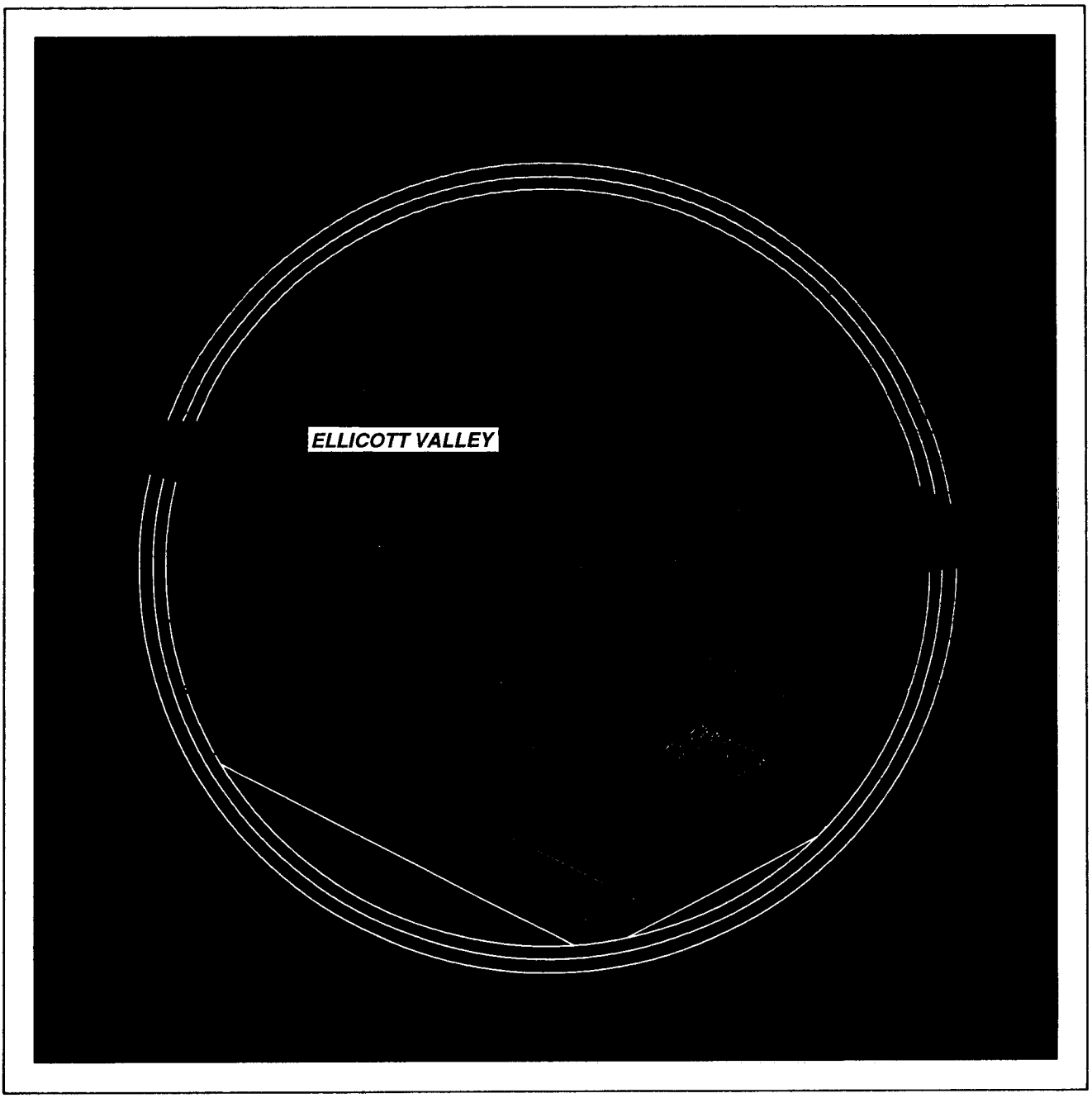
ELLICOTT VALLEY COMPREHENSIVE PLAN



MARCH 1989

EL PASO COUNTY
PLANNING DEPARTMENT

ACKNOWLEDGEMENTS

I would like to take this opportunity to recognize the many agencies and individuals who were instrumental in making this planning effort a success. Over a three-year planning process the Ellicott Valley Citizens' Advisory Committee volunteered their time to participate in numerous working and public meetings.

Special Credit should go to Buddy Babcock for his tireless efforts as Chairman of the Citizens' Advisory Committee. Throughout his tenure Buddy consistently worked to seek out input from a broad spectrum of Valley residents and then endeavored to represent them well.

The adoption of this Comprehensive Plan represents one more important step in the process of completing the County's overall small area planning process. Each of the documents is tailored to address the unique planning needs of a particular sub-area of the County. This Plan is especially significant because for the first time it articulates a comprehensive approach to growth management for satellite development areas. Because of this we anticipate that the Ellicott Valley Comprehensive Plan will serve as a valuable point of beginning for the future planning efforts in the County.

Respectfully submitted,

John D. Fisher, Director
El Paso County Planning Department

Board of County Commissioners

Gary Shupp, Chairman
Loren Whittemore, Vice Chairman
Jim Campbell
Jeri Howells
Marcy Morrison

Ellicott Valley Citizens' Advisory Committee

Buddy Babcock, Chairman
Joe Alexander
Kay Amendt
Darol Dickinson
Dan Gordon
Everett Handle
Ted Schubert
Carl Susemihl
Byron Wall
Dick Wilson

Planning Commission

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Carl Brenning, Jr.
Mary Helen Carlson
Paul Gary Conover
Richard Pfalmer
Frank Royal
Parry Thomas

Associate Members

Paul Grogger
Barbara Ingersoll
Beth Jones
Jerry Martin
Richard Rixon, Jr.
Robert Routh

Other Contributing Individuals and Organizations

Don Smith, El Paso County Department of Public Works
Ruth Lewis Carlson, Colorado Division of Wildlife
Springs East Airport
Dawn, Walker, Mountain View Electric
Susan Worker, Proofreader

Primary Planning Team

Carl Schueler, Senior Planner; Project Coordinator
Bradley Maston, Planner I
Stephen Vigil, Draft/Graphics Technician; Graphic Design and Production

El Paso County Planning Department

John D. Fisher, Director
Kenneth G. Rowberg, Assistant Director
Rick O'Connor, Principal Planner
Zee Anderson, Senior Planner
Carl Schueler, Senior Planner
James Geary, Planner I
Sharon Yates, Planner I
Wanda White, Planner I
Stephen Vigil, Draft/Graphics Technician
Charlene O'Driscoll, Associate Planner
Terrence Rorick, Associate Planner
Elaine Nelson, Executive Secretary
Doris Lyons, Administrative Assistant

Former Staff

Mark Gebhart
Kim B. Headley
Vicki Headley
Bradley Maston
Randall Rutsch
Selena Vaughn

Published by:

El Paso County Planning Department
27 East Vermijo
Colorado Springs, CO 80903
Phone # (719) 520-6300

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OVERVIEW

Introduction

This comprehensive plan for the Ellicott Valley Planning Area is one of a continuing series of Small Area Plans which have been adopted as amendments to the County Master Plan. The primary purpose of this plan is to set forth a framework within which proposed new land uses may begin to be analyzed. This framework accounts for the development characteristics which are unique to this planning area. The plan is intended to serve as an advisory planning tool to guide future land use decisions.

The Ellicott Valley Comprehensive Plan is further intended to encourage responsible economic development in the area. Because of the dynamic nature of the planning area, this plan relies on a "performance-based" approach rather than a series of site-specific or use-specific land use designations. It is anticipated and expected that, as the area develops, it will be necessary to refine this plan to include more specific policies.

This document is organized into a total of four chapters, the first of which is this summary description of the planning area and planning process. Chapter II provides a detailed profile of the area and raises a number of the planning issues which are responded to in the final chapter. The third chapter discusses the area's development potential first terms of external and internal influences and then from the perspective of internal development holding capacity. The fourth and final chapter contains the applied elements of the plan. It begins with specific planning policies which are organized according to several subject headings. These are followed by a textual land use scenario. Included as part of this land use scenario is an in-depth treatment of the principles and practice of growth management planning. Because growth management planning is the primary planning approach advocated in this plan, this section will serve as the key operative element of this document.

