

THE EXURBAN CHANGE PROJECT SUMMARY REPORT 1:

**Growth and Change at the Rural-Urban Interface:
An Overview of Ohio's Changing Population and Land Use**

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Executive Summary

Ohio's landscape is a mosaic of disparate land uses. Ohio is one of the most urbanized states in the country, yet retains over half its land base in agricultural uses. As a result, Ohio's "rural-urban interface" — areas in which both rural and urban land uses are found — is increasingly a setting where concerns and debates have merged concerning the management of population growth and urban development, farmland conversion and loss of rural character.

Informed policy and decision making regarding these changes requires an understanding of the population and land use changes. The purpose of this summary report is to provide relevant information and analysis that can be used to support planning and decision making among Ohio communities.

Exurban Change Project

This report summarizes recent research conducted by The Ohio State University's Exurban Change Project contained in three previous publications: *EX-1: Township Growth & Change: Population Characteristics of Ohio's Townships 1960 to 2000 (2001)*; *EX-3: Land Cover in Ohio's Townships: An Analysis of Township Land Cover and Population Change (2002)*; and, *EX-4: Urbanization Trends in Ohio: Tracking Ohio's Urban Growth and Land Use Change (2002)*.

The Exurban Change Project provides analysis of economic, social, agricultural, and land use changes of Ohio's regions and localities focusing on areas in rural-urban transition. The overall goal of the project is to perform applied research on these topics and to disseminate data and research results to local officials, professionals, and interested citizens to support their planning and decision making. All reports, analysis, and data published by the Project can be found online at <http://aede.osu.edu/programs/exurbs/>.

Overview

This report reviews recent changes in population, urban land use, and other land use changes in Ohio and discusses land use policies that are currently in place. This report contains four sections that deal with each of these topics respectively. Each section begins with a list of key findings, which is followed by a more in-depth discussion of the findings, and concludes with a description of the data used to support the analysis.

Section I

Section I examines patterns of Ohio population growth between 1970 and 2000. This section demonstrates that:

- Ohio's population growth has been modest in recent decades, despite higher growth in other states.
- Within Ohio, population has grown faster in nonmetropolitan areas than in their metropolitan counterparts.
- A significant number of Ohioans have chosen to live in unincorporated townships.

Section II

Section II investigates urban land use change in Ohio from 1982 to 1997, showing that:

- Conversion to urban land uses has far outpaced population growth in Ohio in recent decades. In the 1990s, Ohio ranked 8th in the nation in the amount of land converted to urban uses, but only 22nd in total population growth.
- Conversion to urban land uses has happened at a greater rate in Ohio's nonmetropolitan areas than in metropolitan areas.
- The amount of urban land consumed per person in Ohio has increased over time from 0.32 acres per person in 1982 to 0.45 acres per person in 1997.
- More urban land per person is consumed in nonmetropolitan areas, but the rate of increase has been similar across metropolitan and nonmetropolitan areas.

Section III

Section III describes non-urban land use changes from 1982 to 1997, including changes in row crop, pasture land, and forest land. In addition, the distribution of agricultural and forest land covers is considered at a township level and compared with population changes.

- Row crops are Ohio's most dominant land cover, comprising 52% of the total land area of Ohio as of 1997.
- Between 1982 and 1997, agricultural land use decreased by 12% and forest land use increased by a modest 6% during this time period.
- Row crops are the most threatened by potential urbanization. As of the early 1990s, they made up the largest component of non-urban lands located within 40 miles of major cities. Given that Ohio's population growth in the 1990s was the greatest between 20 and 40 miles away from major cities, row crops are more vulnerable than pasture or forest lands to urbanization pressures.

Section IV

In light of the significant changes occurring in Ohio—particularly at rural-urban interfaces in the state—Section IV reviews land use management policies, techniques and programs available to Ohio's counties and townships to handle these changes. Furthermore, new policy directions are suggested to allow local governments to deal more effectively with population and land use change.

- Ohio counties and townships have a somewhat limited ability to handle the population and land use changes affecting the supply and demand of land for different uses in their communities.
- Current policies have not kept pace with changes that have occurred in recent decades. A framework to effectively and efficiently manage these changes should be in place. Legislation concerned with comprehensive planning and plan implementation at the county, township,

and regional levels should be overhauled.

- Finally, new land use management techniques, such as agricultural security areas, should be enabled at the state level.

Conclusions

The findings summarized in this report reveal several overall trends in population and land use that have characterized growth and change in Ohio in recent decades:

- Significant population growth in Ohio's once rural areas has led to a deconcentration of urban areas and an increase in the population densities of many rural-urban areas.
- Conversion of urban land in Ohio has occurred at a relatively rapid rate despite modest population growth.
- The fastest rates of urban land conversion are in areas located at the rural-urban interface of Ohio.
- New, lower density development has led to an increasing pattern of low-density urban land areas at the rural-urban interface.

Ohio's population and urban development patterns are becoming less concentrated and more spread out across the landscape. As a result, it is increasingly difficult to delineate urban and rural areas of Ohio. Ohio's changing landscape is better defined along an rural-urban continuum because many places in Ohio are neither wholly rural nor wholly urban, but contain elements of both.

The overall trend toward a dispersed population and lower density development is not likely to change in the near term. Managing these changes to achieve the outcomes desired by Ohio residents requires informed decision making and innovative policies at all levels of government. But as summarized in the final section of this report, many Ohio counties and townships currently have a limited ability to manage population growth and land use change in rapidly urbanizing areas.

For More Information

To view data for specific Ohio counties and townships, go to the following Web site and click on "Growth and Change at the Rural-Urban Interface: An Overview of Ohio's Changing Population and Land Use." <http://aede.osu.edu/programs/exurbs/>.

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I. Population Dynamics

This section describes the pattern of population change in Ohio, including an examination of changes in population in the state's metropolitan areas, cities, villages, and townships during the last 40 years.

Key Findings

1. The rate of growth of Ohio's population has been modest in recent decades, especially compared to the national rate of growth (Section I.1).
2. While overall population growth in Ohio has grown a modest 6.5 percent since 1970, nonmetropolitan Ohio has grown nearly 17 percent versus only a 4.5 percent increase in metropolitan Ohio since 1970 (Section I.2.b).
3. Within metropolitan areas, counties on the fringe of the core metropolitan cities grew 14 percent in the 1990s compared to an increase of only 2.1 percent in the metropolitan counties containing the core city (Section I.2.c).
4. Ohioans have increasingly chosen to reside in the unincorporated, township areas of the state. In 1970, three million Ohioans resided in unincorporated, township areas of the state. In 2000, 3.9 million resided in these areas. During the same time period, the number of Ohioans residing in a large city of 50,000 or more residents fell from nearly 3.6 million in 1970 to just under three million in 2000 (Section I.3.a).
5. The pattern of township population change in Ohio has not been uniform, with substantial growth in many of the townships located near large Ohio cities and modest growth and even population loss in more remote townships (Section I.3.b).
6. Population density patterns between 1970 and 2000 show that the *rural-urban* settlement pattern is not only the dominant settlement pattern in Ohio, but the fastest growing as well (Section I.4).

