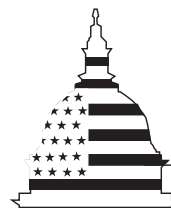


April 1999

COMMUNITY DEVELOPMENT

Extent of Federal Influence on “Urban Sprawl” Is Unclear



G A O

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**Resources, Community, and
Economic Development Division**

B-280699

April 30, 1999

The Honorable James M. Jeffords
United States SenateThe Honorable Carl Levin
United States SenateThe Honorable Diana L. DeGette
House of RepresentativesThe Honorable Max S. Baucus
Ranking Minority Member
Committee on Environment and
Public Works
United States Senate

After World War II, people began moving in large numbers from the central cities to the suburbs. By 1950, the rate of growth nationally was 10 times higher in the suburbs than in the central cities, and by 1970, the United States, for the first time in history, counted more suburbanites than city dwellers or farmers. These demographic changes were accompanied, on the one hand, by an increase in homeownership and opportunities for new businesses and, on the other hand, by the sprawling, low-density, fragmented, automobile-dependent development that is commonly referred to as “urban sprawl.”¹

Concerned about the contribution of federal programs and policies to “urban sprawl” while recognizing that land-use planning has traditionally been a function of state and local governments, you asked us to (1) review research on the origins and implications of “urban sprawl,” (2) describe the evidence that exists on the influence of current federal programs and policies on “urban sprawl,” and (3) identify regulatory review and coordination mechanisms evaluating and mitigating the effects of federal actions on “urban sprawl.” This report, the first of a series examining the implications of federal policies on negative patterns of growth, is based on a review of research and discussions with experts in the public, private, and educational communities on growth-related issues. We did not independently assess the validity of the research. We focused on specific federal programs and policies, including those reflecting decisions on

¹The term “urban sprawl” is, in our view, the clearest of the alternatives we considered using in this report to refer to outward growth. Therefore, despite its negative connotations, we decided to use the term.

spending, taxation, regulation, and the location of federal facilities. Information about each program and policy we reviewed appears in appendix I.

Results in Brief

The growth of suburbs outside central cities, which accelerated after World War II, had both positive and negative effects, according to the research we reviewed. Suburban growth began in response to a number of social, economic, demographic, and technological factors, including the postwar population boom; the increased availability of suburban housing; and the greater use of passenger cars, which allowed greater access to suburban areas. Historically, federal housing and highway programs contributed to suburban growth because the availability of housing loans facilitated suburban homeownership and federal highway spending financed the expansion of highways that gave consumers access to suburban locations. When suburban growth means the rapid spread of fragmented, low-density, automobile-dependent development on the fringes of cities, some observers see such growth as “urban sprawl.” Despite many studies on the costs and implications of “urban sprawl,” so many factors contribute to it and the relationships among these factors are so complex that researchers have had great difficulty isolating the impact of individual factors. As a result, researchers have generally been unable to assign a cost or level of influence to individual factors, including particular federal programs or policies. Research has identified positive effects of “urban sprawl,” such as increased homeownership and new, sometimes lower-cost locations for businesses. At the same time, research points to negative effects, such as higher infrastructure costs in low-density areas, increased traffic congestion, and reduced green space.

Some experts believe—and anecdotal evidence exists to support their belief—that the federal government currently influences “urban sprawl” through spending for specific programs, taxation, and regulation, among other things, but few studies document the extent of the federal influence. According to some experts, the role of federal programs and policies occurs in combination with a number of factors, including market forces and local land-use decisions. Studies that attempt to quantify the link between highway spending and “urban sprawl,” for example, acknowledge the difficulty in isolating the influence of highway spending from that of other factors, such as market influences. For instance, a 1995 Transportation Research Board report states that transportation investments influence the location of growth but do not alone cause

growth.² Anecdotal evidence suggests that investment in water and sewer systems may lead to residential and commercial growth in outer areas because such investment facilitates development. We found little quantitative research linking federal assistance for water and sewer systems with “urban sprawl.” Tax code provisions that subsidize homeowners through the mortgage interest and property tax deductions are believed by some researchers to provide an incentive for purchasing more expensive housing that is sometimes located outside urban areas. The tax policy research we reviewed did not directly estimate the effects of existing tax policies on “urban sprawl.” Local officials have suggested that federal regulations implementing the Clean Air Act encourage industrial development in greenfields, rather than settled areas, because the act restricts emissions in areas that do not meet air quality standards—typically urban areas. However, studies indicate that environmental regulations play a small role in decisions about the location of businesses. The shortage of quantitative evidence does not mean that federal programs and policies do not have an impact on “urban sprawl;” it simply means that the level of the federal influence is difficult to determine.

Executive orders governing the federal regulatory review process do not directly address “urban sprawl,” but coordination among federal agencies on growth-related issues is increasing. Furthermore, the executive orders establish basic principles for agencies to follow when reviewing and approving regulations, and specific laws, such as the National Environmental Policy Act and the Farmland Protection Policy Act, offer federal agencies an opportunity to consider the potential influence of their actions on growth. Federal agencies coordinate their activities primarily in specific program areas, but coordination across agencies is increasing. For example, the President’s Council on Sustainable Development, a federal advisory committee, was created in 1993 to address development and growth issues by encouraging policies to support collaboration among federal, state, and local government agencies; public interest and community groups; and businesses. The Council issued a report in 1996 that included goals and indicators for developing sustainable communities, such as decreasing traffic congestion and increasing urban green space. The Council plans to issue another report in the spring of 1999 presenting policy recommendations. In addition, the Environmental Protection Agency initiated a Smart Growth Network to share information among federal agencies and other interested parties on growth-related issues. At

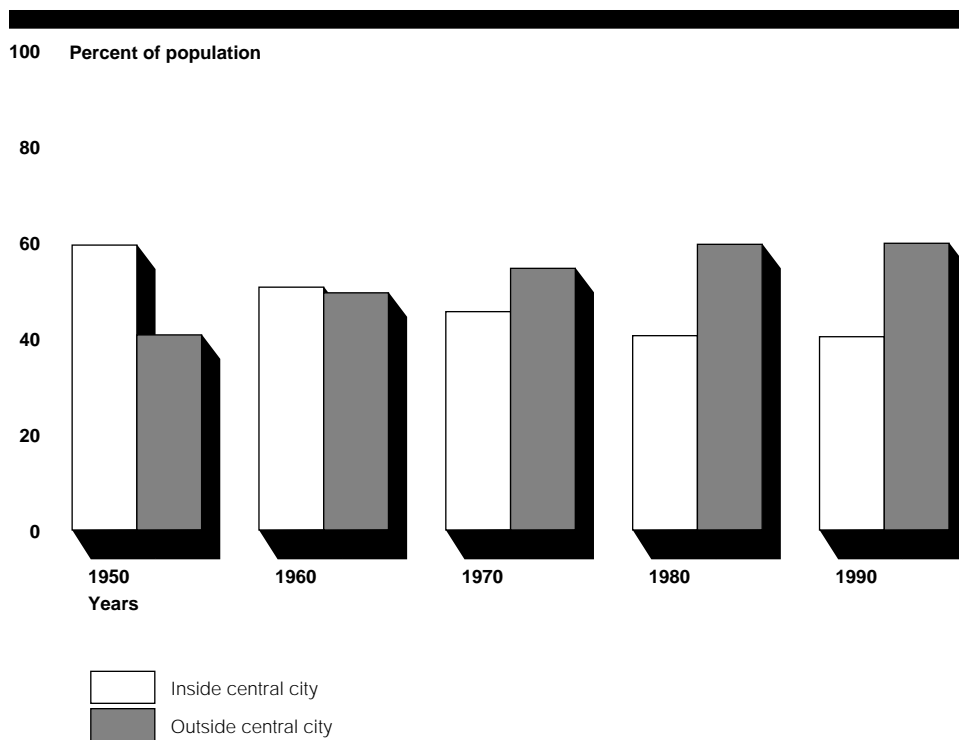
²Expanding Metropolitan Highways: Implications for Air Quality and Energy Use, National Research Council, Transportation Research Board, Special Report 245 (1995).

this time, coordination efforts are too new and the research is too limited to determine how the federal government can better assist state and local governments in managing growth.

Background

Several features of “urban sprawl” are widely recognized, but experts on growth management and related issues have not arrived at a common definition. Experts have difficulty agreeing on a definition because “urban sprawl” has frequently been described as being “in the eye of the beholder.” Research often characterizes this form of growth as low-density, auto-dependent development that rapidly spreads on the fringes of existing communities, often consuming agricultural and environmentally sensitive lands. Research also describes “urban sprawl” as random development characterized by poor accessibility among related land uses, such as housing, jobs, and services like schools and hospitals. Sprawling development can occur in rural and urban areas and can encompass residential, commercial, and industrial zones. Some research also makes a connection between “urban sprawl” and the declining fiscal condition of central cities. Still other research shows that as the outer rings of suburbs have grown over time, the inner rings have sometimes begun to decline, much as the central cities have done. As figure 1 shows, the percentage of people living outside the central city in the 10 largest U.S. metropolitan areas increased from about 40 percent in 1950 to about 60 percent in 1990.

Figure 1: Percentage of Population in 10 Largest Metropolitan Areas, as Defined in 1990, Living Inside and Outside the Central City, 1950-90



Notes: The 10 largest metropolitan areas in 1990 were the New York, Los Angeles, Chicago, San Francisco, Philadelphia, Detroit, Boston, Washington, D.C., Dallas, and Houston metropolitan areas. The metropolitan areas for each decade are considered on the basis of their geography during that decade.

Source: U.S. Bureau of the Census.

Since land-use planning is usually considered a state and local responsibility, the federal government has had limited involvement in regulating land use. According to the literature, the federal government has not adopted a comprehensive national growth plan or land-use policy to balance the nation’s competing needs for economic growth, environmental conservation, and urban reinvestment. However, the federal government does influence land-use decisions through federal laws, such as the National Environmental Policy Act (NEPA), which requires federal agencies to prepare environmental impact statements, and federal court decisions.

The states have inherent powers to regulate land use and have generally delegated certain authorities, including zoning, to local governments. Even so, a state can influence how and where growth will occur by using permitting, funding, and construction decisions to encourage or discourage the reuse of existing infrastructure or the revitalization of downtown areas. At least 11 states have passed growth management legislation since 1985. Some of the legislation³ allows states and/or local governments to purchase lands to preserve farmland and natural resources, provides financial incentives to encourage companies and individuals to move to downtown areas, and restricts development to specific areas.

The states generally confer primary authority for land-use decisions on local governments. Traditionally, local governments have used their zoning authority to regulate land uses. More recently, some local governments have used impact fees and other techniques to manage growth. Local governments are also participating in regional governance structures and other types of partnerships to oversee land-use planning and influence the spending of resources.

Origins and Implications of “Urban Sprawl”

Suburban development evolved as a result of a combination of social, economic, demographic and technological factors. For example, innovations such as the automobile opened access to suburban areas, and networking and computers have made individuals and businesses more mobile. Some studies have identified the positive effects of suburban development—opportunities for homeownership and new, sometimes lower-cost locations for businesses—while others focus on the negative effects. Among those cited are the diversion of economic resources from, and the growth of poverty in, the central cities; the loss of green space and higher public costs for infrastructure in the suburbs; and the steady increase in traffic congestion.

Several Interrelated Factors Contributed to the Origins of “Urban Sprawl”

America’s largest cities underwent dramatic demographic changes during the second half of this century. The literature cites a combination of social, economic, and demographic factors that historically contributed to suburban growth and created a framework for the growth patterns that continue today. For example, during the 1940s, city populations exploded as millions of people moved from rural areas to metropolitan areas

³For example, in 1997, Maryland passed legislation enacting the Rural Legacy Program, which is designed, among other things, to establish greenbelts of forests and farms around rural communities and preserve critical habitats for native plants and wildlife.

seeking employment. By the 1950s, much of the housing in these cities was old and overcrowded, and the country was experiencing a population boom that, coupled with rapidly rising household incomes, intensified the desires of many households to live in bigger homes on larger lots. By the mid-1960s, an immense increase in housing and other construction occurred in suburban areas. According to researchers, the Federal Housing Administration's (FHA) single-family homeownership program increased the availability of long-term housing loans while the program's strict construction standards and requirement that neighborhoods be homogeneous (segregated) ensured that most FHA loans would be made for homes in the suburbs. In addition, local governments contributed to "urban sprawl" by encouraging low-density development through zoning laws and subdivision regulations.

During the 1950s and 1960s, two additional factors—the movement of African-Americans into formerly white city neighborhoods and, in some cities, court-ordered busing to achieve racial integration in the public schools—caused many middle-class white families to move out from the central cities, according to the research. In some cities, the exodus of the white middle class was followed by the withdrawal of middle-class minority families and viable businesses. Concentrations of poverty and crime rates increased, and the quality of the public schools declined. Some researchers believe that this exodus may inadvertently have been given additional impetus by such federal programs as public housing, which destabilized many urban neighborhoods, removing older housing and replacing it with cheaply constructed and poorly maintained public housing developments inhabited by the poorest of the poor.

Technology has also played a unique role in facilitating suburban development by giving people more choice in where they live and work. Transportation innovations—beginning with the steam ferry, cable and horse-drawn cars, commuter and elevated railroads, and the electric streetcar—initially improved access to new towns surrounding large cities; this access accelerated greatly with the advent and increased use of the automobile. Researchers have pointed to the historic role played by federal highway subsidies in contributing to "urban sprawl." The construction of highways facilitated growth by providing access to suburban areas. In addition, the mechanization of farm production led indirectly to migration from rural to urban areas. More recently, high technology networks and machines, such as the Internet, computers, faxes, and cellular phones, have made both individuals and businesses more mobile than ever before.

Experts Cite Positive and Negative Implications of “Urban Sprawl”

Experts have identified both positive and negative implications of “urban sprawl.” On the positive side, according to experts, homeownership has increased because housing costs are lower in outer-ring suburbs; businesses have more, and sometimes cheaper, locations to choose from; and consumers may have access to lower prices at suburban discount stores. But experts also said that “urban sprawl” has diverted economic development from, and increased the concentration of poverty within, the central cities; reduced green space; increased the public costs of new infrastructure in low-density areas; and increased traffic congestion. Appendix II provides a summary of the factors listed in a 1998 synthesis of literature on the topic⁴ and shows whether the studies agreed on whether each factor exists and has been significantly linked to “urban sprawl.”

