

URBAN GROWTH BOUNDARY REPORT
FOR THE
CITY OF COOKEVILLE, TENNESSEE

OCTOBER 1999

TABLE OF CONTENTS
COOKEVILLE URBAN GROWTH BOUNDARY REPORT

	<u>PAGE NO.</u>
INTRODUCTION	1
PURPOSE OF REPORT	1
POPULATION PROJECTIONS	2
PROJECTED GROWTH BY POPULATION DENSITY	3
EXISTING LAND USE INVENTORY AND ANALYSIS	3
FUTURE LAND USE NEEDS	4
HISTORICAL GROWTH TRENDS	7
VACANT LAND ANALYSIS	7
SUMMARY OF ESTIMATED FUTURE LAND REQUIREMENTS	8
FRINGE AREA ANALYSIS	8
PUBLIC INFRASTRUCTURE, SERVICES, AND FACILITIES	9
URBAN GROWTH BOUNDARY	11
ESTIMATED COSTS FOR URBAN SERVICES	12

INTRODUCTION

In 1998 the Tennessee General Assembly, through Public Chapter 1101, established the requirement for the preparation of 20-year growth policy plans for every county in the State. This act calls for the creation of a coordinating committee in each county for the purpose of formulating the countywide growth policy plan. The membership of the coordinating committee is composed of representatives of the county and cities. The county and cities may propose boundaries to the committee. The plan, when completed by the coordinating committee, is submitted to each city and county for ratification. Following ratification by each city and county, the growth plan must then be submitted to and approved by the State Local Government Planning Advisory Committee. The plan is then to be recorded with the register's office. Once a plan is adopted it cannot be amended for a period of three years. The amendment process is the same as that for initial adoption.

Public Chapter 1101 provides that three distinct types of growth areas may be identified in each county. These growth areas are:

- (1) "Urban Growth Boundaries", areas that contain the corporate limits of a municipality and the adjoining territory where growth is expected;
- (2) "Planned Growth Areas", areas outside Urban Growth Boundaries where growth is expected; and
- (3) "Rural Areas", areas outside the other two categories to be preserved for agriculture, recreation, forest, wildlife, and uses other than high-density residential, commercial or industrial development.

PURPOSE OF REPORT

The purpose of this document is to identify an Urban Growth Boundary for the City of Cookeville for submission to the Putnam County Coordinating Committee. Section 7 of Public Chapter 1101 specifies five criteria to be considered in the process of identifying this area. These criteria are as follows:

- (A) Identify territory that is reasonably compact yet sufficiently large to accommodate residential and nonresidential growth projected to occur during the next 20 years;
- (B) Identify territory that is contiguous to the existing boundaries of the municipality;
- (C) Identify territory that a reasonable and prudent person would project as the likely site of high density commercial, industrial and/or residential growth over the next 20 years based on historical experience, economic trends, population growth patterns and topographic characteristics;
- (D) Identify territory in which the municipality is better able and prepared than other municipalities to efficiently and effectively provide urban services; and
- (E) Reflect the municipality's duty to facilitate full development of resources within the current boundaries of the municipality and to manage and control urban expansion outside of such current boundaries, taking into account the impact to agricultural lands, forests, recreational areas and wildlife management areas.

The process utilized to identify the Cookeville Urban Growth Boundary involves several elements. Primary factors that are considered include population projections, growth projections by population density, existing land use characteristics, future land use needs, and historical growth trends. The capability of the vacant land within the municipality to meet the future land use needs is also examined. An analysis of the fringe area surrounding the municipality is completed to assess the level and intensity of development and to evaluate its suitability and potential for urban type development. Other factors considered include the need for the provision of core infrastructure, urban level services, and public facilities.

POPULATION PROJECTIONS

To evaluate a county or city’s growth potential the preparation of population projections is required. Population projections are necessary to project future land use trends. Public Chapter 1101 mandates the utilization of population projections prepared by the University of Tennessee Center for Business and Economic Research (UT-CBER) in January 1999. The UT-CBER population projections for the City of Cookeville and Putnam County to the year 2020 are presented in Table 1.

