## **Contents**

Summary	iv
I. Overview	1
II. Trends in Land Use: Two Kinds of Growth	
What is Sprawl?	
Two Kinds of Growth	12
III. Driving Forces	15
U.S. Population Growth and Household Formation	15
Household Land Consumption	16
Demand for Low-Density Development	17
Metropolitan Expansion	18
Infrastructure	20
Employment, Economic Development and Technology	23
IV. The Costs of Growth	26
Costs Imposed by Growth	26
Infrastructure Costs	27
Transportation	28
Impacts on Taxpayers	28
Impacts on Landscape, Open Space, and Sense of Community	31
Environmental Changes	31
Other Quality of Life Issues	35
An Economic Interpretation of the Demand for Low-Density Development	36
V. Consequences for Farming	38
Agriculture: Farming in the City's Shadow	38
Working Landscapes and Rural Amenities	43
Benefits of Famland and Open Space	44
VI. Local Responses to Growth	50
Playing Catch Up	50
How Local Governments Address Growth Problems	50
Planning Efforts to Control Growth	51
Capacity for Response in Relation to Urbanization Pressure	52
Federal Assistance for Planning	54
Slow Growth, No Growth, and Smart Growth	55
Monetary Incentives for Conserving Farm and Forest Land	57

VII. Potential Federal Roles	65
Helping Increase State and Local Planning Capacity	65
Coordinating Local, Regional, and State Efforts	66
Coordinating Federal Development Activities and Growth Management Goals	67
Funding Monetary Conservation Incentives	68
Conserving Rural Amenities As Part of Greater Agricultural and Trade Policy Goals	69
References	71
List of Figures	
Figure 1—Schematic diagram of urban geography	11
Figure 2—Trends in developed land use, 1960-2000	13
Figure 3—Land base of the United States, 1992	13
Figure 4—Annual additions to housing area, by lot size, 1900-97	14
Figure 5—Additions to U.S. population 1972-2007	15
Figure 6—U.S. population and household change 1982-97	16
Figure 7—Household formation and housing completions, 1960-97	16
Figure 8—County typology, 1990	19
Figure 9—U.S. population change 1982-97	20
Figure 10—Sewage disposal by lot size, 1994-97	21
Figure 11—Water supply by lot size, 1994-1997	22
Figure 12—High-tech jobs grow more slowly in cities than in suburbs 1992-97	24
Figure 13—Private and public capital costs by community type	27
Figure 14—Relative capital costs of public infrastructure	28
Figure 15—Ratio of community service costs to tax revenues (n=85)	29
Figure 16—Savings of agricultural and environmentally sensitive lands, compact growth versus "sprawl"	33
Figure 17—Water quality impacts by community type	35
Figure 18Distribution of farmers' markets	40
Figure 19Conceptual model of agricultural adaptation to urbanization	
Figure 20Farms in 1978 out of business by 1997, by farm category	44
Figure 21Transitions between farm types, metro farms, 1978-97	45
Figure 22—Composition of land use change in urbanizing areas, 1970's and 1980's	45
Figure 23—Degree of urban influence, 1990	47
Figure 24—Comparison of estimated urban growth boundaries and percent of area changing to developed uses, 1982-92	48
Figure 25Actual and estimated easement value for cropland, by urban influence	61
Figure 26—Costs of purchase of development rights and use-value assessment relative to benefits for preserving cropland, by urban influence	63

## **List of Tables**

Table 1—Trends in U.S. urban development, 1960-2000
Table 2—Growth-related issues, impacts, and possible solutions
Table 3—Metro and nonmetro farm characteristics, United States, 1991 and 199738
Table 4—Estimates of the average amenity value of farmland
Table 5—Estimated nonmarket value of land under urban influence estimated to be developed in succeeding decades
Table 6—Annual recreational water quality damages due to urbanization of farmland 49
Table 7—State implementation of smart growth strategies
Table 8—Comparison of costs and benefits for protecting cropland, by degree of urban influence, 1995
Appendix table 1—Implicit tax subsidy attributable to tax expenditures in use-value assessment programs, by State, 1995
Appendix table 2—Estimated purchase of development rights expenditures for urban-influenced cropland, compared with actual expenditures, acreage, and use-value assessment tax expenditures, 1995