (1991) reports that in 1988, developed land cost the city of Boulder over \$2,500 per acre to maintain, and up to \$3,200 when utilities, flood control, transportation and governmental costs were

included. In contrast, the public cost for maintaining open space in the city was only \$75 per acre, or less than three percent that of developed land.

A study in Yarmouth, Maine, determined that the costs in excess of revenue that would be generated if a specific parcel of land were to be developed were \$140,000 annually, compared to an annual cost of \$76,000 over 20 years to purchase the property. A parcel that had already been allowed to develop was also analyzed, and revealed a similar magnitude of savings had it been left undeveloped (Smith, R., Propst and Abberger 1991).

In Huntsville, Alabama, a study demonstrated that the infrastructure costs of a proposed development would be close to \$5 million, and that the city would have to spend \$2,500 to \$3,000 per acre per year to provide it with public services. In comparison, acquisition costs for the acreage would be \$3.3 million, and maintenance would only cost \$75 per acre annually (Smith, R., Propst and Abberger 1991).

THE COSTS AND BENEFITS OF PLANNED VERSUS UNPLANNED DEVELOPMENT

1. The Benefits of Planning and Growth Management

Several studies (Beatley, Brower and Brower 1988; Caputo 1979; National Park Service Rivers, Trails and Conservation Assistance 1991) explain that land use planning and managing growth can prevent or reduce the costs of property damage (not to mention loss of life from natural hazards such as flooding, by not permitting certain types of development in hazard-prone areas. Also, since the Federal Flood Insurance Program subsidizes the cost of procuring flood insurance, and since structures repeatedly damaged by floods can receive payment each time, in the long run it would be cheaper for the public to acquire structures in flood-prone locations than to continue to pay for their repair.

Effective growth management can minimize public financial exposure by evaluating the potential market for proposed development. For example, the village of Deerfield, Illinois did not approve a new hotel because the landowner failed to demonstrate that the market existed to support an additional hotel in the village (Fulton 1987).

Peiser (1984) compared the economic results of planned community development with unplanned development for a site in Texas, and found that planned development produced higher net benefits than unplanned in three areas: land development costs, social costs and particularly transportation costs. Although the magnitude of the difference was less than five percent of total costs, the results indicate that one important step in reducing the costs of sprawl would be to improve transportation planning.

A detailed economic study by the Center for Urban Policy Research at Rutgers University (1992) shows that New Jersey Interim State Development and Redevelopment Plan will save the state \$1.38 billion in infrastructure costs over 20 years, \$400 million a year in operating costs, and significant amounts of farm and "fragile" land and water. It will also significantly reduce sewage disposal and road costs.

Environmentally sensitive land planning can also produce economic benefits. For example, after following environmental impact statement recommendations, the developer of a large-scale residential project in rural Virginia saved approximately 10 percent on development costs when a redesign that avoided problem soils, saved forest land, and decreased storm water runoff also reduced pavement and street and utility length (Drenning 1983).

2. The Costs of Regulating Development

There is a large amount of literature on the effects of land use regulation on housing costs. Muth and Wetzler (1976) found only a small effect of building codes on home costs. However, much research (e.g., Real Estate Research Corporation 1975b; Lincoln et al. 1976; Urban Land Institute and Gruen Gruen + Associates 1977; Seidel 1978; Frech and Lafferty 1984; Black and Hoben 1985) indicates that regulations such as subdivision requirements, flood plain and wetland regulation, zoning, and environmental controls can increase the price and reduce the supply of housing by driving up development costs and reducing the supply of raw land. This effect can reduce the supply affordable housing; this issue is discussed further in section I.E.

Urban Land Institute and Gruen Gruen + Associates (1977) show that the relationship of regulation to housing prices is very complicated. For example, although restrictions on development which do not affect the supply of developable land (e.g., rationing of building permits) could actually *lower* the price of raw land—since demand for it is effectively reduced—the prices of housing built on that land will rise, because demand for housing has not been reduced but supply has.

In his study of the costs of environmental protection, Richardson (1976) found that increases in housing costs escalated largely as a function of administrative procedures. He recommended efficient coordination of the various agencies involved in regulating land use in order to lessen the cost of regulation.

