

# **Paying the Costs of Sprawl: Using Fair-Share Costing to Control Sprawl**

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## **Section I: Background**

### **1.1 Introduction**

For the last 50 years, sprawl has been the dominant growth practice in the U.S. In 1950, 84 million people lived in 168 U.S. metropolitan areas, 60 percent of which lived within the “central city.” By 1990, the demographic proportions of these 168 metro areas were reversed with 159 million residents sprawled outward, only one-third of them living in central cities. (Rusk, 1998).

Sprawl is generally defined as very low-density development outside of city centers, usually on previously undeveloped land. Opponents of sprawl loathe to admit that sprawl has many attractions – low-density residential lifestyles, easy access to open space at home and in the country, relatively short commuting times for those who both live and work in the suburbs, ease of movement, and the ability to separate oneself spatially from problems associated with poverty and the inner city. Nonetheless, sprawl is as much a product of poor land use planning, skewed market mechanisms, uneven tax policies, and fragmented government bodies as it is a product of personal preference. And while sprawl has its advantages, some would argue its costs to society outweigh its benefits. It is a problem primarily due to the hidden costs associated with it, namely greater car dependence, higher infrastructure costs, loss of open space and agricultural lands, more energy-intensive development, urban core disinvestment, and traffic congestion.

Rather than go deep into the debate on whether sprawl is good or bad, this paper focuses on how sprawl is often subsidized and looks at ways to allocate its costs more fairly. This approach, nonetheless, aims to help communities manage “out of control” sprawl and minimize some of its more negative impacts. Sprawl has been a dominant growth practice partly because it appears to be cheap. Land outside of city centers is less expensive than land in downtown areas. And yet infrastructure costs, the costs of new facilities, and the cost of public services are often higher for sprawl. A major problem is that homebuyers or developers do not pay all of these costs.

This paper explores the need to quantify the true costs of sprawl and examines market-based strategies for internalizing the costs of sprawl using development impact fees and excise taxes. Currently, some areas use impact fees to address the higher infrastructure costs, such as water and sewer hookups, associated with outlying developments. In the future, impact fees and excise taxes could be used to address costs more fully, perhaps including some of social costs of car dependence. Impact fees could be applied variably based on density and distance from the urban core to help discourage outlying low-density developments.

### **1.2 What are the Roots of Sprawl?**

As mentioned earlier, sprawl is low-density urban development in areas outside of the urban center. It has three distinguishing characteristics: 1) it usually has densities no higher than 12 people per acre, 2) it is compartmentalized, meaning that homes are separated from commercial and industrial areas, and 3) it is an urban form typified by branching street patterns and cul-de-sacs (Durning, 1996). The separation of residential developments from stores, shopping malls, and offices increases the distance people need to travel to run errands or go to work. The low-density nature of sprawl does not support public transportation, so it leads to heavy reliance on cars.

What causes sprawl? One of the market drivers is that land in outlying areas tends to be significantly cheaper than land in or near urban centers. In one study in the San Francisco area comparing infill versus green space land prices, infill areas were about 75% higher on average (Bragado, et al., 1995). This has driven moderate and low-income families out of the city onto previously undeveloped lands. Construction, permitting, parking, and design costs are also less. Furthermore, developers often find it easier to obtain approvals in outlying lots, because there are fewer concerned neighbors to hold up the process. Clean-up costs and fear of liability for unknown contamination, also steer people away from infill lots.

A number of common policies and practices have encouraged a movement away from city centers. Property taxes are one such policy. In some cases, homeowners and

businesses have been forced to look to outlying areas in order to avoid high tax rates instituted by revenue-poor cities. The mortgage insurance system, which favors single family dwellings, has also encouraged low-density suburban development and, until recent changes in tax laws, national tax policy encouraged people to always buy bigger new homes to avoid capital gains.

Another factor that has encouraged sprawl is the widespread problem of fragmented governing bodies in many urban areas. It is common for cities to have a variety of agencies making decisions about land use. For instance, the city of New York has over 700 governmental jurisdictions in three different states. These agencies have not been able to effectively control sprawl in the New York Metropolitan Area. Between 1960 and 1985, New York City expanded its land area by over 65%, while the regional population only grew by 8% (Young, 1995). Competition for sales tax revenue amongst adjacent jurisdictions also pushes each tax district to seek retail build out.

Sprawl also has a component of the chicken or the egg phenomenon, regarding workers and the location of businesses. With the shift in the economy to an information and service-based economy, service firms are highly mobile and have less incentive to purchase high-priced property in downtown areas. Businesses have moved to the suburbs to take advantage of tax incentives and to avoid higher land and capital costs in downtown areas. These businesses have exacerbated the problem of vehicle dependence by providing convenient, free parking to employees at facilities.

### **1.3 What are the Impacts of Sprawl?**

Without considering the public and social costs, sprawl makes more economic sense than infill redevelopment. One estimate conducted for the Bay Area in California suggests that the costs of sprawl to the developer are on the order of \$100-132 per square foot, while infill redevelopment costs come in at around \$163-191 per square foot -- about 50% more (Bragado, et al., 1995). The savings are associated with lower land, construction, and parking costs and lower permitting and design fees for developments in outlying areas (see Table 1). However, experience over the last 30 years, has shown us that the

social costs of sprawl are significant -- primarily from loss of open space and agricultural lands, greater reliance on vehicles, blighting of urban centers, higher resource consumption (i.e. energy and water), greater infrastructure costs, and higher costs of services.

<b>Table 1: Development Costs -- Sprawl versus Infill Development</b> <b>1993 Estimates for Bay Area, California</b> <b>\$/square foot</b>		
	Infill Development	Sprawl Development
Land	\$15-\$20	\$8-12
Site Preparation	\$5-10	\$5-10
Construction	\$60-65	\$45-55
Parking (sprawl included in construction)	\$15-18	\$0
Soft Costs (permits, fees, etc.)	\$32-37	\$20-26
Contingency 5%	\$6-7	\$4-5
Subtotal	\$133-157	\$82-108
Profit 15%	\$20-23	\$12-16
Marketing	\$10-11	\$6-8
<b>Total Cost</b>	<b>\$163-191</b>	<b>\$100-132</b>
Source: Bragado, et al., 1995.		

### **Loss of Open Space and Agricultural Lands**

With decentralization and sprawl development, our farmland is rapidly disappearing. A study by the American Farmland Trust has estimated that the U.S. is losing about 50 acres an hour to sprawling developments. If this trend continues, the Trust estimates that 13% of prime U.S. farmland could be redeveloped by 2050 (Longman, 1998). The consequences of this trend have been hotly debated. With increases in productivity, the U.S. has been able to grow more crops with less land and labor (Gordon, 1998). Part of the problem, however, is what land is being lost. Between 1982 and 1987, the Central

Valley—California’s leading agricultural region—lost almost a half-million acres of productive farmland (Bank of America, 1996). Some of this land can be replaced by bringing new land into agricultural production, but often at high economic and environmental cost. In addition, loss of agricultural land in close proximity to urban centers, represents a loss in efficiency and a loss in ability for small farmers to easily sell their fruits and vegetables in local markets. Out of a total of about 250 million acres of cultivated farmland in the U.S. only 48 million areas are within 50 miles of the 100 largest urbanized areas (Nelson, 1992b).