TABLE 1
PROJECTED POPULATION COUNTS AND PERCENT CHANGE
CITY OF COOKEVILLE AND PUTNAM COUNTY
TO 2020

	1990	Percent Change 1990-2000	2000	Percent Change 2000-2010	2010	Percent Change 2010-2020	2020
Cookeville	21,744	24.7%	27,120	16.7%	31,655	14.8%	36,337
Putnam County	51,568	17.2%	60,452	11.0%	67,128	9.2%	73,308

According to the UT-CBER projections, the population of the City of Cookeville will be 36,337 in the year 2020. This represents an increase of approximately 14,600 persons and a growth rate of nearly 70 percent for the period between 1990 and 2020. The total population of Putnam County is projected to increase by 21,740 persons by the year 2020, which is a growth rate of just over 40 percent. The City of Cookeville’s annual growth rate through the year 2020 as projected by UT-CBER is over 2.2 percent. Putnam County’s annual growth rate is projected by UT-CBER to be 1.4 percent for the 30 year period, or almost half that of the municipality.

The UT-CBER population projections indicate that approximately 67 percent of the county's total projected population increase will occur within the City of Cookeville. Furthermore, according to UT-CBER, half of the county's total population will be located within the corporate limits of Cookeville by the year 2020. The percentage of Putnam County's projected population located within the City of Cookeville is presented in Table 2.

TABLE 2
SUMMARY OF PROJECTED POPULATION AS A PERCENTAGE OF THE
TOTAL COUNTY POPULATION
TO 2020

	1990	Percent Of Total	2000	Percent Of Total	2010	Percent Of Total	2020	Percent Of Total
Cookeville	21,744		27,120		31,655		36,337	
		42.2%		44.9%		47.2%		49.6%
Putnam County	51,568		60,452		67,128		73,308	

PROJECTED GROWTH BY POPULATION DENSITY

Future growth can be estimated by applying existing population densities to projected population levels. The current population density in the City of Cookeville is 1.55 persons per acre (21,744 persons on 14,050 acres). When the city's current population density is applied to the year 2020 projected population of 36,337 a total required land area of 23,440 acres or an increase of approximately 9,400 acres is indicated.

EXISTING LAND USE INVENTORY AND ANALYSIS

As a part of a comprehensive planning effort, the municipality's Department of Planning and Codes completed a land use inventory of the City of Cookeville in the summer of 1999. The primary purpose of this inventory was to determine how each parcel of land within the municipality is utilized. Each individual land use was assigned to a general land use category. These land use categories include residential, commercial/private services, industrial, public services/cultural/recreational, utilities, transportation, and vacant land. According to the 1999 land use inventory, of the 14,050 acres located within the corporate limits of the City of Cookeville nearly 70 percent, or approximately 9,500 acres, is developed. Just over 30 percent of the municipality's total land area, or approximately 4,500 acres, is classified as vacant land. Table 3 presents a summary of land use in the City of Cookeville by acreage and as a percentage of total land.

TABLE 3
LAND USE BY ACREAGE
AND AS PERCENT OF TOTAL LAND
CITY OF COOKEVILLE

LAND USE CATEGORY	ACRES	PERCENT OF TOTAL
Residential	4,178	29.8
Commercial/Private Services	1,176	8.4
Industrial	633	4.5
Public/Cultural/Recreational	1,480	10.5
Utilities	71	0.5
Transportation	1,970	14.0
DEVELOPED LAND	9,508	67.7
VACANT LAND	4,542	32.3
TOTAL LAND AREA	14,050	100

FUTURE LAND USE NEEDS

The projected future land use needs of the municipality are a primary determining factor for delineating an Urban Growth Boundary. If the projected future land use needs can not be absorbed by the available acreage within the corporate limits then acreage for future growth outside the corporate limits must be identified and preserved for this future growth. To determine future land use needs the inventory of existing land use completed by the Department of Planning and Codes in 1999 is utilized to calculate densities of development. The existing land use densities are then applied to the projected population to estimate future land use needs. Presented in the following are projected land use needs to the year 2020 for each of the land use categories.

Residential

Nearly 30 percent of the total land area or 4,178 acres in Cookeville is occupied by residential land uses. These residential land uses consists of approximately 10,070 dwelling units. The 4,178 acres of residential land use when applied to the current population result in a residential density of 5.2 acres per person. When this density is applied to the projected population increase then an additional 2,810 acres of land will be needed to meet the residential land use demands by the year 2020.

Commercial/Private Services

The City of Cookeville is not only the commercial center for Putnam County but also for a large portion of the Upper Cumberland Region. According to the 1999 inventory, 1,178 acres of land in Cookeville are occupied by commercial and/or private service land use. This results in a commercial/private service density of 18.4 acres per person. When this density is applied to the projected population increase then an additional approximately 795 acres of land will be needed to meet the commercial/private service land use demands by the year 2020.

