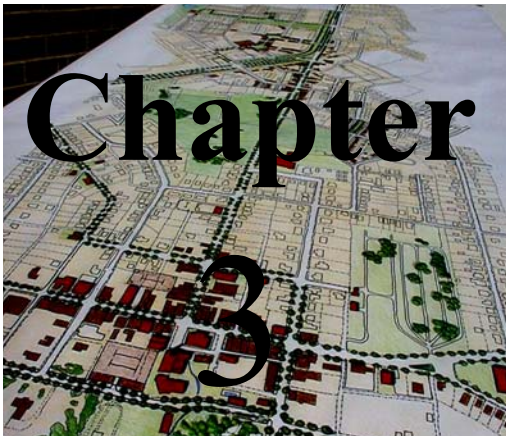

The Application of Urban Services or Growth Boundaries

If Woodford is to develop a new methodology for the "construction" of its USB areas, what models exist and what factors should be taken into consideration?

This Chapter builds on the data and findings from Chapter 1, presenting background information about the development and application of the growth management tool referred to as an urban service or growth area. The intent of presenting this information is to prepare the Woodford community for the task of developing a methodology and policy basis for the use of this tool.

Historic and National Perspective

Land is a finite resource. While we can reclaim past mistakes in using land, we cannot effectively create more land. Throughout the country, citizens have long been asking how urban growth, and the way such growth uses the land, will contribute to sustaining or improving their quality of life. Traditional processes have been seen as failures, and various techniques for adequately managing growth have been applied in the hope of creating and retaining communities. One of these techniques is called urban containment, but is more often known as an urban growth boundary or an urban service boundary.

> **The increasing tempo of urbanization and growth is already depriving many Americans of the right to live in decent surroundings.**
>
> White House message, 1965

Such boundaries are not new. In 1580 Queen Elizabeth I issued a proclamation that forbid building within three miles of the city of London. More recently, it appears that the first urban growth boundary in the United States was adopted during the 1950s in Lexington, Kentucky. During the 1970s the technique was beginning to spread: Oregon required incorporated cities to designate urban

growth boundaries; two Florida counties adopted urban development boundaries; and Minneapolis-St. Paul established an urban service boundary. By the early 1990s six states had urban growth area requirements in state growth management legislation. Tennessee, Maryland, Maine, and Wisconsin have now joined the list; other states have a tradition of urban growth boundaries without specific mandates in state legislation (for example, Kentucky and California).

In 1994 a survey was conducted of the 25 largest metropolitan areas to determine the degree to which urban growth boundaries were being implemented. Of the 1,143 jurisdictions responding to the survey from within those metropolitan areas, it was found that 197 had urban growth boundaries. While the technique is not as extensively used as zoning or other development regulations, it is nevertheless widespread, implemented in every region of the country.

UGBs have also been increasingly promoted … as a useful and effective tool in constraining urban growth.

The Brookings Institution, 2002

Types of Urban Boundaries

Several terms have been used almost interchangeably to refer to urban containment boundaries: urban growth boundaries, urban development boundaries, urban area boundaries, and urban service boundaries. Most boundaries serve essentially the same purpose of separating land where urban development is appropriate from land reserved for rural uses. However, the urban service boundary is often established with the idea of ensuring efficient use of the urban services provided to the urban area and protecting the investment in urban infrastructure. In contrast, an urban growth boundary is established primarily to contain growth and development. Some boundaries are very strictly held (for example, the often studied Portland, Oregon, urban growth boundary); others are adjusted periodically in response to the changing dynamics of growth. In particular, it appears that urban service boundaries are more easily adjusted as they relate to the sequencing of growth and the extension of services rather than strictly limiting the growth and extension of urban development.

Establishing the Urban Boundary

Some states with legislation requiring urban growth boundaries are specific in tying the size of the area within the boundary to the need for urban land. This requirement attempts to balance the demand for urban land with the supply of urban land. Whether there is a statutory requirement for need as the basis for establishing the boundary, as a sound planning principle, the designation of any land use should be related to the need for that use. Where is the need derived? In planning practice, population is the basis for determining land use needs. A jurisdiction should have land available for homes, work places, civic places, education, and recreation to meet the needs of its population.