The costs associated with “urban sprawl” have also received considerable attention. For example, an Office of Technology Assessment study examining the implications of technological changes in metropolitan areas analyzed whether “urban sprawl” pays its own way or is subsidized.⁵ The costs were divided into direct costs, such as on-site development costs or the costs of neighborhood services available to new developments exclusively, and indirect costs, such as the impact of suburban development on air and water quality and the costs of travel. According to the study, the research suggests that sprawling development “costs more than compact development, and that some of that cost is subsidized.” Who actually pays for these subsidies is unclear. According to the study, the subsidies are sometimes a combination of local, state, and federal government resources. In other cases, the costs are subsidized by central cities or nearby, older suburbs that are experiencing the negative implications of “urban sprawl” themselves. A 1997 study on the costs and benefits of “urban sprawl” concluded that under a scenario of controlled growth, citizens could reduce land consumption by 60 percent and road building by 25 percent.⁶ On the other hand, a 1990 study on growth management noted that controls on local growth tend to increase housing prices.⁷ In addition, a 1998 study on how “urban sprawl” has affected Michigan concluded that, in terms of costs, urbanization is not threatening

⁴Robert W. Burchell et al., *Costs of Sprawl Revisited: The Evidence of Sprawl’s Negative and Positive Impacts*, National Research Council, Transportation Research Board (1998).

⁵*The Technological Reshaping of Metropolitan America*, Office of Technology Assessment (OTA-ETI-643, Sept. 1995).

⁶Robert W. Burchell, “Economic and Fiscal Costs (and Benefits) of Sprawl,” *The Urban Lawyer* (Spring 1997).

⁷Benjamin Chinitz, “Growth Management: Good for the Town, Bad for the Nation?” *Journal of the American Planning Association* (Winter 1990), pp. 3-8.

Michigan’s agricultural industry, the negative effects of development on local infrastructure costs are exaggerated, and higher residential densities may increase pollution levels.⁸ Overall, however, so many factors contribute to “urban sprawl” and are so closely interrelated that researchers have found it extremely difficult to isolate the cost or influence of individual factors—including those relating to federal programs and policies.

Some Believe That Selected Federal Programs and Policies Influence “Urban Sprawl,” but the Extent of the Influence Is Unclear

Some experts believe—and anecdotal evidence exists to support their belief—that the federal government influences “urban sprawl” through spending, taxation, regulation, and decisions about the location of federal facilities; however, limited data are available to document and quantify the extent of the federal influence. While one noted expert said that “there aren’t many federal policies that induce sprawl,” others believe that the role of federal programs and policies is more piecemeal and incremental in nature, facilitating “urban sprawl” when combined with other factors, such as market forces and local zoning.⁹ Some information exists on where federal spending is occurring for highway and water and sewer programs, but data are not always geographically specific enough to capture spending in suburban areas, making it difficult to analyze the federal influence. Few studies use quantitative data to demonstrate a direct link between “urban sprawl” and federal spending, exclusive of other influences. The tax policy studies we reviewed do not directly estimate whether tax policies, such as the home mortgage interest deduction and property tax deductions for owner-occupied housing, affect the direction and magnitude of “urban sprawl.” Local officials allege that federal regulations implementing the Clean Air Act contribute to “urban sprawl,” but a body of quantitative evidence indicates that environmental regulations play a small role in businesses’ decisions about where to locate. Some experts believe that the location of federal and postal facilities plays a significant role in “urban sprawl;” however, studies have not been conducted to show the impact of the location of federal and postal facilities on “urban sprawl.”

⁸Samuel R. Staley, “Urban Sprawl” and the Michigan Landscape: A Market-Oriented Approach, Mackinac Center for Public Policy (Oct. 1998).

⁹Growth Management Planning and Research Clearinghouse, U. of Washington, *A Literature Review of Community Impacts and Costs of Urban Sprawl*, National Trust for Historic Preservation (Sept. 1993), p. 47.

The Impact of Federal Spending Programs on “Urban Sprawl” Varies

Experts and much of the research agree that federal spending by the Department of Transportation for the Interstate Highway System—in combination with other factors such as population growth, rising personal incomes, and increased automobile ownership—supported the expansion of metropolitan areas by improving access to suburban locations. For example, a Transportation Research Board study identified evidence indicating that funding for the Interstate Highway System improved access to developable land on the fringes of urban areas, thus supporting low-density development.¹⁰ Another Transportation Research Board report noted that highway access, though necessary to support decentralization, is not the only factor responsible for growth.¹¹ The Federal Highway Administration collects federal highway obligation data by type of highway improvement, but these data are not detailed enough to distinguish overall spending in suburban areas from spending in urban areas. Federal Highway Administration officials said their reporting system reflects federal spending by the legislated federal-aid designations—rural, urban, small urban, and urbanized—and cannot identify spending in suburban areas because suburban development can occur in any of the population areas. Federal highway data show that the federal share of highway capital outlays has been between 41 and 46 percent since 1987, but Federal Highway Administration officials emphasize that almost all highway projects are selected by state and local decisionmakers. Also, according to Federal Highway Administration officials, the 1998 Transportation Equity Act for the 21st Century increased metropolitan planning organizations’ already high level of flexibility to fund transportation projects that best meet locally determined goals.

Anecdotal evidence suggests that investments in water and sewer systems lead to residential and commercial growth in outer areas because these investments facilitate development. However, we found little research linking the federal assistance provided through the eight major federal water and sewer programs that we reviewed to “urban sprawl.”¹² We did find analyses that related federal spending for water and sewer systems to economic growth, but not to “urban sprawl” specifically. In addition, some federal agency staff said that their programs had a past or present influence on growth, while other officials said that water or sewer projects allow for future population growth. The five federal agencies that

¹⁰Consequences of the Development of the Interstate Highway System for Transit, National Research Council, Transportation Research Board, Research Results Digest No. 21 (Aug. 1997).

¹¹See footnote 2.

¹²See app. I for more information on the programs and our criteria for selecting them.

administer the eight programs we reviewed maintain varying types of spending data for their programs, making it difficult to summarize the distribution of federal funding for these programs geographically or by the type of construction (new versus upgrade).

Historically, researchers have cited FHA's single-family homeownership program as contributing to "urban sprawl" through its strict construction and design standards and its requirement that neighborhoods be homogeneous, which ensured that most FHA loans would be made for homes located in the suburbs. We did not find any recent research showing that the single-family housing program encourages housing development in suburban areas over central cities. The goal of FHA's current single-family mortgage insurance program is to increase homeownership regardless of the location of the home. In light of this focus, FHA's single-family mortgage insurance program is an important tool to help first-time buyers attain homeownership and to encourage homeownership in underserved areas.¹³ According to a Department of Housing and Urban Development (HUD) publication based on 1996 Home Mortgage Disclosure Act data, 46 percent of FHA's loans were made in central cities while 37 percent of the conforming conventional market's loans were for central city properties.¹⁴

Some researchers have described the historic contribution of federal public housing policies to the concentration of poverty in central cities and the movement of the middle class to suburban areas. To counteract poverty in central cities and give low-income renters mobility, the Congress established the Section 8 voucher and certificate programs to provide tenant-based rental assistance. Using a voucher or certificate, a low-income tenant can look for suitable housing anywhere in the United States where a housing authority is administering a tenant-based program. According to a 1998 article by an Urban Institute expert on the program, the program has the potential to help families move to healthier neighborhoods, but several obstacles currently limit the mobility of Section 8 voucher and certificate holders.¹⁵ For example, the local public housing authorities that manage the programs lack strong incentives to

¹³An underserved area is a metropolitan census tract in which (1) the median income is less than or equal to 90 percent of the local area's median income or (2) the minority population is greater than or equal to 30 percent of the total population and the median income is less than or equal to 120 percent of the local area's median income.

¹⁴U.S. Housing Market Conditions, HUD, Office of Policy Development and Research (Aug. 1998).

¹⁵Margery Austin Turner, "Moving Out of Poverty: Expanding Mobility and Choice Through Tenant-Based Housing Assistance," *Housing Policy Debate*, Vol. 9, No. 2 (1998), pp. 373-394.

encourage mobility and may lack resources to assist tenants seeking apartments. Ineffective local program management also discourages landlords in suburban areas from participating in the program.

Some agencies are implementing programs or taking steps to address growth-related issues associated with their missions. For example, the Federal Highway Administration administers the Congestion Mitigation and Air Quality Improvement Program, which funds transportation projects that help urban areas improve air quality. The Department of Commerce's Economic Development Administration includes among its strategic funding priorities the consideration of sustainable development and the reuse of brownfields.¹⁶ In addition, the Farmland Protection Program, administered by the U.S. Department of Agriculture (USDA), allows for the purchase of conservation easements¹⁷ or other interests on land that would limit the conversion of prime and unique farmland to nonagricultural uses, such as residential development. In fiscal year 1998, USDA obligated \$17.3 million under this program to preclude the conversion of about 46,000 acres with an estimated easement value of about \$96 million. Nineteen states are participating in the program, including Michigan, which expects to protect an estimated 1,728 acres, and Vermont, which expects to protect an estimated 6,830 acres.

Very Little Research Exists on the Impact of Selected Tax Policies on "Urban Sprawl"

Tax code provisions that subsidize homeowners through the mortgage interest and property tax deductions are believed by some researchers to provide an incentive to purchase the more expensive housing that is sometimes located outside urban areas.¹⁸ Very little research has focused specifically on how preferential tax treatment for homeowners affects the direction or the magnitude of "urban sprawl." Some studies present statistics they believe imply such a relationship, but no one has directly estimated the effects of tax preferences on "urban sprawl." Studies of housing tax preferences have focused mainly on the effects of tax preferences on the quantity of housing purchased, the price of housing, the homeownership rate, the tendency of households to move, and federal tax expenditures rather than on the location of the new housing. As discussed in appendix I, researchers broadly agree that removing these tax

¹⁶Brownfield sites are abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.

¹⁷A conservation easement is a deed restriction that landowners voluntarily place on their property to protect resources such as productive agricultural land or wildlife habitat.

¹⁸The location of a home is not a condition that affects a homeowner's ability to use the mortgage interest deduction.

preferences would reduce both housing purchases and the price of housing. However, researchers have not reached consensus on the magnitude of these effects.

Some supporters of new estate tax provisions providing exclusions for qualified family-owned business interests and qualified conservation easements believe that these provisions encourage the continued operation of family farms and are likely to increase donations of land for conservation purposes. A study by USDA's Economic Research Service provides some support for such claims. The study notes that the new exclusion for qualified family-owned businesses ". . . should reduce, if not eliminate, the need to sell farm assets to pay federal estate taxes. . . ." ¹⁹ The study further notes that the exclusion for land subject to conservation easement is likely to benefit a relatively small number of landowners.

The research also addresses the effect of changes in tax provisions covering employer-paid parking benefits. While some studies indicate that employer-paid parking, employer-provided incentives for ridesharing, and high-occupancy-vehicle lanes may decrease the probability that an employee will drive to work alone, a 1991 study on commuting incentives notes that factors other than commuting costs are more important in explaining patterns of commuting. ²⁰

Environmental Regulations Play a Small Role in Decisions About Locating Businesses

While the Clean Air Act and the Clean Water Act were enacted to improve the quality of the nation's air and water, some have stated that they have unintentionally contributed to "urban sprawl." For example, local governments have claimed that the Clean Air Act's regulations restricting emissions in areas that do not meet air quality standards—typically urban areas—contribute to decisions by businesses not to locate in central cities. However, we did not find any quantitative research supporting claims that environmental regulations governing air quality and water quality encourage growth in undeveloped areas rather than in existing urban and suburban areas. In fact, as discussed further in appendix I, a body of research shows that environmental regulations have played a small role in businesses' choices of location.

¹⁹James Monke and Ron Durst, *The Taxpayer Relief Act of 1997: Provisions for Farmers and Rural Communities*, USDA, Economic Research Service, Agriculture Economic Report No. 764 (July 1998), p. 18.

²⁰Genevieve Giuliano and Kenneth A. Small, "Is the Journey to Work Explained by Urban Structure?" *Urban Studies*, Vol. 30, No. 9 (Nov. 1993), pp. 1485-1500.

Because the Environmental Protection Agency (EPA) views “urban sprawl” as an environmental problem, it has initiated programs such as the Clean Air/Brownfields Partnership Pilot to improve air quality while encouraging the redevelopment of cities and sustainable new development. EPA started the pilot program because “it believes that locating development on brownfield sites within the city as opposed to greenfield sites in the surrounding areas has a net benefit for the environment, including cleaner air.” By documenting the air quality benefits of brownfield and urban redevelopment, EPA hopes to offer communities greater flexibility in meeting federal clean air standards while still meeting economic development needs. Baltimore, Chicago, and Dallas are participating in the pilot program.

Executive Orders on Locating Federal Buildings Encourage Consideration of Central Business Districts, but No Studies Quantify Effects of Decisions About Location

Some experts believe that the location of federal and postal facilities plays a significant role in the economic viability of downtown urban areas. Executive orders covering the location of federal facilities require federal agencies to give first consideration to central business areas and historic properties when deciding where to locate. However, we did not find any studies quantifying the impact of the location of federal and postal facilities on “urban sprawl.” The lack of research in this area is due, in large part, to a lack of data. The General Services Administration (GSA), responsible for administering the policy on location for 8,073 federal facilities, and the Postal Service, responsible for administering the policy on location for 34,377 owned and leased postal facilities, are not required to, and do not, centrally collect data that could be used to show whether federal facilities are relocating to suburban areas.

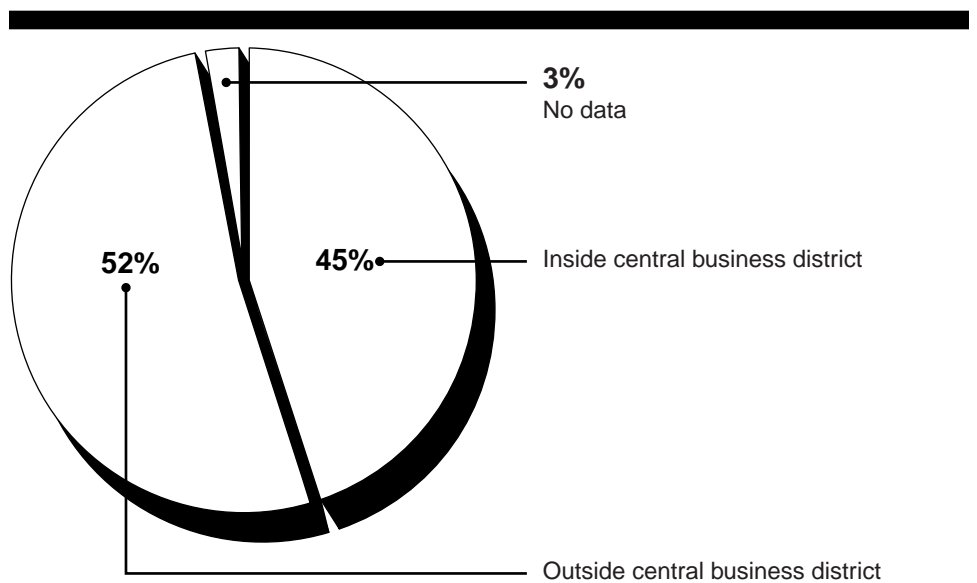
In response to our request, GSA provided data on active building leases²¹ with effective dates between October 1, 1995, and November 13, 1998. These data show that during the period analyzed, federally leased facilities were, for the most part, located in central cities, not in suburban areas. As shown in figure 2, almost half of all leased facilities were located in central business districts. Furthermore, of the leased facilities that were located outside central business districts, 91 percent were located within the central city limits.²² According to GSA’s data, the two most common reasons provided by agencies for not choosing a central business district

²¹For buildings in cities where GSA leases 100,000 square feet or more of rental space.