### **Greater Reliance on Vehicles**

Sprawl leads to an increase in vehicle dependence, which has both social and private costs. Since 1970, population density has been steadily declining in the U.S. With this decline in density, has come a greater reliance on the automobile. From 1970 to 1996, the mileage people drive has grown four times as fast as the population, and twice as fast as licensed drivers. The number of cars has also outgrown the population. During the same time period, the number of cars grew by more than 97 million, while the population increased only 61 million. (USA Today, January 16, 1998).

<b>Table 2: Increase in population, vehicles, drivers and mile driven 1970-1996</b>		
	<b>1996 Total</b>	<b>% increase from 1970</b>
Miles Driven	2.5 trillion	+123%
Vehicles	205.4 million	+90%
Drivers	179.5 million	+61%
Population	265.3 million	+30%
Source: USA Today (1/16/98)		

The U.S. is currently one of the most car dependent nations in the world, with private ownership rates about twice those of Western Europe. The cost of owning a car can be a financial burden on families. Owning and operating a car costs about \$3600 a year

(Durning, 1996), which translates to about 16-20% of total household expenditures (Young, 1995). Put another way, a median income family would spend 27 hours a month working to pay for the 32 hours a month they spend on average in a car (Durning, 1996).

Living in the suburbs does not necessarily translate into more driving. With many industries and companies locating themselves in suburbs, most commuting now takes place suburb-to-suburb (Gordon, 1998). Nonetheless, studies show as much as a doubling of vehicles miles traveled (VMT) per capita for people living in sprawl-like development compared to older transit-oriented development (Calthorp, 1993). In addition, uses of other modes of transportation (i.e. biking, walking, using the bus or other forms of public transit), are significantly less in sprawl development. Some would argue this simply reflects that cars are a superior choice of transportation – neglecting the fact that more than 32% of the U.S. population can't drive (10% excluding children under 16) (Littman, 1998). Sprawl development can be designed to be more pedestrian, bike and public transit friendly, recognizing, however, that the viability of these alternate modes of transportation (beyond recreational uses) is highly affected by density, or the lack thereof.

Driving also has costs associated with loss of habitat, congestion, resource consumption, and a decline in air quality. The social costs of the increased reliance on the automobile in the U.S. have been estimated to be as much as \$184 billion a year (Cobb, 1998), which does not even include productivity losses from congestion or tax revenue losses from land used for roads. Cobb's estimate of damages includes \$36 billion in uncompensated damages from accidents, \$40 billion in road maintenance costs not covered by tolls and user fees, \$19 billion for defending oil supplies, and \$89 billion in environmental damages (see Table 3). Of the total environmental damages, \$62 billion are estimated to be from health effects, visibility loss, and crop damage resulting from air pollution. Traffic congestion is also costly in terms of fuel loss and time loss. The average worker now spends about 9 hours per week, or more than a full working day, traveling in a car due to increased commuting times and congestion.



<b>Table 3: U.S. Subsidies for Driving (\$billions)</b>			
<i>Direct Subsidies</i>		<i>Indirect Subsidies</i>	
Highway construction, maintenance and services (less user fees and tolls)	\$31	Accidents (uncompensated deaths, injuries, and medical expenses)	\$36
Local streets and services	\$9	Air pollution	\$62
Strategic Petroleum Reserve	\$1	Water pollution	\$6
Military protection of oil supplies	\$18	Noise pollution	\$8
<b>Total Direct Costs</b>	<b>\$59</b>	Global warming	\$13
<b>TOTAL COSTS</b>	<b>\$184</b>	<b>Total Indirect Costs</b>	<b>\$125</b>
Source: Cobb, 1998			

### **Blighting of Urban Centers**

The movement away from urban cores also has costs. Downs (1988) makes a strong argument for how government policies and peripheral growth have directly exacerbated problems of intensive concentrations of poor households in central portions of our metropolitan areas. Unlimited sprawl removes new jobs from accessibility by unemployed inner-core residents; fragmented controls over land use permit exclusionary zoning policies; and cities designed for cars deprive poor people and non-drivers of mobility (Downs, 1998). Urban disinvestment translates into lost sales and property tax revenues. Empty urban lots are also targets for arson, graffiti, and other types of crime. Surrounding businesses and properties often lose value due to the crime and stigma associated with vacant lots. Today, its not just an issue of movement away from the urban core, many metropolitan areas are now seeing problems of blight and abandonment

in areas of what policy experts call the inner-ring suburbs – suburbs developed 20-30 years ago now surrounded by new development. Lacking the newness of suburban development on the outside, and without the quality of housing stock and cultural amenities that help fuel downtown revitalization, experts fear some of these areas could become islands of urban decay (Anton, 1998).

### **Higher Resource Consumption**

Energy consumption is affected by the size of homes and business spaces, as well as what is called the “shared-wall” phenomenon where townhomes and apartments can enjoy much lower heating bills than freestanding homes. Per capita water consumption, particularly in arid climates, goes up dramatically for homes with larger lots and lawns that need watering.

A recent study by the City of San Jose, California tried to estimate the savings associated with implementing growth restrictions to limit sprawl. If the city had not implemented an urban growth boundary, an estimated 3,000 homes would have been built in outlying areas. These homes would have resulted in 200,000 additional vehicle miles by commuters, 3 million additional gallons of water and 40% greater energy use for heating and cooling each day (Allen et al., 1996).

### **Higher Infrastructure Costs and Costs of Services**

The cost of providing infrastructure and municipal services is higher with sprawl. Studies in California and Florida have shown these extra costs to be on the order of \$20,000 per residential unit (Nicholas, et al., 1991 as cited, p. 1). Similarly, study by Rutgers University comparing a sprawl development in New Jersey with a more compact infill development found a differential of about \$25,000 per residence (Bragado, et al., 1995). Another study, looking specifically at sewer hookups cost found that in Tallahassee, Florida, sewer hookups cost \$11,433 in suburban areas compared to \$4,447 for the mostly black, center-city neighborhoods nearest the sewage treatment plant. Despite this nearly \$7,000 difference in real cost, all households pay the same price of about \$6,000

for sewer connection. The urban residents paid \$2,000 extra in hookup costs, while suburban homes received a subsidy of \$5,000 (Longman, 1998).