Industrial

It is expected that the City of Cookeville will continue as the major employment center for Putnam County and for a number of adjacent counties. The 1999 land use inventory indicates that 633 acres of land in Cookeville are use for industrial purposes. This indicates an industrial land use density of 34.3 acres per person. When this density is applied to the projected population increase then approximately 425 additional acres of land will be needed to meet the industrial land use needs by the year 2020.

As there are less than 150 acres of land in the municipality's existing industrial parks available for future industrial development, the acquisition of additional lands will be necessary to meet the projected land use needs. The decision by large industrial development to locate within the municipality could substantially affect the projected future land use needs in this category. It is anticipated the Urban Growth Boundary would be amended as necessary should this occur.

Public/Cultural/Recreational

The importance of the City of Cookeville to Putnam County and the Upper Cumberland Region as a principal provider of public services, cultural and recreational land uses is projected to continue through the 20-year planning period. According to the 1999 inventory 1,480 acres of land in Cookeville are utilized by public services, cultural, or recreational land uses. This results in a density of 14.7 persons per acre. Applying this density to the projected population increase indicates that an additional approximately 995 acres of land will be needed to meet the public service, cultural and recreational land use demands by the year 2020.

Several factors could significantly alter the projected public service, cultural and recreational land use demands. Any substantial expansions of Tennessee Technological University, which is the only 4-year college in the Upper Cumberland Region, or Cookeville Regional Medical Center, which is the primary medical facility for much of the region, will require the acquisition of additional properties. One other potential impact on the future land use needs in this category is the planned development of the Nashville Tech Cookeville Center.

Utilities

The City of Cookeville is the largest provider and location for utilities in Putnam County. Within the municipality approximately 71 acres of land are occupied by various utilities, which includes the facilities necessary for the city's water, sewer, electric and gas systems. The 71 acres represents a density of 306 persons per acre of land used for utilities. When this density is applied to the projected population increase approximately 48 additional acres of land will be needed to meet the land use needs of the various utilities by the year 2020.

Transportation

Land used for transportation purposes occupy approximately 1,970 acres of land in the City of Cookeville. This indicates a density of 11 persons per acre of land occupied by transportation uses. Applying this density to the projected population increase indicates that an additional approximately 1,330 acres of land will be needed to meet the transportation land use demands by the year 2020.

Market Factor

The exact projection of future land use needs is difficult if not impossible due to unpredictable events. Dramatic upswings or downswings in the national economy will affect future land use development. The construction of major thoroughfares will spur construction. A decision by a major employer to locate in the area will affect all areas of land use development.

To account for the impact of unpredictable events a market or safety factor is traditionally applied to future land use projections. The utilization of a market factor is especially valid when operating under the limitations of an Urban Growth Boundary. Such a boundary effectively restricts where a municipality can grow and expand. A conservative market factor of 25 percent is utilized in the projected future land use needs for the City of Cookeville.

Summary of Future Land Use Needs

Table 4 presents a summary of the year 2020 projected land use needs for the City of Cookeville by land use category.

TABLE 4
CITY OF COOKEVILLE
PROJECTED LAND USE NEEDS
BY 2020

LAND USE CATEGORY	CURRENT DENSITY PER ACRE	FUTURE ACREAGE NEEDED
Residential	5.2	2,810
Commercial	18.4	790
Industrial	34.3	425
Public, Cultural, and Recreational	14.7	995
Utilities	306.0	50
Transportation	11.0	1,330
SUBTOTAL		6,400
Plus 25 % Market Factor		1,600
TOTAL		8,000

The application of current land use development densities to the projected year 2020 population indicates that a minimum of 8,000 acres of land will be necessary to accommodate future land use needs of the City of Cookeville.

HISTORICAL GROWTH TRENDS

An additional method for estimating future growth of a municipality is an analysis of past growth trends. To determine a historical growth rate for the City of Cookeville the total land area determined in the 1999 land use inventory was compared to a land use inventory completed in 1964 as a part of the Cookeville, Tennessee Land Use Plan for 1980. This comparison indicates that the land area of the City of Cookeville increased by approximately 12,000 acres during the 35-year period between 1964 and 1999. This represents an annual average increase in land area of approximately 343 acres. Assuming the same rate of growth over the 20-year planning period the City of Cookeville would need an additional 6,840 acres of land area by 2020.