A comparison of Vermont's state-wide land use law (Act 250) with New Hampshire's system of local and regional land use review revealed that the two approaches have had similar results and neither has hindered economic development (Merrill 1987). Vermont's economy grew by 15 percent from 1970 to 1980, the first decade Act 250 was in effect, ranking second in growth among the New England states (New Hampshire was first). This countered predictions that the state-wide law would stifle development; in fact,

Vermont turns away very few projects. During this same period, New Hampshire's real gross product increased by 54 percent, and in the 1980s its economic growth rate was one of the highest in the nation.

3. The Costs of Poorly-Planned Development

While effectively managing growth can have positive impacts on a community, unplanned development can produce negative fiscal and economic impacts. A major result of unregulated development has been widespread urban sprawl. Sprawl is typified by development "leapfrogging" over existing urban areas into surrounding, often cheaper, rural land even when there is undeveloped land still available within the developed areas. A landmark study, *The Costs of Sprawl* (Real Estate Research Corporation 1974a,b and 1975) analyzed a range of housing types and concluded:

"Sprawl" is the most expensive form of residential development in terms of economic costs, environmental costs, natural resource consumption, and many types of personal costs... This cost difference is particularly significant for that proportion of total costs which is likely to be borne by local governments... In terms of alternative development patterns for a given site, the study indicates that better planning will reduce all types of costs and their incidence on government... Planned development of all densities is less costly to create and operate than sprawl (p. 7).

Numerous other studies (e.g., Bahl and McGuire 1977; Downing and Gusteley 1977; American Farmland Trust 1985; Kasowski 1992; Brabec forthcoming) substantiate the high costs of sprawling, land-consuming development in contrast with the lower economic (and other) costs of pedestrian-oriented, compact development.

Frank (1989) discusses the uneven distribution of the costs of sprawl: the incremental or "marginal" cost of extending services to development far from existing facilities is higher than the marginal cost of new development closer to facilities. However, charges are typically evenly distributed among *all* users by "average" cost pricing, which results in "an enormous price subsidy" of some users by others. Frank further notes that since newer homes tend to be most affordable to higher income people, the rich are often being subsidized by the poor. This subsidy Frank describes is essentially an encouragement to sprawling development. Daniels and Lapping (1984) describe how control of large-scale but not small-scale development in Vermont also encouraged sprawl.

Bahl and McGuire (1977), Downing (1977) and Frank discuss ways to recover the costs of sprawl and eliminate the inequities of the present system. Many communities

charge impact fees on new development to help offset its service requirements; however, most impact fees are also assessed on an average cost basis.

Egan (1991) reports that in Montana, where there is no zoning for parcels of 20 acres or more, working ranches have been carved up and sold as non-workable "ranchettes", causing land price increases and higher property taxes—which then increase the pressure for ranchers to sell *more* land. For example, the average cost of land in one Montana county has gone from \$150 an acre in 1977 to about \$10,000 in 1991.

Berry (1978) studied the effects of population growth in nonmetropolitan areas on agricultural activities. He found that urbanization causes: farming and farmers to become less significant economically, since they are relatively fewer; the conversion of farmland to urban uses and the idling of farmland in anticipation of conversion or because new suburban residents hinder farming activities deemed nuisances; and a switch from dairying to agricultural activities requiring less investment, due to uncertainty about its future viability.

THE COSTS AND BENEFITS OF VARIOUS PLANNING TECHNIQUES AND LAND USE ALTERNATIVES

The land uses and planning techniques examined in this section have many hard-to-quantify economic impacts in addition to the costs and benefits presented in the studies reviewed. The literature on the economic and fiscal impacts of land use planning covers a wide range of planning techniques from specific tools such as clustered development to very broad terms such as "growth management" and "zoning", which may incorporate many specific tools. This paper organizes them in groups as similar as possible, beginning with the broadest terms.

1. The Economic Impacts of Growth Management

One of the most often-studied economic aspects of growth management is its effect on housing and land prices. Black and Hoben (1985) found that growth management regulation can significantly affect land supply and demand, and therefore cause price inflation. Other studies confirm that growth controls can raise housing prices, due both to restrictions on supply and the increased attractiveness of well-planned communities (e.g., Schwartz, Hansen and Green 1981; Dowall 1984; Segal and Srinivasan 1985; Schwartz, Zorn and Hansen 1986; Zorn, Hansen and Schwartz 1986), while some research suggests that growth controls also lower the value of undeveloped land *outside* the municipality (Gleeson 1979; Vaillancourt and Monty 1985; Fischel 1990). Knaap (1985) found that nonurban land *within* growth boundaries in metropolitan Portland, Oregon increased in value.