Description of the Planning Area

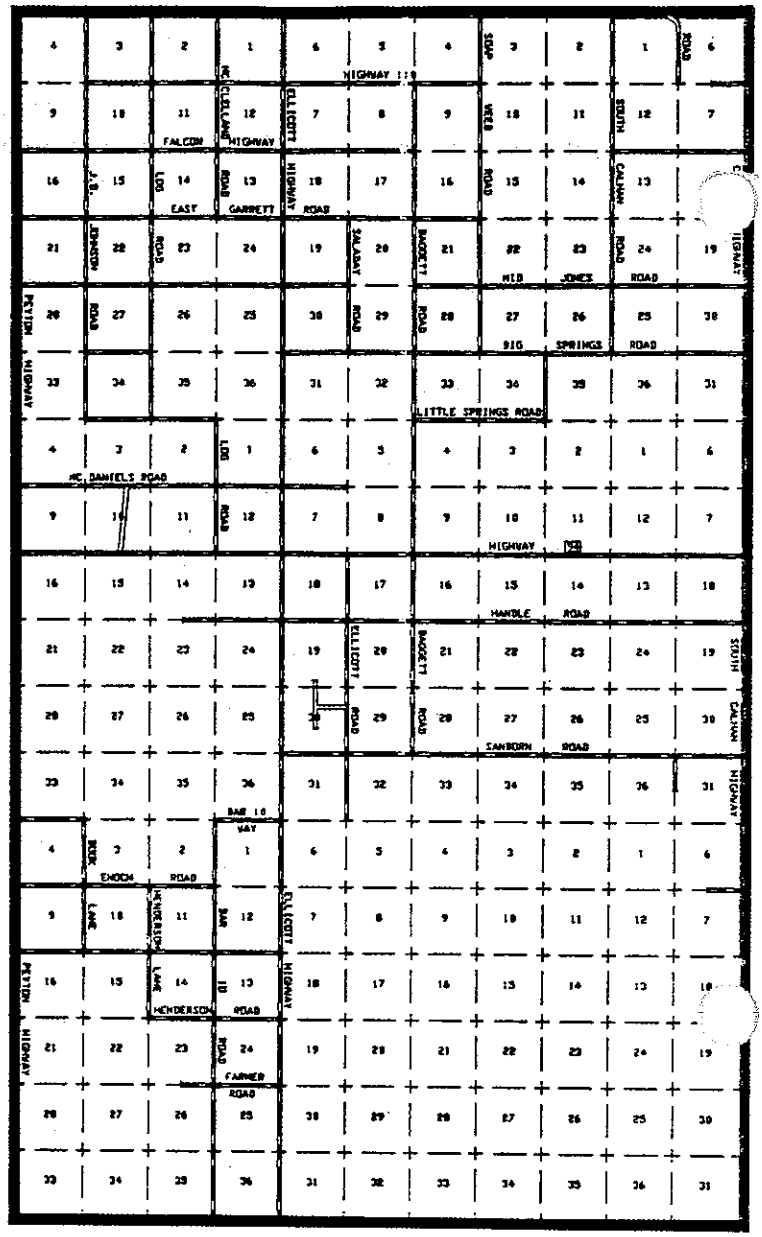
The Ellicott Valley Planning Area was delineated by the Planning Department in cooperation with residents of the Ellicott Valley and then approved by the Board of County Commissioners. As shown on Map 1 the planning area is bounded on the north by Judge Orr Road, on the south by Squirrel Creek Road, on the west by Peyton Highway and on the east by Calhan Highway. This 198 square mile planning area is roughly centered around the unincorporated community of Ellicott. It is this community that gives the Ellicott Valley its name even though the actual "valley" is that of the Upper Black Squirrel Creek and its tributaries.

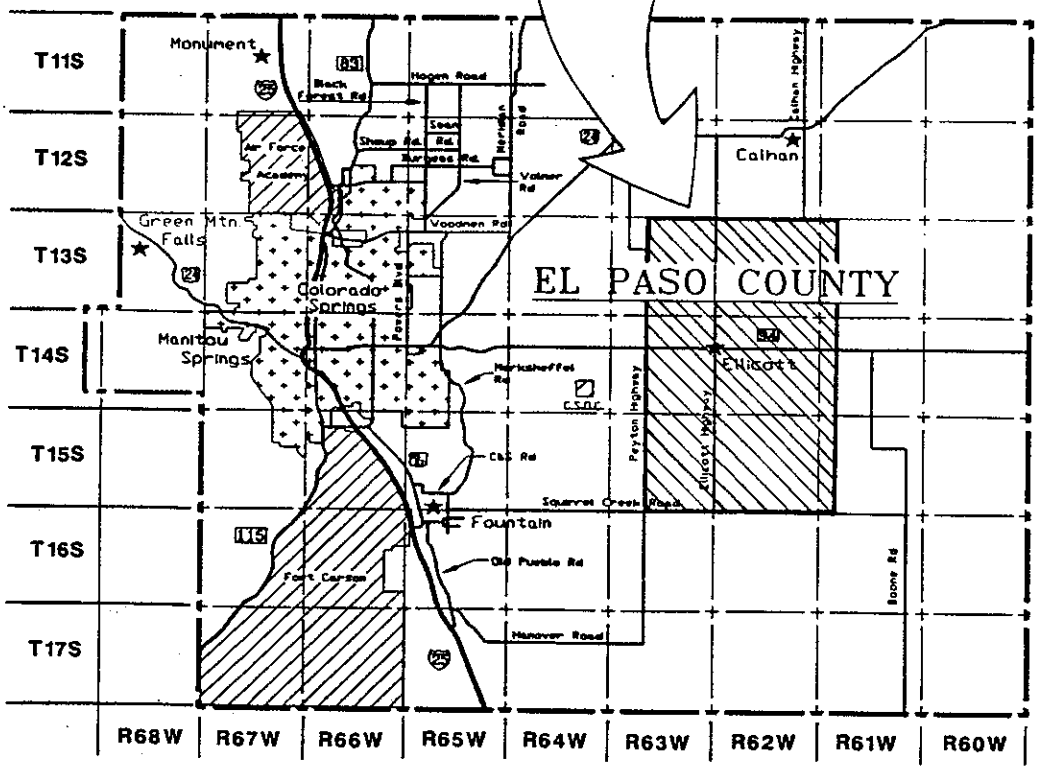
Along its western perimeter this planning area overlaps the boundaries of the Highway 94 Comprehensive Plan. Where the overlap occurs, this plan supercedes that document.

ELLICOTT VALLEY COMPREHENSIVE PLAN VICINITY MAP

North

MAP NO. 1





Planning Process

This comprehensive planning effort was authorized by the Board of County Commissioners in late 1985 in response to the concerns of many area residents that they were operating without the benefit of a current master plan. Following an advertisement for volunteers, the Board of County Commissioners appointed a 10 member Citizens' Advisory Committee in February of 1986. Over the next 2½ years the Committee worked with the Planning Department staff to comprehensively inventory the planning area, analyze development opportunities and constraints, discuss relevant issues and choose among planning options.

Altogether, the Committee held about 30 meetings, including four which were advertised to the general public. During the regularly scheduled meetings, the Committee went through the text of the plan in detail to ensure that the document accurately reflected their viewpoint. In addition to working directly on this plan, the Committee also sponsored meetings on the subject of zoning and on a proposal to locate an Air Force Academy auxiliary landing field in the planning area. From this point on it is anticipated that the Committee will continue to operate on a semi-active basis to assist in the review of land use proposals and in the promotion of this plan.

The role of the Planning Department during this process included assisting the Committee Chairman in coordinating the activities of the Committee, collecting data, preparing drafts of the plan, formulating planning options and publishing the document. The Department will continue to assist in interpreting and implementing this plan.

Legal Framework

The County is granted the authority to develop a master (comprehensive) plan for an unincorporated area through state "enabling" legislation. According to Sections 30-28-106, and 30-28-108, of the Colorado Revised Statutes (C.R.S.), the drafting and adopting of a master plan may be carried out at the discretion of the County Planning Commission. Section 30-28-108 also provides the discretion to "add to the plan or carry any part of it into greater detail from time to time". This allows the Planning Commission to amend the County's 1990 Land Use Plan by adopting a "Small Area Plan" for this portion of the County.

The Planning Commission shall, by Section 30-28-109, C.R.S., certify the plan to the Board of County Commissioners. Sections 30-28-106 and 30-28-107, C.R.S., specify the contents of the plan, its purpose and the authority for its amendment.

According to State statutes, this is not a legally binding regulatory document. It is to be used by the El Paso County Planning Commission and Board of County Commissioners in an advisory capacity to provide overall direction for more specific zoning, subdivision and other land use decisions which may be of a regulatory nature.

Amendments

This plan has been purposefully designed to be dynamic and flexible. Unanticipated issues and situations will provide the opportunity for critical analysis and revision. To ensure that this document continues to be appreciated and maintained as a viable planning tool, it should be viewed as a springboard for future amendments. Major amendments which would effect the spirit and intent of this document should be made through the public hearing process with adequate community input. Minor changes may be made editorially.