VACANT LAND ANALYSIS

According to the 1999 land use inventory there are approximately 4,542 acres of vacant land within the City of Cookeville. However, as indicated in Table 5, an estimated 1,273 acres of this vacant land has physical or other constraints that significantly limit their potential for development. This leaves approximately 3,269 acres of land within the municipality for future development. As noted previously, an additional 8,000 acres of land will be necessary to meet the city's future land use demands to the year 2020. If all of the vacant land suitable for development in the municipality is utilized, then an estimated 4,731 acres of vacant land will still be needed to meet the future land use needs.

TABLE 5

SUMMARY OF VACANT LAND BY CONSTRAINTS TO DEVELOPMENT CITY OF COOKEVILLE

CONSTRAINT	ACREAGE	PERCENT
Topography	529	11.6
Flood Plain	125	2.8
Sinkholes	107	2.3
Poor Soils	454	10.0
Utility Easements	58	1.3
Total with Constraints	1,273	28.0
No Constraints	3,269	72.0
Total Vacant Land	4,542	100%

SUMMARY OF ESTIMATED FUTURE LAND REQUIREMENTS

The three methods utilized in this report for projecting future land area requirements indicate that between approximately 5,000 to 7,000 acres of land outside the current corporate limits will be necessary to accommodate the future growth of the City of Cookeville to the year 2020.

FRINGE AREA ANALYSIS

In anticipation of the identification of an Urban Growth Boundary, the inventory of the municipality's existing land use completed by the Department of Planning and Codes in the summer of 1999 also included a significant fringe area surrounding the City of Cookeville. The area studied consisted of nearly 24,000 acres of unincorporated territory. Each parcel of land in the study area was classified by land use categories. Table 6 presents a summary of existing land use in the Cookeville Fringe Area by acreage and as a percent of the total land in the unincorporated study area.

TABLE 6

LAND USE BY ACREAGE AND AS PERCENT OF TOTAL LAND COOKEVILLE FRINGE AREA

LAND USE CATEGORY	ACRES	PERCENT OF TOTAL
Residential	5,775	24.1
Commercial/Private Services	542	2.2
Industrial	90	0.4
Public/Cultural/Recreational	831	3.5
Utilities	9	0.1
Transportation	1,170	5.1
DEVELOPED LAND	8,416	35.1
VACANT LAND	15,563	64.9
TOTAL LAND AREA	23,980	100

PUBLIC INFRASTRUCTURE, SERVICES, AND FACILITIES

A significant portion of the fringe area around the City of Cookeville has already developed at urban densities; however, without the urban services necessary to support it. The lack of or substandard infrastructure, urban services, and public facilities in areas developed at urban densities can result in unsafe and unpleasant living conditions. The City of Cookeville has the capacity to provide the necessary infrastructure, services, and facilities to a substantial area outside its current corporate limits. In fact, for many of the services and facilities necessary for urban density development, the City of Cookeville is the only available entity with the capability of providing such services and facilities.

In the following sections the public infrastructure, services and facilities that are necessary for development at urban level densities are reviewed.

Public Water Supply and Distribution

Public water service is available to all developed portions of Cookeville and is provided entirely by the municipality's Department of Water Quality Control. The city's water department also either serves or provides the water for all of the fringe area surrounding the municipality. Development of the fringe area around the municipality is dependent upon the ability of the City of Cookeville to produce potable water. Planned improvements to the city's water supply and treatment capacities should allow the Department of Water Quality Control to meet expected water demands through the year 2020.

Sanitary Sewer

The City of Cookeville Department of Water Quality Control provides sanitary sewer service for the residents of the municipality. Approximately 90 percent of the municipality currently has access to public sewer service. The Department of Water Quality Control is currently implementing a plan for completing the provision of public sewer service to all developed areas within the municipality within the next five years. As less than half of the municipality's wastewater treatment capacity is currently utilized, a substantial amount of growth can be accommodated.

Public sewer service is not available to the unincorporated fringe area. Several residential subdivisions with hundreds of single-family homes have been developed on the edge of the municipality. Most of the homes are located on lots of approximately 20,000 square feet in size and are served by subsurface sewage disposal systems. Many of these systems can be expected to fail over the next 20 years, resulting in potential health problems. The provision of a public sewerage treatment system will be the best solution and the City of Cookeville has the only public sewer system.

Natural Gas

Natural gas service within the City of Cookeville and much of the area surrounding the municipality is provided by the Cookeville Natural Gas System. Portions of the area around the municipality are also served by Middle Tennessee Natural Gas. A mechanism is in place between the Cookeville and Middle Tennessee Natural Gas Systems for determining service responsibilities. The present natural gas supply should more than adequately meet the future natural gas needs of the City of Cookeville Natural Gas System's service area.