Fischel (1985, 1989) reviewed more than 60 economic studies of the effects of growth controls on housing costs, land values and the pattern of land use location. The majority of these studies found that growth controls do raise housing prices, particularly in the suburbs of large metropolitan areas; however, they have relatively little effect on housing prices in small cities and rural areas. The studies indicate that undeveloped land can suffer a loss in value, suggesting that growth controls may confer benefits on insiders (those already in the community) and impose costs on outsiders and owners of undeveloped land. Fischel points out that growth controls can lead to "leapfrog" development, which makes the pattern of metropolitan areas excessively spread out. Thus, cities lose some of the benefits that accrue from living and working in close physical proximity to others (agglomeration economies) which make cities desirable economic locations.

Lillydahl and Singell (1987) also reviewed the literature and concluded that in most growth control communities, prices of existing houses increase by 10 to 20 percent. The American Planning Association (1989) reports that experts disagree on the extent to which land use controls and fees are being passed on to the homebuyer, with estimates ranging from 18 to 34 percent in the San Francisco Bay area to a 2.5 percent increase in housing prices over the next six years in the San Diego area.

The rationing of building permits may be the growth control technique that has the most dramatic impact on housing prices. Such building caps directly limit the supply of housing; therefore, they tend to accelerate the rise in price (American Planning Association 1989).

Nelson (1986) demonstrated that Salem, Oregon's growth containment program increased urban land prices and decreased nearby rural land prices, which was consistent with theory, while also inhibiting rural land speculation. However, he also reports (Nelson 1990a) that statewide, Oregon's use of urban growth boundaries (UGBs) has contained growth *without* driving up housing prices. One unwanted consequence of the program has been the development of expensive, low-density communities outside the UGBs, where land is excepted from the same regulation.

Elliott (1981) found that in regions where only a few communities control growth, housing prices in towns with growth control were indistinguishable from prices in non-growth control towns. However, in highly regulated regions, prices in growth control towns were significantly higher. Brueckner (1990) shows that in some locations, growth controls may also raise rather than lower the value of undeveloped land.

Growth controls in Petaluma, California have allowed the city to grow from approximately 20,000 residents to over 40,000 since 1970, and have increased the cost of housing dramatically (Eastridge 1990). Schwartz, Hansen and Green (1984) reported that after its growth control program began, small, low-priced housing practically disappeared from Petaluma, but continued to be developed in a neighboring city that supported growth. Petaluma's growth control program has had some positive economic impacts in addition to

the housing impact (Salmons 1986). Leapfrog development has been reduced, resulting in a compact growth pattern that is economical to service, and the program allows the city to promote the types of housing needed.

Schwartz, Zorn and Hansen (1986) discuss the inconsistent results in the literature and conclude that many of the differences are due to biases in methods, not underlying factual differences. They, and Deakin (1989), argue that by not controlling properly for supply and demand differences, some studies may have exaggerated the price increases caused by growth controls. The American Planning Association (1989) concludes that the price effects of growth controls depend on a number of factors, which include the condition of the local housing market, whether surrounding communities have adopted growth controls, and the restrictiveness of the controls.

Additional individual community experiences follow:

Oregon's land use planning program has been successful in encouraging growth in well-suited locations and has eased the state's transition from a manufacturing to a high technology economy (Hamill et al. 1989). Yaro and Reid (1987) report that the program has improved the economic setting for industry by increasing the supply of land zoned for industrial purposes and the certainty that zoning will no longer frequently change.

Lincoln, Massachusetts has used a mix of growth management techniques to preserve more than 2,000 acres of open space while accommodating the same amount of growth as they would have under previous, traditional zoning (Narus 1990).

Rips (1991) reports that Lincoln, Nebraska also uses a variety of techniques to achieve orderly growth: no inefficient, costly leapfrogging has occurred, the city has stayed within existing watersheds (thus avoiding the vast expenditures required for public facilities in new drainage basins), the quality of commercial development is high, and municipal services are excellent.

An interesting but unintended benefit of Boulder, Colorado's, growth management ordinance has been the smoothing out of the cyclical peaks and troughs (or the "boom-and-bust cycle") in the local building industry. By delaying development during high-growth years, the city's allocation system has the effect of extending the building period (American Planning Association 1989).