Costs of services to different areas of a municipality are also influenced by location. Simply put, the further away developments are from the service centers that serve them, the more costly it usually is to provide those services. Another critical issue facing communities is whether new development occurs in areas where existing facilities, namely schools, libraries, parks and police stations can absorb capacity. Cities witnessing both rapid suburban growth and urban disinvestment at the same time can have situations where taxpayers are paying for new facilities while other facilities are being underutilized. Between 1970 and 1995, the number of public-school students in Maine declined by 27,000, yet the state spent more than \$338 million building new schools in fast-growing suburban towns (Longman, 1998).

Finally, street connectivity and route distance can be more influential than physical proximity. The maze-like effect of cul-de-sac development, for example, makes it more time consuming and expensive for police to watch neighborhoods on the beat. Rarely, however, do communities try to quantify these differences and make different areas pay appropriately. (See case study on Lancaster, California for a write-up on one community that has set up location-variable impact fees).

#### **1.4 Addressing the Full Costs of Sprawl**

The market price of low-density, energy inefficient, sprawling developments does not incorporate the social costs associated with car dependence, loss of open space, and deterioration of downtowns. The trick is to determine a way to incorporate these costs into the marketplace and put the financial burden on the developer and homeowner. In recent years, a number of growth control policies have been instituted by cities around the country to try to reduce the impacts of sprawl. These strategies have included growth boundaries, restrictions on building permits, service area fees, cooperative city and regional planning, impact fees, and excise taxes. While impact fees have focused on placing the economic burden of sprawl back on the homeowner or developer, they have

been limited to paying for the additional infrastructure costs associated with sewage, water, roads, and municipal services. Fees in the form of excise taxes could, however, be designed to more fully address the costs of sprawl. Another approach is to set up an impact fee system that varies relative to municipal services or density. In the next section, we will look at how these market-based strategies have been used by communities.

## **Section 2: Paying the Costs of Sprawl**

This section looks at market-based strategies to help communities pay for the full cost of new development and discourage sprawl. Market-based strategies looked at include impact fees, excise taxes and location dependent surcharges. Case studies are used to show how some of these strategies have been applied in different communities. In addition, this section discusses how to quantify the impacts of sprawl and how geographic information systems (GIS) and spatial accounting tools could be used to help in this process.

### **2.1 Who Should Pay and How?**

#### **Impact Fees**

##### *A Brief History of Impact Fees*

According to one definition, impact fees are “monetary charges imposed on new development to recoup or offset a proportionate share of public capital costs required to accommodate such development with necessary public facilities” (Nicholas and Nelson, 1988 as cited in 1991 p. 2). Impact fees grew out of the public’s realization, during the 1960’s, that despite the use of developer exactions, growth may actually be a drain on public coffers. Prior to this time, growth was seen as a way to increase tax revenue and generally boost the local economy. As neighborhoods became crowded and public services were not able to keep up with growth, attitudes began to change.

A concurrent trend was that during this time federal, state, and local governments began reducing their commitment to finance community facilities. Between 1965 and 1984, average per capital outlays in constant 1972 dollars for infrastructure dropped from \$161 to \$87. (Nelson, 1988). Anti-growth sentiments continued throughout the 1970s, as several studies found that new developments did not generate sufficient tax revenues to pay for the additional demand they put on public services. Another event of the 1970s, that may have helped shape impact fees, was the passage of the National Environmental Protection Act (NEPA), which required that environmental impact assessments be conducted for certain construction projects (Nicholas, et al., 1991). The methods used for

calculating environmental impacts are similar to those that have been adopted for determining impact fees.

#### *Where are Impact Fees Being Used?*

Impact fees have been used extensively in Florida, California, Oregon, Colorado and Texas. In recent years, ten states have taken steps to specifically authorize communities to assess impact fees. These states include Arizona, California, Georgia, Maine, Maryland, Nevada, Oregon, Texas, Vermont and Washington. One difficulty in determining how many communities are currently using impact fees is terminology. Impact fees are also called developer charges, benefit assessments, connection charges, exactions or extractions (by developers), or donations (by jurisdictions) (Nicholas, et al., 1991). In communities across the country, fees have been used to pay for the costs of fire and police protection, roads, schools, parks, libraries, water, sewer, drainage, and other municipal services.

#### *What are Impact Fees Used For?*

Impact fees have been used for the expansion or construction of new facilities (located outside of the boundaries of the new development) that provide municipal services. Generally, impact fees can not legally be used for "operation, maintenance, repair, alteration, or replacement of capital facilities" (Nicholas, et al., 1991 as cited, p. 1). Most commonly, fees are used to recoup the cost of water and sewer hookups. Fees that are used for highway construction rank as the next most common type. However, using impact fees to pay for facilities other than roads and utilities, is still relatively uncommon in the U.S. When comparing cities, the level of fees and the types of services they fund varies widely. Based on a 1990 study by the University of Florida, the national average of all fees assessed (for roads, parks, public facilities, police, fire, libraries, schools, water and sewer) was about \$6,400 per single family home – ranging from \$2,000 to \$17,000 (see Table 4). Excluding water and sewer charges, the average drops to about \$3,700 per single family residence. (Nicholas, et al., 1991, p. 3). Even for specific services, there has been very little consistency among communities regarding the level of fees. For

instance, fees for roads ranged from \$130 to \$7,300 per single family home according to the Florida study.

<b>Table 4: Average Impact Fees for Various Services Fees for Single Family Homes (per unit)</b>			
	Low	Average	High
Roads	130	1,543	7,348
Parks	81	534	2,000
Public Facilities	47	98	271
Police	6	51	102
Fire	11	142	686
Library	30	93	190
Schools	135	1,231	2,096
Water	530	1,261	2,510
Sewer	1,100	1,467	1,830
Total	2,069	6,413	17,033
Less Water & Sewer	439	3,686	12,693
Source: Growth Management Studies, University of Florida, 1990 as cited in Nicholas et al., 1991.			

#### *Setting Impact Fees to Better Address Sprawl*

When setting impact fees, the major issues that need to be resolved include determining the appropriate formula, the amount of flexibility that will be allowed in setting the fee, and whether offsets for donated land, other revenue sources, or existing facility capacity should be allowed. Generally, most communities use either a formula or a published schedule to calculate the fee for a new development. In order to stand up to legal scrutiny, impact fees must be set to reflect the costs of providing facilities that will serve the new development. The connection between the new development and the additional cost of providing services must be clear. Therefore, impact fee calculations often depend

## ***Lancaster Case Study***

### Background

Lancaster is a city about 60 miles north of metropolitan Los Angeles. Incorporated in 1977, the city experienced rapid population growth in the 1980s – its population more than doubled during the decade to 125,000. At first, impact fees were imposed on new development to help pay the cost for streets, signalization, drainage/flood control, and park acquisition. As in most cities, these fees were the same no matter where the development was located, and with cheaper land on the fringe, the incentive was to sprawl. In 1980, the city spanned approximately 37 square miles. By the end of the decade the urban area had exploded to 94 square miles (Hill, 1997).