Electricity

The Cookeville Electric System serves all of Cookeville and certain areas outside the municipality. The Upper Cumberland Electric Membership Cooperative serves those portions of the area immediately surrounding the municipality not served by the Cookeville Electric System. The present power supply of the City of Cookeville Electric System should more than adequately meet the future electric needs of its service area.

Recreation

The City of Cookeville is a principal provider of recreational services and facilities for Putnam County. Many of the residents in the fringe area of Cookeville already utilize the recreational services and facilities operated and maintained by the city. Existing and planned municipal recreational facilities can adequately serve a substantial area outside the current corporate limits.

Fire Protection

The residents of the City of Cookeville are served by the Cookeville Fire Department and benefit from a Class 4 ISO rating. The Cookeville Fire Department has three stations located within the municipality that are manned 24 hours a day 7 days a week. A fourth station is planned for the southeast section of the municipality. The residents outside the municipality are served by volunteer fire departments that provide a Class 9 ISO rating.

Police Protection

The Cookeville Police Department serves the residents of the City of Cookeville. The municipality is patrolled 24 hours a day and an average response time of 3 to 4 minutes is provided for the residents or businesses needing police assistance. Property owners outside the municipality are served by the Putnam County Sheriff's Department.

Solid Waste Collection

The City of Cookeville provides weekly garbage pickup for its residents. Citizens residing in the fringe area surrounding the municipality must either contract for private garbage collection or haul their solid waste to one of the county's convenience centers.

Education

The county operates all public schools in Putnam County. Within the City of Cookeville there are 6 elementary schools, 2 middle schools, and 1 high school. There are no public schools located in the unincorporated area surrounding the municipality.

Planning, Land Use Controls and Building Codes

Planning, land use controls, and building codes are provided, administered and enforced by the City of Cookeville through its Department of Planning and Codes. The municipality's subdivision regulations are enforced within the Cookeville Planning Region, which includes an area outside the municipality. Zoning and building codes are enforced within the municipality. Putnam County provides planning and subdivision regulations for areas outside the Cookeville Planning Region through a contract with the Local Planning Assistance Office. No zoning protection or building codes are provided for the citizens residing in the fringe area surrounding the municipality.

URBAN GROWTH BOUNDARY

The proposed Urban Growth Boundary for the City of Cookeville is depicted in Illustration 1. The identification of the Urban Growth Boundary is intended to comply with the five criteria specified in Public Chapter 1101. First, the area is reasonably compact yet sufficiently large to accommodate growth and development projected to occur by year 2020. Second, all of the territory included within the Urban Growth Boundary is contiguous with the existing municipal corporate boundary. Third, it is expected that the area within the Urban Growth Boundary will most likely to develop at urban level densities over the next 20 years. Fourth, the City of Cookeville has the capability to provide the services necessary for development at urban level densities within the Urban Growth Boundary. Fifth, the area reflects the municipality's duty to facilitate full development of resources inside the corporate limits and to manage and control urban expansion outside the corporate limits. A brief description and analysis of the area identified in the City of Cookeville Urban Growth Boundary is provided in the following.

General Description of Urban Growth Boundary

The Urban Growth Boundary for the City of Cookeville extends approximately 1.5 miles to the north on State Highways 135 and 136. On the west the boundary extends approximately 2.7 miles on State Highway 290, approximately 0.9 miles on Highway 70N, and approximately 2.6 miles on Interstate 40. Along State Highway 135 to the southwest the boundary extends approximately 0.75 miles. To the southeast the boundary follows the Falling Water River. On the east the boundary extends approximately 1.9 miles on Interstate 40 and approximately 0.6 miles on Buck Mountain Road. In an effort to delineate boundaries with some permanence and ease of identification, the boundary lines, with the exception of the Falling Water River, primarily follow existing parcel lines.

Analysis of Urban Growth Boundary

The unincorporated territory proposed for inclusion within the Cookeville Urban Growth Boundary consists of approximately 18,500 acres. Table 7 presents a summary of existing land use in the unincorporated portion of the Urban Growth Boundary. Within these 18,500 acres approximately 5,800 acres or 31 percent is developed and 12,700 acres or 69 percent is vacant land. As Table 8 reflects, of these 12,700 acres of vacant land only an estimated 10,000 acres are suitable for development. It is further anticipated that a portion of this vacant land will be preserved as open space or utilized for agricultural purposes throughout the 20 year planning period. Although the estimated acreage available for development in the proposed Urban Growth Boundary slightly exceeds the municipality's projected land area requirements, the additional acreage is required to accommodate major thoroughfare improvements planned by the Tennessee Department of Transportation. The primary accommodation is the westward extension of the Urban Growth Boundary to include the location of a proposed Interstate 40 interchange.