I.1 Ohio's Population Growth

With a population of over 11.3 million residents, Ohio is the seventh most populous state in the nation. From 1900 to 1970, the state's population steadily grew from approximately four million residents in 1900 to over ten million by 1970 (an average of 14.5 percent each decade) (**Figure 1**).

From 1970 to 2000, though, the state's population has grown a modest 6.5 percent (695,717 residents). Ohio's population growth from 1970 to 2000 is especially low compared to the 47.5 percent increase in the total U.S. population during this 30-year time period.

Not only has population growth in Ohio lagged the national pace of population growth, the rate of growth in many southern and western states has far exceeded the rate of growth in Ohio in recent decades (**Figure 2**). While Ohio grew by 506,000 residents (4.7 percent) in the 1990s, states such as Georgia, Idaho, Utah, Colorado, Arizona, and Nevada grew by more than 25 percent (**Figure 3**). North Carolina added 1,420,676 residents (21.4 percent), Texas grew by 3,865,310 residents

(22.8 percent) and Florida grew by 3,044,452 residents (23.4 percent). Only six states had slower rates of growth than Ohio in the 1990s.

Ohio population growth during the 1990s was similar to neighboring states. Pennsylvania grew by 399,411 residents (3.4 percent), Michigan grew by 643,147 residents (6.9 percent), Illinois grew by 988,691 residents (8.6 percent) and Kentucky grew by 356,473 (9.7 percent).

I.2 Metropolitan and Nonmetropolitan Population Change Within Ohio

The pattern of population change within Ohio has varied. Some areas of Ohio have experienced substantial population increases while other areas have lost population in recent decades. Two sets of comparisons are reported in this section: population change in metropolitan Ohio compared to population change in nonmetropolitan Ohio; and patterns of population change in different types of metropolitan counties.

I.2.a Metropolitan Areas

According to the US Census Bureau definition, a metropolitan area is an economic region comprised of one or more counties that contain a central city with a population greater than 50,000 and adjacent counties that are economically tied to the core county containing the largest city. Generally, counties not designated as part of a metropolitan area are considered to be economically independent of metropolitan areas and, some would argue, are also more rural in nature.

There are fifteen metropolitan areas in Ohio, with the Cleveland-Lorain-Elyria and Akron metropolitan areas often grouped together as the Cleveland-Akron consolidated metropolitan area (CMSA) and the Cincinnati and Hamilton-Middletown metropolitan areas grouped together as the Cincinnati-Hamilton CMSA (**Map 1**). Five of Ohio's metropolitan areas include counties from other states, although *data reported in this document are only for those Ohio portions of metropolitan areas*. Currently, a total of 39 Ohio counties are classified as metropolitan, with the remaining 49 classifiable as nonmetropolitan.

I.2.b Metro vs. Nonmetro Ohio Population Growth

Comparisons of metropolitan and non-metropolitan areas are often conducted to discern differences between areas that might be characterized as more urban (metropolitan) and areas that are more rural (nonmetropolitan). While the accuracy of this urban versus rural distinction is not perfect, metro and nonmetro comparisons do reflect differences between more and less densely populated areas.

In 2000, over 81 percent (9.2 million) of Ohio's residents lived in one of the state's 39 metropolitan counties. The remaining 2.1 million residents (19 percent) live in one of Ohio's 49 nonmetropolitan counties (**Table 1**). The proportion of Ohioans residing in either a metropolitan county (1993 definition) or nonmetropolitan county has remained relatively stable since 1970, with a slight increase in the proportion of Ohioans living in non-metropolitan counties.

From 1970 to 1980, the population of nonmetropolitan Ohio grew 9.6 percent while the population of metropolitan Ohio declined 0.3 percent (**Figure 4**). The pattern of large population increase in nonmetropolitan Ohio during the 1970s was part of a documented nationwide

phenomenon and has been referred to as the nonmetropolitan turnaround by demographers, as it represented a reversal of historic patterns of nonmetropolitan population decline.

During the 1980s, there was little population growth in metropolitan (0.4 percent increase) and nonmetropolitan Ohio (0.7 percent increase). During the 1990s, there were similar levels of growth in both metropolitan (4.4 percent or 387,709 residents) and nonmetropolitan (5.9 percent or 118,316 residents) Ohio.

From 1970 to 2000, the net population increase was slightly higher in metropolitan Ohio (increase of 392,935 residents) compared to nonmetropolitan Ohio (increase of 308,188 residents). But in terms of relative increase, the population of nonmetropolitan Ohio increased nearly 17 percent compared to an increase of only 4.5 percent in metropolitan Ohio.

1.2.c Changes within Metropolitan Regions

Despite modest population growth in Ohio's metropolitan areas since 1970, variation exists in the pattern of growth within and between them.

During the 1990s, only four of the 15 metropolitan areas (Columbus, Hamilton, Akron, and Cincinnati) in the state experienced population increases that matched the statewide increase of 4.7 percent. Four metropolitan areas actually experienced moderate population losses (Dayton, Youngstown, Wheeling and Steubenville) (**Table 2**). Since 1970, nearly half (seven) of Ohio's metropolitan areas have lost residents, while the Columbus and Hamilton metropolitan areas have experienced double digit increases (26.9 and 32.0 percent respectively).

Even within metropolitan areas the pattern of population change varies. The basic pattern in Ohio's metropolitan areas is that the metropolitan counties containing the core urban area (such as Cuyahoga, Hamilton, and Montgomery counties) experienced population declines, while fringe metropolitan counties (less urbanized counties closely tied to the core urban county) grew substantially (**Table 2**). (**Map 2** depicts core metro counties and fringe metro counties.)

Since 1990, the number of Ohioans living in fringe metropolitan counties has increased 14 percent (242,092 residents) compared to an increase in core counties of only 2.1 percent (145,615 residents). Since 1970, fringe metropolitan counties have grown over 27 percent (543,037 residents) compared to a 2.1 percent population loss (a loss of 150,102 residents) in core metropolitan counties.

I.3 Township Population Change

Further refining this examination of population change, this subsection focuses on the pattern of population change in Ohio's townships, villages, and cities. While township boundaries can encompass both incorporated (village and city land area) and unincorporated areas of the state, the following data on townships is associated only with township area not also part of a village's or city's land area. (See the Notes subsection for a more detailed description.)

1.3.a Population Growth in Ohio Townships

For the past 30 years, Ohio township population has grown steadily, from just over three million residents in 1970 to nearly 3.9 million residents in 2000 (**Figure 5**). This growth occurred despite the reduction of township land area and population due to annexation by adjoining cities and villages. This is in contrast to a decline in the number of Ohioans residing in large Ohio cities

(population greater than 50,000), which declined from nearly 3.6 million in 1970 to just under three million residents in 2000.