²²This calculation does not include 129 of the total 642 leased facilities that were located outside the central business district because they were not located within a metropolitan statistical area. A metropolitan statistical area is an area that includes at least one city with 50,000 or more inhabitants or an urbanized area with a total metropolitan population of at least 100,000.

location are that it (1) would conflict with the agency’s mission (40 percent) or (2) would not fulfill special requirements (27 percent). For example, the mission of the Immigration and Naturalization Service might require that one of its offices be located adjacent to a major port. According to GSA, data prior to 1995 were not readily available.

Figure 2: GSA’s Data on the Location of Federal Buildings With Leases Effective Between October 1, 1995, and November 13, 1998



Note: The 45 percent of buildings leased within the central business district represent approximately 17 million square feet, the 52 percent outside the central business district represent about 20 million square feet, and the remaining 3 percent represent about 0.5 million square feet.

Although not required to do so, Postal Service officials have pledged to comply with the executive orders applicable to federal facilities. However, Postal Service officials said they collect data on the number of postal facilities that relocate annually but do not collect data on how many facilities relocate outside central cities. As a result, they could not provide us with data that would indicate to what extent postal facilities have relocated from central cities to suburban locations. Postal officials said they explore every option for maintaining retail operations in downtown locations and, in some cases, have retained retail operations in downtown locations and moved distribution operations to different locations. While the research includes anecdotal evidence of instances in which post office

retail facilities have relocated from downtown locations in small towns, Postal Service officials said that post offices are often the last facilities to relocate from already empty downtowns. In response to heightened sensitivity about the location of postal facilities, the Postal Service recently issued regulations that establish procedures for notifying local citizens and public officials of projects, as well as for soliciting and considering community input, before making a final decision to expand an existing facility, relocate to another existing building, or start new construction.²³ In February and March 1999, bills that include guidelines for the relocation, closing, consolidation, or construction of post offices were introduced in the House and Senate, respectively.

Federal Regulatory Review Mechanisms Do Not Directly Address “Urban Sprawl,” but Coordination of Growth-Related Issues Is Increasing

Regulatory review mechanisms do not directly consider “urban sprawl,” but several federal coordination efforts are addressing growth-related issues. Executive orders establish basic principles for agencies to follow when developing regulations, and specific laws require agencies to consider the impact of federal actions. For instance, laws such as NEPA and the Farmland Protection Policy Act offer federal agencies an opportunity to consider how their actions influence growth. Coordination among federal agencies on growth-related issues is increasing, but most agencies continue to focus on specific program issues.

Regulatory Review Mechanisms Do Not Directly Address Growth Issues

The executive orders governing the regulatory review process establish basic principles for developing regulations but are not intended to address “urban sprawl.” For example, Executive Order 12866, the order that establishes the framework for regulatory planning and review, does not specifically require federal agencies to consider how their actions will influence patterns of growth. Instead, the order outlines general principles that federal agencies should adhere to when developing new regulations or considering whether to modify existing regulations. For example, these principles require agencies to consider available alternatives to direct regulation; prepare cost-benefit analyses when developing regulations; and, whenever feasible, seek the views of appropriate state, local, and tribal officials before imposing regulatory requirements. According to the Acting Administrator of the Office of Management and Budget’s Office of Information and Regulatory Affairs—the office responsible for reviewing

²³The Postal Reorganization Act of 1970, as amended, already requires the Postal Service to consider how a post office’s proposed closing or consolidation will affect the community served.

significant regulatory actions²⁴—the principles set forth in Executive Order 12866 do not mention specific policy issues, such as “urban sprawl,” because the principles were designed to be overarching and applicable to all regulations. Executive Order 12875 supplements Executive Order 12866 by requiring federal agencies to develop an effective process for obtaining input when developing regulatory proposals containing significant unfunded mandates.²⁵ Nonetheless, as part of its Sustainable Urban Environments effort, EPA plans to analyze whether its regulations, policies, or programs create barriers or disincentives that encourage sprawl or growth with negative consequences.

NEPA requires federal agencies to consider the indirect as well as the direct effects of their actions on the environment and thus offers federal agencies an opportunity to consider the influence of their actions on growth. NEPA requires that a detailed environmental impact statement be prepared for every major federal action that may significantly affect the quality of the human environment. According to the act and its implementing regulations, a statement must, among other things, present the environmental effects of the proposed action—including the direct, indirect, and cumulative effects. Although the Council on Environmental Quality—which has issued regulations for implementing the procedural provisions of NEPA—has not provided guidance beyond the implementing regulations on determining indirect effects, EPA officials said that one of the things that federal agencies may (but are not required to) consider is the effect of a proposed action on “urban sprawl.” Officials responsible for some of the water and sewer programs we reviewed said that they considered growth-related issues, such as traffic congestion, as part of their environmental assessment under NEPA.

The Farmland Protection Policy Act, enacted in 1981, gave the federal government an opportunity to control “urban sprawl” by limiting the extent to which its actions lead to the conversion of farmland. The act was designed to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It requires federal agencies to consider the adverse effects of federal programs on the preservation of farmland and alternative actions that could lessen these effects. However, USDA did not issue

²⁴Executive Order 12866 defines significant regulations as those that may (1) have an annual effect on the economy of \$100 million or more; (2) interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients; or (4) raise novel legal or policy issues.

²⁵Unfunded mandates are laws that require an action on the part of another level of government without providing funding.

revised regulations to respond to changes made to the law in 1985 until June 17, 1994, and, according to the Congressional Research Service and others, the act has not been effectively implemented.

Coordination on Growth-Related Issues Is Increasing

Coordination among federal agencies and between federal agencies and their state and local counterparts on growth-related issues has steadily increased in recent years through the efforts of a federal advisory group and EPA. The President's Council on Sustainable Development, a broad-based federal advisory committee established in 1993, is addressing development and growth issues by encouraging policies to support regional collaboration among federal, state, and local government agencies; public interest and community groups; and businesses. The Council issued an initial report in 1996²⁶ that included goals and indicators of sustainable development—such as decreasing traffic congestion and increasing urban green space—and recommendations for changes at all levels of government that the Council believes must occur to achieve sustainable development.²⁷ On January 9, 1999, the Council released a draft of its latest report to the President presenting recommendations in four policy areas, including policies to build partnerships to strengthen communities. The Council expects to finalize the report in the spring of 1999. EPA also initiated a Smart Growth network to share information among federal agencies and other interested parties on issues related to “urban sprawl.”

More narrowly focused federal interagency coordination efforts are indirectly addressing growth-related issues. These include efforts such as the Federal Interagency Working Group on Brownfields, the Community Empowerment Board, and the Clean Water Action Plan. The Federal Interagency Working Group on Brownfields, established in 1996, is a forum for federal agencies to exchange information on brownfields-related activities and to develop a coordinated national agenda on brownfields. The federal brownfields program focuses on redeveloping abandoned industrial and commercial sites. The Community Empowerment Board's mission is to facilitate interagency cooperation, engage its members and agencies to ensure follow-through on commitments to local areas, and assist HUD and USDA with urban and rural programs. The purpose of the Clean Water Action Plan is to coordinate the work of EPA, USDA, and other

²⁶Sustainable America: A New Consensus for Prosperity, Opportunity, and a Healthy Environment for the Future, The President's Council on Sustainable Development (Feb. 1996).

²⁷Sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.

federal agencies to improve and strengthen water pollution control efforts. As part of this initiative, EPA is working with other agencies to identify ways to support locally initiated smart growth efforts designed to improve water quality.

In addition, Executive Order 12372 provides a vehicle for coordination between the federal government and state and local governments. This order, dated July 14, 1982, requires federal agencies to provide opportunities for affected state and local officials to review proposed federal financial assistance and direct federal development.²⁸ Applicants for the aid are expected to respond to concerns raised by state or local agencies before the application is approved by the federal agency. According to federal officials, concerns raised under this process sometimes include growth-related issues.

Some experts on local growth issues have recommended that the federal government use a regional approach to address local growth issues. For instance, the Center for Neighborhood Technology, a Chicago-based nonprofit group that supports community development issues linked to ecological improvements, endorses a stronger linkage between the federal government and metropolitan areas to solve regional problems. According to a 1997 Center article, the federal government can help further regional goals through leverage, or using its resources to enhance network relationships; linkage, or connecting various community networks with each other; and learning, or developing network capabilities for communities to more effectively reach their goals.²⁹ Proponents of regionalism often cite the metropolitan planning organization structure established by the Intermodal Surface Transportation Efficiency Act of 1991 and continued with only modest refinements by the Transportation Equity Act of the 21st Century as an example of how the federal government is responding to local needs within regions.

Observations

The extent of the federal influence on “urban sprawl” is not well documented or quantified. The lack of agreement on a definition of “urban sprawl,” coupled with the many interrelated factors that contribute to this condition, makes it extremely difficult to isolate and measure the influence of specific factors—including those relating to federal programs and policies. The shortage of quantitative evidence does

²⁸Executive Order 12372 was slightly amended by Executive Order 12416 in Apr. 1983.

²⁹Clement Dinsmore, The Federal Role in Metropolitan Cooperation, Center for Neighborhood Technology (1997).

not mean that federal programs and policies do not have an impact on “urban sprawl”; it simply means that the level of federal influence is difficult to determine. Even so, growth-related considerations are emerging as concerns for federal agencies. In addition, state and local governments, which remain primarily responsible for land-use decisions, are taking steps such as passing legislation to manage growth. Though all levels of government are searching for ways to counter the negative effects of “urban sprawl” and the unintended consequences of federal policies, these efforts will be constrained by the limited availability of quantitative data and the potential costs of identifying spending patterns.

Agency Comments and Our Evaluation

We provided a draft of this report to the 13 federal agencies—USDA, Commerce (for the Economic Development Administration), Defense (for the U.S. Army Corps of Engineers), Energy, EPA, GSA, HUD, the Interior, the Internal Revenue Service, Transportation, Treasury, the Office of Management and Budget (OMB), and the U.S. Postal Service—that administer or oversee the programs and policies discussed in this report. Commerce, EPA, and GSA provided letters commenting on the draft that appear in appendixes III, IV, and V of the report, along with our detailed responses. Energy, HUD, the Interior, the Army Corps of Engineers, the Internal Revenue Service, and OMB provided clarifying language and technical comments that we incorporated into the report as appropriate. USDA, Treasury, and the U.S. Postal Service did not have any comments on the report.

Commerce’s letter characterized the report as a fair and appropriate representation of “urban sprawl” as it relates to the programs of the Department’s Economic Development Administration (EDA). Commerce’s additional comments focused primarily on EDA’s local planning process and suggested that the process, which involves multicounty planning organizations that assist EDA in establishing priorities for projects and investments, could be viewed as another model for regionalism and a means for the federal government to address local growth issues. Because EDA’s local planning process was not cited as an example of regionalism in the literature we reviewed or by the officials we interviewed, we did not review the process and, therefore, did not add it as an example in the report. See appendix III.

EPA agreed that most researchers have found that federal policies contribute, to some degree, to sprawl, but that the magnitude and extent of the federal contribution is difficult to quantify. EPA said we could have

made a stronger case as to whether certain federal policies contribute to lower-density development by grouping policies that have similar effects in one section and noting that they promote low-density development. In addition, EPA said that good data exist on some federal policies—such as transportation—and their contribution to outward movement and that we could highlight these areas. While we agree with EPA that there is research on several federal programs and policies that may also contribute to outward movement, the lack of research in other areas makes the suggestion about grouping the policies in one section impractical. In addition, creating such a section in the report might lead readers to assume that the other policies do not contribute to lower-density development when, in reality, research does not exist to prove the point either way. Therefore, we did not make this change to the report. EPA was also concerned about our discussion of the impact of outward growth and said there is widespread agreement within the research community on the effects of outward growth. We disagree with EPA that there is widespread agreement. As summarized in appendix II of the report, a synthesis of available literature found very little agreement on many alleged positive and negative effects of “urban sprawl.” Because our intent was to provide a balanced discussion of the positive and negative implications of “urban sprawl” cited by experts, we revised the language in the report to make it clear that statements about positive and negative effects are the views of experts. See appendix IV.

GSA’s comments provided supplemental information on the agency’s implementation of the executive orders governing the location of federal facilities. We considered GSA’s comments on the implementation of the executive orders but did not make any changes to the report because we believe that the report contains sufficient information on these activities. GSA also provided additional information on its activities that support the Federal Livable Communities Agenda, introduced as part of the fiscal year 2000 budget. For example, among other things, GSA began a Good Neighbor Program in 1996 that encourages the use of space on the ground floor of federal buildings for restaurants and shops, as well as the use of federal buildings and plazas for activities and events. In response to GSA’s comments, we referred in appendix I of the report to GSA’s Good Neighbor Program. See appendix V.

Along with their technical comments, HUD and OMB provided general comments. HUD praised the report for recognizing the complex forces of urban development and decline and for treating the subject with objectivity. OMB thought the report implied that there is no role for the

federal government with respect to “urban sprawl.” OMB said that a more appropriate conclusion would be that “. . . the federal government’s appropriate response may be to align its own actions in support of local efforts and provide a broad array of tools to local communities so that they can address issues in a comprehensive manner.” However, the report does not state that there is no role for the federal government, but rather observes that it is difficult, on the basis of existing research, to determine what the federal role should be. We also describe the role of the federal government in several initiatives.