Position Statements

The Citizens' Advisory Committee and the Planning Department realized, early on in the planning process, that the relatively undeveloped and unconstrained character of the planning area would allow an almost infinite number of planning options. In order to focus their efforts it was decided to first agree on a broad philosophical approach to the process. After considerable discussion and several drafts, the following position statements were agreed on by the Committee:

1. Proper planning actions for the Ellicott Valley can best be taken when decision makers have access to a comprehensive catalogue which clearly presents all facets of the planning area.

2. Several new developments in the vicinity of the planning area promise to provide a catalyst for change in the Valley. Spin-offs related to the continued development of major military installations and plans for a potential new transportation corridor will most likely affect the historic agricultural and ranching character of the Valley. This plan should anticipate the possible impacts of these developments and provide a framework within which future plans for the Valley can be evaluated.

3. The Valley is ultimately capable of providing many of the elements necessary to support residential, commercial and industrial development. It is the intention of the plan to promote the Valley as the location for one or more self-sustaining satellite communities which will be complementary to the existing metropolitan area.

4. This plan anticipates that coordinated residential, commercial and industrial development will be the best and highest use of the resources of the Valley. Landowners may protect these development resources by zoning their property within the Valley. If at a later date, the area is zoned, the Citizens' Advisory Committee recommends that the County place the majority of the Valley in the A-4 (Agricultural) zone to provide for the protection of these resources.

CHAPTER II

AREA PROFILE

Introduction

This Chapter presents a profile of the past trends, existing conditions and future development potential of the Ellicott Valley Planning Area. One of its purposes is to acquaint the user of this document with the unique features of the area. Another is to provide a logical context for the analysis of development potential which will follow in Chapter III. Finally, this Area Profile is meant to aid in the identification of issues which will be addressed in the policies and planning scenarios which are developed in Chapter IV of this document.

The material in this Profile is organized under several separate subject headings. These include: History, Socioeconomic Information, Natural Systems, Public Facilities and Community Services, Transportation and Land Use.

History

The history of the Ellicott Valley Planning Area is a microcosm of that of most of the Eastern Plains near the Front Range. Often they were initially bypassed by the first settlers who moved through them on their way to the gold camps of the Rockies or the agricultural valleys of California. Native Americans tended to migrate across the Plains as they hunted so that they rarely settled in one place for long. The first cattlemen were not closely tied to any one area. When the Plains were finally settled, it was by very perseverant individuals who were intent on creating new communities based on agricultural values.

In the Ellicott Valley, ample evidence exists of the comings and goings of Native Americans. Crow's Roost, an outcropping of white sandstone located 7 miles south of Ellicott near Upper Black Squirrel Creek, was an Indian camping place for many generations. Fairly permanent white settlement began in the 1860's with the establishment of several large ranching operations. From a cattleman's perspective, free access to water was the critical imperative. Ranchers typically sought ownership of only the few acres which would give them control of water supplies. Their cattle intermingled with those of other ranchers as they grazed over a wide area of open range. Sheepmen were able to operate in those areas which did not have free access to water. An influx of Eastern dollars in the 1870's led to the consolidation of some very large, but fluctuating operations. Notable among these were the Love, Bohart and Big Springs Ranches. Several of these large parcels still exist today, primarily under State ownership.

The first homesteaders came to the Valley in the 1890's. Many of these would-be settlers had picked their 160 acre quarter section off of a survey map back in the Midwest. They were not aware that even if they were lucky enough to have access to water, 160 acres was not nearly adequate for subsistence farming in this semiarid climate.

Nevertheless some families did hang on. The revised Homestead Act of 1909, which allowed individuals to file on up to 320 acres, finally led to the settlement of the

open range. Since even 320 acres was not enough to eke out an existence when conditions were anything but good, the rate of attrition among homesteaders was great.

The Blizzard of 1888 ended the hopes of many, but others were able to hang on so that by the 1920's almost all of the land in the Valley had been filed on. In good years it was possible to sucessfully practice dryland farming in the region because alluvial water was close enough to the surface to allow for sub-irrigation. However, the drought of the late 1920's and the Depression of the 1930's combined to eliminate many of the small holdings and begin a trend toward large ownerships that has only recently begun to be reversed.

Agriculture was given a temporary boost beginning in the 1935 when the first irrigation well was drilled in the Valley. For the next 2½ decades electrically-assisted pumping allowed for intensive cultivation. Crops such as alfalfa were grown up and down the Valley. Groundwater use did have the effect of reducing the opportunity for dryland farming since subsurface water levels were lowered. Beginning in the 1960's the Cherokee Water and Sanitation District (then known as the Cimarron Corporation) leased many of the existing water rights and began drilling some of their own wells. Today about one third of the available ground water is exported out of the region for use in the developing areas east of Colorado Springs. Irrigation of alfalfa, pasture land and sod farms continues in some areas.

The Town of Ellicott itself was established in 1897 and named after a homesteader and postmaster by that name. In that same year the original Ellicott schoolhouse is thought to have been transported from Franceville on four wagons. At that time the Valley was served by several very small school houses. In 1900, the Pleasant Valley School was constructed where the present elementary school is located. A later structure was renamed the Ellicott School after the Ellicott District broke off from the Falcon District (#49) in 1918.

The community of Drennan started to become established in the southwestern corner of the planning area around 1906 when this former sheep land began to be homesteaded. The Drennan School was constructed in 1917 and even after its closing in 1955, it has continued to be the focal point of this community.

A fairly unique feature of the Ellicott Valley is its very large share of State-owned lands. These were set aside as School Trust Lands prior to 1900. Across the State, Sections 16 and 36 of each Township were deeded for this purpose as part of the original federal grant to the State of Colorado. However, because much of the land on the Western Slope had been preempted by this time, the State was empowered to obtain additional lands in certain areas. One of these was eastern El Paso County. Where possible these State lands were clustered along major drainages in an attempt to secure as much water as possible. Today, approximately 30% of the planning area is under State-ownership, including the majority of the southeastern corner.

State lands are further discussed in the Land Use section of this Chapter.

Most of the original homesteads were simple structures or dugouts constructed of sod, adobe or rough timber. Little evidence of them remains today. The 1976 publication, Historic Sites and Structures, El Paso County, Colorado identifies a total of four sites and structures in this planning area. One is the previously mentioned Drennan School. Crow's Roost was also noted in the survey both as a source of Indian artifacts and a favorite picnic area for later settlers. The Cape Cod Homestead just north of Ellicott is also identified along with the headquarters of the Big Springs Ranch which has been in fairly continuous operation since about 1870.

A natural and historic feature known as the Indian Paint Mines is located just to the north of the planning area. Tradition has it that the Indians used these colorful clays for their paints. Later, the artist and pottery maker Artis van Briggle obtained much of his raw material from this site. The Robinson Brick Company of Denver still mines in the area today.

In the Ellicott Valley today, a transition away from an agriculturally based economy is well underway. An influx of newcomers are relying on the Valley as either a bedroom community or a place to retire. According to local observers, as late as the mid-1960's, almost every youngster attending the Ellicott School was raised on an active farm or ranch. Today it is estimated that less than 10% of the school age population has a direct connection to active agriculture. Recently the Valley has been considered as a location for urban density developments.

Socioeconomic Information

This section includes an analysis of trends in the population growth of the planning area. It also describes the characteristics of this population with an emphasis on factors which show a variation when compared with the County as a whole. The purpose of this socioeconomic overview is first to provide a better understanding of the unique characteristics of the planning area's population and then to focus on key socioeconomic factors which might require special attention during the formulation of policies and planning concepts.

Coming up with socioeconomic statistics for the Ellicott Valley Planning Area is a fairly imprecise process because the geography used in the 1970 and 1980 U.S. Censuses does not match the planning area boundaries. Moreover, the planning area has undergone substantial change since the last full census was undertaken in 1980. Visual counts, or those which rely on utility hook-ups are not as exact and do not provide as detailed a picture of the area. Nevertheless, the information which is available does provide useful insights into the makeup of the area.

Population Trends

While the present overall population density of the planning area would still be considered very low (at approximately seven persons

per square mile) it has shown a substantial upward growth trend over the past two decades. In 1970, the population of the entire southeastern portion of the County (Census Tract 46) numbered only about 1,238. By 1980 this figure had increased to 2,632, representing a 112% increase over ten years. This rate of growth was more than double that experienced by the County as a whole over the same period.

The 1980 population of the planning area itself has been estimated to be 1,127 through a process involving the adjustment of Census figures by identifying structures on air photos of the same period and accounting for those not in the planning area.