The number of Ohioans residing in villages (populations less than 5,000) has remained constant between 0.8 and 0.9 million residents and the number of Ohioans residing in small cities (more than 5,000 but less than 50,000 residents) has grown from nearly 3.2 million in 1970 to over 3.6 million in 2000.

1.3.b Pattern of Ohio Township Population Change, 1970 to 2000

During the 1970s, 1,094 of the 1,320 townships experienced population growth, with 116 townships experiencing growth in excess of 50 percent (many of which were located in the Cleveland, Akron, Columbus, Cincinnati and Hamilton metropolitan areas) and 224 townships experiencing population loss (many in the northwest and southeast Ohio, as well as east of the Dayton-Springfield metropolitan area) (**Map 3**).

In the 1980s, many townships (557 of 1,318) townships lost population, but there were pockets of growth primarily located around the Cleveland, Akron, Columbus and Cincinnati regions (**Map 4**). A larger proportion of Ohio townships grew in the 1990s, but instead of widespread growth as in the 1970s, growth was more likely in townships located near the state's larger cities (**Map 5**).

The result of these patterns of change in Ohio township population is the emergence of a substantial number of densely populated townships located near the state's large cities (**Maps 6 and 7**). In 1970, 245 of Ohio's 1320 townships (18.4 percent of all townships) had population densities in excess of 100 persons per square mile. By 2000, that proportion had grown to 348 of 1313 townships (26.5 percent). In contrast, the number of Ohio townships with population densities of less than 50 people per square mile fell from 823 of 1320 (66.5 percent of all townships) to 598 (45.5 percent) in 2000.

I.4 Population Density Patterns

Further refining the level of analysis, it is possible to discern changes in Ohio settlement at the neighborhood level, approximated by the U.S. Census geographic unit of the block group. Block groups are sub-county geographical units defined by the U.S. Census Bureau, containing an average of 2,500 persons. An analysis of U.S. Census Bureau data from 1970, 1980, 1990 and 2000 at the block group level was conducted to assess how Ohio settlement densities have changed since 1970.

For each decade, all block groups in Ohio were classified into one of five categories according to their population density: urban high density, urban low density, urban-rural, rural-urban, or rural, for each decade (**Table 3**). Then, for each decade, total land area within each level of density was computed (**Figure 6**).

Results show that rural-urban density (40-235 people per square mile) is the most common in Ohio, and the amount of land settled at this density has increased substantially since 1970 (**Figure 6**). (Urban-rural and urban low density settlement types also have increased in size.) Much of the increase in areas with rural-urban densities paralleled a decrease in the total area of Ohio with rural densities. The other settlement type that decreased in terms of total land area of the state was urban high density (more than 5,000 people per square mile).

Notes

Census of Population

To analyze township population characteristics, sub-county level data were gathered and aggregated from four decennial censuses (1970-2000). Data were summarized into a township database with all townships existing since 1970 and their 100% population counts and land areas. The sources of data utilized to create the township database were as follows:

- Office of Strategic Research. The Ohio Department of Development (2001) 2000 Census of Population by age, race and Hispanic origin for Ohio's governmental units Office of Strategic Research. The Ohio Department of Development (2001) Decennial Census of Population for places, 1990 to 2000
- U.S. Census Bureau. (1990) 1990 Census of Population and Housing
- Geolytics. (2000) Geolytics CensusCD 1980: Data derived from the 1980 Census of Population and Housing
- U.S. Census Bureau. (1981) 1980 Census of Population: Volume 1 Characteristics of the Population

Township data are derived from extracting "place/remainder" data from the US Census Bureau. Place/remainder data is a more detailed level of geography than traditional minor civil divisions, or MCDs. Place/remainder includes data for those persons residing in the unincorporated township area only. Persons living in cities and villages are not contained in this data.

Township Government

Three types of general-purpose local governments exist in the state of Ohio: counties, townships, and municipalities. Counties are the major local government subdivision of the state, with all of the state's territory and population contained within one of Ohio's 88 counties. Municipalities in the state are classified as either a village (population less than 5,000) or city (population 5,000 or greater). In contrast, townships are administrative units of state government limited to functions specified by state law. See OSU Extension Bulletin 835-98 (online at: ohioline.ag.ohio-state.edu) for additional background information about local governments in Ohio.

II. Urban Land Use Change

Since 1982, the United States Department of Agriculture's National Resources Inventory (NRI) has assessed land use in the nation every five years. This section reports on analysis using data from the NRI to determine changes in Ohio's urban land use between 1982 to 1997.

Key Findings

1. Ohio is one of the most urbanized states in the nation. As of 1997, it was ranked 7th in the nation in total amount of urban land (Section II.1).
2. Ohio has experienced relatively rapid urban land conversion, but only modest population gains. Ohio ranked 8th in the nation in the amount of land converted to urban uses from 1992-1997, but only 22nd in total population growth in the 1990s (Section II.2).
3. The percent increase in urban land use has been greater in nonmetropolitan counties than metropolitan counties, challenging the assumption that urbanization is limited to metropolitan areas (Section II.3.b).
4. Population growth is not the sole factor for the growth of Ohio's urban land use. Ohioans use more land per person than in previous decades as indicated by the increases over time in the urban land consumption index (Section II.3.d).
5. The largest increases in urban land consumption per person have occurred in nonmetropolitan regions of Ohio. Many of these areas are also areas witnessed the largest increases in urban land, suggesting that new development in areas of rapid urbanization is occurring at densities significantly lower than previous urban development (Section II.3.c).

II.1 Ohio's Urban Land Expansion

Population increases in Ohio are associated with increases in urban land use. In this subsection, the U.S. Department of Agriculture's National Resources Inventory (NRI) data are used to analyze changes in urban land use in Ohio from 1982 to 1997. (See the Notes subsection for the definition of urban land use.)

In 1982, approximately 2.8 million acres of urban land use were identified by the NRI, or about 10.5 percent of the total area of the state. In 1997, Ohio's urban land use was 3.6 million acres, or 13.7 percent of the state's total land area (**Table 4**). From 1982 to 1997, the amount of land classified as urban grew 828,000 acres, a 22.9 percent increase.

The rate of urban land growth in Ohio was greatest between 1992 and 1997. Ohio added 201,000 acres of urban land use between 1982 and 1987 (an increase of 7.2 percent), 263,000 acres between 1987 and 1992 (an increase of 8.8 percent), and 365,000 acres between 1992 and 1997 (an increase of 11.2 percent) (**Figure 7**).

II.2 Change in Ohio Urban Land Use Change vs. the Nation

With over 3.6 million acres of urban land, Ohio ranks seventh among all states in total acres of urban land. In terms of the percentage of all developed non-federal land, Ohio ranks tenth nationally (14.1 percent urban land use), with New Jersey having the largest proportion of total urban land area (39.1 percent) (**Table 5**).