Scope and Methodology

To determine the history and implications of “urban sprawl,” we conducted interviews and collected documentation and studies from the literature on sprawl and growth-related issues. Specifically, we interviewed officials from federal, state, and local governments; educational institutions, such as the Albany Law School; and private nonprofit organizations, such as the Brookings Institution and the National Trust for Historic Preservation. We attended the National Governors’ Association’s Conference on Smart Growth, the Georgia Conservancy/Urban Land Institute/Environmental Protection Agency Smart Growth Conference, and the Second Annual Partners for Smart Growth Conference. To better understand the implications of “urban sprawl” at the local level, we attended round table discussions on sprawl in Burlington, Vermont, and Denver, Colorado. We also reviewed key studies such as The Costs of Sprawl Revisited by Robert Burchell and others and Crabgrass Frontier: The Suburbanization of the United States by Kenneth Jackson. A selected bibliography of the studies we reviewed appears at the end of this report.

To determine the evidence that exists on the federal influence on “urban sprawl,” we interviewed officials and collected documentation and studies from the federal agencies administering selected federal programs. Specifically, we interviewed federal officials and gathered documentation from the departments of Agriculture, Commerce, Energy, HUD, the Interior, Transportation, and the Treasury and agencies including the U.S. Army Corps of Engineers, EPA, GSA, the Internal Revenue Service, OMB, and the U.S. Postal Service. We also drew on our own prior work on these agencies.

To further identify quantitative evidence on how selected federal programs and policies influence “urban sprawl,” we conducted literature searches and interviewed and gathered studies from think tanks and advocacy

groups. We searched economic and business literature to identify quantitative research on the federal influence on sprawl. We did not independently assess the validity of the research. We interviewed officials and gathered studies from organizations such as the American Farmland Trust, Brookings Institution, Fannie Mae, National Academy of Public Administration, National Association of Home Builders, National Association of Realtors, Natural Resources Defense Council, National Trust for Historic Preservation, Northeast-Midwest Institute, Surface Transportation Policy Project, Transportation Research Board, U.S. Conference of Mayors, and Urban Institute. In addition, we employed J.M. Pogodzinski, an economics professor from San Jose State University, to identify and summarize research on the implications of federal tax policies on sprawl. To identify major federal municipal water and sewer programs, we also searched the June 1998 edition of the Catalog of Federal Domestic Assistance. We did not include water and sewer programs in our listing if they did not provide assistance for the new construction, upgrade, operation, or maintenance of municipal systems or if they had not had at least one annual funding or expenditure of approximately \$50 million or more since fiscal year 1995. We also conducted an electronic mail survey of colleges and universities with urban/regional planning programs accredited by the American Planning Association. We received responses from 14 schools.

To identify regulatory review and coordination mechanisms related to “urban sprawl,” we conducted interviews with and collected documentation and studies from federal agencies. We reviewed executive orders and the Council on Environmental Quality’s regulations on NEPA. We interviewed federal officials at HUD, EPA, and OMB. We also reviewed reports published by the President’s Council on Sustainable Development and the Center for Neighborhood Technology.

We performed our work from July 1998 through April 1999 in accordance with generally accepted government auditing standards.

As arranged with your offices, unless you announce its contents earlier, we plan no further distribution of this report until 5 days after the date of this letter. At that time, we will send copies to Senator John Chafee, Chairman, Senate Committee on Environment and Public Works; Representative Thomas Bliley, Jr., Chairman, and Representative John Dingell, Ranking Minority Member, House Committee on Commerce; Representative Bud Shuster, Chairman, and Representative James L.

Oberstar, Ranking Minority Member, House Committee on Transportation and Infrastructure; and other appropriate congressional recipients. We are also sending copies of this report to the Honorable Dan Glickman, Secretary of Agriculture; the Honorable William M. Daley, Secretary of Commerce; the Honorable William S. Cohen, Secretary of Defense; the Honorable Bill Richardson, Secretary of Energy; the Honorable Andrew Cuomo, Secretary of Housing and Urban Development; the Honorable Bruce Babbitt, Secretary of the Interior; the Honorable Rodney E. Slater, Secretary of Transportation; the Honorable Robert E. Rubin, Secretary of the Treasury; the Honorable Charles O. Rossotti, Commissioner of Internal Revenue; the Honorable Carol M. Browner, Administrator of the Environmental Protection Agency; the Honorable David J. Barram, Administrator of the U.S. General Services Administration; the Honorable William Henderson, Postmaster General; and the Honorable Jacob Lew, Director of the Office of Management and Budget. Copies will also be made available to others upon request.

If you have any questions, please call me at (202) 512-7631. Major contributors to this report are listed in appendix VI.



Judy A. England-Joseph
Director, Housing and Community
Development Issues

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Abbreviations

DOE	Department of Energy
DOT	Department of Transportation
EDA	Economic Development Administration
EPA	Environmental Protection Agency
FHA	Federal Housing Administration
GAO	General Accounting Office
GSA	General Services Administration
HUD	Department of Housing and Urban Development
NEPA	National Environmental Policy Act
OMB	Office of Management and Budget
USDA	U.S. Department of Agriculture

The Influence of Selected Federal Policies and Programs on “Urban Sprawl”

This appendix presents the results of our review of research on the relationship between specific federal programs and policies and “urban sprawl.” The questions included in the appendix were asked in the June 10, 1998, request letter. The appendix covers policies and programs related to agriculture, environmental protection, housing, the location of federal and postal facilities, taxation, transportation, utility pricing, and water and sewer infrastructure. For each policy, the appendix includes (1) the results of our literature review and (2) the views of federal, state, and local government agencies; advocacy groups; and academia.

Agriculture

Issue:

Which federal agricultural programs, if any, support the objective of maintaining prime agricultural land near areas becoming more urban?

Research Results:

We identified only one U.S. Department of Agriculture (USDA) program that is specifically designed to preserve prime agricultural land—the Farmland Protection Program. The objective of this program is to purchase conservation easements³⁰ or other interests on land that would limit the conversion of prime and unique farmland to nonagricultural uses. The Department has already obligated the \$35 million made available for the program, and the President has requested an additional \$28 million in Commodity Credit Corporation funds and \$50 million in discretionary funds for the program in his fiscal year 2000 budget submission. In addition, the Farmland Protection Policy Act requires federal agencies to consider the adverse effects of federal programs on the preservation of farmland and alternative actions that could lessen these effects. However, according to the literature we reviewed, the act has not been enforced and is, therefore, limited in its effectiveness. USDA officials told us that the act is not enforceable because it offers no guidance for choosing a less damaging alternative and no incentives for doing so.

Whether urbanization poses a threat to prime agricultural land and agricultural production has been debated in recent years. For example, in 1994, USDA’s Economic Research Service reported, after studying rural land conversion rates between 1960 and 1980, that the loss of farmland to urban uses did not pose a threat to total cropland or agricultural production in

³⁰A conservation easement is a deed restriction that landowners voluntarily place on their property to protect resources such as productive agricultural land and wildlife habitat.

the United States.³¹ In a 1996 report, the Economic Research Service concluded, on the basis of analyses conducted over the past two decades, that urbanization does not pose a threat to the nation’s supply of prime cropland or its ability to produce food.³² In 1997, the American Farmland Trust reported, after analyzing USDA’s most recent National Resources Inventory, that about 4.3 million acres of the nation’s prime and unique farmland were converted between 1982 and 1992 and that most of this loss was due to urbanization.³³ The American Farmland Trust also determined that 79 percent of the fruit, 69 percent of the vegetables, 52 percent of the dairy products, and 28 percent of the meat produced in the United States was produced on high-quality farmland threatened by development. Although there is disagreement on the potential impact of lost farmland, both the Economic Research Service and the American Farmland Trust have stated that farmland preservation is one way to curb “urban sprawl.” USDA’s Natural Resources Conservation Service is equally concerned about erosion resulting from the increased use of marginal land in agricultural production.

Environmental Protection

Issue: Do federal policies on air quality encourage development in greenfields, rather than in existing urban and suburban areas?

Research Results: Certain provisions of the Clean Air Act have been criticized because they may encourage development in greenfields, rather than in existing urban and suburban areas; however, research has shown that private firms’ decisions about location are not influenced to any significant extent by environmental regulations. The provisions often cited are the stringent restrictions imposed when an area is not in compliance with the standards for certain air pollutants, such as ozone, and the requirement that federally supported transportation activities conform with states’ plans for attaining and maintaining air quality standards. However, according to a study of

³¹Marlow Vesterby, Ralph E. Heimlich, and Kenneth S. Krupa, Urbanization of Rural Land in the United States, USDA, Economic Research Service, Agricultural Economic Report No. 673 (Mar. 1994).

³²Keith Wiebe, Ababayehu Tegene, and Betsey Kuhn, Partial Interests in Land: Policy Tools for Resource Use and Conservation, USDA, Economic Research Service, Agricultural Economic Report No. 744 (Nov. 1996).

³³A. Ann Sorensen, Richard P. Greene, and Karen Russ, Farming on the Edge, American Farmland Trust (Mar. 1997).

the effects of environmental regulations on competitiveness, evidence from U.S. studies questions the widespread belief that environmental regulations have a significant effect on the siting of new plants in the United States.³⁴ In addition, a review of studies analyzing the effects of environmental regulation on decisions about location concluded that “although we cannot conclude statistically that environmental regulations are unimportant without first asking more refined questions, there is little evidence that regulations have become a truly important location factor for a wide spectrum of industries.”³⁵ Finally, a study of the impact of environmental regulations on the location of Fortune 500 manufacturing branch plants did not find any statistically significant effects of environmental regulation on the location of businesses.³⁶

Issue:

Do requirements for water quality treatment (including combined sewer overflows) encourage development in greenfields, rather than in existing urban and suburban areas?

Research Results:

Combined sewer systems are sewer systems that collect both storm water runoff and sanitary sewage in the same pipe. They serve roughly 950 communities with about 40 million people. Most communities with combined sewer systems are located in the Northeast and Great Lakes regions. According to the Environmental Protection Agency (EPA), communities with combined sewer systems will incur up to \$45 billion in costs to comply with its combined sewer overflow control policy. Issues associated with the costs of compliance have been raised by the CSO Partnership, a consortium of about 100 communities with combined sewer overflow problems. A Partnership official stated that municipalities served by such systems are often required to raise their water and sewer rates to cover the costs of compliance; the higher rates then discourage growth in these jurisdictions and drive development out to the surrounding areas. However, we did not find any quantitative research supporting this view.

As part of the National Pollutant Discharge Elimination System, EPA requires certain entities to obtain permits for their storm water discharges. In November 1990, the agency issued storm water control regulations that require communities with over 100,000 inhabitants and industrial sites

³⁴Adam B. Jaffe, et al. “Environmental Regulation and the Competitiveness of U.S. Manufacturing: What Does the Evidence Tell Us?” *Journal of Economic Literature*, Vol. 33 (Mar. 1995), pp. 132-163.

³⁵Kelly Robinson, “Industrial Location and Air Pollution Controls: A Review of Evidence From the USA,” *Progress in Human Geography*, Vol. 19, No. 2 (1995), p. 223.

³⁶Timothy J. Bartik, “The Effects of Environmental Regulation on Business Location in the United States,” *Growth and Change*, Vol. 19, No. 3 (Summer 1988), pp. 22-44.

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(including construction activity sites involving at least 5 acres) to obtain permits. In January 1998, the agency proposed regulations that would extend permitting requirements to small communities in urbanized areas and small construction sites. We did not find any quantitative research indicating that EPA’s storm water control regulations encourage “urban sprawl.”

Issue:

Does the literature mention other Clean Water Act provisions that can influence “urban sprawl?”

Research Results:

Although several documents we reviewed stated that federal wetlands policy influences “urban sprawl,” we did not find any quantitative research proving that federal policies on wetlands encourage “urban sprawl.” Section 404 of the Clean Water Act regulates the discharge of dredged and fill material into the nation’s waterways, including wetlands. Most land preparation and construction activities in wetlands would involve the discharge of fill and would, therefore, require a permit from the U.S. Army Corps of Engineers. In fiscal year 1998, the Corps issued 89,857 permits, allowed about 31,090 wetlands acres to be filled, and required that about 46,630 wetlands acres be mitigated.³⁷ An article analyzing the influence of environmental mandates on urban growth concluded that although section 404 does not significantly limit urban growth, it does discourage and delay development in some areas.³⁸

The Sierra Club and the Environmental Working Group have reported that the Corps is encouraging development by issuing certain nationwide permits—generic licenses that grant blanket authorization for specific types of fill in wetlands of certain sizes.³⁹ One of the permits they criticized was Nationwide Permit 26, which allows discharges into headwaters and isolated waters as long as they do not cause the loss of more than 3 acres of waters. In response to concerns about the extent to which adverse effects are being authorized by Nationwide Permit 26, the Corps agreed to

³⁷Through mitigation, the Corps seeks to offset the adverse effects of wetlands conversion, generally by requiring the replacement of important wetlands functions and values.

³⁸Lindell Marsh, Douglas Porter, and David Salvesen, “The Impact of Environmental Mandates on Urban Growth,” *Cityscape: A Journal of Policy Development and Research*, Vol. 2, No. 3 (Sept. 1996), pp. 127-154.

³⁹Brett Hulsey, *Subsidizing Disaster: How Your Tax Money and Weak Wetland Protection Increase Your Risk of Being Flooded*, Sierra Club Midwest Office (Apr. 15, 1997).

replace the permit with activity-specific permits that more clearly define the activities being regulated.

Housing

Issue: Which federal housing programs, if any, have credit policies that encourage new development in suburban areas rather than reinvestment in central city areas?

Research Results: The Department of Housing and Urban Development (HUD), through its Federal Housing Administration (FHA), operates the federal government’s largest single-family home mortgage insurance program and oversees the financial safety and soundness of the two privately owned but federally chartered corporations—Fannie Mae (the Federal National Mortgage Association) and Freddie Mac (the Federal Home Loan Mortgage Corporation). These programs represent the primary tools used by HUD to reach its goal of increasing homeownership opportunities for low- and moderate-income families and for those living in underserved areas.

HUD’s single-family home mortgage insurance programs are available to all qualified borrowers for homes located in rural, suburban, or central city areas. For this reason, it is not clear what impact, if any, these programs currently have on “urban sprawl.” While FHA’s relatively liberal credit and down payment requirements would facilitate qualified inner city residents’ purchases of homes in the suburbs, other aspects of the program are designed to stimulate mortgage lending in the inner city. In addition, data from FHA show that its insured loans in metropolitan areas are almost evenly concentrated between central cities and suburbs.

Our review of existing research identified no recent studies that directly address the relative impact of federal single-family housing programs on development in suburban and central city locations. However, reports by HUD and GAO show that FHA is an important source of mortgage insurance for low-income and minority home buyers and for homes purchased in central cities.⁴⁰, ⁴¹ Under the Home Mortgage Disclosure Act, the federal

⁴⁰An Analysis of FHA’s Single-Family Insurance Program, HUD, Office of Policy Development and Research (Oct. 1995).