2. The Economic Impacts of Zoning

Price effects on housing due specifically to the presence of zoning have also been studied, again with varying results. Bergman (1974a) found land prices only moderately dependent on zoning. Anderson and Dower (1980) found that land zoned for intensive development appreciates more rapidly than land designated for less intensive uses.

Pollakowski and Wachter (1990) studied 17 planning area groups within Montgomery County, Maryland, and found that the positive effects of growth management controls and zoning on housing and developed land prices were greater when taken together than when measured separately.

Maser, Riker and Rosett (1977) investigated Monroe County, New York and found no price changes attributable to zoning. They interpret this as indicating that zoning had not had a significant effect on the supply of land available for different uses. Rather, market forces had negated the forces of regulation, since landowners could have their land rezoned. In this situation, zoning will tend to conform to the unregulated outcome. However, White (1988) found some weaknesses in this argument, and obtained evidence that zoning is effective and binding.

Evidence from Charlotte, North Carolina shows that purchasers of residential property desire uniformity in neighborhood land use, and are willing to - and do - pay a premium for areas with residential zoning classifications (Jud 1980).

Zoning regulations that increase the cost of housing are wide road specifications and other expensive land improvement requirements, such as sidewalks in low-density residential zones, large open space dedications, large minimum lot frontages, and excessive minimum floor area requirements (Central Naugatuck Valley Regional Planning Agency 1978).

McClendon (1981) studied Beaumont, TX and found that zoning deficiencies, including large minimum lot sizes that were driving up housing costs, were having an obvious negative impact on local economic development. The city has revised its zoning ordinance to remain competitive and encourage cost-effective development.

3. The Economic Impacts of Environmental Regulations

Holway and Burby (1990) found that floodplain elevation requirements and zoning floodplains for lower density development lower the value of vacant land, indicating that they are successfully reducing development expectations of landowners and steering developers away from land in flood hazard areas.

Meyer (1992) tested the hypothesis that rigorous environmental management hurts economic growth and development. He first ranked the fifty U.S. states by the breadth and depth of their environmental programs and then measured and compared their economic performances. The results demonstrated that states with stronger environmental policies in fact consistently out-performed the weaker environmental states on all the economic measures, and also showed the greatest gains in economic growth between the 1970s and 1980s. Meyer concludes that:

The data show that at a minimum the pursuit of environmental quality does not hinder economic growth and development. Furthermore, there appears to be a moderate yet consistent positive association between environmentalism and economic growth.

4. The Economic Impacts of Open Space Preservation

Caputo (1979) presents a well-supported argument that "Open Space Pays". He lists numerous economic reasons open space preservation benefits communities, and gives several examples where purchasing land or its development rights for open space was less expensive to the community than developing it would have been. One example is a 1970 study by noted planner Ian McHarg which projected that unplanned development in the 760-square-mile study area would yield \$33.5 million in land sales and development profits over the next ten years, while planned development designed to accommodate the same population level and preserve desirable open spaces would yield over \$40.5 million.

Fox (1990) also gives an in-depth presentation of the economic benefits of investing in open space. He describes numerous contributions open space makes to the local economy, highlighting its impact on real estate values, energy conservation and infrastructure investments, and the image of the city. He presents many examples of open space development projects (e.g., parks, greenways, waterfront developments) that have stimulated the local economy.

Larson (1992) reports in the National Association of Homebuilders' publication *Land Development* that the most successful projects do not waste open space. He states that in addition to providing environmental amenities and recreational opportunities, projects that feature open space are projects that sell. For example, a land developer donated a seven-mile easement for the Big Blue Trail in northern Virginia, thereby providing a critical trail link along the perimeter of the subdivision (National Park Service Rivers, Trails and Conservation Assistance 1991). The developer advertised the accessibility of the trail and sold all tracts within four months.

Greenways—networks of parks, trails, waterways, scenic roads and bike paths—are appearing in a variety of forms around the nation (Didato 1990). Seattle's 12-mile multipurpose Burke-Gilman Trail, which follows the route of an abandoned rail corridor, has increased the value of nearby property by an average of six percent (Seattle Engineering Department 1987; Mazour 1988), and was the catalyst for a new \$117 million county open space bond issue (Didato 1990).