As a result, the city was not recouping the costs associated with costly infrastructure expansions and increased levels of services. In addition, costs to the city for services that increased with distance from the urban core – like street and park maintenance and community safety – were not included in the fee structure at all (Hill, 1997).

Under the Urban Structure Program (USP), the City of Lancaster created a distance surcharge to cover these services. The program was adopted as an integral part of the city's 20-year General Plan in March 1992. Surcharges are levied for a period of 20 years with charges increasing with distance from the town's pro-rata service core (City of Lancaster, 1993). A primary objective of the program was to accommodate growth and development but not let the cost of that growth be transferred to existing residents.

To ensure that infrastructure facilities adequately serve both present and future development, guidelines from urban service levels were established. These adopted service standards were based on local and regional standards and on state and federal statutes. The 20-year general plan served as the foundation for establishing the USP's objectives and policies defining the spatial pattern of new development for Lancaster. One objective was to encourage the location of new urban growth within or adjacent to identified urban nodes so that the provision of services to new development is not a burden to existing residents. Another objective was to encourage planning and development of large-scale, mixed-use communities with phasing and financing of infrastructure improvements, public facilities, and municipal services costs (City of Lancaster, 1993).

### How it was done

Designers of the USP model tried to integrate both the new and existing impact fees into a unified model allowing the city to define, relate, and modify each impact fee in a consistent and comprehensive manner (Hill, 1997). Along these lines, it was necessary to develop a model that would satisfy several objectives.

- Construct a modular system composed of freestanding impact fees that could be modified, added or deleted, and each with separate nexus documentation and implementing ordinance and/or resolution.
- Have the model analyze three nexus relationships – burden, type, and cost – for each impact fee (required by State law).
- Link cost estimation factors to city budget with fees based on current operations.



- Incorporate growth trends/forecasts for future infrastructure needs in determining the new development's cost share.

Incorporate the increased cost of providing services and maintaining facilities at greater distance from the urban core (City of Lancaster, 1993).

#### Computerized Calculations

Once the parameters and the fee-estimating equations were worked out, software was developed so that the model could run on Microsoft Excel, using mathematical equations to estimate the impacts of and derive the fees for each development proposal. Based upon size, location, and land-use mix of each project, impact fees are calculated for infrastructure, public facilities, and operations. (Hill, 1997)

Infrastructure fees assess the new development project's need for streets, signalization, and flood/drainage capital improvements. While facility fees pay for public facilities and buildings that will be required as a result of future population growth; and operations impact fees represent the cost of distance-related city services, such as road maintenance, street sweeping, and community safety (Hill, 1997).

A multiyear multiplier that corresponds with the 20-year horizon of the general plan is applied so that future operating impacts are covered. The operations impact fee is the net sum of operating costs, which are based on the city's annual budget, less project-related revenues. Each operating cost element is multiplied by a surcharge for projects located at a greater distance from the municipal facility. The surcharge is based upon the distance between the project and the pro-rata service range (a circle surrounding the facility which can be serviced at or below current costs) (City of Lancaster, 1993).

Hill (1997) provides an example of the model running on two comparable projects, one located adjacent to the urban core and the other located approximately six miles from it. The model indicates that the total impact fee per single family residential unit for the project located adjacent to the urban core is \$6,541, while the fee for the project located six miles from the urban core is \$10,797, approximately 65 percent greater. The computerized fee estimation model includes annual update procedures, which keep fees current, accurate, and fair. The basis of fee estimation is tied to the city's annual budgetary process; this allow the operations fee to be modified to reflect current operations (Hill, 1997).

Unlike the more traditional approach to growth control of establishing urban limit lines, which restrict development to locations within defined boundaries, the USP does not prevent development from locating outside the urban core. It simply requires the developer to pay the full cost of infrastructure and services necessary to maintain the project over the life span of the general plan (Hill, 1997). Since the USP went into effect in 1992 the demographics of development have changed. Five years later, the population of Lancaster grew by 16%, yet little of the growth occurred outside the urban core (Swope, 1997).

on factors such as the need for new facilities, the current population, the size of the building, and the amount of sewage flow. Since these factors are variable, the level of the fee is often adjusted for each development project.

Although a few communities calculate fees based on the location of the development, this is not a common practice. According to national surveys, less than 3 percent of sewer impact fees and 5 percent of impact fees for fire service are set to reflect differences in location (Frank et al., 1988 as cited in Nelson, 1988, p 13). The lack of geographic considerations in setting fees limits their ability to guide growth. Used in conjunction with other growth control measures, impact fees could help limit sprawl, or at least make sprawl pay its own way. Recently, one city, Lancaster, California, adopted a program that sets fees based on the distance of the development from the urban core (see case study below for more detail). The distance "surcharge" is only applied for services such as street sweeping, park maintenance, and police protection that are more expensive to provide at greater distances (City of Lancaster, 1993). The upshot of Lancaster's program has been to reduce the number of proposals for developments far from the urban core, and to keep the rapid growth (about a 16% increase in two years) concentrated near downtown.

### **Excise Taxes or Impact Taxes**

Development excise taxes are similar to impact fees and can also be used to control sprawl. The two main differences between impact fees and excise taxes are that 1) taxes must be approved by the public, and 2) the level of the tax does not have to bear any relationship to the cost of providing services to the development. Because they require public approval, excise taxes do not need to stand up to the legal scrutiny required of impact fees. So, in this way, development excise taxes are more flexible. They can be set at whatever reasonable level is necessary to balance the budget and they can be spent for any reasonable purpose (Nelson, 1988). With regard to addressing the full costs of sprawl, excise taxes may represent a better alternative for incorporating some of the social costs associated with air quality impacts and vehicle dependence. Given the greater flexibility in setting the fees, these costs could be incorporated in the tax. A

number of cities, like Boulder, Colorado, have adopted development excise taxes to help pay for growth, although none that we have found have instituted a tax that varies by location.

### ***Boulder Case Study***

Boulder, Colorado, a city located 27 miles northwest of Denver, recently began using an excise tax to regulate the costs of growth. In 1987, the city adopted an ordinance to establish a development excise tax to make new developments pay their fair share of growth-related impacts on public facilities. In 1996, the city hired a consulting firm to revise the level of the tax, but the proposal was defeated by a public vote in reaction to a campaign launched by the private developers arguing that it would result in a loss of commercial development and sales tax revenue. In 1998, however, the public did support an increase in the original development excise tax to account for inflation.

The development excise tax was developed to vary for single family detached and multi-family housing. Smaller fees are also levied against commercial buildings, but these are considerably less than the taxes applied to residential units. The taxes are levied on new construction and are collected before final inspection and/or release of the electric meter (whichever comes first). On additions to existing buildings, these taxes are collected when building permits are issued (City of Boulder, 1998 Schedule of Fees).