TABLE 7
LAND USE BY ACREAGE
AND AS PERCENT OF TOTAL LAND
UNINCORPORATED URBAN GROWTH AREA

LAND USE CATEGORY	ACRES	PERCENT OF TOTAL
Residential	3,732	20.1
Commercial/Private Services	446	2.4
Industrial	65	0.4
Public/Cultural/Recreational	674	3.7
Utilities	7	0.0
Transportation	913	4.9
DEVELOPED LAND	5,837	31.5
VACANT LAND	12,704	68.5
TOTAL LAND AREA	18,541	100

TABLE 8
SUMMARY OF VACANT LAND
BY CONSTRAINTS TO DEVELOPMENT
UNINCORPORATED URBAN GROWTH AREA

CONSTRAINT	ACREAGE	PERCENT
Topography	598	4.7
Flood Plain	244	1.9
Sinkholes	225	1.8
Poor Soils	1,545	12.2
Utility Easements	101	0.8
Total with Constraints	2,713	21.4
No Constraints	9,991	78.6
Total Vacant Land	12,704	100

URBAN GROWTH BOUNDARY MAP

ESTIMATED COSTS FOR URBAN SERVICES

It is anticipated that the areas proposed for inclusion within the Cookeville Urban Growth Boundary will continue to receive the same level of public infrastructure, services and facilities that they currently receive until such time as any portion of the UGB is annexed by the City of Cookeville. When and if an area within the UGB is proposed for annexation by the City of Cookeville, the municipality will develop detailed estimates for the provision of urban services. A Plan of Services, specifying when urban services will be provided and who will provide them, will also be prepared by the municipality for any area proposed for annexation.

As noted in the Public Infrastructure, Services and Facilities section of this Urban Growth Boundary Report, with the exception of public sewer service, the core infrastructure, urban services and public facilities necessary to facilitate full development within the municipality are in place throughout the existing corporate limits. It is estimated that 90 to 95 percent of the municipality has access to public sewer. The Cookeville Department of Water Quality Control is currently implementing plans to provide sewer service to all developed portions of the municipality within the next five (5) years. The estimated costs for completing the provision of sewer service in the municipality is \$3 million to \$5 million.

Public Chapter 1101, Section 7 (a)(1)(D) requires that the urban growth areas of a municipality shall: “identify territory in which the municipality is better able and prepared than other municipalities to efficiently and effectively provide urban services”. For the area proposed for inclusion within the Cookeville UGB, the City of Cookeville is the only municipality, and in fact the only entity than can feasibly provide urban services. As stated above urban level services will be provided to the areas within the UGB only when and if the areas are annexed. The urban level services specified in Public Chapter 1101 as being required in a Plan of Services include police protection, fire protection, water service, electrical service, sanitary sewer service, solid waste collection, road and street construction and repair, recreational facilities and programs, street lighting, and zoning services. A summary of the estimated costs for the provision of these services, assuming annexation of the entire UGB, is presented in the following:

Police Protection: The level of police protection within the current corporate limits is considered excellent and the same level would be provided to the UGB when and if it is annexed. The current annual budget for the Cookeville Police Department is \$4.5 million. This represents a per capita cost of \$202.55. Assuming complete annexation of the UGB and a population level of 36,337 the total annual budget for police services would be \$7.3 million or an increase of \$2.8 million. No new major capital improvements are anticipated to provide police service to the entire UGB.

Fire Protection: The Cookeville Fire Department currently provides the residents of Cookeville with a Class 4 level of protection. This same level of protection would be extended to the UGB when and if it is annexed. The current annual budget for the Cookeville Fire Department is \$2.4 million. This represents a per person cost of \$108.03. Assuming complete annexation of the UGB and a population level of 36,337 the total annual budget for fire service would be \$3.9 million or an increase of \$1.5 million. Two (2) new fire stations, one in the northwest section and one in the southeast section of the municipality will be needed to serve the entire UGB. The estimated one time cost for these stations, including land acquisition, is \$1 million each. The estimated one time cost for providing the fire trucks and equipment for these stations is \$750,000 each.