Schwab (1989) describes several small cities around the country which have developed waterfront parks to successfully revive their downtown economies. Wilmington, North Carolina (pop. 57,000) invested in riverfront parks, which have enhanced the value of private investments and helped renew economic growth. Olympia,

Washington (pop.30,000) is also using development of a waterfront park as a key element in attracting further downtown investment. The project was partially funded through special assessments on property owners, who have found that their sales have subsequently increased and their investments have paid off very well.

Beaton (1988) examined the impact of rural open space zoning (which includes essential exclusion of development in "preservation" zones, and various degrees of density and other restriction in other zones) on property values in the New Jersey Pinelands. He found that the value of developed land increased throughout both the planning and implementation phases of the restrictive regulations, while the prices of vacant land first rose rapidly, then plateaued and finally fell to levels supported by current information regarding both the real amenity of residing within the restricted area and the real costs of development. He also found a relative rise in the tax base.

Beaton also reviews the results of several other studies of the impact of open space zoning on property values. Two previous studies in the Pinelands Zones found no significant price changes. Kay's (1988) survey of land parcels in the six zoning classes in Adirondack State Park indicated there was no impairment of property values from the implementation of open space zoning, and Wissel, Reeb and Hedges (1986) conclude that parcels subject to the new zoning are more valuable than those in towns without zoning.

By increasing nearby property values, a park in Union County, New Jersey generated more than enough extra tax revenue to cover park operating and financing costs (Little 1969), and in only five years the increased revenue equalled the acquisition and development expenditures (Goodenough 1965).

Boulder's open space program has proven to be cost effective (Eastridge 1990). It costs the city an average of \$75 per year to maintain an acre of open space, compared to \$4,000 per year to provide services - *excluding* schools and transportation - to an acre of residential development.

National Park Service Rivers, Trails and Conservation Assistance Program (1991) has published a resource book which presents examples of the wide range of economic impacts of protecting rivers, trails and greenways. These include: enhanced property values; increased revenue from recreation, tourism, and resource agency expenditures; new opportunities for commercial use; improved business attraction and retention; and lower public costs through hazard mitigation, better public health, pollution control, and reductions in expensive development.

5. The Economic Impacts of Farmland Preservation

Exclusive agricultural zoning (EAZ) has been adopted in many places to control the location or limit the amount of non-farm development in agricultural areas (Henneberry

and Barrows 1990). Knaap (1985) and Vaillancourt and Monty (1985) found evidence that such restriction lowers land values. However, Henneberry and Barrows studied EAZ in Wisconsin and found that it has both positive and negative price effects depending on farmland parcel characteristics and the political setting in which the zoning is adopted. For example, large parcels relatively removed from urban areas increased in value under zoning, while small parcels closer in sold for more when they were not zoned. Within greenbelts, farmland values are highest in the center of the greenbelt (Nelson 1985).

Nelson (1988) found that when greenbelts incorporating farmland are used for urban containment: 1) demand for "exurban" land shifts further out, away from the farmland protected in the greenbelts; 2) the value of exurban land rises the closer it gets to greenbelt land, perhaps reflecting the scenic and other benefits of greenbelts; and 3) greenbelt land values are not adversely affected by nearby exurban development, which suggests that farmers and exurban residents can coexist when their respective districts are clearly defined.

In 1986, Daniels and Nelson reported that Oregon's farmland protection program had experienced some success, but that during the 1970s and 80s hobby farms (parcels too small for commercially viable farm use) had proliferated to the extent that they were threatening the viability of existing farm operations. Growth in hobby farms (which is occurring in most states) increases land prices and fragments land holdings, making it difficult for commercial farms to expand or consolidate parcels into viable units. However, Nelson (1992) demonstrates that since the 1986 study, full implementation of Oregon's mix of policies has effectively preserved farmland in the face of urbanization and has led to a considerably more robust farming economy in the Willamette Valley. In fact, although the total number of hobby farms has fallen, many of them have become viable farming operations in their own right, with a rise in productivity paralleling that of commercial farms. Nelson suggests that—at least in Oregon's regulatory environment—both hobby and commercial farmers can not only coexist but mutually benefit, with the hobby farms helping sustain the local economy.