The typical method for quantifying these needs begins with the number of people to be supported with land for residential uses, business and industry, schools, churches, public facilities, parks, and other uses. Statistical databases, such as the Census, provide information on the average number of people per household. From this information, it is possible to determine how many residences are needed for the current and future population. In turn, applying information about density in different districts throughout the jurisdiction will yield the number of acres needed for residential activity. Additional steps in calculating land needs include an adjustment to the acres needed in order to account for a market factor[1], vacancy rates, and land not available for development due to environmental or other constraints. (Refer to the appendix for an outline of this typical methodology.)

For other types of land uses, typical methods compare the current population to the current amount of land in each use to determine the ratio of land use to population. This ratio may be applied to the anticipated population to determine land needs for non-residential purposes. By using the ratio method, adjustments are not required. It is inherent in the ratio method that some lands were not available, were underutilized, or were left vacant due to the ability to choose one location over another.

The Woodford Experience

The 1970s

The implementation of an urban boundary in Woodford County dates to the *Single Document Plan of 1969.* The boundary is called an urban service area (USA). According to the 1977 *Woodford County Comprehensive Plan* the primary reason for the USA is *"to protect agricultural uses from the intrusion of urban development."* The objectives in establishing the USA in 1977 included:

- Allocating enough land for 10,000 people and additional land to account for land within the boundary that would not actually be available for development
- Allocating land based on density characteristics of recent development
- Establishing a limit (boundary line) for all development except single-family residential and agriculture
- Providing for urban containment based on ease and efficiency of service delivery
- Ensuring efficient use of the public investment in services

The actual creation of the boundary location was based on the Versailles Land Use Plan, including land *"where development might be expected within the planning period."* It appears from the objectives stated in the plan that the USA boundary line was established

[1] Market factor is the term used to describe the adjustment needed to ensure sufficient choice in location, density, and residential land that is actually used for rights-of-way or utilities. Without a market factor, the assumed equilibrium between supply and demand provides freedom of choice for those making location choices in the early years of implementation. However, as the supply is depleted, choice is restricted.

through the application of planning principles; however, there is no information on the analysis that supported the application of these principles. For example, the discussion refers to "density characteristics of recent development" but does not describe the development trend over time. This trend discussion could have included consideration of the reduction in household size and the different densities in the various zones. There was no analysis of capacity of the various services to be provided, and what was intended to ensure "ease and efficiency" of service delivery.

The 1990s

In 1977 the USA centered on Versailles was approximately 4,550 acres. In the 1997 Plan update, the Versailles USB was approximately 5,100 acres. There is no information available for Midway prior to the 1997 plan update; however, in 1997 the Midway USB was approximately 672 acres. (The urban area is first referred to as an Urban Service Boundary or USB as part of the 1997 Plan Update.)

The *Comprehensive Plan Update '97* indicates that the determination of future needs in the USB was based on the development potential of land within the USB, adjacent uses, the transportation system, and public facility availability. The map of the future urban land uses included a surplus beyond the amount needed to satisfy growth. However, there is even less information about how these determinations were made. What population would be served? What density factors, market factors, and trends were included in the methodology? How many housing units would be needed to meet the needs of the increased population? The objectives related to the USB in the 1997 plan update include the following:

- Discourage residential subdivisions scattered outside the Versailles USB or the Midway growth area.
- Encourage infill within the Midway city limits for a better use of land.
- Monitor the rate of growth to ensure the orderly and efficient provision of community facilities and services.
- Encourage centralized compact patterns of land development.
- Maintain the existing acres of the urban service area throughout the planning period.
- Provide and opportunity for compact residential development inside the USB.
- Protect prime agricultural land from urbanization and incompatible land uses.
- Conserve the unique elements of the County's agrarian character.
- Provide residential opportunities outside the USBs through permitting low-density residential development within certain constraints.

Clearly there have been some adjustments to the urban service boundary since its original adoption. According to the 1997 plan update, in 1994 the goals and objectives were readopted, affirming the commitment to containing urban development as reflected in the *1989 Comprehensive Plan.* According to the discussion in the 1997 plan update, this action resulted in a clear direction that the USB should no be significantly expanded in the

planning process. It was, however, reconfigured, and expanded only to the extent of recognizing land annexed to Midway.