⁴¹Homeownership: FHA’s Role in Helping People Obtain Home Mortgages (GAO/RCED-96-123, Aug. 13, 1996).

government collects data on the income, race, and geographic location of borrowers obtaining home mortgages. These data show that in 1996 almost half (46 percent) of FHA’s single-family loans were made for homes located in central cities and 41 percent were made for homes in what are defined as underserved areas.⁴² In comparison, 37 percent of conventional loans purchased by Fannie Mae and Freddie Mac were for homes located in central cities.

Issue:

Do low-income housing tax credits favor new construction rather than rehabilitation of existing housing?

Research Results:

The Low-Income Housing Tax Credit program uses tax credits as an incentive for developers and investors to provide affordable rental housing for households whose income is at or below specified income levels. Recent quantitative studies include information on the mix of new construction and rehabilitation and indicate whether projects are located in urban or rural areas. A 1997 GAO report revealed that most low-income housing developments were newly constructed, but some were rehabilitated.⁴³ This report examined projects placed in service between 1992 and 1994. Another study that looked at 2,554 tax credit projects completed between 1987 and 1996 found that the number of projects located in central cities increased over time.⁴⁴ This study focused on data from four syndicators of tax-credit equity.⁴⁵ HUD reviewed projects completed primarily between 1992 and 1994 found that more than half of the units were located in central cities.⁴⁶ HUD officials recognize there may be some regional implications for this program and believe more information on the potential impact of the Low-Income Housing Tax Credit program’s policies is needed.

⁴²Metropolitan census tracts in which (1) the median income is less than or equal to 90 percent of the local area’s median income or (2) the minority population is greater than or equal to 30 percent of the total population and the median income is less than or equal to 120 percent of the local area’s median income.

⁴³Tax Credits: Opportunities to Improve Oversight of the Low-Income Housing Program (GAO/GGD/RCED-97-55, Mar. 28, 1997).

⁴⁴Jean L. Cummings and Denise DiPasquale, Building Affordable Rental Housing: An Analysis of the Low-Income Housing Tax Credit Program, City Research (Feb. 1998).

⁴⁵Syndicators act as brokers between developers and investors by pooling several projects into one tax credit equity fund and marketing the tax credits to investors, thus spreading the risk to investors across the projects.

⁴⁶Abt Associates, Inc., Development and Analysis of the National Low-Income Housing Tax Credit Database, HUD, Office of Policy Development and Research (July 1996).

Location of Federal and Postal Facilities

Issue: To what extent are federal agencies complying with the executive orders governing federal facility location decisions?

Research Results: Executive Orders 12072 and 13006 require federal agencies making urban location decisions to give first consideration to central business areas and historic properties. According to information provided by the General Services Administration (GSA) on 1,242 active leases, about 45 percent of the leased facilities are located within central business districts.⁴⁷ GSA explained that a federal facility might be located outside a central business district if (1) a location within the central business district conflicted with the agency’s mission, (2) an agency’s special requirements could not be met within the central business district, or (3) there was not enough competition within the central business district.

The Rural Development Act of 1972, as amended, directs federal agencies to give first priority to locating new offices and other facilities in rural areas. However, when an agency’s mission and programs require an urban location, the agency must comply with Executive Orders 12072 and 13006. Executive Order 12072, promulgated in August 1978 by President Carter, directs federal agencies to give first consideration to a centralized community business area and adjacent areas of similar character⁴⁸ when filling space needs in urban areas. Executive Order 13006, issued by President Clinton in May 1996, reaffirms the commitment set forth in Executive Order 12072 to strengthen the nation’s cities by encouraging the location of federal facilities in central cities. Specifically, it requires federal agencies to give first consideration to historic properties within historic districts, especially those located in central business areas.

GSA is responsible for administering Executive Orders 12072 and 13006. The implementing regulations for Executive Order 12072 state that agencies can locate outside a central business area only if the market cannot supply suitable space or if a central business area cannot meet the

⁴⁷Central business districts are specific districts within central business areas where localities have chosen to concentrate the development of offices or mixed uses.

⁴⁸These adjacent areas may include empowerment zones or other redevelopment areas that are outside the central business district but still within the city limits.

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agency’s mission requirements. As discussed in the letter of this report, almost half of the leased facilities that GSA analyzed were located in central business districts. Moreover, as shown in table I.1, the most common reason cited by GSA for locating outside a central business district was that locating within it would conflict with the agency’s mission. We did not independently verify GSA’s reasons.

Table I.1: Reasons for Locating Federal Facilities Outside the Central Business District

Reason	Number of leases	Percentage of leases
Location within the central business district would conflict with the agency's mission	257	40
The agency's specialized requirements could not be met within the central business district	175	27
Competition was inadequate within the central business district	133	21
Other reasons (e.g., the central business district was not defined)	34	5
Combination of the above	20	3
No information available	23	4
Total	642	100

Source: GAO's analysis of data provided by GSA.

GSA has been both criticized and praised for its enforcement of Executive Order 12072. For instance, the National Council for Urban Economic Development criticized GSA for allowing the Internal Revenue Service to leave the central business district in Fresno, California, despite efforts to find a suitable location within the downtown area. According to GSA, it reviewed the Internal Revenue Service’s request to move out of downtown Fresno and found that the request was mission driven and that the Internal Revenue Service was in compliance with Executive Order 12072. The Secretary of the Treasury attested to the fact that the move was based on the Internal Revenue Service’s mission-related requirements. In December 1998, the Mayor of Baltimore, Maryland, praised GSA for adding over 500 new federal jobs to the city and complying with Executive Order 12072.

In addition to enforcing the executive orders covering the location of federal facilities, GSA initiated the Good Neighbor Program in 1996 to promote local economic and civic activities. The agency uses the program to accomplish a variety of civic initiatives in communities with federal facilities. For instance, GSA sets aside ground-floor and plaza space in federal buildings for public activities and events and joins business improvement districts—districts created by property owners so that they can tax themselves to cover the costs of maintenance, security, and other services.

Issue:

Is there an effective process for considering the potential impact of relocating postal facilities on existing communities?

Research Results:

The U.S. Postal Service issued regulations effective October 5, 1998, that greatly expanded its procedures for notifying local citizens and public officials of facility projects, as well as for soliciting and considering community input, before making a final decision to expand an existing facility, relocate to another existing building, or start new construction. These procedures, which are similar to those required when post offices are closed, include

- meeting with and sending a letter to high-ranking local public officials to describe the project that is under consideration;
- sending an initial news release to local media;
- posting a copy of the letter to local officials and/or the news release in the lobby of the affected post office; and
- except under exceptional circumstances, attending or conducting at least one mandatory public hearing to describe the project, invite questions, solicit written comments, and describe the process for considering community input.

Although it is too soon to determine if the new process will be effective, critics have maintained that members of affected communities should be able to appeal relocation decisions to the Postal Rate Commission, as they can do when post office closures are planned. In February and March 1999, bills that include guidelines for the relocation, closing, consolidation, or construction of post offices were introduced in the House and Senate, respectively. The bills would allow any person served by a post office whose relocation has been approved to appeal the relocation decision to the Postal Rate Commission.

According to some of the researchers whose work we reviewed, the relocation of post office retail facilities from downtown locations to outlying areas is detrimental to the downtown economy and contributes to “urban sprawl.” However, we did not find any quantitative research that supports this conclusion. One reason for the lack of quantitative research may be a lack of data. Although the Postal Service can determine how many relocations occurred during a given year, it cannot readily determine how many postal facilities were relocated to outlying areas because it does not have centralized data showing whether the facilities were relocated across the street or in outlying areas. However, organizations such as the National Trust for Historic Preservation follow this issue and have documented instances when post offices have been relocated outside central business districts.

Taxation

Issue:

Do federal tax provisions that create a tax advantage for more expensive housing tend to favor low-density development outside existing urban and suburban areas?

Research Results:

We identified many studies of federal tax preferences for owner-occupied housing that focus mainly on the effects of tax preferences on the quantity of housing consumed, the price of housing, the homeownership rate, the tendency of households to move, and federal tax expenditures. We found very little research that focused specifically on whether preferential tax treatment for homeowners affects “urban sprawl.” Although some authors present statistics that they believe imply such a relationship, no one has directly estimated the effects of tax preferences on “urban sprawl.”

The main features of the federal tax code pertaining to owner-occupied housing that have been analyzed in the literature are the deductibility of mortgage interest payments and property taxes and the tax treatment of capital gains on housing. Investment in owner-occupied housing is treated differently from other investments under the income tax rules in three ways. First, the value of housing services (the imputed rental income) that a homeowner derives from occupying his or her own house is not included in his or her taxable income. This means that an owner-occupier’s income

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from housing (the imputed rental income) is treated differently from a landlord’s rental income, which is subject to tax. Second, under the Taxpayer Relief Act of 1997, gains due to the appreciation of owner-occupied homes are exempt from income taxation for almost all taxpayers. Third, other costs of homeownership (e.g., maintenance costs) are not deductible.

The direction and magnitude of the effects of the tax preferences for owner-occupied housing on the location of housing are also uncertain. To analyze the effects of these preferences, Blackely and Follain employed a widely used economic model of households’ locational choices.⁴⁹ They concluded that, in general, the impact of the preferences on locational choice was ambiguous. For specific model assumptions that they considered reasonable, they found that the preferences may, in fact, be a countervailing force to suburbanization.

A study by Gyourko and Voith developed three theoretical models to determine the conditions under which tax preferences for owner-occupied housing would contribute to the decentralization of metropolitan areas.⁵⁰ The authors did not develop quantitative estimates of these effects. Gyourko and Voith argued that tax preferences by themselves do not create greater population decentralization, less dense central cities, and more extreme residential sorting by income. These spatial effects arise from the interaction of the tax treatment of housing with other features of the housing market, such as land-use constraints and methods of financing local amenities.

Some other recent studies have analyzed the effect on “urban sprawl” of modifying the tax treatment of capital gains.⁵¹ Under the Taxpayer Relief Act of 1997, individuals are permitted to exclude from taxable income up to \$250,000 of gain (generally \$500,000 for joint filers) realized on the sale or exchange of property that has been used as a principal residence. There are certain conditions the taxpayer must satisfy to qualify.

⁴⁹Dixie Blackley and James R. Follain, “Inflation, Tax Advantages to Homeownership and the Locational Choices of Households,” *Regional Science and Urban Economics*, Vol. 13, No. 4 (Nov. 1983), pp.505-516.

⁵⁰Joseph Gyourko and Richard Voith, “Does the U.S. Treatment of Housing Promote Suburbanization and Central City Decline?” Working Paper No. 97-13, Federal Reserve Bank of Philadelphia (Sept. 17, 1997).

⁵¹Linking Tax Law and Sustainable Development: The Taxpayer Relief Act of 1997, Environmental Law Institute (1998) and The IRS Homeseller Capital Gain Provision: Contributor to Urban Decline, Ohio Housing Research Network (Jan. 5, 1994).

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We found no quantitative studies estimating the effect, if any, on “urban sprawl” of the current favorable capital gains treatment for owner-occupied housing. One study suggests that the past treatment of capital gains contributed to the outmigration from cities when home prices in central cities declined relative to home prices in the suburbs.⁵² A homeowner with accrued capital gains had a disincentive to move inward if such a move involved the purchase of a less expensive home because that purchase would require the homeowner to pay tax on at least some of the gains earned on the sale of the original home. The Environmental Law Institute notes that the recent change in the law removes this disincentive.⁵³ The Institute also suggests that the new treatment—under which exclusions may be claimed every 2 years—may encourage some homeowners to live in and rehabilitate a succession of older urban homes in order to earn tax-free gains. The Environmental and Energy Study Institute suggests that another effect of the favorable treatment may be to encourage wealthier taxpayers to purchase larger homes on larger lots, which are more likely to be in outlying areas.⁵⁴ No estimates have been made of the magnitude of these, or any other, effects of the current capital gains exclusion on the amount or location of the housing purchased.

Several recent papers have used models and simulations to estimate various effects associated both with removing the mortgage interest and property tax deductions and with altering the treatment of capital gains in housing, but these papers have not tied their results specifically to “urban sprawl.”⁵⁵ There is broad agreement that removing these tax preferences would reduce overall housing consumption and the price of housing.

⁵²The IRS Homeseller Capital Gain Provision: Contributor to Urban Decline, Ohio Housing Research Network (Jan. 5, 1994).

⁵³See footnote 51.

⁵⁴Don Gray and Carol Werner, “Sustainability Provisions in the New Tax Law,” Memorandum to Members of the Sustainable Communities Advisory Committee and Other Potentially Interested Parties, Environmental and Energy Study Institute (Nov. 6, 1997).

⁵⁵James Berkovec and Don Fullerton, “A General Equilibrium Model of Housing, Taxes and Portfolio Choice,” *Journal of Political Economy*, Vol. 100, No. 2 (1992); Leonard E. Burman, Sally Wallace, and David Weiner, “How Capital Gains Taxes Distort Homeowners’ Decisions,” 89th Annual Conference on Taxation, National Tax Association (Nov. 12, 1996); Dennis R. Capozza, Richard K. Green, and Patric H. Hendershott, “Taxes, Mortgage Borrowing and Residential Land Prices,” in Henry J. Aaron and William G. Gale (eds.), *Economic Effects of Fundamental Tax Reform* (Brookings Institution Press: Washington, D.C., 1996); Richard K. Green and Kerry D. Vandell, *Giving Households Credit: How Changes in the Tax Code Could Promote Homeownership*, Working Paper, Center for Urban Land Economics Research, U. of Wisconsin-Madison (Jan. 27, 1998); Todd M. Sinai, “The Effect of Tax Reform on the Owner-Occupied Housing Market,” Ph.D. Dissertation, Massachusetts Institute of Technology (June 1997); Todd Sinai, “Taxation, User Cost, Household Mobility Decisions,” Working Paper, Wharton School, U. of Pennsylvania (Dec. 1997).

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However, there is no consensus among researchers on the magnitude of these effects.

Issue: Do federal estate taxes encourage the conversion of farmland that is located near urban areas?

Research Results: Some supporters of special treatment for qualified family-owned business interests and qualified conservation easements believe that recent tax changes encourage the continued operation of family farms and are likely to increase donations of land for conservation purposes. A study by USDA’s Economic Research Service provides some support for such claims. The study notes that the new exclusion for qualified family-owned businesses “. . . should reduce, if not eliminate, the need to sell farm assets to pay Federal estate taxes. . . .”⁵⁶ The same study notes that relatively few landowners would benefit from the exclusion for land subject to conservation easements.