A 1980 National Agricultural Lands Study inventory and another detailed study show that agricultural zoning encourages farmers to invest in the continuation of farming and discourages disruptive land speculation by those anticipating conversion to urban uses (Coughlin and Keene 1983).

Tibbetts (1992) describes a less expensive alternative to the outright purchase of farmland or its development rights that has been utilized in some rural areas. "Open space zoning" ordinances which require developers to build structures closer together in villagelike clusters, with smaller lots and narrower roads than in conventional suburban developments, have preserved farmland and at the same time allowed landowners to make money by selling part of their land. He reports that developers and homeowners have prospered, too, since home values in these village developments have appreciated faster than in conventional ones.

6. The Economic Impacts of Large Lot Zoning

Ironically, many communities have required large minimum lot sizes (two to 20 acres) in the hope that this will preserve open space and rural character. In effect, such zoning often results in low-density urban sprawl (Nelson 1985). Although large lot zoning does reduce the number of homes, it also spreads them across the land on lots that are too small for farming, too far apart for a sense of neighborhood, and useless for forestry or recreational use (Planning Commissioner's Journal 1992). Arendt (1988) states that large-lot zoning essentially mandates sprawl: it destroys open space and town character by consuming land at an alarming rate and leaving a bland, homogenized landscape.

Bergman (1974a, p. 212) reports that "there is no serious disagreement among the study findings or within the literature with the statement that the cost of land, lots, and houses becomes higher as lot size increases." He further reports (1974c, p. 5) that: "Large lot, low density zoning is instrumental in establishing a minimum price floor which tends to eliminate a significant number of households from the market for new houses."

7. The Economic Impacts of Cluster versus Conventionally Planned Development

Arendt (1992) describes the economic benefits of cluster, or open space, development:

This pattern of down-sized houselots and preserved open space offers distinct economic advantages to all parties. Developers can reduce the costs of building roads and, if applicable, water and sewer lines. Local governments save on snowplowing and on periodic road resurfacing. And homebuyers often pay less because of these cost savings...Landowners who view their property as their "pension" no longer have to destroy their woods and fields in order to retire with a guaranteed income, as their equity is not diminished. Local governments do not have to raise property taxes to finance expensive open space acquisitions... Developers are not placed under unreasonable constraints, and realtors gain a special marketing tool (p. 6).

Lacy (1989) compared two housing subdivisions that utilized clusters of small lots, which allowed for a variety of public open spaces, with two similar but conventionally planned subdivisions. He found that homes in the cluster/open space developments

appreciated at significantly higher rates than homes in their conventional counterparts, even though the conventional properties had much larger private yards.

A report by the Central Naugatuck Valley Regional Planning Agency (1978) concluded that high land improvement costs can be reduced by lowering lot frontage requirements and/or by adopting cluster regulations. The study found that housing cost savings of \$20,000 to \$31,000 (in 1978 dollars) could be achieved by permitting smaller houses on smaller lots.

Land Design/Research Inc. (1976) and Untermann and Small (1977) describe the economic advantages of clustered versus conventional plans, which include reduced site development costs when narrower or smaller lots are used, due to fewer lineal feet of roads, curbing, utilities and sidewalks. Narrower streets and right of ways also lower development and construction material costs. The open space created by smaller lots offers further opportunities to save on costs: grass-lined swales and ponding areas can be used to channelize and detain storm water, thereby reducing or eliminating the need to pay for curbs, gutters, pipes and other storm water management infrastructure; this in turn can minimize downstream flooding and its additional off-site development costs.

Goodkin (1986) compared conventional and cluster plans, and found that total site development costs—for grading, clearing, street pavement, curbs/gutters, street trees, driveways, storm drainage, water distribution, sanitary sewer, and sidewalks—were 34 percent lower for the cluster plan.

Brabec (forthcoming) explains that an achievable cluster density for a particular development project, with no increase in total allowable density, is based on: 1) the cost savings of physical development; 2) sewage treatment options; and 3) local market forces. Depending on local market conditions, there will be a lot size threshold where clustering of lots will produce an equal or greater return to the developer than a conventional subdivision. For example, Brabec reports that in Howard County, Maryland, one acre house lots with adjacent open space were found to be valued equally with typical three to five acre lots.