Not only is Ohio one of the most urbanized states in the U.S., but the rate of growth in urban land in Ohio is one of the fastest in the nation. With an increase of over 364,800 acres of urban land between 1992 and 1997 (11.2 percent), Ohio ranks eighth nationally in the net growth of urban land use during this time period (**Table 5**). This increase translates into an average of 73,000 additional acres of urban land use coming into existence each year from 1992 to 1997.

In contrast, Ohio's population is not growing at the same rate as other states that have experienced rapid urbanization (**Table 6**). Ohio ranked 22nd among all states in net population growth between 1990 and 2000. The relatively smaller growth of Ohio's population in the last decade contrasts with Ohio's relatively large increase in urban land use in just the five years between 1992 and 1997.

II.3 Spatial Patterns of Urban Land Use Change, 1982 to 1997

The spatial pattern of urban land use change within Ohio at the county and metropolitan levels reveals some distinct differences in patterns of change.

II.3.a Ohio County Urban Land Use Change

Trends of urban land use change across Ohio counties between 1982 and 1997 reveal substantial changes in Ohio's landscape. The amount of urban land has increased 23% in Ohio between 1982 and 1997. The most substantial increases in acres of urban land occurred in Ohio's metropolitan areas, but the relative percentage change in urban land indicates that substantial urban growth is also occurring in many of Ohio's traditionally rural counties (**Maps 9 and 10**).

II.3.b Metropolitan vs. Nonmetropolitan Areas

Both metropolitan and nonmetropolitan areas in Ohio added substantial urban land in the 1980s and 1990s. (Refer to **Map 1** on page 4 to view metro and nonmetro county classifications.) Metropolitan counties added 579,000 acres of urban land (an increase of 28 percent) and non-metropolitan counties added 257,000 acres (an increase of 36 percent) between 1982 and 1997.

When analyzing the rate of increase in urban land use for the five-year increments between 1982 and 1997 (1982-87, 1987-92 and 1992-97), nonmetropolitan urban growth rates were greater or equal to the rate of growth in metropolitan areas (**Figure 8**).

II.3.c Urban Land Use Change in the "3 Cs"

The Cincinnati-Hamilton and the Cleveland-Akron consolidated metropolitan areas and the Columbus metropolitan area are the largest metropolitan regions in Ohio. The increase in urban

land use was both higher in absolute and percentage terms in each of these three metropolitan regions compared to other smaller metropolitan areas of the state (**Figure 9**). A total of 385,000 acres of urban land use was added in these three metropolitan areas between 1982 and 1997, which was 46 percent of the state's total new urban land use for the fifteen-year period (1982-1997).

II.3.d Urban Land Consumption Index

One method for evaluating urban land use change is to analyze how much urban land, on average, is consumed per person for a given area. Analyzing the trend in urban land consumption over time reveals whether the pattern of urban development has become more or less concentrated.

The "urban land consumption index" is defined as the amount of urban land within an area for a given year divided by the population of that area for the same year. (See the Notes subsection for a more detailed description of the urban land consumption index.) Increases in this index over time indicate an increasing amount of urban land is being consumed per person, which implies a less concentrated and more sprawling pattern of development.

A growing amount of urban land was consumed per person from 1982 to 1997. In 1982, the state average urban land consumption index was 0.32 acres per person. In 1997 it increased 25 percent to 0.45 urban acres per person. The index was higher in nonmetropolitan than in metropolitan counties across the fifteen-year time period (**Figure 10**). However, the rate of increase in both metro and nonmetro counties was similar between 1982 and 1997 (25 percent and 29 percent respectively).

The urban land consumption index has increased in all metro areas of the state (**Figure 11**). In 1982, the index values in metropolitan areas ranged from 0.28 to 0.40 acres of urban land per person. In 1997, the range was from 0.32 to 0.43. The Columbus area led the index in 1982 (0.40) and Mansfield led in 1997 (0.43). Dayton-Springfield had the lowest index in 1982 and 1997 (0.28 and 0.32 respectively).

While the urban land consumption index in all metropolitan areas increased, some increased at faster rates than others during the fifteen-year study period. Lima's index rose 33.9 percent from 1982 to 1997, while the index rose 4.7 percent in Columbus.

The urban land consumption index varies across Ohio, but on the whole, land consumption per person in Ohio is on the rise. Ohioans are using more land per person than in previous decades and rural areas are not an exception.

Notes

National Resources Inventory

The U.S. Department of Agriculture National Resources Conservation Service's National Resource Inventory (NRI) is a land use inventory of all non-federal land in the United States. Data are collected every five years from 800,000 sample sites in 50 states. This unique statistically based survey allows analysis of land use change from 1982 to 1997. For more information related to the National Resource Inventory please visit the NRI web site at: <http://www.nhq.nrcs.usda.gov/>

For the purposes of this study, Urban Land is defined as including the following NRI land use types: Rural Transportation Land, Small Built-Up Areas and all Urban and Built-Up Areas:

1. Rural transportation land consists of all highways, roads, railroads and associated right-of-ways outside urban and built-up areas; also includes private roads to farmsteads or ranch headquarters, logging roads, and other private roads (field lanes are not included).
2. Small built-up areas consist of developed land units of 0.25 to 10 acres, which meet the definition of Urban and built-up areas.
3. Urban and built-up areas consist of residential, industrial, commercial, and institutional land; construction sites; public administrative sites; railroad yards; cemeteries; airports; golf courses; sanitary landfills; sewage treatment plants; water control structures and spillways; other land used for such purposes; small parks (less than ten acres) within urban and built-up areas; and highways, railroads, and other transportation facilities if they are surrounded by urban areas. Also included are tracts of less than ten acres that do not meet the above definition but are completely surrounded by Urban and built-up land. Two size categories are recognized in the NRI: areas of 0.25 acre to ten acres, and areas of at least ten acres.

Urban Land Consumption Index

The urban land consumption index is adapted from a study conducted by the Brookings Institution that used a similar measure to compare urban sprawl in U.S. metropolitan regions [Fulton et. al. (2001) *Who Sprawls Most? How Growth Patterns Differ Across the U.S.* The Brookings Institution. Survey Series. Washington D.C.].

This index is defined as the amount of urban land within an area for a given year divided by the population of that area for the same year. The 1982, 1987, 1992 and 1997 NRI were used to calculate the amount of urban land use within a county for each of those time periods.

For 1982, 1987, 1992, and 1997 county population counts, data were used from the U.S. Census Bureau Population Estimates Program. The Population Estimates Program publishes state population estimates each year after a decennial census for total population with details on age, sex, race and Hispanic origin. The first release of total population estimates at the end of the calendar year includes demographic components of change (births, deaths, and migration). Later releases include population data by age, sex, race, and Hispanic origin and give numbers for single year of age, different age groupings, and median age.