In April of 1986, Joe Alexander of the El Paso County Telephone Company identified 417 households in the planning area with telephone service. Using a population per household of 3.21 would put the planning area population at about 1,339 persons at that time. An air reconnaissance done at approximately the same time identified a total of 495 units. Assuming a vacancy rate of 11% (equal to 1980) and the same 3.21 population per household figure, the resulting population from this method would be 1,414. This slightly higher number could reflect the fact that some units do not have telephone service. Over the past year or two there has been evidence that a number of additional units have been built or placed in the planning area. It appears that the majority of these new units have been mobile homes.

In summary, it can be concluded that the population of the planning area is still fairly low, but its growth rate is higher than the County average. At present on the order of 1,500 persons live in the Ellicott Valley and about 50 new residents are being added each year.

Population, Housing and Employment Characteristics

Table 1 provides a summary of the population and housing characteristics of the Ellicott Valley Planning Area based on responses to the 1980 Census. To come up with this table it was assumed that the population of the planning area was comparable in characteristics to that of the larger Census enumeration district in which it is located.

As would be expected, the housing units were predominantly single family structures or mobile homes in 1980. This corresponds with the fact that the population per household of 3.34 at that time was significantly higher than the County average of 2.73. Family sizes tend to be larger for detached units on larger lots than they are for multifamly units or townhouses. The 1980 mobile home proportion of about 32.5% was well in excess of the County average of 4.1%. Based on the air survey done by the Citizens' Advisory Committee in 1986, the percentage of mobile homes had risen to 46% by that time. This very high proportion is probably attributable to the limited regulations applied to this primarily unzoned area, and to relatively low local land costs.

Census figures indicate that the planning area population is overwhelmingly Caucasian. At 38.9%, the proportion of those aged 16 and under was much higher than the County average of 27.3%. This is also consistent with the large percentage of detached units and the larger household size in the planning area. Educational attainment among planning area residents was lower than the County average, but average income was slightly higher.

Table 1 also describes the employment status of area residents in 1980. Agricultural employment by planning area residents (at 20%) in 1980 was much more significant that the county-wide figure of less than 2%. However, there are indications that the importance of agriculture in the area has declined somewhat over the past few years. Based on a review of the businesses identified in the Land Use section of this chapter it is estimated that no more than 100 area residents are employed in non-agricultural businesses within the boundaries of the planning area. Many agricultral workers also hold a job in town. This means that on the order of 75 percent of the workers living in the Valley commute outside on a daily basis. Finally, it is worth noting that in 1980 the average commuting time for planning area residents was 39.4 minutes as compared to 17.8 for the County as a whole. This indicates that planning area residents are very dependent on their automobiles, and further substantiates the assumption that most do not work in or near the planning area.

In overall summary, the population density of the planning area is very low when compared to the average for the County, but the area is growing at a substantially faster rate. Planning area residents are typically younger, have larger households, probably travel long distances to work and are much more likely to live in mobile homes.

TABLE 1: 1980 POPULATION, HOUSING AND EMPLOYMENT
ELLICOTT VALLEY PLANNING AREA

	Planning Area Estimate (1980)		County Comparison (1980)
Total Population	1,127		
Total Households	338		
Population per Household	3.34		2.73
Total Housing Units	395		
Single Family	237	(60.0%)	(65.7%)
Duplexes	0	(0.0%)	(3.5%)
Multifamily	29	(7.4%)	(26.7%)
Mobile Homes	128	(32.5%)	(4.1%)
Occupied Housing Units	353		
Vacancy Rate		(10.6%)	(2.5%)
Race and Spanish Origin			
White	1,097	(97.3%)	(87.3%)
Black	0	(0.0%)	(6.2%)
Hispanic	30	(2.7%)	(8.1%)*
Persons by Age			
0 - 9 years		(25.7%)	(15.7%)
10 - 16 years		(13.2%)	(11.6%)
17 - 21 years		(4.6%)	(12.0%)
22 - 44 years		(32.4%)	(37.3%)
45 - 64 years		(18.9%)	(16.5%)
65 plus		(5.2%)	(6.8%)
Years of School Completed (Age 25 and Over)			
Elementary (0-8 years)		(16.5%)	(7.5%)
High School (1-3 years)		(14.9%)	(9.8%)
High School (4 years)		(45.5%)	(38.4%)
College (1-3 years)		(18.8%)	(23.4%)
College (4 years or more)		(4.3%)	(20.9%)

* Persons of Spanish origin may be of any race.

	Planning Area Estimate (1980)	County Comparison (1980)
Employment by Industry		
Agriculture, Forestry Fishing and Mining	(19.7%)	(1.4%)
Construction	(6.8%)	(7.6%)
Manufacturing	(11.2%)	(15.2%)
Transportation	(2.4%)	(3.1%)
Communications and Other Utilities	(4.6%)	(3.5%)
Wholesale Trade	(4.6%)	(3.3%)
Retail Trade	(8.1%)	(19.8%)
Finance, Insurance and Real Estate	(5.7%)	(8.0%)
Service	(31.0%)	(32.0%)
Public Administration	(5.7%)	(6.1%)
Unemployment	(7.7%)	(7.6%)
Median Household Income (1979)	$17,198	$16,254
Mean Travel Time to Work (Minutes)	39.4	17.8

Source: U.S. Bureau of the Census, 1980 modified by El Paso County Planning Department.

Natural Systems

Introduction

The natural environment of the Ellicott Valley Planning Area provides the broad framework within which land use decisions should be made. While the natural characteristics of this area ordinarily do not represent a complete constraint to development these factors do function as an important influence. The purpose of this section is to briefly describe the natural systems which define the planning area and to identify areas with special development sensitivities.

Geology and Topography

The Ellicott Valley Planning Area is located on the plains well east of the Front Range, but most of its geology can be linked to the formation of the Rocky Mountains. The bedrock and alluvial materials which underly the area originated as weathered sediments from the Rocky Mountain Uplift. Almost the entire planning area is underlain by one or more of the sedimentary rock units of the Denver Basin. The Denver Basin can be generally envisioned as an overturned bowl or dome made up of fairly horizontal layers of rock. Overall it extends from north of Denver down into the middle of El Paso County. The upper layers begin to outcrop and then disappear as one moves to the south and east through the planning area. The approximate limits of the Denver, Arapahoe and Laramie-Fox Hills formations, all of which occur as part of the Basin, are shown on Map 2. These sedimentary rock layers contain considerable quantities of recoverable groundwater, especially where they are thicker in the northern portion of the planning area. Underneath these layers is a very thick deposit of Pierre Shale which contains very little recoverable groundwater.

Over the majority of the planning area, the bedrock units do not outcrop on the surface. They are covered by unconsolidated deposits of windblown or water-borne sediments which average less than 100 feet in thickness. These sediments are deepest in association with Upper Black Squirrel Creek and its tributaries. Because they are often partially saturated with groundwater these deposits are classified as alluvial sediments and function as an important local groundwater resource. Altogether, these alluvial aquifers cover approximately 42 percent of the planning area. Map 2 shows the approximate limits of the alluvial aquifer as defined by the U.S. Geological Survey. Both bedrock and alluvial aquifers are covered in more detail in the Water Resources section of this chapter.

The topography of the planning area is predominantly rolling. Slopes average less than 5%, with only a few areas over 10%. Among these steep areas are the Crow's Roost outcrop, limited areas around Big Springs Ranch and portions of the northeast corner of the planning area known as Holcomb Hills. Overall, land in the planning area slopes north to south and towards the central valley. At about 6,850 feet in elevation, the highest point in the planning area is about 800 feet above downtown Colorado Springs. The lowest point in the planning area is about 5,575 feet, resulting in a maximum elevation difference of about 1,275 feet. One hundred foot contours are included on Map 3 to help visualize the overall topography.

MAP NO. 2

ELLICOTT VALLEY
COMPREHENSIVE PLAN

APPROXIMATE AQUIFER LIMITS

- UPPER BLACK SQUIRREL DESIGNATED GROUND WATER BASIN
- DENVER
- ARAPAHOE
- LARAMIE
- FOX HILLS

SCALE: (IN MILES)
1/8 1/2 1 3
0 1/4 1 2

NORTH

*SOURCES;
U.S. GEOLOGICAL SURVEY

T13S T14S T15S T16S
R61W R62W R63W

ALLUVIAL AQUIFER
LIMIT OF INFORMATION
LIMIT OF INFORMATION
LIMIT OF INFORMATION
ARAPAHOE
LARAMIE
FOX HILLS

MAP NO. 3

ELLICOTT VALLEY
COMPREHENSIVE PLAN

TOPOGRAPHY, FLOODPLAINS, AND MAJOR DRAINAGE BASINS

100-YEAR FLOODPLAINS

CONTOUR LINE (100' INTERVAL)

DESIGNATED DRAINAGE BASIN

SCALE: (IN MILES)

0 1/4 1/8 1/2 1 2 3

NORTH

*SOURCES;
1986 FEMA FLOOD INSURANCE MAPS
USGS MAPS
1988 EL PASO COUNTY DRAINAGE BASIN ID. AND FEE ESTIMATION REPORT

T13S T14S T15S T16S
R61W R62W R63W

In summary, there are few geological or topographical conditions which will directly limit development in the planning area.