"Performance zoning" is environmentally sensitive zoning that promotes cluster development with a variety of housing types on the unrestricted portion of a site at the same density that would be achieved under conventional zoning. In this way, the landowner's equity is also maintained, and savings of development costs are possible. Belits (1989) studied the results of performance zoning in Union Township, New Jersey, and found that the township was able to preserve as permanent open space 84.5 percent of the land that was proposed for development, without incurring any cost and without reducing the landowners' equity. Brabec (forthcoming) reports that a Maryland Office of Planning study found that at densities of one house per five acres, approximately \$3,500 in site development costs could be saved for each additional house placed on a five acre lot.

In other words, if three houses instead of one were put on a five acre lot, \$7,000 and ten acres of open space would be saved.

Frank (1982) addresses the question of whether performance zoning will make costs go up. He reports that the only extra costs that occur during development review are those for site capacity calculations, which run from \$20 to \$40. Because performance zoning does not take land *out* of development, but rather merely *rearranges* it on the site, it will not affect the price of houses. Under the same performance standards, both moderately priced and expensive housing can be built, depending on market demand.

8. The Economic Impacts of Historic Preservation

Many communities around the nation have used preservation of their unique cultural and historic assets to fuel economic growth. In her annotated bibliography, "The Economics of Community Character Preservation," Brabec (1990) describes a number of reports documenting increases in gross output, earnings, employment, and state and local tax revenue due to historic preservation rehabilitation tax credits. For example, a New York State report showed that the state's gross economic output increased by a total of \$639.7 million from 1976 to 1982 as a result of certified rehabilitation, resulting in \$184.9 million in greater wage earnings. The University of Georgia reviewed 482 projects and found that historic preservation effectively advanced economic development objectives.

Lowell, Massachusetts has created a model historic preservation program which features its factories and warehouses. The program demonstrates that people are very interested in preserving the heritage of working communities, and that historic preservation is good for business. The program has built a community spirit that has helped attract almost \$1 billion in rehabilitation and commercial development during the last 15 years. Lowell's experience indicates that insistence upon quality rehabilitation, historic integrity and diversity - blending a mix of housing and cultural opportunities - can pay off (Freeman 1990).

Other communities have had success with historic preservation projects, including Manteo, North Carolina, where enhancement of the town's historic resources resulted in major waterfront redevelopment and invigorated economic activity (Beatley, Brower and Brower 1987); and Wilmington, Illinois, where the old Cotton Exchange warehouse was rehabilitated to create a unique specialty retail shopping complex which generated momentum for further commercial investment in historic buildings (Schwab 1989).

Leithe et al. (1991) analyzed the economic benefits of historic and other community preservation activities, using data from Galveston, Texas, and Fredericksburg, Virginia. In both cities, they found significant benefits from increased construction activity, property values and commercial activity.

LAND USE PLANNING AND AFFORDABLE HOUSING

An important negative side effect of some local strategies is the reduction of the supply of affordable housing, mainly due to increased costs of land and housing. In effect, and sometimes deliberately, some planning strategies are exclusionary. Some communities support zoning that doesn't permit low-income housing out of fear that it will decrease the value of their homes and land (Urban Land Institute and Gruen Gruen + Associates 1977; Johnston et al. 1990). Other municipalities have attempted to manage growth with zoning and subdivision regulations which go beyond necessary standards of health and safety, and have thus unnecessarily increased the cost of development and housing (Central Naugatuck Valley Regional Planning Agency 1978).

Housing affordability has become a problem nationwide. For example, Johnston et al. report that the percentage of American households able to purchase a median-priced new house fell from 40 percent in the early 1970s to less than ten percent in 1981. City planners generally agree that in order to prevent exacerbation of the housing problem, growth management measures that will cause housing cost increases must be accompanied by local affordable housing initiatives (American Planning Association 1989).

A related issue is the equity of the impacts of growth management. Fischel (1985, 1990) shows that the economic benefits of some growth controls—higher land and house values—accrue mainly to well-to-do people in suburban jurisdictions (who are usually the ones to adopt them), while the costs are borne in large by people of lesser means (generally low-income renters and first-time homebuyers who live outside of those jurisdictions). He also describes how growth controls can lead developers to leapfrog out to communities that still welcome them, which can induce a greater separation of rich and poor than would otherwise occur.

Some municipalities and states have used various techniques, including "inclusionary" zoning (ordinances that require a certain percentage of all new residential development to be constructed as low- or moderate-priced housing), in an attempt to mitigate the exclusionary effects of growth management.