For more information on the Population Estimates Program, visit:
<http://eire.census.gov/popest/estimates.php>

III. Rural Land Use and Land Cover Patterns

This section reports on changes in agricultural and forest land uses in Ohio between 1982 and 1997 based on the National Resources Inventory (NRI) land use data. In addition, the National Land Cover Dataset (NLCD), which are land cover data based on satellite imagery from the early 1990s is used to analyze more detailed patterns of agricultural land cover and forest land cover at the township level. (See the Notes subsection for an explanation of the distinction between land use and land cover.) Lastly, the extent to which population and urban land conversion threaten agricultural and forested lands in different areas of the state is considered.

Key Findings

1. Agriculture is Ohio's dominant land use, but has been declining steadily. In 1982, farmland totaled 15.2 million acres and covered 58 percent of the state. By 1997, Ohio's farmland acreage had decreased by 12 percent to 13.6 million acres and covered just over 51 percent of the total land area (Section III.1.a).
2. Forest land totaled over seven million acres in 1997 and covered 27 percent of the state's land area. Forest land increased six percent (422,000 acres) in Ohio between 1982 and 1997. Increases in forest land were concentrated in east and southeast Ohio (Section III.1.b).
3. Population growth in the 1990s appears to be occurring in townships with moderate amounts (relative to Ohio) of both row crop cover and forest land cover. High rates of population growth are not occurring in townships with the highest amounts of agricultural or forest land cover, therefore, some areas of Ohio are not likely to be impacted by urbanization in the near future, in particular, the highly agricultural Northwest and the highly forested Southeast (Section III.2).
4. Significant population growth occurred in townships with moderate to large proportions of agricultural land cover. Seventy-three percent of the total population growth in townships between 1990-2000 occurred in townships that have between 38 and 88 percent of their total land in an agricultural land cover. Agricultural land makes up 64 percent of township land in Ohio located within ten miles of a major city and over 76 percent of land for townships located within ten to 30 miles of a major urban center. Conversely, the percent of forest land cover in townships increases with distance from major cities (Section III.3).
5. Ohio's township population growth in the 1990s was highest in areas located ten to 20 miles outside of major cities. Over 80 percent of this population growth took place within 40 miles of major cities. Because Ohio agricultural land is more concentrated around the peripheries of Ohio's major cities, agricultural land is much more vulnerable to current and future population growth than forest lands (Section III.3.d).
6. Farmland loss in and around metropolitan areas is often matched with increases in urban land use, suggesting that urbanization is a driving force of farmland loss in these regions. On the other hand, farmland loss in some nonmetropolitan areas of the state is associated with much lower rates of urbanization but higher rates of increase in forest land (Section III.4).

III.1 Ohio Land Cover Change, 1982 to 1997

Land use data from the National Resources Inventory are used in this section to quantify changes in agricultural lands (including both row crops and pasture lands) and forest lands.

III.1.a Agricultural Land Use

Nearly 52 percent of Ohio's land area was in agricultural use in 1997 (**Table 7**). From 1982 to 1997, the amount of agricultural land (row crops and pasture lands combined) fell from 15.2 million acres to 13.6 million acres (**Table 8**), a decline of 10.5 percent.

The amount of farmland acres lost has been equally split between row crops (i.e. corn or soy beans) and pasture land. The amount of land used for row crops decreased from 12.5 million acres to 11.6 million acres and pastureland decreased from 2.8 million acres to just over 2 million acres between 1982 and 1997. Because there is less total pasture land in Ohio than row crops, the percentage loss of pasture land is much greater over this time period: 39 percent of pasture lands were lost during this period vs. six percent of row crops (**Table 8**).

Spatial patterns of farmland loss indicate that large losses of pasture acreage are spatially concentrated in eastern Ohio, while row crop losses are more distributed across the state (**Maps 11 and 12**). Counties with a large amount of row crop loss (more than 50,000 acres) are found throughout the state.

III.1.b Forest Land Use

The NRI data reveal that the amount of forest land increased from 6.7 million acres to seven million acres, from 1982 to 1997, a 6.4 percent increase (**Table 8**). In 1982, over 25 percent of the state had forest land, increasing to nearly 27 percent in 1997 (**Table 7**).

Increases in forest land primarily occurred in portions of eastern and southeast Ohio (**Map 13**). Linking this change to agricultural land use trends occurring in these regions during the same period, the gains occurred in areas with a loss of pastureland. Increases in forest land were not universal throughout Ohio. Forest loss occurred in 34 of Ohio's 88 counties, mainly in the southeastern part of the state.

III.2 Land Cover in Townships, early 1990s

To explore the composition of land cover outside Ohio's urban areas at a more refined level, the National Land Cover Dataset (NLCD) was used to analyze agricultural land cover (including row crops and pasture lands) and forest land cover across townships in Ohio. The NLCD is a compilation of 30-meter resolution satellite imagery from the early 1990s. The result is a national land cover dataset with 21 different land cover types.

Since the NLCD was compiled, Ohio townships have added over 300,000 people. Given these changes, the relationship between recent population trends (using U.S. Census Bureau data) and Ohio land cover is explored as well.

III.2.a Township Land Cover Composition

According to the NLCD, total agricultural land covers 62.9 percent of township land area; row

crops are the dominant agricultural land cover (40 percent of all township land) and pasture land is 23 percent of all township land. Forestlands were also a prominent land cover in townships, covering 32.4 percent of township land area.

III.2.b Total Agricultural Land Cover

Agricultural land (both pasture and row crops) covers 62.9 percent of the Ohio township landscape. Over half of Ohio townships have more than 66 percent of their total land area in agricultural land cover, with a quarter of all Ohio townships having over 88 percent agricultural land cover (**Table 9**). These townships are generally located in the Northwestern portion of the state (**Map 14**).

Differences in population exist in townships with varying amounts of total agricultural land cover. Approximately 25 percent of the townships have more than 88 percent agricultural land cover and contain just over 11 percent of Ohio's total township population. These townships grew by only 2.8 percent between 1990 and 2000, which accounts for 3.5 percent of total township population growth during this decade. In contrast, townships with moderate levels of agricultural land (38 percent to 88 percent) accounted for 73 percent of all township population growth in the 1990s (**Table 9**).

III.2.c Forest Land Cover

Forest land cover exists throughout Ohio, but is most prevalent in Southeastern Ohio, the Appalachian region of the state (**Map 15**). High concentrations of forest land cover also exist in the Northeast.

Moderate amounts of forest land cover can be found in all Ohio townships (**Table 9**). Approximately half of Ohio's townships contain more than 27 percent forest land cover, with one quarter of all townships (327 townships) containing more than 53 percent.

Relating the location of forest land cover to percent township population growth between 1990 and 2000 reveals that 81 percent of all growth during the 1990s occurred in areas with moderate levels of forest cover (between 8 and 53 percent) (**Table 9**).