Floodplains

Map 3 also shows the approximate limits of 100-year floodplains as designated on the Flood Insurance Rate Maps prepared for El Paso County by the Federal Emergency Management Agency. In these areas there is a statistical chance of flooding on an average of once every 100 years.

It is evident from the map that a substantial amount of land in the planning area is prone to some type of 100-year flooding. Where the floodplains are relatively shallow and open as they are in the Ellicott Valley, it is sometimes possible to remove substantial amounts of land from the flood fringe portion of the floodplain through minor channel modification without adversely impacting downstream flooding and erosion conditions. The County's policy is to generally not allow structural development within any designated flood areas until a specific plan is prepared and approved to remove the property from the flood fringe and officially amend the flood insurance maps. Once this is done, more intensive use of the modified property may be allowed. In the Ellicott Valley a careful assesment determine the exact location of foodway versus the flood fringe has yet to be undertaken. Because too much channel modification will result in higher downstream flood peaks and a reduced recharge to the alluvial aquifers on which area residents depend for their water supplies, development should generally be oriented away from the main floodplain.

It should also be noted that there are numerous additional minor stream channels in the planning area which are prone to flooding. These conditions need to be addressed at the site-specific planning level. This subject is further discussed in Public Facilities and Community Services section of this chapter under the heading of Drainage.

Mineral Resources

The County's Master Plan for the Extraction of Commercial Mineral Deposits shows bands of sand and fine aggregate deposits in association with the major stream systems in the Valley. However, these materials exist in such large quantities that it is unlikely that the majority would be marketable. A thin band of strippable coal is depicted across the southern portion of the planning area. It is an extension of the same deposit which was historically mined in the Rockrimmon, Cragmoor and Franceville areas. This seam is quite thin and probably can not be feasibly strip-mined at the depth which it occurs in the planning area. It is likely that extraction operations in the planning area will be limited to the removal of construction materials for fairly local projects.

Soils

Soils are typically related to the parent material which occurs immediately beneath them. In the planning area this material is primarily wind or water-borne sediments. For this reason, the Valley is characterized by mostly well-drained, sandy soils. To the north, these materials are primarily derived from weathered sedimentary rock (mostly sandstone) and to the south they relate to alluvial or wind-deposited material which has been carried for larger distances.

Severe soils-related building site suitability problems are confined primarily to floodplains. Septic system suitability problems occur in flood plains and also in sandy soils which drain too rapidly. Particular attention will have to be paid to development and revegetation of wind-deposited soils to protect these areas from wind erosion. These ratings were prepared by the U.S. Soil Conservation Service (SCS). The Planning Department has prepared soil suitabity maps based on these criteria. These maps are available for inspection at the Department. With the exception of major flood plains, building problems can usually be overcome with proper engineering, and septic systems can be adequately designed if lots are sufficiently large. This information is therefore best used as an initial resource to identify areas where additional study or special engineering may be necessary.

The SCS designates about 30% of the soils in the planning area as prime for agriculture assuming they are irrigated. With competing demands for groundwater, it is unlikely that nearly this much irrigation will take place in the future.

Climate

Residents of the Ellicott Valley are spared much of the adverse weather which occurs to the north and up along the valley slopes to the east and west. Within the planning area itself, there is a significant moderation in weather from north to south. Generalized maps in the El Paso County Sourcebook indicate that there is about a five week difference in the growing season between the northern and southern planning area boundaries. Annual average snowfall (at less than 40 inches) and annual precipitation (at 12-14 inches) are both less than the amounts received in Colorado Springs. The frequency of major thunderstorms is comparatively low for the entire planning area. State Highway 94 is presently closed between Colorado Springs and the planning area because of snowstorms approximately two to three times a year. However, with recent increase in traffic associated with the Falcon Air Force Base and with the area itself, this section of roadway can be expected to close less often.

Air Quality

The climate of the Ellicott Valley will also have some impact on future air quality although this is difficult to predict given current information and existing technology. What is known is that the Valley is not presently included in any regional non-attainment areas and that air quality is presently good. Additional development is bound to add pollutants to the air, but the Valley may be spared some of the inversion effects which are associated with areas located closer to the Front Range. Since automotive traffic is the chief culprit in producing critical pollutants,

land use plans which reduce the need for vehicular trips will certainly have a postive impact.

Vegetation and Wildlife

The planning area is dominated by a high plains ecosystem. The natural vegetation is plains grassland with the only trees being those which have been introduced by man. Dominant natural species include blue grama, sand dropseed, three-awn, sand reed, bluestem, side-oats grama, sand sage and yucca. Historically, a substantial percentage of the area has been under irrigation. More recently, irrigated acreage has been more limited. Sod farming has taken over from traditional agricultural crop production as the predominant user of agricultural irrigation water today.

Included among the several wildlife species that occur in the planning area are a large antelope herd, mule deer, elk, white-tailed deer, kit foxes, coyotes, ducks, geese, lark buntings, great-horned owls, jack rabbits, cottontails, kangaroo rats and prairie dogs. The area is within the overall range of the peregrine and prairie falcons and is also used by several other raptors. At least one active eagle nest existed in the planning area as of 1986. Golden eagles are often sighted, and bald eagles are reported during some periods. The roadrunner is another familiar resident. During the early fall the Valley functions as a dove migration route.

Both the scaled quail and the burrowing owl occupy several sites in the Valley. These species are considered rare, and in need of special protection. Also of special importance is a heavily-used antelope crossing located a few miles to the east of Ellicott. As traffic on State Highway 94 increases, and development patterns become more defined, this crossing will become more focussed.

The Wildlife Impact Composite Maps prepared by the Colorado Division of Wildlife show about 5% of the planning area within a high impact area, 60% in a moderate impact area, and 35% with low potential impacts. The high impact area correlates to buffers designated around nesting sites, while moderate impact areas relate to year-round antelope range. Not shown on the maps are the boundaries of the riparian (water-related) habitats associated with Black Squirrel Creek. These are vitally important to the lifecycle of several indigenous and migratory wildlife species. A more detailed description of wildlife occurence and habitats in the planning area is available on file with the documentation for this plan. This information and area wildlife professionals should be consulted as a part of the review of major development proposals.

Water Resources

The history and the development within the Ellicott Valley Planning Area is closely tied with the use of water resources. Much of the area's future will depend on the wise use of the resources which are still available. What follows is a brief overview of the water situation in the planning area. Because water is such a naturally and legally complex subject, the reader should be cautioned not to draw anything but broad conclusions from this material. Specific questions should be addressed to the Office of the State Engineer or to the County's hydrogeologist.

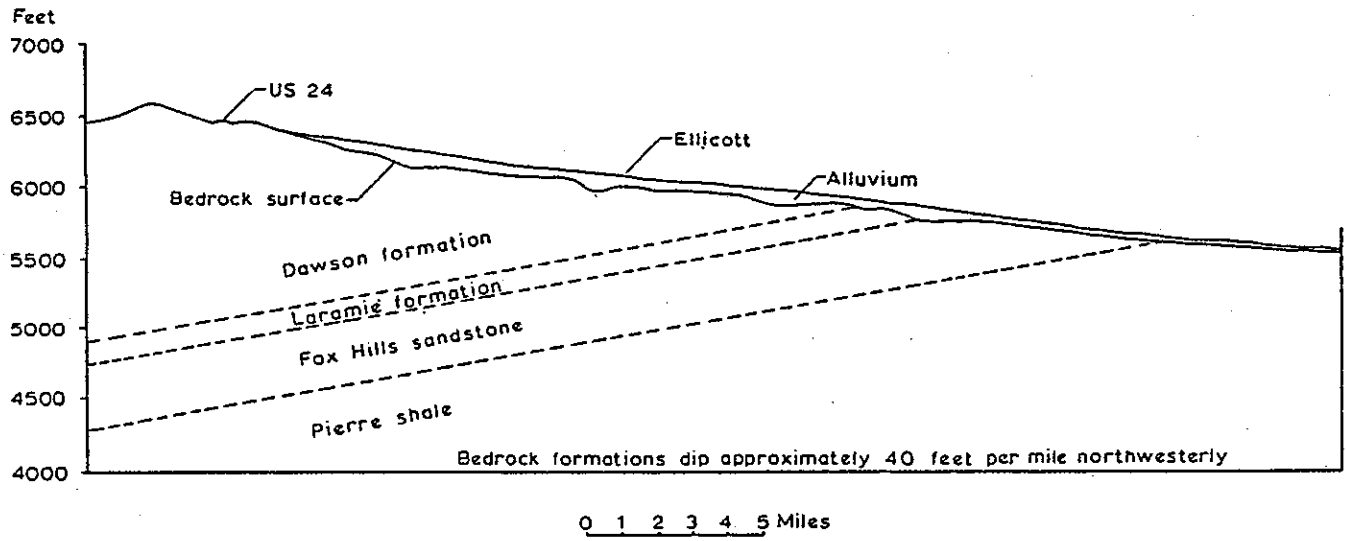
Almost all of the Ellicott Valley Planning Area is drained by the Upper Black Squirrel Creek or its tributaries. Ultimately these surface channels wind to the south and connect with the Arkansas River. However, none of these streams flow significantly on the surface for more than a few days per year. For example, the average annual surface discharge of Upper Black Squirrel Creek as it passes through Ellicott was estimated by the United States Geological Survey (USGS) in 1976 to be 0.60 cubic feet per second. This compares to a figure of about 50.0 cubic feet per second for Fountain Creek as it flows through Colorado Springs.