Adjustments to the boundary resulted from changes both in the direction and location of growth, and the slow growth in the northwest part of the urban area where development constraints are a limiting factor. Unlike the 1977 plan, there is no specific goal in the 1997 plan update to provide land for a target population; rather the map reflects the commitment to maintaining the size of the USB. There was a recommendation that the boundary be "*shifted to include more developable land and to exclude land less available or appropriate for development."* It is not clear how land is determined to be "less available" or "less appropriate" for development.

The 1997 plan update is clear that the goals and objectives, maps of natural features, and future land use maps must be used together in considering development proposals. There is no single factor to be applied in determining whether a development proposal is appropriate for a particular location. It is also clear that the preparation of the future land use map included a surplus of land in each category of use; however, the plan also acknowledges that as growth continues and land is developed, less land will be available. This situation may result in increased costs of land. However, the plan anticipates that the availability of a surplus in each category will limit the degree to which this situation occurs. Given that the plan is now being updated, five years after the previous update, there is an opportunity to revisit the calculations of land needed to serve the anticipated population.

The following general principles have been derived from the text of the 1997 plan with regard to the location of future development.

- A surplus of land has been set aside beyond the amount anticipated for future growth. This allows flexibility in determining specific land uses in a specific location based on various constraints to development.
- Land use decisions must respect the plan as a whole designed to balance future population projects, goals and objectives, text, and maps for land use, natural features, transportation, and community facilities.
- Development proposals in the rural area must respect the balance between the provision of adequate land for development within the Versailles and Midway USB's and the preservation and protection of rural areas, farmland, and agricultural economy.
- Concentration of urban development within urban service boundaries helps maintain the agricultural economy and reduce the cost of service provision to urban development.
- Growth should be encouraged where it most efficiently uses existing and planned utility systems and is compatible with existing land uses.
- The allocations of various land uses are based on trends for the proportion of land devoted to each type of use.

In comparing the principles derived from the 1997 plan with standard planning methodology as depicted in the appendix, several potential problems are apparent.

- There is no analysis regarding actual land needs, density trends, housing units needed, market factor applied, or definitions of land that is "less available" or "less appropriate".
- While it is appropriate that a surplus be available, there is not information to indicate how such a surplus was derived.
- There is no analysis of service capacity for the urban services to be provided within the USB. How much is now available? What plans are in place to expand capacity? How does any increase in capacity match the increase in demand for the service?
- Allocations of land are based on trends for the proportion of land devoted to each type of use. What trends? The plan refers to base data, although there is no information within the plan to indicate the exact type of data and the methodologies used for analysis.
- Where future needs for residential land are based on the allowable density of the zoning districts, the amount of land needed will be understated. Experience indicates that development typically uses about 50% to 60% of the allowable density.
- There is no indication of how much future growth is assumed to occur in the rural area.

There are two ways to address these apparent shortcomings in the analysis to determine the size of the USB. The first is the "start over" approach. In this approach, an analysis is conducted to determine the amount of urban land needed. However, there is no commitment to the existing USB. The amount land within the boundary is determined from a fresh start, with no assumptions from previous calculations. The boundary line is assigned without regard for the existing location.

The second approach is the "comparison" approach. In the comparison approach, an analysis is conducted to determine the amount of land needed for urban development. However, in this approach, the land needed is compared to the existing USB, and the final step in the analysis is an indication whether the USB is too large or not large enough to meet needs through the planning period. Boundary lines are adjusted in some locations based on the results of this comparison. As the current planning process continues, based on the vision of "town and country", the USB promises to be an excellent tool for managing the future growth in Woodford County. As described earlier in this report, the fundamental reason for a boundary to contain the urban area is to identify what lands should be "town" and what lands should be "country."

Observations Regarding the Future Land Use Map

The map appears to reflect the direction of growth as described in the plan update. The boundary is largely south, east, and west of the city limits, and appears to be contained inside the Blue Grass Parkway. The boundary appears to be reasonable based on the

transportation network. Additional information would be needed to compare the land use map with maps of facility locations and natural features constraining development in order to evaluate the boundary from that perspective.