III.2.d Row Crop Land Cover

The pattern of row crop cover across townships varies dramatically. Townships where row crops are the dominant land cover are primarily located in the Western and Northwestern portions of Ohio, or those portions of the state associated with the Corn Belt region of the Midwest (**Map 16**).

The distribution of row crops across townships varies more than any of the other land covers. One quarter of townships have less than nine percent of their area in row crop cover while one quarter of Ohio townships have at least 72 percent of their land area in row crops (**Table 10**).

Generally speaking, the regions of the state with townships containing high and low proportions of their land area in row crops experienced modest population growth during the 1990s, while some of the fastest growing Ohio townships (accounting for almost 80 percent of all township growth) had between nine and 72 percent of their land area in row crops (**Table 10**).

III.2.e Pasture Land Cover

The location of pasture land also varies within Ohio, but is concentrated in the foothills of the Appalachian region and around the peripheries of the Cleveland-Akron, Cincinnati-Hamilton and Columbus metro areas (**Map 17**).

Modest amounts of pasture can be found in many of Ohio's townships. Approximately half of Ohio townships (653 townships) have between 13 and 29 percent pasture land cover (**Table 10**).

The pattern of population change in townships with varying levels of pasture land cover did not differ much, although population growth between 1990 and 2000 was lower in townships with the least amount of pastureland cover (those with less than 13 percent) (**Table 6**).

III.3 Land Cover and Population by Distance from Major Ohio Cities

To determine how the composition of Ohio township land cover changes in relation to major urban areas of Ohio, a spatial analysis was conducted using a geographic information system. Major urban areas were defined as those with at least 100,000 residents in 2000. Distance zones were established in ten mile increments around each urban area (**Map 13**).

Total agricultural land cover, row crop cover, pasture land cover, and forest land cover were aggregated in these zones and compared (**Figure 13**). Population growth in the 1990s was also aggregated in these zones and compared to each land cover.

III.3.a Total Agricultural Land Cover

Sixty-four percent of township land in Ohio located within ten miles of a major city is in agricultural land cover. Moreover, agricultural land cover comprises over 76 percent of township land located between ten to 30 miles of a major urban center. Total agricultural land cover increases with distance from major cities up to approximately 30 miles. This proportion declines after distance to a major urban center increases beyond 30 miles.

III.3.b Row Crop and Pasture Land Cover

The change in agricultural land cover as distance increases from major Ohio cities is primarily due to changes in row crop cover rather than pasture land cover. The proportion of pasture land remains relatively constant as distance to major cities increases, accounting for 20 to 25 percent of township land on average. The proportion of row crops follows quite a different pattern; it is a relatively large component of total township land within ten to 30 miles of major cities, where total agricultural land cover is at its greatest amount. Within this distance, row crop cover account for over 50 percent of total township land cover.

III.3.c Forest Land Cover

Conversely, forest land cover in townships increases considerably as distance increases from major Ohio cities. Forest land cover constitutes less than 22 percent of land cover in townships located within 30 miles of major cities; this figure increases to 48 percent of total land cover for townships located more than 40 miles away.

III.3.d Recent Population Trends

Population trends between 1990 and 2000 were examined using the same distance zones from major city. The greatest amount of population growth, or 26 percent, happened within ten to 20 miles of urban centers. Over 80 percent of total township population growth took place within 40 miles of major urban centers, an area with 70 percent of the land in agricultural land cover.

These population and land use trends suggest that agricultural land in Ohio is much more vulnerable to current and future population growth than forest lands and that predominately agricultural townships within 40 miles of urban centers appear to be experiencing the majority of population growth. As land closer to the cities is converted, development pressures in the outer rural-urban fringe areas (e.g. those located 20-40 miles outside major cities) are likely to intensify in the future.

III.4 Farmland Loss

According to the National Resources Inventory (NRI) data, Ohio lost 1.6 million acres of farmland between 1982 and 1997. Almost all counties (84 of Ohio's 88 counties) in Ohio lost farmland acreage during this 15 year period. The majority of this land has been converted to either urban land or forest land.

III.4.a Prime Farmland Loss

Ohio is one of only four states with over 50 percent of its land base in prime soils. Of the 1.6 million acres of farmland lost between 1982 and 1997 in Ohio, 640,000 acres (40 percent) were considered to be prime farmland. Of all the row crops converted to urban uses from 1982 to 1997, the NRI data shows that a high percentage (78 percent) was composed of prime agricultural land.

Between 1992 and 1997, Ohio ranked 2nd out of all states nationally in acreage of prime agricultural land converted to urban uses (212,000 acres). Only Texas lost more of its prime agricultural land (332,000 acres) to urban growth during this period.

III.4.b Agriculture to Urban Conversion Ratio

While urban growth explains some of this farmland loss, significant increases in forest land in non-metropolitan areas suggest that not all farmland is being lost to urbanization pressures. To determine the extent to which losses in farmland are correlated with increases in urban land, a ratio of farmland loss to urban growth was calculated for each of Ohio's counties.

The "Agriculture to Urban Land Conversion Ratio" is calculated by dividing the loss of agricultural land (represented as a positive value) by the increase in urban land for a county between 1982 and 1997. The resulting scoring system gives a measure of agricultural land loss relative to urban growth. The closer the ratio is to one, the greater the correlation between farmland loss and urban land growth, thus increasing the likelihood that the decrease in agricultural land was due to urban land conversion.

Counties with high ratios (those losing more agricultural land than gaining in urban land) are spatially concentrated in southeast Ohio and scattered across other non-metropolitan areas of the state. Counties with low ratios (those whose losses in farmland are approximately matched by

gains in urban land) are heavily concentrated around the state's major metropolitan areas (Map 19).

The results suggest that the underlying causes of farmland loss may be different depending on where the land is located. Farmland loss in and around metropolitan areas is matched by gains in urban land, suggesting that urbanization is the driving force of farmland loss. On the other hand, farmland loss in the Southeast and other non-metropolitan areas of the state is accompanied by much lower rates of urbanization and higher rates of increases in forest land, suggesting that other factors (e.g. low agricultural commodity prices) are driving farmland loss.

Notes

National Land Cover Dataset

The land cover data used in this report are from the National Land Cover Dataset (NLCD) produced by the Multi-Resolution Land Characteristics Consortium. These data were compiled from LANDSAT TM imagery (circa 1992) with a spatial resolution of 30 meters and supplemented by various ancillary data, including agricultural and census statistics, land cover maps, soil characteristics and wetland data. These data are from the early 1990s and, although changes have certainly occurred in many areas of Ohio since then, they provide a reasonable snapshot of Ohio land cover.

Because of the spatial resolution of 30 meters used to create the NLCD, these data cannot distinguish between low-density development and many non-urban lands, including agricultural and forest lands. Therefore, the non-urban uses that dominate rural housing and development at the rural-urban fringe are categorized as agricultural or forest land. For this reason, the amount of agricultural and forest land reported here overstates the amount of non-urban land in an agricultural or forested land use.