The city has not used impact fees alone to control growth. In fact, it has a long history of managing its growth, starting in 1967 when it became the first city in the U.S. to pass a tax to acquire open space. Shortly thereafter, in 1970, the city and county adopted a joint comprehensive plan that laid out the intended direction and extent of the city's growth. Growth limitations were added in 1978, when the plan limited the city from expanding sewer and water service outside of the city boundaries. It also limited the county from approving new subdivisions that would require "urban levels of services and facilities." This was the first major step in controlling sprawl and preserving open space and rural lands in the area (Pollack, 1998).

Since the city has other mechanisms in place, such as open space, building permit limitations, a growth boundary, a joint comprehensive plan with the county, the need to adjust the level of the taxes by location is not essential. The tax could, however, be modified in the future to address some of the other social costs of development.

## **2.2 Quantifying the Impacts of Sprawl**

In order to counter development subsidies and encourage more desirable forms of land use, communities must develop mechanisms for quantifying and tracking impacts. Once

the impacts are known, communities can devise systems for getting the appropriate entities to pay a more equitable share.

### **Infrastructure and Facility Costs**

Direct costs, including infrastructure and new facility costs, as well as an assessment of revenues generated from new development, are relatively straightforward to compute. Infrastructure costs include water, sewage, utilities, roads, parks, and sidewalks. Capital facility costs include schools, libraries, fire stations, and police stations -- each with associated services. Other services include street cleaning, solid waste handling, and emergency medical services. Suburban development on the city's outskirts means new infrastructure and capital facilities need to be put into place. These costs can be quantified using readily available formulas and computer models, incorporating population and employment projections; trip generation data and capital facilities cost estimates.

### **Proximity to Municipal Services**

Costs of services to different areas of a municipality can be quantified by collecting empirical data looking at the costs of services to existing areas relative to distance/accessibility and then projecting what might the costs of services be to a new development. Direct route time and distance, as opposed to "as-the-crow-flies" distance, can be modeled using Geographic Information System (GIS) programs, like ArcView's Spatial Analyst®. GIS mapping can also help track existing facilities, their capacity, and whether or not new development in different areas could be absorbed without the need to build new facilities.

### **Quantifying Other Impacts**

Resource efficient communities are not only more environmentally friendly but also more economically viable. Energy savings, for example, can translate into more profitable businesses, affordable housing that is affordable to live in, and, as a result, more jobs, a cleaner environment, and higher quality of life. Quantifying the impact of sprawl

development versus more efficient compact development in terms of energy use and resource use can help make a more convincing argument for alternatives to sprawl.

Again, GIS tools, like PLACE3S, INDEX® or SmartPlaces® can be used to quantify the impacts of different types of development in terms of energy, water, air quality and other indicators. Certain costs, like air quality impacts, could actually be assigned to those responsible through emissions taxes or other mechanisms. Ecological mapping of sensitive areas can help recognize the ecological value of different areas. As in the case of wetlands, a common way to protect these areas is through regulation and/or the public acquisition of sensitive areas rather than through market incentives. Nonetheless, folding ecological value into the actual cost of development could help steer development into the least sensitive areas.

Market viability of public transit is highly dependent on density. Spread out development is much more costly to serve. To promote transit-oriented development and keep public transit viable, portions of the cost of transit services could be incorporated into the developer's cost of development rather than flatly taxing people throughout a metropolitan area. The cost of increased vehicle miles traveled (VMT) and resulting impact on air quality, congestion, and expensive road projects, while more difficult to calculate, could also be brought into the development cost equation of excise taxes.

### **Public Participation and Spatial Accounting**

Most successful growth management strategies incorporate public process to gain broad support from diverse stakeholders. Lancaster's Urban Structure Program, a product of the 20 year general planning process, involved over two years of public process to get both developer and resident backing for the program (Hill, 1997). There are three main components of an effective public process:

- *Public participation:* a fully engaged, comprehensive group of stakeholders committed to the principles of sustainability and collaborative planning;

- *Planning and design*: a clear set of planning and design principles that embody a community's values and vision of what greater resource efficiency and sustainability mean to their future; and
- *Measurement*: quantitative documentation of energy, economic, and environmental impacts to support informed planning choices and monitor plans as they are implemented. (Allen, et. al, 1996).

This third component aims to measure the economic, environmental and social impacts of community plans and monitor these indicators to see whether the community is becoming more or less sustainable over time. The objective is to give decision-makers quantitative information that strengthens the argument for resource-efficient choices. This process is greatly enhanced by spatial accounting and Geographic Information System (GIS) mapping tools which enable communities to track multiple issues and see how they relate to each other. For example, GIS spatial accounting can enable communities to track infrastructure and municipal services expenses and calculate how they differ relative to the density and location of developments. In addition, this information can be mapped with an overlay of environmentally sensitive areas, to make sure development occurs in the right place. Overtime more and more information can be taken into account, and depending on public receptivity, can be incorporated into the impact fees and/or excise taxes.

One tool that uses GIS spatial accounting and outlines an effective planning process is

### ***San Diego Case Study***

San Diego's use of impact fees, as well as San Diego's Association of Governments (SANDAG) use of GIS in community process and impact analysis has proven to be a powerful and effective combination. While impact fees level the financial playing field, GIS and community process tools like PLACE3S help the community look at other environmental impacts, such as air quality, energy use and jobs, and incorporate this information into decision making. Between 1992 and 1994, SANDAG, working with a California Energy Commission grant and technical assistance, produced the San Diego Regional Energy Plan. This plan integrates many of the region's land use, transportation, air quality, housing, and economic development goals into a 14-item action agenda. Using a planning and impact analysis process called PLACE3S (PLANNing for Community Energy, Economic and Environmental Sustainability), the city compared the costs and benefits of taking additional actions to manage growth throughout the region against two alternative levels of growth management. PLACE3S determined that the policies contained in the Regional Energy Plan would save about 1.5 billion in energy costs throughout the region over the 15 year planning horizon. These same measures would create about 5,000 new energy-related jobs and prevent about one-half million tons of air pollutants from being emitted over the same timeframe.

### **2.3 Using Fees and Taxes with Other Growth Management Strategies**

Impact fees and sprawl taxes represent one set techniques for controlling growth. Several growth management techniques have emerged around the country that can be coupled with impact fees and excise taxes to help slow down sprawl.

*Urban growth boundaries or urban service limits* are mapped lines that mark off areas development should or should not occur. For some communities the boundaries have legal standing while other communities set up growth boundaries as a recommendation. Such boundaries are intended to promote compact urban growth in order to provide services more effectively and efficiently and to protect agricultural land and natural resources. Combining growth boundaries with impact fees and excise taxes helps draw a hard line where development can and cannot occur while making sure development within the growth boundary pays the full cost of development. One of the more common obstacles to establishing effective growth boundaries is lack of cooperation among the multiple jurisdictions of a metropolitan region.