Issue: Does the literature mention other tax provisions that can influence “urban sprawl?”

Research Results: The literature also addresses the effect of changes in employer-paid parking benefits. Section 132(f) of the Internal Revenue Code allows employers to exclude from the income of their employees the value of employer-provided parking up to \$175 per month in 1999. The Environmental and Energy Study Institute contends that tax provisions that favor driving to work contribute to traffic congestion, pollution, and other public costs associated with automobile use.⁵⁷ While some studies indicate that employer-paid parking, employer-provided incentives for ridesharing, and high-occupancy-vehicle lanes may have a large effect on the probability that employees will drive to work alone,⁵⁸ another source

⁵⁶James Monke and Ron Durst, *The Taxpayer Relief Act of 1997: Provisions for Farmers and Rural Communities*, USDA, Economic Research Service, Agriculture Economic Report No. 764 (July 1998), p. 18.

⁵⁷See footnote 54.

⁵⁸David Brownstone and Thomas F. Golob, “The Effectiveness of Ridesharing Incentives: Discrete-Choice Models of Commuting in Southern California,” *Regional Science and Urban Economics*, Vol. 22 (1992), pp. 5-24; Richard W. Willson, “Estimating the Travel and Parking Demand Effects of Employer-paid Parking,” *Regional Science and Urban Economics*, Vol. 22 (1992), pp. 133-145.

on commuting incentives notes that factors other than commuting costs are more important in explaining patterns of commuting.⁵⁹ Section 132(f) of the Internal Revenue Code also allows employers to exclude from the income of their employees the value of employer-provided transit passes and transportation in commuter highway vehicles up to an aggregate of \$65 per month in 1999. An IRS official noted that this multiple ridership provision could have the potential to decrease the incentive to commute alone.

Transportation

Issue:

Do federal transportation programs encourage “urban sprawl” through the construction of new highways rather than the maintenance of existing highway systems?

Research Results:

The research we reviewed did not focus on whether federal programs encourage new construction at the expense of maintaining or preserving systems. The research did support the conclusion that, historically, interstate highways improved access to developable land on the urban fringe, supporting dispersed, low-density development. This phenomenon originated with the passage of the Federal-Aid Highway Act of 1956, according to the Transportation Research Board. The Interstate Highway System is about 100 percent complete, and the federal share of annual highway expenditures is about 21 percent, though the federal share of annual highway capital outlays has been between 41 and 46 percent since 1987. More recently, quantitative research data were collected on the impact of specific transportation investments on the physical development of metropolitan areas. One study of areas with and without beltways had difficulty deducing any effect of beltways on central city populations. Another study analyzed the changes in residential and commercial development in certain California areas and found a strong relationship between expanded highway capacity and increased residential construction. The study did not determine whether there was a shift in development from other parts of the region. The Transportation Research Board suggests that even with sophisticated statistical techniques, cause-and-effect relationships are difficult to distinguish. Moreover,

⁵⁹Genevieve Giuliano and Kenneth A. Small, “Is the Journey to Work Explained by Urban Structure?” *Urban Studies*, Vol. 30, No. 9 (Nov. 1993), pp. 1485-1500.

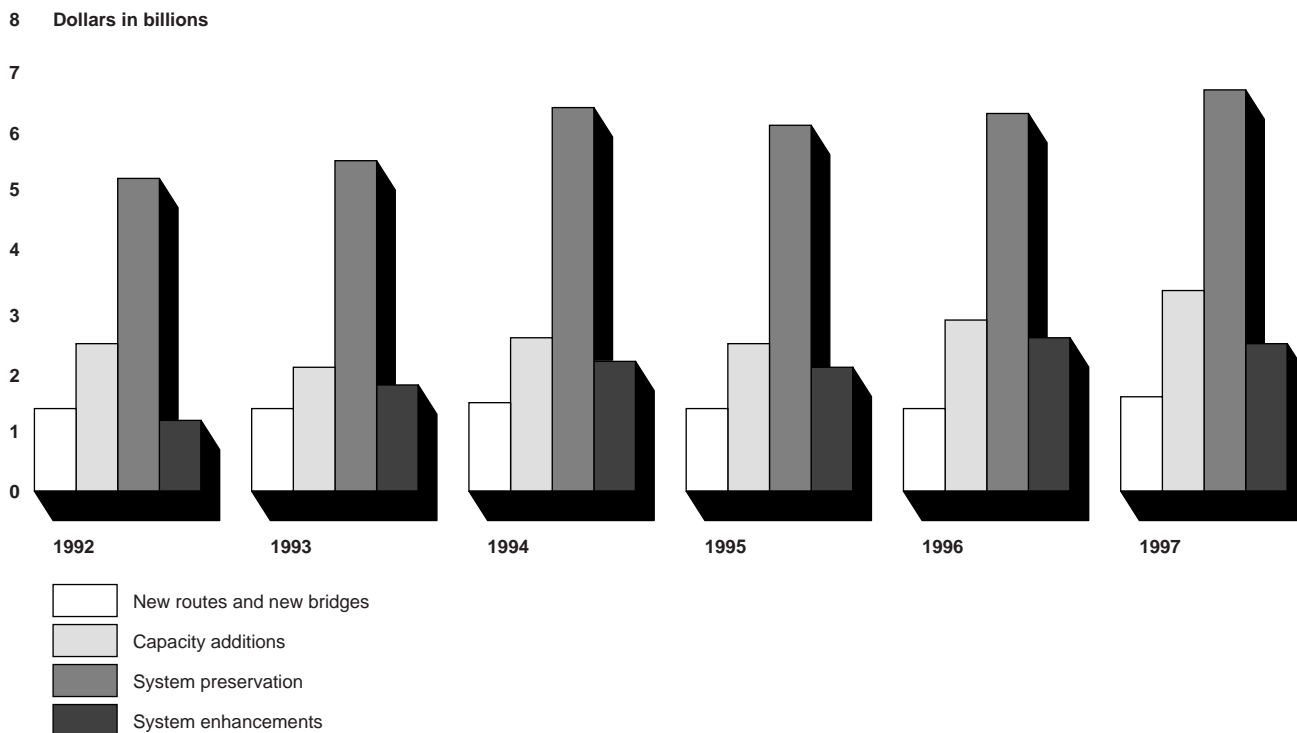
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transportation investments may affect development for many decades, but most studies examine only short-term consequences.

As shown in figure I.1, from fiscal year 1992 through fiscal year 1997, most federal highway funds were obligated for system preservation projects. Although the proportions of obligations were relatively constant for all categories, the percentage of federal funds obligated for new routes and bridges decreased slightly while the percentage obligated for system enhancements increased by about 6 percent. Figure I.1 represents federal-aid highway projects under way. These projects account for two-thirds of the total federal obligations for highway improvements. Figure I.1 also shows that over the 6-year period, obligations were as follows: \$8.7 billion for new routes and bridges, \$16.2 billion for capacity additions, \$36.8 billion for system preservation, and \$12.3 billion for system enhancements.

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Figure I.1: Obligation of Federal Funds for Highway Improvements, Fiscal Years 1992-97



New routes and new bridges—construction of new roads and bridges that do not replace or relocate existing roads or bridges; Capacity additions—relocation, major widening, and reconstruction—added capacity; System preservation—minor widening, restoration and rehabilitation, reconstruction—no added capacity, bridge replacement, major bridge rehabilitation; and minor bridge rehabilitation; system enhancements—safety/traffic/traffic system management, and environmentally related projects.

Note: Dollars are in constant billions.

Source: Federal Highway Administration's Fiscal Management Information System.

Researchers such as Kenneth Jackson, David Rusk, and the Growth Management Planning and Research Clearinghouse have concluded that highway capacity expansion projects contributed to “urban sprawl.” In addition, according to the Transportation Research Board, most expansion of road capacity is taking place at the urban fringe.⁶⁰ However, the lack of

⁶⁰Expanding Metropolitan Highways: Implications for Air Quality and Energy Use, National Research Council, Transportation Research Board, Special Report 245 (1995), p. 194.

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a specific geographic designation for suburban areas makes it difficult to capture spending in these areas. For example, one study made assumptions about federal highway data and concluded, as shown in table I.2, that nonurbanized areas—defined as small towns and low-density suburbs—received a disproportionate amount of federal roadway funds.⁶¹ Federal Highway Administration officials said their reporting system reflects federal spending by the legislated federal-aid designations—rural, urban, small urban, and urbanized—and cannot identify spending in suburban areas because suburban development can occur in any of the population areas. For instance, federal highway expenditure data are associated with two types of communities—urban (those with a population of more than 5,000) or rural (those with a population of up to 4,999)—making it difficult to distinguish spending in suburban areas. The states report highway expenditure data to the Department of Transportation in the aggregate—combining funding and transfers for federal funding, according to Federal Highway Administration officials.

Table I.2: Analysis of Federal Highway Spending for Fiscal Year 1995

	Percentage of roadway funds received	Percentage of nation’s population	Amount received per capita
Urbanized ^a	46	64	\$54.25
Nonurbanized ^b	14	9	\$115.11
Rural ^c	39	28	\$98.01

^aPopulation is equal to or greater than 50,000.

^bPopulation is between 5,000 and 49,999. The Surface Transportation Policy Project considers these areas as small towns and low-density suburbs.

^cPopulation is equal to or fewer than 4,999.

Source: Getting a Fair Share: An Analysis of Federal Transportation Spending, Surface Transportation Policy Project (1996).

Utility Pricing

Issue:

Do Federal energy providers encourage suburban development through their rate structure?

⁶¹Getting a Fair Share: An Analysis of Federal Transportation Spending, Surface Transportation Policy Project (1996).

Research Results:

Our review identified very little research on the impact of utility rates and costs on suburban development. A study on the costs of urban growth in Oregon communities examines power generation costs and suggests that the costs of growth-related investments in electric power generation are distributed among all ratepayers through their utility bills.⁶² The study criticizes this form of pricing—on an “average cost basis”—because suburban developments do not pay for the full cost of receiving electricity. The study argues that many communities subsidize urban growth by recovering only a fraction of their costs for new development, including those for utility infrastructure. Another study estimates the costs of basic public facilities and infrastructure associated with population growth for 730 U.S. cities and towns.⁶³ The study acknowledges the difficulty of distinguishing growth-related costs from other public-sector costs.

The federal government has played a significant role in the development of electricity markets. Since the New Deal, the federal government has established about 130 water projects that—in addition to promoting agriculture, flood control, navigation, and other activities—produce electric power. To provide this power to large portions of rural America, the government also created five power marketing administrations, along with the Tennessee Valley Authority.⁶⁴ The Tennessee Valley Authority is a multipurpose independent federal corporation, which generates and markets its own power. In addition, the government made financing available to rural utilities to assist them in building and maintaining electricity distribution systems that provide electricity to rural areas through USDA’s Rural Utilities Service. In 1996, the power marketing administrations and the Tennessee Valley Authority provided about 10 percent of the nation’s electricity supply.⁶⁵

The power marketing administrations, created between 1937 and 1977, sell and transmit power generated at federal facilities operated primarily by the Department of the Interior’s Bureau of Reclamation and the U.S. Army Corps of Engineers. The power marketing administrations’ mission is to market federal power in a manner that encourages the most widespread use at the lowest possible rates consistent with sound business practices.

⁶²Eben Fodor, The Cost of Growth in Oregon: 1998 Report, Fodor and Associates (Oct. 1998).

⁶³Beyond Sprawl: The Cost of Population Growth to Local Communities, Carrying Capacity Network (Dec. 1998).

⁶⁴One power marketing administration, the Alaska Power Administration, was divested in 1997 and 1998.

⁶⁵Federal Power: Options for Selected Power Marketing Administrations’ Role in a Changing Electricity Industry (GAO/RCED-98-43, Mar. 6, 1998).

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They generally sell this power in wholesale markets, mostly to publicly and cooperatively owned utilities that, in turn, sell power to end-use (retail) consumers. Each administration has its own specific geographic boundaries. Together, the power marketing administrations and the Tennessee Valley Authority currently market power within 33 states.

The power marketing administrations are generally required to recover all costs incurred as a result of producing, transmitting, and marketing power, including the costs of repaying the federal investment in the power generating facilities and other debt, with interest. However, we recently concluded that the power marketing administrations are not recovering through their electricity rates all of the power-related costs incurred by the federal government.⁶⁶ In addition, certain nonpower costs are allocated to power revenues for repayment. For example, under the concept of aid-to-irrigation, revenues earned from the sale of power are supposed to repay billions of federal dollars invested in irrigation facilities that the Secretary of the Interior believes irrigators will be unable to repay. The Federal Energy Regulatory Commission reviews the rates charged by the power marketing administrations. From 1990 through 1995, the power marketing administrations sold wholesale power at average rates that were 40 to 50 percent below those charged by nonfederal utilities.^{67, 68} In the recent past, however, the Bonneville Power Administration’s rates were at or above market rates.

The largest federal power producer is the Tennessee Valley Authority. By some measures, it is the largest utility in the nation. Providing about 5 percent of the nation’s power, it generates its own power and markets it in wholesale markets, as well as directly to large industrial customers. The Tennessee Valley Authority is required by law to set rates so that power revenues cover all operating expenses, including depreciation and amortization. According to recent GAO work, the Tennessee Valley Authority was generally recovering all power-related costs incurred by the federal government through its rates. The Tennessee Valley Authority also approves the retail rates charged by the 159 municipal and cooperative utilities that are its primary customers. The power program is by far the Tennessee Valley Authority’s largest activity. Unlike the rates of other utilities and the power marketing administrations, the Tennessee Valley

⁶⁶Federal Electricity Activities: The Federal Government’s Net Cost and Potential for Future Losses, Vols. 1 and 2 (GAO/AIMD-97-110 and 110A, Sept. 19, 1997).

⁶⁷Federal Power: Regional Effects of Changes in PMAs’ Rates (GAO/RCED-99-15, Nov. 16, 1998).

⁶⁸Federal Power: PMA Rate Impacts, by Service Area (GAO/RCED-99-55, Jan. 28, 1999).

Authority’s power rates are not subject to review and approval by state public utility commissioners or the Federal Energy Regulatory Commission. Instead, all authority over the Tennessee Valley Authority’s operations—including the sole authority to set wholesale power rates and approve the retail rates charged to distributors—is vested in a three-member board of directors.