Land Cover versus Land Use

Land *cover* data, such as the NLCD data, represent the physical material covering the landscape. Land cover data provides a general interpretation of a given landscape and should not be confused with land *use*, which indicates how the land is being used. While many times land cover also indicates land use, it often times does not. For example, the land cover of a plot of land may be forest, but the actual land use may be a natural preserve, a commercial forest that is managed for timber, or a low-density residential development with a full tree canopy. Thus, data that reports land cover gives only a general interpretation of what biophysical matter covers the landscape and does not accurately assess land use.

The National Resources Inventory (NRI) used in Section III.3.a and Section II tracks land *use* by sampling 800,000 sites in fifty states.

For more information on the National Land Cover Dataset, see:
<http://www.epa.gov/mrlc/nlcd.html>

For more information on the National Resources Inventory, see:
<http://www.nhq.nrcs.usda.gov/NRI/>

Prime Farmland

The Natural Resource Inventory defines “prime farmland” as: “Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses.”

IV. Ohio Land Use Policies

This section provides an overview of some of the options available for Ohio county and township governments to manage population and land use changes. In some cases, a brief discussion is provided as to the limitations of these options given current conditions in Ohio. Suggestions on new policy directions are also provided.

Key Findings

1. Ohio counties and townships have some techniques for managing population and land use changes that affect the supply and demand of land in different uses in their communities (Section IV.1).
2. To respond to urban growth in rural areas, Ohio needs to bring the basic planning and plan implementation measures, like zoning and subdivision regulation, up to date. Without the authority or obligation to develop a framework of effective land use decision-making, the existing tools and techniques for managing supply and demand of land cannot be used effectively together (Section IV.2).
3. Furthermore, enabling new techniques such as impact fees, transfer of development rights, agricultural security areas, and urban service boundaries should be considered and possibly adopted at the state level (Section IV.2.b).

IV.1 Existing Policies

Conversion of land to urban uses generally occurs when the net payoff from converting land to an urban use is greater than the returns of keeping land in non-urban use (for example, agricultural use). Land use policies can attempt to affect either the supply or demand of land available for urban growth. The supply of land for urban growth is usually found in rural areas.

In general, policies are adopted to influence either the particular location of urban land within a region (for example, by directing new growth to specified areas) or the total amount of land available for urban uses within a region (for example, by encouraging retention of land in non-urban uses).

When discussing local policy in Ohio, it is important to note that Ohio is a “home rule” state. Ohio municipalities are granted home rule powers; counties and townships are not. That means that county and township governments may only act as specified by Ohio law, and therefore are limited in their ability, through statute, to affect local land use. Therefore, counties and townships are dependent on the state and the powers it authorizes explicitly to them to handle population and land use change.

In what follows, we first discuss policies that seek to affect the particular location of urban land and then identify policies that seek to limit the supply of urban land by encouraging non-urban uses of land, such as agriculture. Not all policies that affect rural land in Ohio are discussed, however. This list is limited to some of the policies that affect township and county government’s ability to manage local land use.

IV.1.a Policies Directing the Location of Urban Land Development

Comprehensive Planning

Comprehensive planning, also known as master planning, is the foundation from which all decision-making, regulating, capital expenditures and program execution should be made in a community. Planning provides the rationale for exercise of the regulatory power of government. Generally, a comprehensive plan should begin with information gathering on the demographic and economic characteristics of the community and an inventory or assessment of the built and natural environment. The plan should address transportation, land use community facilities, and housing and include implementation strategies for these components. This includes a zoning map (Meck and Pearlman, 1999).

County or regional planning commissions are given the authority to conduct comprehensive planning. There is no specific authority for townships to create a comprehensive plan or even to adopt a county's or regional planning commission's comprehensive plan. Interestingly, townships are able to adopt a zoning plan without specific reference to a comprehensive plan.

Zoning

Zoning can be used to implement a comprehensive plan, primarily by regulating land use. Zoning is established locally. It designates allowable land uses for different areas and regulates such things such as lot sizes and building heights (Stamm, 1999). According to an Ohio State University Extension study done by Tim Pritchard and John Stamm, only about half of Ohio's townships had either township or county zoning as of November 1997 (Pritchard and Stamm, 1998). The remaining 612 townships either had no zoning, rejected zoning or repealed their zoning.

Subdivision Regulations

Subdivision regulations are another technique for implementing a community's comprehensive plan. Subdivision regulations ensure accurate title records, property division, and development with sufficient services within the subdivision. The purpose of these regulations is to provide for the appropriate alignment of streets and services (CCAO, 2002). Subdivision regulations can be adopted by county commissioners or a county or regional planning commission. Townships are automatically subject to subdivision regulations adopted by the county.

Annexation Reform

Recent annexation reform may provide a new method for townships to influence urban growth. However, because annexation reform is new, it is difficult to judge the outcome. Annexation is the process by which a municipality acquires additional territory. Initiative may come from the property owner wishing to become part of the municipality or from the municipality itself. Recent annexation reform expanded the options for annexing, providing five different ways annexations can take place.

This recent reform does several things. First, the reform fosters more cooperation between townships and municipalities. And annexation agreements reinforce negotiations. Second, the reform makes annexations more expedient and flexible and the decision to annex more decisive.

Third, annexation reform levels the economic playing-field for townships, providing a method to require payments for the loss of tax revenue and to enact special provisions for the division of inside millage, or taxes not voted on. (This provision applies if the municipality and the township agree the land will remain in the township.)

Finally, annexation reform provides a broader ability for townships to do land use management. For example, an urban service boundary designated during the annexation process could, in essence, establish a growth moratorium. In addition, counties, which have to approve annexations, can now look at overall land use in the area as a criterion for determining if annexation makes sense.

JEDDs and CEDAs

These new annexation agreements may replace the need for Joint Economic Development Districts, or JEDDs, and Cooperative Economic Development Agreements, or CEDAs. JEDDs, authorized in 1995, allow for joint decision-making concerning economic development at the rural-urban fringe. CEDAs, created in 1999, expand the concept of a JEDD, allowing for agreements to cover residential land. Both of these types of agreements encourage discussion between municipalities and townships and they also encourage revenue sharing. Annexation agreements, JEDDs and CEDAs all deal with development in areas that are considered the rural-urban fringe.

IV.1.b Policies Limiting the Amount of Land Available for Urban Uses

Purchase of Agricultural Easements

Purchase of agricultural conservation easements (PACE) programs, also known as purchase of development rights programs, allows counties or townships to permanently protect farmland. Landowners voluntarily sell agricultural easements to a governmental entity or nonprofit organization, usually a land trust. An agricultural easement is a deed restriction, typically restricting non-agricultural development, that landowners place on their property to protect agricultural land. The easements authorize the local government or nonprofit to monitor and enforce the restrictions set forth in the agreement.