*Benchmarks or indicator projects* identify social, environmental and/or economic measures that can be used for tracking community objectives. Locally relevant indicators include the number of salmon spawning each year in near-by rivers or the number of clean air days. Benchmarking determines existing conditions among an array of indicators and sets future targets. Tracking the indicators over time provides evidence of specific progress in growth management programs. With modeling and spatial accounting programs, communities can also project the impact of different growth patterns on different indicators.

*Threshold standards* can be used to establish standards for a variety of public facilities and services as well as for environmental qualities such as air and water quality that must be met to allow development to proceed. (Porter, 1996)

*Growth limits and Moratoriums* establish annual quotas for building permits to limit the rate of growth either permanently or temporarily. They are put into place to retain small-town character or preserve open space or are used to regulate the pace of development to an amount that can be served by the community's infrastructure improvement program. Many have a rating system for determining priorities among potential projects.

*Incentive zoning* encourages but does not mandate development of certain uses, amenities, or design qualities in return for defined benefits, such as increased densities. Incentives are often used in downtown areas and suburban business centers to gain open space, special building features, or public art (Porter, 1996). Incentive zones, such as enterprise zones, can involve tax breaks for businesses and developers trying to develop in economically depressed regions.

*Development exactions* require developer contributions of land, facilities, or funding for certain types of public facilities that may serve more than the developer's project or be located off site. Exactions go beyond typical impact fees set up to provide basic on-site facilities (Porter, 1996).

*Revenue sharing* amongst jurisdictions is one response to the problem of multiple jurisdictions racing to build more and more retail for sales tax revenues. Getting multiple jurisdictions to agree to revenue sharing is usually easier said than done. Public attitudes against sprawl have to be strong enough to get all of the jurisdictions to the table. GIS mapping and decision support tools can help multiple jurisdictions develop a common vision for the region and establish a tracking system for implementation.



## **Section 3: Policy Implications**

### **3.1 The Impacts of Impact Fees and Sprawl Taxes**

Growth management strategies designed to guide the actions of private developers inevitably impose some constraints on private sector opportunities. Presumably, the burdens of such constraints are more than offset by the benefits. Even the most well-intentioned programs, however, tend to increase the time and effort required to obtain development approvals, limit the latitude of property owners to respond to market demands, and restrict the supply of developable land. In addition, growth management techniques can exclude some classes of residents and business from the community. (Porter, 1996)

Some growth management techniques may produce unforeseen consequences. Urban growth boundaries that restrict development in certain areas, for example, run the risk of creating artificial shortages of developable land and up land prices. Requirements for adequate public facilities may trigger moratoriums when public funding of infrastructure falls short of needs. Growth management techniques can also impose major planning and administrative requirements on local governments. For growth management programs to work well, they often require additional staff time and expertise. (Porter, 1996).

### **Equity Issues and Affordable Housing**

Do impact fees correct or exacerbate inequities or are they neutral? Nicholas (1992), notes that in most applications of impact fees, the fee does not vary with personal income, and therefore, impact fees tend to be regressive. Connerly (in Nelson, 1992, p. 362), argues that developers usually pass on the costs of impact fees to others and therefore they have an exclusionary impact and exacerbate inequities. Snyder and Stegman (1986) estimate that each \$1,000 of impact fees adds \$315 to the annual income a household will need to purchase a home under a 30-year mortgage with a 10 percent interest rate. A \$5,000 impact fee therefore increases the minimum income required to purchase the home by around \$1,600. Because of the persistent differentials in black and

white incomes, housing costs driven up by impact fees will serve as additional barriers to racial integration – a problem that characterized many metropolitan areas (Connerly in Nelson, 1992, p. 364).

Market-based strategies that discourage sprawl development and encourage new downtown development may also exacerbate housing affordability in downtown areas in two ways. First, it may directly reduce the supply of affordable housing by demolition to clear sites for office tower development. Second, it may increase the value of real estate resulting from more intense use of urban land and by creating an additional housing demand by new employees attracted to the development (Nelson, 1988). Huffman (in Nelson, 1992, p. 315), distinguishes between different supply and demand conditions for home buyers, but in all cases concludes buyers pay the largest share of the fee, over the long-term.

### **Some Solutions**

Looking at it from a different perspective, Downs (1998), makes a strong case for the social inequities caused by sprawl and its link to concentrations of poverty. In the fight against inequities, it could be argued that it is more crucial to contain sprawl and make sure new development pays its fair-share than it is to keep sprawl housing cheap. As the Tallahassee Florida study mentioned earlier, inner city neighborhoods can be caught in situations where they are subsidizing sprawl development on the order of \$2000 per sewer hookup fee (Longman, 1998). Perhaps the best strategy is to first make developers pay their fair share, and then address affordable housing and equity issues through set asides and other programs.

As seen with the Boulder case study, excise taxes can more easily set aside funding for affordable housing. In general, planners and developers should establish alternative sources of funding so that low-income housing is not stifled by impact fees. Funding could come from local sources, and a city could even pledge a portion of its general fund for payment of impact fees for lower income housing (Connerly in Nelson, 1992, p. 365). Impact fees could also be tailored to the effects that specific developments have on

communities with fixed assessment fee schedules that account for categorical variation of impacts (Huffman in Nelson, 1992, p. 321). Finally, basing impact fees on square footage and/or density can help mitigate the regressive nature of fees (Nicholas, 1992). In Boston and San Francisco, a per-square-foot assessment on new downtown office construction translates into proceeds used by the city to provide additional lower cost housing to qualifying households (Nelson, 1988).

### **3.2 Public Reactions to Fees and Taxes**

Generally, the public is supportive of impact fees, because they are seen as a way to make new growth pay for itself. Existing residents of a community do not want to see a decline in the level of municipal services, due to an influx of rapid growth. However, there are often concerns that impact fees will raise the cost of development and could discourage businesses and economic development from occurring in the community. Therefore, there is a balancing act that must occur. When developing an impact fee policy, it is best to work closely with the public in developing the structure of the policy. This will lead to a more accepted fee that incorporates the concerns of the public, and of the developers.

When faced with the prospect of an impact fee, developers may put forth a number of objections. Some of the most common arguments are that fees stifle development, that they are too much of a financial burden, that they are not fair because existing developments don't have to pay, and that the municipality doesn't have the authority to create such a fee (Townsend, 1996). Impact fees are seen by some as another layer of bureaucracy, slowing the development process. Another concern is that high fees will make surrounding areas more attractive for development, making local areas less desirable. A recent survey by the Building Industry Association of San Diego, found that high impact fees could "not only put the brakes on some types of residential development, but they may be high enough on the commercial/industrial side to keep companies from coming to San Diego." (Biberman, 1997).