Water Service: The Cookeville Department of Water Quality Control currently serves approximately 25 percent of the unincorporated area within the Urban Growth Boundary, including the entire southeastern section, and portions of the southern, southwestern and western sections. In addition the City of Cookeville provides the water to the four (4) water utility districts that serve the remaining sections of the UGB. These utility districts have extended water lines to all developed areas within the UGB. However, approximately 40 miles of the existing water lines are less than six (6) inches in size and are not suitable for adequate fire protection. As the potential annexation of properties within the UGB does not require that the City of Cookeville purchase the right to service any such properties from existing utility districts this cost has not been calculated. The cost for upgrading the existing substandard water lines is estimated to cost \$20 dollars per linear foot or a total cost of \$4.2 million. The current annual budget for water distribution system maintenance and water plant operation is \$1.9 million or \$85.50 per capita. Assuming complete annexation of the UGB and a population level of 36,337 the total annual budget for water service would be \$3.1 million or an increase of \$1.2 million.

Due to the effective enforcement of the Putnam County Subdivision Regulations a significant portion of the UGB has been adequately provided with fire hydrants. It is estimated that an additional 250 hydrants would be needed to adequately serve the UGB. The total cost to provide these hydrants at \$1,200 per hydrant is \$300,000. The cost for the extension of water service to any undeveloped areas in the UGB annexed by the City of Cookeville will be the responsibility of the developer as per the municipality's utility extension policy and subdivision regulations.

Electrical Service: The unincorporated properties within the Urban Growth Boundary are provided electrical service by the Upper Cumberland Electric Membership Cooperative. The UCMEC has the capacity to provide electrical service for the full development of the UGB. As the potential annexation of properties within the UGB does not require that the City of Cookeville purchase the service area from the UCMEC, this cost has not been calculated.

Sewer Service: Sanitary sewer service is not available to the unincorporated areas within the proposed Urban Growth Boundary. The Cookeville Department of Water Quality Control is the only entity with the capacity and capability of providing sewer service to these areas. Approximately 100 miles of sewer lines would be required to provide sewer service to the developed areas with the entire unincorporated portion of the UGB should it be annexed. The cost for the provision of sewer service to the developed portions of the UGB is estimated at \$35 per linear foot or a total \$18.5 million. The current annual budget for sewer collection, sewer lift station, and sewer plant operation is \$1.3 million or \$58.50 per capita. Assuming complete annexation of the UGB and a population level of 36,337 the total annual budget for sewer service would be \$2.1 million or an increase of \$800,000. The cost for the extension of sewer service to any undeveloped areas in the UGB annexed by the City of Cookeville will be the responsibility of the developer as per the municipality's utility extension policy and subdivision regulations.

Solid Waste Collection: Weekly solid waste collection will be provided by the City of Cookeville to residential properties within the Urban Growth Boundary when and if it is annexed. The current annual budget for residential solid waste collection is \$330,000 or \$14.85 per capita. Assuming complete annexation of the UGB and a population level of 36,337 the total annual budget for residential solid waste collection would be \$540,000 or an increase of \$210,000. It is estimated that two (2) additional garbage trucks will be necessary to serve the entire area within the UGB. The estimated one-time cost for these garbage trucks is \$200,000 each or \$400,000. Solid waste collection for commercial and industrial properties in the UGB will also be provided by the City of Cookeville should the UGB be annexed. Funding for commercial and industrial solid waste collection will be provided through collection fees.

Road and Street Construction and Repair: There are approximately 101 miles of local streets located in the unincorporated areas within the proposed Urban Growth Boundary. Maintenance and repair of these local streets will become the responsibility of the Cookeville Public Works Department when and if the Urban Growth Boundary is annexed. Due to an effective road surfacing and maintenance effort by the Putnam County Road Department the vast majority of the roads in the unincorporated areas of the UGB are in better than average condition and would not need immediate repairs should the areas be annexed. The current annual budget for public works (including the state street aid fund) is \$2.1 million or \$94.50 per capita. Assuming complete annexation of the UGB and a population level of 36,337 the total annual budget for public works would be \$3.4 or an increase of \$1.3 million. New street construction in the UGB will generally be the responsibility of the developer as per the subdivision regulations.

Recreational Facilities and Programs: The City of Cookeville is the primary provider of recreational facilities and programs for most of Putnam County and the residents of the proposed UGB already enjoy access to these facilities and programs. The facilities of the Cookeville Department of Leisure Services, in terms of quantity and availability, exceed national standards. The Department of Leisure Service has completed Master Plan which indicates that one additional recreational/park facility will be necessary to adequately serve the UGB, when and if it is annexed. This facility should be located in the southwestern section of the municipality. The one time cost for the development of this facility is estimated a \$1 million. The current annual budget for park maintenance is \$640,000 or \$28.80 per capita. Assuming complete annexation of the UGB and a population level of 36,337 the total annual budget for park maintenance would be \$1.04 million or an increase of \$400,000.