The flows which do occur in the Upper Black Squirrel Creek Drainage can be highly variable. During a massive thunderstorm in 1965, it was estimated that the maximum discharge in Black Squirrel Creek at Ellicott was 141,000 cubic feet per second. This flow is roughly equivalent to an acre foot every two seconds.

Ordinarily, on the order of 90 to 95% of the overall flow in the basin is occurring underground in the alluvial sediments. Water moves slowly downgradient through these loosely consolidated materials. During most years, a "slug" made up of runoff from the upper part of the basin slowly makes its way down the stream, surfacing periodically. Due to the draw-down which has occurred over the past few decades, near surface groundwater movement has now been slowed. Typically the saturated thickness of this alluvium is less than 100 feet, but the deposits cover almost 30% of the basin as a whole and closer to half of the planning area itself. Water movement through these materials is slow enough to be measured in feet per month, but it is still much faster than the rates typically experienced in deeper bedrock aquifers. A generalized cross section is included to show the relative positions of water-bearing materials in the Valley, and the approximate boundaries of all aquifers within the planning area are depicted in plan view on Map 2.

A USGS study completed in 1988 estimated that the Upper Black Squirrel alluvium contained about 500,000 acre feet of groundwater in storage (down from about 600,000 acre feet in the mid-1960's). However, not all of this water can be economically withdrawn. At typical rates of use, this amount of water could theoretically satisfy the domestic needs of over one million families for one year. The renewable component of this system is much more limited, as evidenced by the estimates that, under present use, groundwater in storage has been decreasing by 5,000 acre feet per year. Hard numbers are difficult to come by, but it has been variously estimated that on the order of 6,000 to 10,000 acre feet are recharged to the basin annually. There is some evidence this flow is stopped by a rise in the level of the Pierre Shale formation south of the planning area. There are also some hydraulic connections between the alluvial water and the bedrock groundwater which exists beneath it.

FIGURE 1: GEOLOGIC CROSS-SECTION SHOWING ELLICOTT VALLEY ALLUVIAL AND BEDROCK AQUIFERS



Source: Colorado Division of Water Resources.

In 1967, there were about 80 large capacity wells operating in the basin. Large capacity wells are those which are permitted to withdraw more than 50 gallons per minute. Of these, only eight were municipal wells, but they accounted for an estimated 40% of the groundwater withdrawals. Today it is estimated that about the same number of wells are operating. A total of 188 large capacity wells have final permits, but many of these have only conditional rights. A significant difference between municipal and agricultural uses of groundwater is that the municipal water use can be considered to be totally "consumptive" since the supply is currently exported out of the basin. An estimated 30% of the groundwater used for irrigation ends up back in the aquifer. There are also a large number of smaller capacity stock and domestic wells in the planning area.

Municipal withdrawals from the basin amounted to about 3,500 acre feet in the early 1970's and probably average somewhat less than 3,000 acre feet today. Agricultural use has averaged about 8,000 acre feet over the past two decades. The exact rate of use for this purpose is difficult to determine since the flow on many irrigation wells is not closely monitored. The quality of this alluvial water is generally excellent, but the U.S.G.S. has identified localized high levels of nitrates and nitrites possibly associated with agricultural operations.

In 1968, the Upper Black Squirrel Designated Groundwater Basin was established by Order of the State Groundwater Commission. In 1979, the taxpaying electors of the area encompassed within the basin voted in favor of forming a Groundwater Management District. The Management District presently administers all groundwater within and beneath the Upper Black Squirrel Creek Designated Groundwater Basin, subject to the general oversight of the Colorado Groundwater Commission. The boundaries of the designated basin, shown on Map 2, encompass most of the planning area.

After they are first processed by the State Division of Water Resources, permit applications for any well within the basin are reviewed by the District for consistency with its rules and regulations. District rules and regulations allow for the prohibition of the export of water from the basin. Within its boundaries, the District is authorized to levy a property tax to support its activities. In those areas not under the jurisdiction of the Upper Black Squirrel District, applications for well permits are reviewed only at the State level. Applications for permits to withdraw non-tributary water outside the boundaries of the District are evaluated for compliance with the State Engineer's rules written to implement Senate Bill 5. In addition to reconfirming a maximum 1% annual withdrawal from bedrock aquifers, Senate Bill 5 also provides for the delineation of those portions of the bedrock aquifers which are considered as legally tributary to surface water rights. Since Senate Bill 5 does

not have any application to any of the groundwater located within the boundaries of designated groundwater basins, the Colorado Groundwater Commission is in the process of formulating a policy to govern the withdrawl of non-tributary and "not non-tributary" groundwater, as defined by the State Engineer's Rules and Regulations. After this policy is finalized, applications for appropriation of bedrock water within designated basins will continue to be analyzed on a case-by-case basis to determine whether the groundwater is in fact non-tributary.

In 1987, the Upper Black Squirrel Basin was chosen by the Colorado Department of Health for inclusion in a pilot Wellhead Protection Program study. The wells selected for analysis were those of the Cherokee Water and Sanitation District. These large capacity wells are located east of Ellicott Highway and north of State Highway 94. The water withdrawn from them is used to serve urban developments located in the Cimarron Hills area. The preliminary results of this study indicate that large areas, several miles upgradient from these municipal wells, are underlain by water which might reach the wellheads within a period of 20 years or less. The implication of this finding is that any land use or other control which might be imposed to protect these or other municipal wells would have to be applied over a large percentage of the planning area.

The Upper Black Squirrel Groundwater Management District has recently initiated its own long-range planning project with the goal of assessing and updating their water use policies. The results of this study could impact future land uses in the Valley.

The deeper bedrock aquifers, which underly the majority of the planning area, contain much more groundwater in storage than is available at any one time in the alluvium. Maps prepared by the County's consulting hydrogeologist and based on information provided by the State Division of Water Resources indicate that there is between 30 and 90 acre feet per acre of bedrock groundwater in storage under the planning area. This water is contained in the three bedrock aquifers which underlie portions of the area. As can be seen on Map 2 the availability of this type of groundwater decreases markedly from north to south as the aquifers run out and the underly Pierre Shale is closer to the surface. To date, these bedrock water supplies have been virtually undeveloped.

Conclusion- Natural Systems

Only a relatively small proportion of the planning area (mainly flood plains) can be considered "undevelopable" due to natural constraints. In the majority of cases, environmental considerations will act more as "influences" which will affect the type, orientation and timing of development. Of these natural considerations, the water system, specifically relative water availability, will likely have the most profound effect on development options. It will be absolutely

critical to protect the quality and function of the alluvial aquifer since it will continue to play an important role in the local and regional water supply. Other natural features can potentially represent amenities if they are incorporated into sound development plans.

Public Facilities and Community Services

Introduction

It is clear from the preceding section that the Ellicott Valley Planning Area is blessed with an ample supply of land which is generally free of environmental constraints to residential and commercial development. Given this situation, the availability of public services (along with the market and public policy) will largely dictate if, when, where and how urban density development will take place in the planning area. The purpose of this section is to describe existing public facilities and services in the planning area and to discuss the potential for future service provision. Facilities, which are considered, include community institutions, schools, parks and recreation, water, wastewater, drainage, other utilities and public safety.