In a number of instances, developers have taken municipalities to court over proposed fees (see next section for further discussion). Despite controversy, developers on the

whole seem to accept impact fees with minimal objection as long as the proposed fees are reasonable. Given the alternatives of case-by-case exactions or growth control measures that limit or halt development altogether, most developers prefer impact fees (Nelson, 1988). Well-designed impact fees that capture the complexities of development are more easily accepted. Some factors that make impact fees more palatable to developers are if there is good land use planning, fair administration, reasonable methods of calculating fees, and if the developers have some say in the development of the facilities funded with the fees (Nicholas et al., 1991).

Impact fees may also be more palatable to developers if they are involved in the process of creating the fee. For example, when the City of Lancaster, California, created a location-dependent impact fee, it worked closely with developers and builders to design an acceptable fee. In fact, the city presented several options to the building community and solicited their input on which one would be most fair. Involving the community and builders added almost two years to the process of developing the fee, but so far the fee has not been legally challenged and it has generally been viewed as a success (Hill, 1997).

### **3.3 Political/Legal Issues with implementing Impact Fees**

#### **Legal Issues in Setting Fees**

As impact fees have developed, the courts have guided their use and applicability. Fees have been challenged in the judicial system based on three general arguments. The first type of attack has focused on whether they are authorized by state statute. In order to address this issue, at least a dozen states have adopted legislation officially authorized the use of impact fees (Arizona, California, Georgia, Illinois, Maine, New Jersey, Nevada, Oregon, Texas, Vermont, Virginia, Washington and West Virginia). Some of these statutes authorize impact fees for roads, while others have adopted more general authorizing statutes. In a few states where authorizing legislation does not exist, impact fees have been rejected by the courts as unauthorized taxes (Nicholas et al., 1991).

A second common type of attack is that fees violate the constitutional guarantee of equal protection by discriminating between existing and new developments. In most cases, this type of argument has not been well-received by the courts. If a court accepts the concept of impact fees, it is unlikely to rule against fees on the issue of discrimination. A number of cases have established the legal precedent for allowing fees to vary according to land use or time of development. If fees are set appropriately, and they can be shown to offset costs attributable to the development, legal challenges are more easily overcome (Nicholas et al., 1991; Nelson, 1988).

A third type of challenge is whether or not fees constitute unreasonable regulation exceeding police power or that they are disguised taxes levied in violation of the state constitution. In the 1960's, the first major court decision, *Jordan v. Village of Menomonee Falls*, set the precedent for allowing local governments to require land dedications. In this case, the court ruled that dedications of land for schools and parks were a valid exercise of police power. The city sufficiently showed the connection, or rational nexus, between the need for new public facilities and the regulation applied to the new development. The overall trend in state judicial decisions has been to consider impact fees to be regulations that are a valid use of police power (Nicholas et al., 1991; Nelson, 1988).

The “rational nexus” test, which has become the primary legal precedent for designing impact fee regulations, has been further refined in subsequent court decisions in Florida and Utah. In *Contractors and Builders Association of Pinellas County v. City of Dunedin*, the Florida court found development impact fees to be reasonable if:

- a reasonable connection is established between the need for new public facilities and the growth resulting from new development,
- fees do not exceed a proportionate share of the current or future cost incurred in serving the development paying the fee, and
- a reasonable connection is established between the use of the fees and the benefits received by the development paying the fees.

In a subsequent ruling, the Utah court expanded upon how a rational nexus can be established in *Banberry Development Corporation v. South Jordan City*. The ruling focused on the connection between the level of the fee and the cost of the new public facilities. In this case, the court provided additional guidance on developing fees that address the appropriate portion of public facilities costs (Nicholas et al., 1991).

The rational nexus test is now the primary measure used by courts to determine the validity of impact fees. Generally, the overall trend has been one of greater acceptance by the courts in recent years. This may be due, in part, to increased awareness by the courts and the general public that growth does put a burden on public coffers. Whether or not courts will uphold an expansion of the application of impact fees, still remains to be seen (Nicholas et al., 1991; Nelson, 1988).

### **Legal Issues in Setting Excise Taxes**

Excise taxes are generally subject to less legal scrutiny, which is one of their primary advantages. The rational nexus test is not required in setting the level of the tax, because it must be approved by a vote of the people. Despite the greater flexibility in setting the level of the tax, there are a number of legal issues that must be considered when adopting a tax. First, the local government must be granted the authority by the state legislature to be able to create an excise tax. Second, the tax must apply to a developer or individual rather than the land. In a case in California, the court ruled against an excise tax because it was levied on a sub-division rather than on the developer. Once the proposed tax is determined to be a valid excise tax, it must then pass four general standards of legal review. It must be found to have a rational purpose, cannot unreasonably discriminate, cannot be at a unreasonable level (it cannot be set so high that the value of the property is overcome by the high taxes), and it cannot be applied to projects already under construction. If all of these conditions are satisfied, the tax would hold up to legal analysis (Nelson, 1988).

### **3.4 Conclusions**

#### **Using Market-Based Strategies to Control Sprawl**

One concern about market-based strategies, such as impact fees and excise taxes, is that they may stifle development by making it more expensive. This may have a direct negative impact on affordable housing and small start-up businesses. Making developers pay the full price of development, in effect, may exclude segments of the population from living in that area – further exacerbating problems of concentrated poverty in the inner city. Similarly, impact fees and excise taxes tend to be regressive in nature with lower income people having to pay a larger proportion of their income. Nicholas (1992), analyzed several ways communities could adjust impact fees to make them less regressive and found that adjusting the fee relative to the square footage of homes and apartments was one of the more effective and straight forward to mitigate the regressive aspect of impact fees.

Impact fees and/or excise taxes must be applied consistently across jurisdictional boundaries for them to effectively contain regional growth. If adjacent communities do not institute fees, then there is a clear advantage to developing in a community that does not have a fee. Within a community, impact fees or excise taxes are perhaps more fair than case-by-case developer exactions. Overall, using market-based strategies to slow down rapid sprawl has both its advantages and disadvantages over regulatory approaches. Simply put, these techniques will not stop anyone who is willing to pay the price, while regulatory efforts may restrict rational choices.

#### *Location-Based Fees or Taxes*

Location-based impact fees can be used as long as the costs of development are shown to be greater for outlying developments. Excise taxes could also be designed to vary by location. As discussed earlier, the City of Lancaster, California has successfully implemented a location-dependent fee for sprawl development. The fee is applied based on the number of miles the new development is from the urban core. To satisfy legal concerns, fees are only used to offset the cost of services, such as street sweeping, road

maintenance, and police protection, which are higher for outlying developments. So far, the Lancaster fee has not been taken to court, and it does not appear likely that it will be legally challenge. The city's efforts in involving the community and developers in the generation of the impact fee policy may explain, at least in part, the limited opposition to the policy.

### *Incorporating Social Costs*

Extending the scope of impact fees to include other social costs may be difficult based on current legal rulings. Social costs would not satisfy the rational nexus test that is widely used by courts to determine the validity of impact fee policies. However, excise taxes would more easily allow these costs to be incorporated, because there are fewer restrictions set specifically on the level of the fee.