PACE allows landowners to separate and sell the right to develop land from their other property rights. The landowner is paid the difference between the value of the land as restricted and the value of the land for its “highest and best use.”

Access Management

Access management is another strategy for guiding land use by allowing local governments to maintain intended service levels on roadways and coordinate land use and transportation decisions (Chadbourne, 2000). In essence, access management is one way that local communities can grapple with transportation problems associated with otherwise unregulated growth in rural areas. In 2002, counties and townships were specifically enabled through legislation to conduct access management (CCAO, 1994).

CAUV and Agricultural Districts

Current Agricultural Use Valuation and Agricultural Districts also affect “supply” of rural land for farming and other undeveloped uses. These programs are administered by the county and

participation of landowners is voluntary. These are options that individual landowners can exercise.

Current Agricultural Use Valuation (CAUV) is a differential real estate tax assessment program that affords owners of farmland the opportunity to have their parcels taxed according to their value in agriculture rather than their full market value.

Agricultural Districts (also known as the Ohio Right to Farm Law) provides protection against nuisance suits over farm operations, deferment of tax assessments on land to build sewer and water lines, and allows for additional review if land is taken by eminent domain for a public purpose.

When the basic enabling legislation for guiding land use was written in the early 1900s, Ohio was primarily an agrarian state with small pockets of urban areas. But Ohio's landscape has changed and the authority given to counties and townships to provide the most basic of services, some of which is outlined in the previous section, may be inadequate for managing the variety of challenges that arise in rural-urban areas. Therefore, current legislation needs to be reviewed, possibly with new authorities granted to counties and townships, and state level policies on managing urban growth need to be considered.

IV.2 New Policy Directions

This section provides suggestions for new policy directions if Ohio's governments are to manage the urban growth and other land use changes occurring at the rural-urban fringe.

IV.2.a Suggested Changes to Current Legislation

Planning

Comprehensive planning, or master planning, should be the basis for growth management strategies in Ohio. But Ohio communities are not required to plan their actions. "Planning is permissive, instead of required... Failure to engage in planning prior to the enactment of land use and related regulations does not necessary invalidate those regulations..." (Meck and Pearlman, p. 64, 1999). In a state once considered a leader in this area, institutions have not kept up with the changing face of the countryside. In 1975 the General Assembly created the Ohio Land Use Review Committee. This was the first major reassessment since Ohio planning and zoning law inception, but no comprehensive changes resulted (Meck and Pearlman, 1999).

Revamped Ohio planning legislation would need to:

- Require that county and township land use regulation be done in compliance with an adopted comprehensive plan and clearly establish the connection between planning and zoning.
- Enable townships to adopt county and regional comprehensive plans. It should be noted that townships do not currently have that authority, although they are able to adopt a zoning plan certified by a township zoning commission (Meck and Pearlman, 1999)
- Require that land use decisions be made in accordance with the plan within a reasonable amount of time (for example, decisions about transportation or zoning).

- Provide the framework for and the required elements of a comprehensive plan. Nowhere in the Ohio Revised Code are the components of a comprehensive plan found.

Ohio's zoning enabling law for counties and townships is also outdated. The new provisions for county and township access management must coincide with local zoning, but most zoning codes are out-dated or even nonexistent in more rural areas.

Agricultural Zoning

Perhaps the most useful change in zoning enabling legislation for counties and townships concerns their ability to implement exclusive agricultural zoning. Only once in Ohio zoning law is the word "agriculture" mentioned and there is no mention of zoning for the *purpose* of agriculture.

Currently, local governments have the authority to enact land use regulations consistent with a comprehensive plan to "promote public health, safety and morals" (RC 303.2 and 519.02). Municipal zoning enabling legislation, on the other hand, substitutes the term "general welfare" for "morals" (RC 713.06). Without being able to zone for general welfare, it is unclear whether the ability to create a zone limiting land use options in viable agricultural areas (Libby, 1999).

At minimum, the clause "general welfare" should be amended to the enabling legislation for counties and townships. However, to ensure the ability to zone exclusively for agriculture use, that purpose (exclusive agricultural zoning) should also be added to county and township law (Libby, 1999).

Subdivision Regulations

Like planning and zoning, subdivision regulations need to be revised. Subdivision regulations remain virtually unchanged from the enabling legislation written for unincorporated areas in 1935 (Meck and Pearlman, 1999). They only apply to a division of property into a lot (s) under five acres. Unfortunately, 5.01 acre lots proliferate around exurban Ohio as a result, effectively avoiding the oversight of local government. Further, if township governments have their own comprehensive or master plan, then they have no authority to implement this strategy in accordance with that plan.

IV.2.b New Enabling Legislation

Impact Fees

Impact fees provide a means to accommodate new development in a community and share the costs of new infrastructure associated with that development. Impact fees shift the burden from the community as a whole to new development that creates the need for new or increased services. While Ohio municipalities can impose impact fees, counties and townships are not enabled to do so. Because of the immense amount of development in unincorporated areas on the rural-urban interface, counties and townships should have the same authority to adequately fund the new and increased services demanded by new development instead of letting that burden fall on current residents.

Transfer of Development Right Programs

Transfer of Development Right (TDR) programs allow development to be directed to designated

growth areas and away from areas targeted for land protection. Land developers pay owners of land in protection zones for “development rights.” These development rights are used to create higher density development in designated growth areas that have adequate infrastructure.

The ability to create local TDR programs should first be established by the state legislature. Once established, TDR programs may then be created by local zoning ordinances. TDR programs can be voluntary. That is, landowners in designated protection areas may be encouraged to sell development rights to developers so the developers can build more densely in a designated growth area. Alternatively, TDR may begin with “down-zoning,” or reducing allowed density in areas designated for land protection. This approach is more mandatory in nature.

Since these are private transaction, they cost little in public dollars. However, the success of such programs depends on having a sufficient number of potential buyers of development rights so that a fair price is offered to landowners and landowners are inclined to sell their right to develop. TDR programs enable landowners in protection areas to get equity out of their land while still retaining ownership of the land. These programs concentrate growth in appropriate areas.

Agricultural Security Areas

Agricultural Security Areas (ASAs) allow farmers to voluntarily join together with their community to establish areas designated for agricultural use. For a prescribed amount of time, these landowners forgo any non-agricultural development in exchange for certain benefits. These can include tax reductions or even a commitment from the local government for no development in the designated area. ASAs are essentially temporary land protection programs. Ohio needs ASA enabling legislation that allows for locally-driven programs.

Urban Service Boundaries

Voluntary Urban Service Boundaries (USBs) delineate areas where local governments, along with the state, want to target their efforts to encourage and support urban growth. While landowners and developers are able to build outside of these areas, they are not a priority for infrastructure funding. The Ohio Legislature would develop the framework and the USBs would be cooperatively determined locally by municipalities and townships, and the counties in which they reside.

Notes

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