Community Institutions

Areas where development is physically dispersed tend to rely largely on a few key institutions for their sense of community focus. In the Ellicott Valley one of these institutions is clearly the Ellicott Junior and Senior High School. It functions as a center for numerous social events, meetings and athletic competitions for the adult as well as the school age population. Its location on Ellicott Highway, less than a mile from State Highway 94 puts the school within the perceptual range of the area's overall community center which is situated at the Highway 94/Ellicott Highway intersection. Several small stores, the fire station, two churches, a few homes and several industrial or wholesale operations are located at this crossroads. These and other community facilities, institutions and services are depicted on Map 10 which can be found in the Land Use section of this Chapter. Although Ellicott has never fully coalesced into a town center, it remains an important focus for the community.

Schools

Introduction

Six different school districts serve portions of the Ellicott Valley Planning Area, but seventy percent of the planning area is served by Ellicott District #22. Because of this and the fact that it also operates the only school facility in the planning area, District 22 will be discussed in more detail in this section. The various district boundaries are shown on Map 4 and the proportion of the planning area they serve are summarized in Table 2 below.

MAP NO. 4

ELLICOTT VALLEY COMPREHENSIVE PLAN

SCHOOL DISTRICT BOUNDARIES

- DISTRICT 22
- DISTRICT 28
- DISTRICT 60J
- DISTRICT RJ-1
- DISTRICT 23JT
- DISTRICT 54J

SCALE: (IN MILES)

1/8 1/2 1 3

0 1/4 1 2

NORTH

*SOURCES;

T13S T14S T15S T16S

R61W R62W R63W

MIAMI-YODER DISTRICT 60J

EDISON DISTRICT 54J

CALHAN DISTRICT RJ-1

HANOVER DISTRICT 28

PEYTON DISTRICT 23JT

ELLICOTT DISTRICT 22

LIBERTY RD.
SOUTH CALHAN RD.
COMANCHE RD.
BAGGETT RD.
SALADAY RD.
ELLICOTT HIGHWAY
LAUPPE RD.
ANTIOCH RD.
TERRENCE RD.
CALHAN HIGHWAY SOUTH
MIDWAY RD.
SPRINGS RD.
LITTLE SPRINGS RD.
HIGHWAY
HANDLE RD.
SANBORN RD.
GARRETT RD.
SPEER RD.
MOUNTAIN VIEW RD.
FALCON RD.
LOG RD.
J.D. JOHNSON RD.
MC DANIELS RD.
BAR 10 WAY
EMICH RD.
HENDERSON RD.
FARMER RD.
BOOK LANE
HENDERSON LN.

TABLE 2: SUMMARY OF SCHOOL DISTRICTS

ELLICOTT VALLEY PLANNING AREA

District	Square Miles in Planning Area	Approximate Number of Households*
Ellicott (22)	138.5 (70%)	410 (83%)
Peyton (23J)	4.0 (2%)	25 (5%)
Hanover (28)	9.0 (5%)	2
Edison (54J)	2.0 (1%)	0
Miami Yoder (60J)	28.5 (14%)	37 (7%)
Calhan (RJ-1	15.0 (8%)	21 (4%)

*derived from 1986 structural air survey

All of the school districts serving the planning area are fairly small and rural in nature; however, the Ellicott, Peyton and Calhan Districts have been experiencing substantial growth due to rural residential development. This growth has necessitated the recent construction of a new facility in the Ellicott and Peyton Districts. The Peyton District has experienced a 192% student body growth over the past two decades. The Edison and Miami-Yoder Districts have not experienced much growth, but they require high mill levies to provide service to a small and widely scattered student population. These districts often cooperate with surrounding districts in order to provide a full mix of programs. The Hanover and Edison Districts, in particular, have very small enrollments and could benefit from a limited increase in the number of students they serve, providing that their tax bases were comparably increased by the additional households.

Ellicott School District

The Ellicott School District (#22) has shown a steady enrollment growth over the past 15 years, including a 35 percent increase from 1980 through 1988. Present enrollment is approximately 530 students. Enrollment growth has necessitated the construction of a new Junior/Senior High School building immediately across Ellicott Highway from the original K-12 facility. This structure now serves as the elementary school. The total capacity of both buildings is now 900 students, meaning that there is currently "space" available for 370 additional school children. In 1987 the District obtained North Central accreditation to go along with its State accreditation.

A Facility Needs Analysis and Master Plan commissioned by the Ellicott School District in 1985 projected enrollment to increase to 615 students by 1990. There are some indications that actual growth will fall somewhat short of these expectations over the short term. Predicting growth beyond 1990 was considered difficult, so the consultants recommended a flexible plan for the period from then on. Under this approach, new schools would predominantly be sited along the Highway 94 corridor well to the west of the present facilities. Depending on the pattern of growth which develops, the far western part of the District (which extends to Marksheffel Road) may experience the first large scale urban density growth. Ultimately, this could substantially change the geographic focus of the District. In the more immediate time frame the long range plans of the District are contingent on a continued moderate rate of growth. This growth will allow the District to expand its programs.

Conclusion

Most of the school districts serving the Ellicott Valley Planning Area have experienced substantial relative enrollment increases over the past two decades. This has been due primarily to fairly widely scattered rural residential development. To date, the operating Falcon Air Force Station and the planned SDI test bed have had little direct effect on these districts since their employees reside primarily in districts closer to Colorado Springs. Since FAFS and SDI are federal installations, they also do not directly produce property tax revenues for these eastern districts.

Trends for the future are difficult to predict, but they are likely to involve continued rural residential development with satellite urban density developments in some areas. The rural residential development is inherently difficult to serve since it generates large numbers of students without a comparable increase in property tax revenues. The Ellicott District may specifically be impacted by development which could take place up to 15 miles west of the present school site.

Parks and Recreation

With the planning area's present rural development and agricultural uses, residents have only a limited need for specifically provided "perceived" or "passive" open space. However, as development continues, these demands will grow. In the mean time, the present rural residential population will have a continuing demand for active recreational facilities such as ball fields, golf courses, pools and ice rinks. Any new urban developments will require neighborhood parks, since these residents will not have access to privately owned open space, even if a large amount of open land continues to exist in the vicinity.

Presently, there are no publicly owned and operated open space or recreation facilities in the planning area. There is one small park operated by the Ellicott Ladies Community Club. This parcel is located along Ellicott Highway about one half mile south of Highway 94. The closest regional park is one currently being developed north of Peyton. Another regional park has periodically been planned

for the area north of Highway 94 and west of Corral Bluffs. If developed, this park may end up being operated by the City of Colorado Springs. Some park and open space amenities have also been included in the Sunset Village Master plan and will be available when that project is substantially developed. The Town of Calhan, which is located five miles north of the northeast corner of the planning area, provides some recreational opportunities including the County Fairgrounds. The State of Colorado operates a recreation area around the Ramah Reservoir, but this is located over ten miles from the nearest boundary of the planning area. There also are limited athletic facilities available at the Ellicott School.

Eventually, the valley of the Upper Black Squirrel Creek could be considered as the location for a stream valley park since much of its land will be subject to flood plain restrictions. Recharge from potential future landscape irrigation could also result in additional vegetation occuring in the valley.

Although the County currently has no hard standards for per capita parkland and recreation facilities, the following figures were referenced in their 1979, Capital Development Schedule:

TABLE 3: PARK CRITERIA

ELLICOTT VALLEY PLANNING AREA

Type of Park	Acres/1,000 Population	Size
Neighborhood	2.5	1-15 acres
Community	5.0	15-50 acres
Metro	3.0	150+ acres
Regional	12.0	400+ acres
Total	22.5	

If the planning area's population were assumed to be 1,500, it would mean that, with this formula, Ellicott residents would require about 34 total acres of parkland. With an acreage this low, location and the specific facilities, which would be made available, would be critical. These low acreage factors underscore the problem with developing an accessible park system for a dispersed population. The present (January, 1988) minimum park dedication requirement is .0194 acres per dwelling unit. For a theoretical rural residential subdivision of 100 lots on 600 acres, this would amount to only about two acres of land. This small parcel size, when combined with the fact that the County has limited mechanisms for the administration and maintenance of neighborhood parks, results in the present practice of almost always accepting fees in lieu of land dedication.

Water Service

The Ellicott Valley Planning Area has a supply of easily obtained shallow groundwater. This resource is currently being used by large capacity agricultural and municipal wells and numerous small capacity wells typically used for stock tanks or domestic residential purposes. There are also ongoing plans to use some of the Valley's water resources to support initial phases of urban density development.

All planning area residents currently rely on small individual or shared wells for their water supply. However, there are two tax-supported water providing districts which could provide centralized services. These are the Sunset Metropolitan District and the Cherokee Water and Sanitation District. The systems of both districts are physically and financially interconnected. Sunset has an arrangement with Cherokee which will allow it to provide service to the Sunset Village project. Cherokee currently exports most of its water out of the Valley

to either the Falcon Air Force Base (FAFB) or to the Cimmaron Hills area east of Colorado Springs. In the future, however, it may be possible for them to reallocate water to development within the planning area if a market develops. A third internal possibility would be for a major agricultural user to convert his or her rights to municipal use, and to provide this supply to startup urban development either through an existing provider or by creating a new district. Ordinarily some water rights are lost when this conversion is undertaken in order to compensate for consumptive use.