### **Summary**

More and more communities are looking at a collection of fiscal and regulatory growth management strategies to tackle issues of sprawl, economic development, equity and environmental protection. New techniques and technologies make it increasingly easier to integrate these strategies and apply them on more sophisticated levels. GIS mapping and spatial accounting can make it possible for communities to establish comprehensive impact fee schedules, looking not only at infrastructure costs but also location related costs of municipals services. This paper makes a strong case for making developers pay the full cost of new development. Combined with regulatory strategies and impact analysis/indicator projects, communities will be able to internalize some of the social costs of development and guide development in a more sustainable direction.



## **Section 4: Future Research/Opportunities**

### Further Research on the Costs of Sprawl.

There are several areas of the sprawl debate that would benefit from further research.

These types of studies could be conducted in 6 months to 1 year, and funding requirements would depend on the scope of the project.

- The issue of service and infrastructure costs and distance from an urban center could be studied for a variety of community types. The Lancaster case provides one example of where these costs are being calculated. However, they have not been calculated for communities of different sizes or in different states.
- The association between energy and water use associated with sprawl-like development could be researched further. To date, a few cities have developed anecdotal evidence to this effect, but little definitive research has been done. The association between sprawl and the social costs of increased vehicle use could also be examined further.

### Potential Pilot Project.

Based on the model developed by Lancaster, work with a community to implement a location-dependent impact fee to control sprawl. Moderate sized communities of about 100,000 people in Florida, California, or Colorado, where impact fees have been widely used, might make for a good pilot project. A moderate-size community that is rapidly growing and sprawling is ideal in terms of making the pilot project manageable and in garnering public support. Given the community consensus-building that might be necessary to implement this type of policy (based on the experience of Lancaster), the timeframe on the project might be as long as two years. This type of project may require limited funding, depending on the type of model that would be developed. The pilot city may have funds to help defray some of the costs of implementing a change in policy.

### Develop a Model for Calculating the Location Dependent Costs of Sprawl.

Lancaster, California has already developed a spreadsheet model to calculate the cost differential associated with providing services to areas at various distances from the

urban core. Interested parties could work with Lancaster to improve their model or work with another community to develop a new model. One area of opportunity for improvement is to incorporate geographic information systems (GIS) in the model for calculating costs. GIS can allow the public to visualize and understand the spatial implications of growth. If a model was developed in a new location, the project might take 1-2 years to complete. However, developing the model itself could be done in a shorter timeframe of perhaps 6 months. Funding requirements for this type of project may be on the order of \$50,000-\$100,000, especially if GIS is used to develop the model.

## **Section 5: Other Support**

### **5.1 List of organizations**

The following information was adapted from the Sprawl Watch Clearinghouse (<http://www.sprawlwatch.org/partners.html>).

#### **National Organizations Working on Smart Growth and Sprawl**

**American Farmland Trust.** Working nationwide to protect farmland from suburban sprawl -- by working with individual farmers and communities, and by promoting better public policies at the local, state and federal level, and by educating the public. Website: <http://www.farmland.org>

#### **Brookings Institution Center on Urban and Metropolitan Policy**

The Center has special expertise on regional governance issues and seeks to shape a new generation of urban policies that will help build strong cities and metropolitan regions. In collaboration with leading scholars and practitioners nationwide, the Brookings Center is launching a series of original research and policy projects to help inform national debates and provide practical policy options for key decision-makers. Website: <http://www.brook.edu>.

#### **Center of Excellence for Sustainable Development, U.S. Department of Energy**

A U.S. Department of Energy service center established to provide information and technical advice to help communities strengthen their local economies and enhance the local environment and quality of life. Website: <http://www.sustainable.doe.gov>.

#### **The Conservation Fund**

Through a range of activities, The Conservation Fund is involved in sprawl-reduction and community revitalization and has protected 1,400,000 acres of land, sponsored regional conferences on the sustainable use of land, promoted efforts to revitalize the Land and Water Conservation Act and has provided more than 250 grants and loans for commercial

districts. The Center helps communities build strong partnerships, develop an in-depth understanding of the regional economic opportunities, and capitalize on the unique environment their historic commercial buildings provide. Website: <http://www.nthp.org>

### **National Trust for Historic Preservation**

The National Trust provides information, technical assistance and advice to organizations and individuals working to preserve their communities and avoid urban sprawl.

Concerned with the community disinvestment NTHP has conducted a wide variety of activities that include promotion of federal transportation and tax policies that encourage community revitalization and the rehabilitation of historic houses. Website:

<http://www.nthp.org>

### **Natural Resources Defense Council**

Through a range of projects, NRDC is extensively involved in fighting the negative impacts of urban/suburban sprawl in cities and towns across the country. NRDC's multidisciplinary approach to sprawl can be summarized in three primary categories - influencing metropolitan growth patterns, reducing damages to the natural environment, and strengthening our cities. Website: <http://www.nrdc.org>

### **Scenic America**

Scenic America's mission is to preserve and enhance the scenic character of America's communities and countryside. Through its "Smart Growth/Scenic Stewardship Initiative" Scenic America's smart growth work focuses on retaining the distinctive character of communities and countryside by rebuilding older cities, towns and suburbs as beautiful places to live and work; and conserving agricultural land and open space. Telephone: 202-833-4300.

### **Sierra Club**

The objective of the Sierra Club's national Challenge to Sprawl Campaign is to provide materials, winning campaign strategies, training and funding to better equip Sierra Club volunteers and staff to change sprawling suburban development patterns faced by their communities. Challenge to Sprawl activists are making use of high-profile approaches

which are easy to reproduce in areas across the country: These include grading public officials on sprawl-related votes and crafting local "Sprawl Costs Us All" reports which document the economic costs of sprawl.

Website: <http://www.sierraclub.org/transportation>

### **Smart Growth Network**

The Smart Growth Network encourages development that is environmentally, fiscally, and economically smart and helps create national, regional and local coalitions to support smart growth. The Smart Growth Network's partners work with the US Environmental Protection Agency's Urban and Economic Development Division on outreach programs, technical assistance, research, publications, and other collaborative projects.

Website: <http://www.smartgrowth.org>

### **Surface Transportation Policy Project**

STPP promotes open, accessible, planning processes regarding transportation policies, and transportation investments that achieve environmental, economic, and social equity principles. STPP played a major role, and is very knowledgeable about, the federal Intermodal Surface Transportation Efficiency Act and TEA 21 on federal highway policy. Website: <http://www.transact.org>

### **Trust for Public Land**

The Trust for Public Land practices a unique blend of market-based entrepreneurial conservation. TPL works in collaboration with communities and organizations around the country to bring private land into public ownership and to help create parks, greenways, riverways and to protect those traditional landscapes that define the character of where we live. TPL helps communities acquire endangered open space, create urban parks and promote bond issues to purchase open spaces. Telephone: 202-543-7552.