Conclusions

- There is no clearly defined methodology. As a result there is no clear relationship between the anticipated future population and the amount of land in each use category within the urban service boundary.
- There is no determination of housing units needed to support the population.
- One reason for establishing and continuing the USB is related directly to service delivery—ensuring efficiency of service and efficiency in the use of the public investment in services. However, there is no analysis of infrastructure capacity and its relationship to the population.
- The USB is established in part to fulfill the objective of achieving compact residential development and compact patterns of all land development. However, in the absence of trend analysis for residential density, it is difficult, at best, to determine whether this objective is being met.
- The USB serves to protect agricultural lands from urbanization and incompatible uses by limiting development outside the boundary to single-family residential and agricultural uses. There should be an indication of how much future development is anticipated to locate in these agricultural areas in allowable single-family, low-density residential development.
- The USB has been adjusted to reflect changing market conditions that have affected the direction and location of growth. There should be a clear explanation of those market conditions and the effect on future growth.
- There is a relationship between recommended future land use, the location of natural features, the location of development constraints, and the locations of transportation and other public facilities. However, this relationship is not clearly depicted in the plan.
- The plan has several means of ensuring flexibility in future development locations while still meeting goals and objectives of the plan.
- The USB is intended to provide not only for anticipated future needs to accommodate the population but also a surplus to ensure flexibility in location decisions. This surplus should be more clearly explained, particularly the methodology for deriving the amount of surplus.
- There should be some consideration to the name of the USB. It may be more appropriate to identify an "urban area" in more general terms.
- Establishing an urban area should be based on the "town and country" vision for Woodford County.
- There should be a methodology for amending the boundary in a similar manner as the initial establishment of the boundary.

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Methodology

Typical Methodology for Determine Future Need for Residential Land:

1. Determine future permanent population for the planning period.

2. Determine average household size for current estimated population. If available, determine forecast changes to average household size. If available, use household sizes adjusted for urban and rural areas.

3. Calculate housing units needed for population.
   Population ÷ household size = total dwelling units at future date

4. Adjust total dwelling units

5. Subtract existing dwelling units in districts allowing residential uses
   Total future dwelling units – existing dwelling units = new dwelling units needed

6. Multiply dwelling units needed by a market factor (typically 1.25 to 2.0)

7. New dwelling units needed x market factor = total additional dwelling units

8. Determine land needed to accommodate additional dwelling units

9. If the proportion of current dwelling units for each residential use district is known, use the following formula:
   % in use district x additional dwelling units = dwelling units needed in district ÷ density = acres of residential land needed in the use district

10. Repeat for each use (or zoning) district and add up the results for each district for a total amount of additional land needed for residential purposes to support the future population

11. If the proportions are not known, use an average residential density for the entire jurisdiction

12. Additional dwelling units ÷ average density = acres of residential land needed

13. Balance the land needed with the land supply
    Total land in urban area
    Subtract land now occupied
    Subtract land that is not available for development (flood plain, conservation lands, other environmental lands that are vacant but have an approval for development, land that is under public ownership)
    Subtract land that is allocated to non-residential uses (determined separately – see separate methodology)
    Total land – land in residential use – land that is not available – land allocated for non-residential = land available for new residential development

14. Compare land needed to land available and adjust boundaries as required.

Methodology for Non-Residential Land Needs

Land use needs for commercial, office, and industrial may be determined through a market analysis by an economist. If this is not done, the following methodology is recommended.

1. For commercial, office, and industrial compare the current population to the current amount of land in use for these activities.

2. Divide acres of land in each category by population, in thousands, to calculate the ratio of commercial land per 1,000 people
   Acres of land ÷ (population ÷1,000) = ratio

3. For educational, civic, and recreational land, use an adopted level of service. If no adopted level of service is available, use the ratio method in #1.

4. Adjustments are not necessary when the ratio method is used. The application of a ratio inherently includes adjustment for lands not available for development.

5. For any of these non-residential land uses, public policy may require an adjustment. (For example, if the local government has determined that the current amount of industrial land is not sufficient, projecting the current ratio into the future will not correct the deficiency. The adjustment that must be made does not result from a formula, but from a determination of the effects of the policy.)

An alternate method is to use national trends to allocate some of these land uses. Information is generally available concerning the average amount of commercial or industrial land for jurisdictions in various situations and population ranges.