In addition to authorizing the sale of federal power, the Congress passed laws to encourage the development of nonfederal power systems. Investor-owned utilities were historically reluctant to serve sparsely populated areas because of the heavy capital costs involved in installing power systems that serve relatively few customers. As a result, in 1935, scarcely 1 in 10 farm households in the United States had electricity. The Rural Electrification Act of 1936 authorized the Rural Electrification Administration (now the Rural Utilities Service) to provide loans and loan guarantees to organizations that generate, transmit, and/or distribute electricity to small communities, farms, and persons in rural areas. From fiscal year 1992 through fiscal year 1996, the Rural Utilities Service made or guaranteed 880 loans to rural utilities for capital expenditures generally related to improving systems and extending electric service to new consumers. Some of these systems buy power from the power marketing administrations. According to recent GAO work, the Rural Utilities Service is not recovering all of the federal government’s costs through its loan rates.

Water-Sewer Infrastructure

Issue:

To what extent do federal water-sewer programs tend to support the building of new infrastructure rather than the operation, maintenance, and upgrading of existing infrastructure?

Research Results:

Our search of the literature and interviews with agency officials and trade associations disclosed little evidence linking federal domestic assistance for municipal water and sewer systems to “urban sprawl.” Three studies related federal spending for water or sewer systems to growth-related effects, either directly or indirectly, but not to “urban sprawl.” One study suggested that larger public infrastructure stocks in central cities,

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including state and federally aided sewer systems, have a positive effect on suburban land values.⁶⁹ Another study—an evaluation, sponsored by the Economic Development Administration (EDA), of 203 public works projects that received a closeout payment in fiscal year 1990—describes over a dozen water/sewer projects that contributed directly or indirectly to the creation or retention of jobs in an area, additional investment, or population growth.⁷⁰ The third study, sponsored by HUD, describes two instances in which Community Development Block Grant funds, used in part for water or sewer systems, helped to stabilize neighborhoods or reduce blight in impoverished census tracts.⁷¹ The five articles we identified cited anecdotal evidence suggesting that “urban sprawl” had occurred in areas receiving assistance for water and sewer systems, particularly for the construction of new lines or extensions. However, these citations did not distinguish federal assistance from state, local, private, or other assistance.

We identified eight major⁷² federal domestic programs that provide assistance for new construction or construction to upgrade municipal water and sewer systems. These programs are listed in table I.3. This table also shows that some of these programs maintain data on the amount of funding spent for each type of construction activity, while the other programs do not. We found, through interviews with agency officials, that only the two Community Development Block Grant programs generally provide funding for operations and maintenance. According to HUD officials, the Department does not maintain data on funding for each type of activity, such as new construction, repairs, or operations and maintenance for the two programs. In addition, we found that USDA, HUD, EDA, and EPA either have or will have funding data distributed by the population of the area receiving the assistance.⁷³ However, the agencies maintain these data in different ways. Some of the variation can be attributed to the different ways the individual programs were designed. For instance, according to program officials, three of the eight programs were designed to provide assistance only for the capital costs associated with a system—for the costs of construction or upgrades—but not for

⁶⁹Andrew F. Haughwout, “Central City Infrastructure Investment and Suburban House Values,” *Regional Science and Urban Economics*, Vol. 27 (1997).

⁷⁰Robert W. Burchell, et al., *Public Works Program: Performance Evaluation*, U.S. Department of Commerce, EDA (May 1997).

⁷¹Urban Institute, *Federal Funds, Local Choices: An Evaluation of the Community Development Block Grant Program*, HUD, Office of Policy Development and Research (May 1995).

⁷²We identified major programs as those with at least one annual funding or expenditure of about \$50 million or more since fiscal year 1995 for water and sewer systems.

⁷³Department of the Interior officials generally described the areas served by their programs’ projects as urban or rural but did not refer to databases for this information.

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operation and maintenance. Other programs were designed, according to program officials, to provide assistance to specific areas, such as rural areas or distressed cities. Some of the variation is due to the use of different definitions. For instance, EDA characterizes areas receiving assistance as urban or rural; EPA relies on multiple population ranges without characterizing the ranges as urban, suburban, or rural; and USDA provides funding only to rural populations, although its definition of “rural” differs from EDA’s. Because of this variation, it would be difficult to summarize the distribution of federal funding for water and sewer systems by the type of construction or by the location (urban, suburban, or rural) of the systems.

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Table I.3: Availability of Aggregate Funding Data for Major Federal Water and Sewer Programs, Distributed by Type of Activity

Agency and program	New construction	Construction to upgrade an existing system^a	Varied construction activity^b
USDA, Rural Utilities Service			
Water and Waste Disposal Loans and Grants	X		X
Department of Commerce, EDA			
Public Works	X	X	X
EPA			
Capitalization Grants for State Revolving Funds	X	X	X
Capitalization Grants for Drinking Water State Revolving Fund	c	c	c
HUD, Office of Community Planning and Development			
Community Development Block Grants/ Entitlement Program			X
Community Development Block Grants/State Program			X
Department of the Interior, Bureau of Reclamation			
Title XVI Water Reclamation and Reuse Program	X		
Appropriated Municipal, Rural and Industrial Water Programs in North and South Dakota			X

^aThis column includes data for such upgrading activities as renovation, rehabilitation, and replacement.

^bThis column includes data for both new construction and upgrade activities.

^cAccording to an EPA official, data are not currently available for this new program.

It is also difficult to summarize agency officials’ views on how the funding for these systems influences growth. For instance, some officials identified a past or present influence on growth. An EDA official recognized that significant growth in some counties had been made possible by large water and sewer system projects that the agency assisted in the late 1960s and early to mid-1970s. He believes that assisted projects are now, for the most part, so much smaller in scope that he did not think they would contribute significantly to “urban sprawl.” HUD officials indicated that

funding for a water or sewer line in a rural area, provided under the Community Development Block Grant State Program, could not help but support growth. However, the officials indicated that funding for distressed cities, provided under the Community Development Block Grant Entitlement Program, would be supporting redevelopment rather than growth.

Other officials indicated that the water or sewer projects allow for future population growth. For example, according to the USDA official, projects funded through the Water and Waste Disposal program are designed to serve the existing population, as well as the projected growth in population, as much as 100 percent, over the service life of the water or sewer line. EPA’s Capitalization Grants for State Revolving Funds program will fund the replacement or major rehabilitation of an existing sewer system only if, among other factors, the capacity of the project is equal to the existing capacity, plus a reasonable amount for future growth. Under the agency’s newer Capitalization Grants for Drinking Water State Revolving Fund, expenditures for the expansion of any public water system in anticipation of future population growth are to be avoided. However, the program’s requirements do not preclude the use of financing for facilities that meet the objectives of the Safe Drinking Water Act for the population to be served by the facility over its useful life. An official from the Department of the Interior’s Municipal, Rural and Industrial Appropriated Water Programs in North and South Dakota indicated that the Department considers projected growth in the development of its projects, which are intended to provide water supply infrastructure where none previously existed. An official from the Department of the Interior’s Water Reclamation and Reuse Program noted that its projects, designed to extend the usefulness of water systems and increase the reliability of local water supplies, could draw industry to areas served by the projects.

Of the officials we interviewed, only two, from EDA and HUD, were able to cite a study—one for each agency, already described—assessing the linkage between a program’s assistance and growth-related effects, such as job creation or neighborhood stabilization. Research on the growth-related effects of the agencies’ other programs may not be available, in part, because the programs were not designed to foster residential growth. The objectives for the eight programs we identified varied from water reclamation and reuse to the economic development of distressed communities to the mitigation of health hazards. Consequently, any “urban sprawl” that occurs would be an unintended effect of the program’s assistance. Moreover, the USDA, Interior, and EDA officials we

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interviewed said that three of these programs provide assistance in response to a need identified by the applicant or local sponsor. According to HUD and EDA officials, their agencies’ programs require the formula grant applicants to rank and describe the eligible needs that are being met by a program’s funding.

Summary of Studies on Factors Related to “Urban Sprawl”

The following table is a synthesis of alleged positive and negative effects of sprawl found in studies reviewed by the authors of *The Costs of Sprawl: Revisited*.⁷⁴ The alleged effects are grouped according to their potential impact on five areas: (1) public/private capital and operating costs, (2) transportation and travel costs, (3) land/natural habitat preservation, (4) quality of life, and (5) social issues. The table shows if there is agreement in the studies reviewed as to whether (1) development patterns bring about the alleged positive or negative impact (i.e., does this condition exist to a high degree?) and (2) the alleged impact—if it exists—has been significantly linked to sprawl.

Area potentially affected/ alleged impact	Does this condition exist to a high degree?				Is it strongly linked to sprawl?			
	General agreement	Some agreement	No clear outcome	Substantial disagreement	General agreement	Some agreement	No clear outcome	Substantial disagreement
Public/private capital and operating costs								
Alleged negative impact								
Higher infrastructure costs	X					X		
Higher public operating costs ^a		X						X
More expensive private residential/nonresidential development costs		X						X
More adverse public fiscal impacts ^b		X				X		
Higher aggregate land costs		X				X		
Alleged positive impact								

(continued)

⁷⁴Robert W. Burchell, et.al. *Costs of Sprawl Revisited: The Evidence of Sprawl’s Negative and Positive Impacts*, National Research Council, Transportation Research Board (Sept. 1998).

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Summary of Studies on Factors Related to
"Urban Sprawl"**

Area potentially affected/ alleged impact	Does this condition exist to a high degree?				Is it strongly linked to sprawl?			
	General agreement	Some agreement	No clear outcome	Substantial disagreement	General agreement	Some agreement	No clear outcome	Substantial disagreement
Lower public operating costs		X					X	
Less expensive private residential and nonresidential development costs		X				X		
Fosters efficient development of "leapfrogged" areas			X				X	
Transportation and travel costs								
Alleged negative impact								
More vehicle miles traveled	X				X			
Longer travel times			X				X	
More automobile trips	X				X			
Higher household transportation spending		X				X		
Less cost-efficient and effective transit	X					X		
Higher social costs of travel ^c		X				X		
Alleged positive impact								
Shorter commuting times			X				X	
Less congestion			X		X			

(continued)

**Appendix II
Summary of Studies on Factors Related to
“Urban Sprawl”**

Area potentially affected/ alleged impact	Does this condition exist to a high degree?				Is it strongly linked to sprawl?			
	General agreement	Some agreement	No clear outcome	Substantial disagreement	General agreement	Some agreement	No clear outcome	Substantial disagreement
Lower governmental costs for transportation			X				X	
Automobiles most efficient mode of transportation ^d		X			X			
Land/natural habitat preservation								
Alleged negative impact								
Loss of agricultural land	X				X			
Reduced farmland productivity		X					X	
Reduced farmland viability			X				X	
Loss of fragile environmental lands	X				X			
Reduced regional open space			X				X	
Alleged positive impact								
Enhanced personal and public open space		X					X	
Quality of life								
Alleged negative impact								
Aesthetically displeasing		X					X	
Lessened sense of community		X					X	
Greater stress		X				X		

(continued)

**Appendix II
Summary of Studies on Factors Related to
“Urban Sprawl”**

Area potentially affected/ alleged impact	Does this condition exist to a high degree?				Is it strongly linked to sprawl?			
	General agreement	Some agreement	No clear outcome	Substantial disagreement	General agreement	Some agreement	No clear outcome	Substantial disagreement
Higher energy consumption			X				X	
More air pollution		X						X
Lessened historic preservation		X						X
Alleged positive impact								
Satisfies preference for low-density living	X					X		
Lower crime rates		X						X
Reduced costs of public and private goods		X						X
Fosters greater economic well-being		X				X		
Social Issues								
Alleged negative impact								
Fosters suburban exclusion ^e		X						X
Fosters spatial mismatch ^f	X					X		
Fosters residential segregation		X						X
Worsens city fiscal stress		X				X		
Worsens inner-city deterioration		X				X		
Alleged positive impact								

(continued)

**Appendix II
Summary of Studies on Factors Related to
“Urban Sprawl”**

Area potentially affected/ alleged impact	Does this condition exist to a high degree?				Is it strongly linked to sprawl?			
	General agreement	Some agreement	No clear outcome	Substantial disagreement	General agreement	Some agreement	No clear outcome	Substantial disagreement
Fosters localized land-use decisions	X					X		
Enhances municipal diversity and choice	X					X		

^aPublic operating costs include public workers' salaries and benefits; normal expenditures for supplies, repairs, and replacement items; and debt service for capital facilities.

^aUnplanned growth is believed to result in greater cost to municipalities.

^cThese social costs include air and water pollution, noise, and the costs of parking and accidents that are not paid by transportation users.

^dAutomobiles are the most efficient means of travel when development is dispersed.

^eSuburban exclusionary zoning increases the concentration of low-income households in certain neighborhoods.

^fA spatial mismatch occurs when most new jobs are created in the suburbs and many low-skilled workers live in inner-city neighborhoods; this mismatch aggravates the high rates of unemployment in inner-city neighborhoods.

Comments From the Department of Commerce

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



THE SECRETARY OF COMMERCE
Washington, D.C. 20230

APR - 5 1999

Ms. Judy A. England-Joseph
Director
Housing and Community
Development Issues
U. S. General Accounting Office
Washington, D.C. 20548

Dear Ms. England-Joseph:

Thank you for your letter requesting the Department's comments on the draft General Accounting Office report entitled, Community Development: Federal Influence on "Urban Sprawl" Is Unclear.

We believe that the report fairly and appropriately represents urban sprawl as it relates to the programs of the Economic Development Administration (EDA). The perspective of EDA is that it supports the local economic development needs of distressed communities through the strategic investment of resources. We are providing the enclosed comments, which address the EDA local planning process and various sections of the report, for your consideration.

We appreciate the opportunity to respond to the draft report and your interest in the Department and its programs.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Daley".

William M. Daley

Enclosure

**Appendix III
Comments From the Department of
Commerce**

EDA COMMENTS
TO GAO REPORT ON FEDERAL INFLUENCE
ON "URBAN SPRAWL" IS UNCLEAR

We appreciate the opportunity to respond to the draft report and offer the following comments. As under the Public Works Economic Development Act of 1965, as amended (PWEDA), a continuous local planning process is required to obtain financial assistance from EDA's public works and economic adjustment assistance programs authorized under the Economic Development Reform Act of 1998. This local process requires potential applicants to comply with a comprehensive economic development strategy (CEDS), which should identify and guide the economic growth of a given area. The strategy should promote economic development and opportunity, foster effective transportation systems, enhance and protect the environment, and balance resources through sound management of development. There are over 320 Economic Development Districts (EDD) around the country that have been created under PWEDA, the federal/local partnership that has made EDA a truly unique agency. These multi-county regional planning organizations are governed by boards composed of local elected officials and private sector representatives from cities, towns, and counties. Instead of having to respond to individual requests from approximately 1,500 county economic development plans around the Nation, the EDDs assist EDA in establishing priorities for projects and investments.

Other observations and comments are as follows:

See comment 1.