Street Lighting: Street lighting will be provided to the Urban Growth Boundary when and if it is annexed. The standard for the installation of streetlights is approximately every 200 feet. There are an estimated 108 miles of local and state thoroughfares located in the unincorporated areas of the UGB. Assuming complete annexation of the UGB approximately 2,850 streetlights would need to be installed. The one-time cost for the installation of these streetlights, at \$150.00 per light, is estimated at \$430,000. The annual cost for the purchase of power would be \$63,000.

Zoning Services: Zoning, planning and building code services will be provided for the Urban Growth Boundary when and if it is annexed. The current annual budget for the Department of Planning and Codes is \$530,000 or \$23.85 per capita. Assuming complete annexation of the UGB and a population level of 36,337 the total annual budget for zoning and related services would be \$860,000 or an increase of \$330,000.

Summary of Annual and One-time Costs

A summary of the estimated annual and one-time costs to expand core infrastructure, urban services, and public facilities throughout the all the territory under consideration for inclusion within the Urban Growth Boundary of the City of Cookeville is presented in the following:

	<u>Annual Costs</u>	<u>One-time Costs</u>
Police Protection	\$2,800,000	\$0
Fire Protection	\$1,500,000	\$3,500,000
Water Service	\$1,200,000	\$4,500,000
Electrical Service	\$0	\$0
Sewer Service	\$800,000	\$18,500,000
Solid Waste	\$210,000	\$400,000
Streets	\$1,300,000	\$0
Recreation	\$400,000	\$1,000,000
Street Lighting	\$63,000	\$430,000
Zoning	<u>\$330,000</u>	<u>\$0</u>
 Totals	 \$8,603,000	 \$28,330,000

The estimates depicted above assume that where existing water utility districts adequately serve territories within the proposed Urban Growth Boundaries they will continue to serve these territories when and if the City of Cookeville annexes any portion of these territories. These estimates also assume that the Upper Cumberland Electric Membership Cooperative will continue to provide electrical service within the UGB. These assumptions are based on the following:

1. Public Chapter 1101 requires only that estimates be developed for the provision of infrastructure, services and facilities necessary to serve the area within the UGB.
2. The municipality is not required under the current annexation legislation to purchase service areas of existing utility districts when and if it annexes.

It should be noted that the cost estimates presented herein are based on current dollar figures and assume complete annexation of the entire UGB. The City of Cookeville is not committed to the annexation of the entire area within the UGB. The Cookeville Urban Growth Boundary is intended to identify where urban level type development can be expected to occur over the next 20 years and where the municipality may consider annexation over the same period.

Funding the Cost of Required Urban Services

The cost for providing the required urban services to the entire Urban Growth Boundary, assuming complete annexation, will be funded through several sources. These sources include property taxes, local option sales tax, state shared taxes, utility sales, and grant monies. A portion of the cost of providing some of the urban services will also be funded by developers as properties are developed. A summary of major revenues anticipated from the area within the Urban Growth Boundary, assuming complete annexation, is presented in the following:

Property Taxes: The City of Cookeville's current property tax rate of \$0.82 per \$100.00 of assessed value is one of the lowest municipal rates in the state. The current annual revenue in the municipality from property taxes is \$2.6 million or \$117.00 per capita. Assuming complete annexation of the UGB and a population level of 36,337 the total revenues from property taxes would be \$4.2 million or an increase of \$1.6 million.

Local Sales Tax: The current annual revenues from the local option sales tax in the municipality is \$5.3 million or \$238.60 per capita. Assuming complete annexation of the UGB and a population level of 36,337 the total revenues from the local sales tax would be \$8.7 million or an increase of \$3.4 million.

State Shared Taxes: Revenues from state shared taxes are based on a per capita basis of approximately \$100.00. Utilizing the municipality's current certified population of 22,216 the city receives approximately \$2.2 million annually in state shared taxes. Assuming complete annexation of the UGB and a population level of 36,337 the total revenues from state shared taxes would be \$3.6 million or an increase of \$1.4 million.

Utility User Fees: Current revenues to the Cookeville Department of Water Quality Control from metered water sales, including sewer revenues, is \$6.2 million or \$279.00 per capita. Assuming complete annexation of the UGB and a population level of 36,337 the total revenues from metered water sales would be \$10.1 million or an increase of \$3.9 million.