In Portland, Oregon, a set of specific standards for higher residential densities and a more diverse mixture of housing types has expanded opportunities for affordable housing. Combined with a streamlined permit process and an antimonopoly law, this policy has created a business climate which has successfully encouraged developers to build more affordable housing. The average price of a new home is among the lowest in major U.S. cities, allowing 25 percent of the region's households to buy new homes. The prices of existing houses are correspondingly lower, making them affordable to 48 percent of the region's households. A wider availability of multifamily units enables 77 percent of the region's households to rent an average two-bedroom apartment (Hales 1991).

The American Planning Association (1989) reports that Oceanside, California, has had success in maintaining a supply of affordable housing with an aggressive program that subsidizes land acquisition and construction costs for qualified housing projects, and a manufactured housing rent control law. An existing stock of moderate-priced housing has contributed to Oceanside's success. Hilton Head, South Carolina's growth control program, which does not require provision of affordable housing but rather offers developers density bonuses in exchange for low- and moderate-income units, has had less success. In the late 1980s, the multifamily housing market flagged and the density bonuses therefore did not provide a real incentive for affordable housing development.

Schwartz and Johnston (1981) evaluated inclusionary housing programs in three cities and one county in California. Petaluma's program was unsuccessful due to poor city council support; Davis's program was partially successful, producing one-sixth of new housing in the affordable range, but it did not screen buyers to prevent speculation or ensure that the beneficiaries were moderate-income, nor did it control resale prices; and Palo Alto's program was producing a small percentage of affordable housing under stringent income eligibility requirements and resale restrictions. Orange County had an effective affordable housing program due to its flexibility in allowing builders to cluster their affordable units and to accrue and sell credits for building more than the required number of affordable units. Schwartz and Johnston conclude that if inclusionary housing programs are properly designed, they can increase the supply of affordable units with acceptable equity effects.

Johnston et al. (1990) report that California's program of "selling" density increases in exchange for developer-subsidized housing has had qualified success in encouraging the production of a large number of low- and moderate-income housing units. They found that some communities need higher incentives than the state law mandates, and that 20-year rent and price controls are necessary to keep the program units affordable. They conclude that the program should interest other states and communities because it may help produce affordable housing without the adverse market effects of jurisdiction-wide rent controls and mandatory inclusionary programs without incentives.

Mulroy (1991) found that mixed-income developments in a wide variety of locations have proven competitive with market-rate developments in attracting tenants when they offer attractive amenities, good-quality housing and safe environments. She asserts that "housing for diversity" will help realize the goal of providing adequate shelter for every American.

Massachusetts requires at least ten percent of a municipality's housing to be low-income before they can receive certain forms of state aid. However, only a "handful" of communities have met this quota. And Lincoln, one of the towns that *has* provided low-income housing, is also becoming too expensive for the middle class, and is experiencing some resistance to further affordable housing development (Narus 1990).

Fischel (1985, 1990) concludes from his economic research that if suburbs were developed at historically normal densities (clustered in higher density than typical large-lot suburban sprawl), housing prices would be brought down and more moderate-income people could live there. And, as older housing filtered down within the suburbs, more poor people could afford it as well.

The Central Naugatuck Valley Regional Planning Agency (1978) and the President's Commission on Housing (Siegan 1982) both investigated the relationship between government regulation and affordable housing. They found that density of development restrictions, size of lot and dwelling limits, and exclusion of mobile homes and manufactured housing impede the production of affordable housing. They recommend eliminating regulations that are above minimum health, safety, and general welfare standards, and conclude that the most efficient way to provide lower cost housing is to allow multi-family residential development.

Frank (1982) recommends that, "In places where it is impossible to convince anyone that perfectly nice people live in townhouses and apartments," allowing clusters of single-family detached homes on very small lots is a fallback option. He also suggests that if mobile and modular homes are treated like any other form of residential development, and governed by comparable density, open space and impervious surface standards, communities are more likely to accept them.

After examining the results of affordable housing initiatives in communities around the country, the American Planning Association (1989) concluded that:

Of these strategies, it appears that inclusionary housing requirements, coupled with local and state programs that provide housing subsidies, are the most successful at achieving affordable housing goals. Density bonuses and exemptions from local permit allocation systems may only work in an intensely competitive housing market (p. 2).

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