Pages 3-4 - The report states that "...specific laws such as NEPA and the Farmland Protection Policy Act, offer Federal agencies an opportunity to consider how their actions influence growth." This is true. However, agencies lack the resources to do the type of analyses (i.e., modeling and statistical [regression] analyses) that would indicate what impact federal investments will have on growth 5, 10, and 20 years out.

See comment 2.
Now on p. 6.

Page 7 - The report mentions some of the tools that local governments use to manage growth (e.g., impact fees), but fails to mention some of the more innovative tools and policies that have been developed and implemented at the local level (e.g., transferable development rights (TDRs) - Montgomery County, MD, and location efficient mortgages - Chicago, IL).

See comment 3.
Now on p. 19.

Page 24 - The report mentions the metropolitan planning organization (MPO) structure as a "model" for regionalism, a means to address local growth issues, and for the Federal Government to respond to local needs within regions. Another model would be EDA's economic development districts (EDDs) and the EDA-required comprehensive economic development strategy (CEDS), as mentioned above.

Page 30 - In the listing of abbreviations, EDA was omitted but should be included.

Page 51 - In the first paragraph, line 9, the word "in" was omitted (regarding Rutgers' Public Works study) "...or indirectly in the creation...."

**Appendix III
Comments From the Department of
Commerce**

See comment 4.
Now on page 54.

Page 52 - All Federal agencies except DoC/EDA have been underlined in this table. DoC/EDA should be underlined as well. Also, Economic Adjustment is a second EDA program that provides the types of infrastructure being discussed in this table. The Economic Adjustment Program should be added to the table, with "X's" in each of the three categories, just like Public Works.

Page 53 - The wording of the third sentence should be changed to read as follows: "One EDA official recognizes that significant growth in some counties had been made possible as a result of large water and sewer system projects that EDA assisted in the late 1960s and early to mid 1970s. He nevertheless thinks that their projects are now, for the most part, so much smaller in scope that they would not contribute significantly to urban sprawl."

The following are GAO's comments on the Department of Commerce's letter dated April 5, 1999.

GAO's Comments

1. Identifying whether agencies had the resources to conduct analyses on the impact of federal investments was outside the scope of this report.
2. A more in-depth look at the tools and policies developed at the local level to manage growth is planned for our next report on "urban sprawl."
3. Because the Economic Development Administration's (EDA) local planning process was not cited as an example of regionalism in the literature we reviewed or by the officials we interviewed, we did not review the process; therefore, we did not include the process as an example in the report.
4. We have underlined EDA in table I.3. We did not include EDA's Economic Adjustment Program in the table because it did not meet our criteria for a major program. We identified a major program as one with at least one annual funding or expenditure of about \$50 million or more since fiscal year 1995 for water and sewer systems.

Comments From the Environmental Protection Agency

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
POLICY, PLANNING AND EVALUATION

April 1, 1999

David M. Walker
Comptroller General of the United States
General Accounting Office
441 G Street, NW
Washington, D.C. 20548

Dear Mr. Walker:

We appreciate the opportunity to comment on this important research. The GAO findings will impact national policy – not just the degree to which federal policies contribute to current development patterns, but also the extent to which the federal government can or should attempt to act further to support state and community choices concerning patterns of growth.

The Environmental Protection Agency is one of the federal agencies that already plays a significant role in mitigating impacts that are at least partially attributable to current development patterns. We mitigate congestion and air quality effects that arise from growing auto use; we help to preserve open space and farmland; and we spur community redevelopment in economically distressed older communities through our Brownfields Redevelopment Initiatives.

While the federal interest and potential influence in this area are considerable, our collective understanding of the impact of federal policies on current development patterns is still evolving. We hope that our comments will contribute to a better understanding of the federal role. Our comments fall into two categories: 1) the GAO's findings with respect to federal origins and drivers of outward growth; and 2) the GAO's findings with respect to the impacts and implications of that growth.

The questions posed by this report have been the subject of much study. While there is not unanimity among researchers, most have found that federal policies contribute, to some degree, to sprawl. GAO draws this conclusion throughout the report - and we agree with it. We also agree with GAO that the magnitude and extent of the federal contribution is difficult to quantify and that more data or research is warranted. However, that fact should not obscure the basic conclusion that federal policies do contribute to sprawl.

The GAO's Findings on Federal Incentives for Sprawl

GAO correctly points out that growth patterns are the result of many inter-related factors including social, economic, demographic, and technological factors. In teasing out the specific role of federal spending, taxation, regulation, federal facility location programs or other policies, it may be helpful to focus on a first line of analysis - does a given federal policy contribute to (or amplify or accelerate) the current development pattern? For instance, policies that subsidize lower density development fit this description.

Obviously, this conclusion does not speak to the magnitude of the subsidy or the degree to which this factor, among many, contributes to sprawl. Nor does this initial conclusion speak to the benefits that may result from the policy. However, it is a useful first analysis of the nature of the federal contribution to sprawl. Analyzing the issue in this step-wise way seems especially appropriate in a field where geographic or other key data is difficult to come by.

See comment 1.

**Appendix IV
Comments From the Environmental
Protection Agency**

See comment 2.

In several places the GAO report identifies these types of policies. For instance, the report cites historical tax treatment of parking benefits as a contributor to sprawl. Again, its importance relative to other factors is not determined. The GAO would make a valuable contribution to the state of knowledge if the report compiled similar policies into one section and noted that "these impact development patterns in a way that promoted or promotes low density, single use, development patterns. Their importance versus social and economic factors still must be determined."

Having taken this first step, a second is still possible. Good data exist concerning some federal policies and their impact on outward movement. Estimates of the magnitude of transportation subsidies are available. Indeed, there are studies, including the Transportation Research Board report cited in the GAO report, that firmly connect outward development to transportation policies. We think the research supports initial conclusions for a number of federal policies. In some cases considerable agreement can be found on these issues. The GAO can highlight these areas of agreement and suggest areas that would be fruitfully researched further.

See comment 3.

The GAO's Findings on Impacts of Sprawl and Implications of Findings

We believe that widespread agreement also exists within the research community on the impacts of outward growth. For instance, it is increasingly accepted that road capacity expansion creates its own demand, known as "induced demand." However, the report needs to be careful about what benefits and costs it attributes to different development patterns. The report's discussion of housing affordability is a case in point. The GAO report notes "housing costs are lower in outer ring suburbs. . . enabling increased home ownership." However, non-sprawling development patterns such as clustering that same housing in outer ring suburbs would arguably further reduce housing costs. Affordability is not inherent to sprawl. With respect to housing affordability and sprawl, the GAO should not accept correlation as causation.

See comment 4.

Federal role in addressing sprawl

The last line of the "Observations" section states "Given the shortage of quantitative evidence and the strong state and local role that exists with respect to growth management decisions, it is difficult to determine what role, if any, the federal government should play." This study examines the role of the federal government in inadvertently promoting sprawl. However the extent of the federal government's contribution to sprawl is only one factor in determining the federal role in dealing with the issue. Impacts, national interests, and other factors clearly contribute to determining the federal role in addressing development patterns.

See comment 5.

With this in mind we recommend also that the report title be changed to "Extent of Federal contribution to urban sprawl unclear." The current title suggests that GAO examined more than the federal government's role in causing sprawl. The title implies that the report examined the federal government's ability to influence urban sprawl in the future, whether it be through changes in federal programs, creation of new financing tools or simply broad based educational efforts. This is not the case. The proposed revised title would better reflect the actual scope of the initial study.

See comment 6.

Thank you again for the opportunity to comment. We hope that these comments have helped to further inform the discussion.

Sincerely,



David Gardiner
Assistant Administrator

The following are GAO's comments on the Environmental Protection Agency's (EPA) letter dated April 1, 1999.

GAO's Comments

1. We changed the report to make it clearer that the shortage of evidence does not mean that federal programs and policies do not have an impact on "urban sprawl."
2. We agree with EPA that there is enough research in a few federal program and policy areas, such as transportation, to make stronger statements about the federal impact on "urban sprawl." However, we did not revise the report as EPA suggested. The lack of research on some federal polices makes the suggestion about grouping the similar policies into one section impractical. Furthermore, creating such a section in the report might lead readers to assume that the other policies do not contribute to lower-density development when, in reality, research does not exist to prove the point either way.
3. We disagree with EPA that there is widespread agreement in the research community on the impact of outward growth. As summarized in appendix II, a synthesis of available literature found very little agreement on the alleged positive and negative effects of "urban sprawl." Because our intent was to provide a balanced discussion of the positive and negative implications of "urban sprawl" cited by experts on both sides of the issue, we revised the language in the report to make it clear that the statements about positive and negative effects represent the views of experts.
4. We agree with EPA that affordability is not inherent to "urban sprawl" and that alternatives, such as clustering housing, can also increase the affordability of housing. However, experts believe that a positive effect of "urban sprawl" is that housing costs are lower in the outer-ring suburbs. Because our intent was to cite the views of experts, we did not revise the report.
5. In response to EPA's comments, we deleted the last sentence in the observations section.
6. We changed the report's title to Extent of Federal Influence on "Urban Sprawl" Is Unclear.

Comments From the General Services Administration

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



U.S. GENERAL SERVICES ADMINISTRATION
Office of Communications

April 2, 1999

Mr. David M. Walker
Comptroller General of the United States
General Accounting Office
441 G Street NW
Washington, D.C. 20548

Dear Mr. Walker:

This letter is in response to your request for comments on the draft report entitled "Community Development: Federal Influence on Urban Sprawl is Unclear" (GAO/RCED-99-87). The draft report accurately represents data GSA provided, but I would like to take this opportunity to give you a more complete picture of GSA's role. Our comments primarily are based on our implementation responsibilities for the Executive Orders covering the location of Federal facilities downtown.

GSA Role in Implementing Executive Orders 12072 and 13006

GSA, as the government's real estate procurement agency, is responsible for administering Executive Orders 12072 and 13006, and all federal agencies are responsible for compliance. Those Executive Orders require all Federal agencies and Federally owned and controlled leases to encourage downtown redevelopment.

Executive Order 12072 requires Federal agencies to locate within a central business area, unless the market fails to provide suitable space or meet mission or procurement requirements. Executive Order 13006 directs Federal agencies to remove regulatory barriers and work with customers to encourage participation in the National Historic Preservation Program. Many historic buildings are in downtown locations.

According to an informal GSA survey of 1,200 leases in cities where GSA leased at least 100,000 square feet of space over a three-year period ending in November 1998, approximately half of its leases are in Central Business Areas, which are defined by the cities. Ninety percent are in urban areas. The survey found that agencies were located

See comment 1.

outside Central Business Areas only because of conflicts with agency missions and lack of space and limited competition.

Background

President Carter issued Executive Order 12072 in 1978 to make downtowns attractive places to live and work, conserve existing resources and encourage redevelopment. This Executive Order requires Federal agencies with space needs in urban areas to give first consideration to "Central Business Areas and adjacent areas of similar character. "Federal facilities and Federal use of space in urban areas shall serve to strengthen the nation's cities and to make them attractive places to live and work," according to Section 1-101 of the Executive Order. "Such Federal space shall conserve existing urban resources and encourage the development and redevelopment of cities." Opportunities for locating cultural, educational, recreational, or commercial activities within the proposed facility also should be considered, according to Executive Order 12072.

In May 1996, President Clinton reaffirmed the government's urban commitment by issuing Executive Order 13006, which requires Federal agencies to consider locations in historic buildings and districts in Central Business Areas before looking elsewhere. GSA's implementing rule, and a forthcoming desk guide, encourages agencies, while working within their required guidelines, to devise incentives ranging from limiting competition to providing cost preferences, performing market analyses and sending notices to local officials to accomplish the Executive Order's goals. GSA's responsibilities as landlord for many Federal agencies are limited to informing agencies of their responsibilities to locate downtown and working with cities to minimize negative impacts if Federal agencies vacate downtown space. Agencies are responsible for compliance.

GSA Role in Federal Livable Communities Agenda

GSA reinforces the anti-sprawl and smart-growth initiatives reflected in the Federal Livable Communities Agenda through its asset management program, which emphasizes planning early and well, along with excellent customer service.

GSA Good Neighbor Program

The Good Neighbor Program, initiated in 1996, reflects GSA's commitment to promote local economic and civic activities, along with improving Federal work environments. The program reinforces GSA's commitment to building community partnerships that generate governmental and non-governmental activities in Federal facilities designed for mixed use and, where possible, meeting agency space needs in historic, downtown buildings.

Executive Orders 12072 and 13006 have spurred GSA partnerships with the private sector, leading the agency to set aside ground-floor and plaza space in Federal

See comment 2.

**Appendix V
Comments From the General Services
Administration**

buildings for public activities and events, as well as restaurants and shops, consistent with the Public Buildings Cooperative Use Act of 1976.

The result is that, in an average year, GSA hosts an estimated 5,000 community events and activities in Federal buildings and plazas.

In another partnership project, GSA, consistent with procurement rules, has joined 25 downtown business improvement districts (BIDs), which property-owners created so they could tax themselves for the costs of maintenance, security and other services.

GSA Planning With Communities Program

Building on its Good Neighbor Program, in 1998, GSA announced the Planning With Communities Program, through which agency officials collaborate with local planners on Federal real estate decisions. The program is designed to use consistent implementation of the Executive Orders driving downtown development to increase location, price and service options for GSA customers. Implementation of this program is under way.

Brownfields Redevelopment Initiative (Property Disposal)

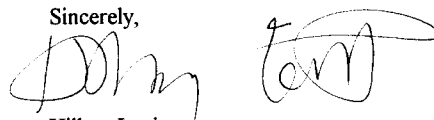
GSA is reviewing underutilized Federal properties in 38 cities, as part of the Clinton Administration's National Brownfields Partnership, a public/private program that removes environmental hazards from blighted urban areas to prepare them for redevelopment.

Other Property for Public Use

Each year neighborhoods in Empowerment Zones, Enterprise Communities and elsewhere receive Federal property worth an estimated \$50 million for public use, as part of GSA's ongoing transfer of surplus Federal real estate to eligible public and private organizations and individuals.

Thank you for the opportunity to reply.

Sincerely,



Hillary Levitt
Director, Civic Design and Planning
Portfolio Management

The following are GAO's comments on the General Services Administration's (GSA) letter dated April 2, 1999.

GAO's Comments

1. We considered the additional information provided by GSA on its implementation of Executive Orders 12072 and 13006 but did not make any changes to the report because the report contains sufficient information on these activities.
2. In response to the additional information provided by GSA on its role in the Federal Livability Communities Agenda, we added a reference to GSA's Good Neighbor Program in appendix I of the report.

Major Contributors to This Report

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