For various reasons, it can be expected that water supply and service considerations in the Valley will tend to direct growth toward either fairly high density clusters or low density residential tracts. Intermediate densities are currently less feasible. This is due in part because the shallow alluvial water rights have been fully appropriated. Permits for additional individual wells will generally require that they be cased and drilled into deeper bedrock aquifers. Where it is determined that a hydraulic connection exists between the new wells and surface water rights, the State will require that an plan is prepared to replace or augment any water which is consumptively used. One potential solution to the intermediate density problem would be to create a rural water delivery system patterns after those in operation in places including Kansas.

Under its newly adopted Subdivision Regulations pertaining to water supply, the County now reviews subdivisions for the quality, quantity and dependability of their proposed water supplies. This determination is largely based on whether the developer can provide a committment for an adequate 300-year supply for the project.

Another potential means of providing additional water to the planning area could involve a network of large capacity wells developed in the bedrock aquifers to the north of the planning area. Since these wells would have to be drilled into the deeper nontributary formations, pumping costs would be significant. However, the trade-off would be an ability to provide for larger amounts of high density development.

An additional long term water source might be a major distribution line which would pass through the planning area and could be tapped into. Such a water transmission line has been suggested as one element of the Front Range Toll Road project.

In summary, the urban density water service prognosis in the Ellicott Valley is good by comparison with other areas in the County. The most immediate option for service to new uses will be development associated with the Sunset Village Metropolitan District. Another near term possibility would be the conversion of existing agricultural rights or the redirection of exported municipal alluvial supplies to municipal uses in the planning area. Additional

water should be available for new rural residential uses, but individual wells will be subject to more sophisticated restrictions including limitations on pumping rates and the requirement to drill into deeper bedrock aquifers.

Wastewater Service

Wastewater treatment service in the planning area at the present time is predominantly limited to individual or small shared septic systems. One small lagoon system is used to handle the wastes from the Ellicott Elementary and Junior/ Senior High School buildings. Another small lagoon system serves the mobile home park located south and west of the Ellicott Highway/ Highway 94 intersection. The Sunset Metropolitan District is building a sewage treatment plant prior to beginning development of their mixed use project. Its expected completion date is May, 1989. The availability of this facility will put the Ellicott Valley at a comparative advantage with other areas in the central and eastern County. The Sunset Metro District Wastewater plant has a design capacity of 1.04 million gallons per day. Its capacity for 5,000 taps has been estimated to be sufficient to accommodate growth in the area for 15 years. The Sunset plant is permitted to function as a sub-basin facility and receive wastes from farther north in the Valley. It is also possible that development around Falcon Air Force Base, further to the west, could also be served. This would be consistent with the State's current policy of encouraging regional and sub-basin facilities rather than numerous development-specific plants.

When there is sufficient demand for growth, options are usually available for treating the resulting wastewater. All proposed treatment plants must be consistent with the PPACG's Areawide Water Quality Management Plan (Project Aquarius) before they can be sent to the State Department of Health for final approval. The Council of Governments divides its three-county planning area into several sub-basins, known as management areas, in order to do specific planning. All of the Ellicott Valley Planning area falls into the High Plains Water Quality Management Area. The most recent Areawide Water Quality Management Plan recommended that an association be formed to coordinate water quality planning in this area. To date this association has not been formed.

Although it is difficult to fully evaluate the impact of wastewater treatment considerations on potential urban development in the planning area, it is likely that economic and statutory factors will combine to encourage the clustering of development around only a few sub-basin facilities or the interceptor lines leading to them. It is less likely that numerous widely dispersed urban clusters could be concurrently developed with adequate and cost-effective centralized wastewater treatment.

Without access to a centralized wastewater treatment plant, development options are considerably more limited. Current County Subdivision Regulations and the regulations of the County Health Department combine to legally prohibit the creation of any new subdivision lots of less than 2½ acres which will not have access to

centralized treatment. The County Health Department prefers that minimum lot sizes in these cases be 5 acres. Under circumstances where it is legally permissible, it is possible to connect more than one unit up to a single septic system. This practice is often discouraged because of concerns with shared maintenance. Small septic systems or other facilities, such as holding tanks, are a viable option for small commercial and industrial projects because these often produce only minimal amounts of sewage. However, if septic leach fields are employed, densities can not be particularly high.

Individual septic systems end up having a profound effect on the density of development, but almost no impact on its dispersion. As additional septic systems are constructed, concerns about cummulative contamination of alluvial ground water may arise. The possibility of contamination is largely one of improperly constructed or badly maintained systems since properly functioning systems result in very low or insignificant levels of pollution. Continued development of centralized treatment facilities such as the Sunset plant will reduce the chances that individual systems will proliferate to the point that they become a cummulative health hazard. Continued development of centralized treatment facilities will reduce the chances that individual systems will proliferate to the point that there will be a hazard.

Overall, the availability of sewage treatment will have an impact on where, when and how growth occurs in the planning area, but it will probably not represent an ultimate limiting factor.

Drainage

If substantial higher density development takes place in the Ellicott Valley, it will result in an increase in the level of imperviousness which will cause a corresponding increase in both the amount of runoff and the speed with which it gets to the major stream channels. This has the effect of increasing downstream flood peaks which in turn represents a hazard to downstream residents and a threat to the natural stream channel. As more development takes place, residents and property owners are also less apt to tolerate the natural erosion and migration of stream channels. These various drainage impacts can be mitigated by either stabilizing the stream channels to accommodate an increase in confined flow, or by detaining or retaining additional runoff on site to maintain historic flows.

For urbanizing areas of the County, this process of drainage basin planning is ordinarily accomplished through the preparation of a detailed study of a defined regional basin. This study incorporates land use projections, policy decisions, and technical analysis to determine what improvements will have to be made to major stream segments and what their cost will be on a per acre basis. A fee can then be charged to new development in accordance with this document. The specifications for these detailed studies are spelled out in the City/County Drainage Criteria Manual. Systems for major stream segments normally must be designed to accommodate a 100-year storm flow.

In an area, such as the Ellicott Valley, where development is likely to be drawn out over time and limited to certain growth clusters, a more individually tailored and site specific approach to drainage may be more appropriate. This approach will likely have a greater reliance on detention and retention to maintain historic flows. However, if multiple or larger projects begin to be proposed, it may be necessary to prepare detailed basin studies to ensure that all plans are coordinated and costs are proportionally shared. Map 3 depicts the boundaries of major basins as they were defined in a county-wide study revised in 1988. These boundaries can be used to assess the probable drainage effects of any proposed development. It should be noted, however, that it may be possible to define a smaller more manageable sub-basin within one of these larger basins if a detailed study is needed, but only part of a basin will be impacted.

In addition to concerns with the major stream reaches, which were discussed above, there will also be a need to address systems for minor storm drainage within the context of a specific development. These improvements, which include curb and gutter, small storm drains and culverts, are ordinarily spelled out in Subdivision Improvements Agreements. These minor systems are designed to accommodate a 10-year design flow.

Other Utilities

All of the Ellicott Valley Planning Area falls within the service area of the Mountain View Electric Association. Mountain View Electric Association, Inc., is a consumer owned electric distribution cooperative. It is part owner of the electric supplier Tri-State Generation and Transmission Cooperative. This system can provide dependable electric power to both major developments and single structures. Map 5 depicts Mountain View's main transmission lines along with the location of their substation. Also shown is the main Tri-State G & T line which runs through the southern portion of the planning area. Major upgrading of local power lines has recently occurred in the planning area.

All but the extreme northwest corner of the planning area is served by the El Paso County Telephone Company. This company is a wholly owned subsidiary of U.S. West (refer to Map 5). Their main business office and exchange is located just outside the planning area on the corner of Peyton and Ellicott Highways. Since El Paso County Telephone's lines ordinarily parallel those of Mountain View, the potential for telephone service extension is often comparable to that for electricity. El Paso County Telephone should be able to handle any expansions needed to serve additional development in the planning area.

Because natural gas service is presently unavailable in the planning area, residents presently rely on a combination of electricity and propane for their energy needs. The Ellicott School, major agricultural operations and other facilities make use of large propane tanks. If gas service were extended to the planning area, the logical provider would be Peoples Natural Gas. People's is in the

MAP NO. 5

ELLICOTT VALLEY COMPREHENSIVE PLAN

UTILITIES

MOUNTAIN VIEW ELECTRIC ASSOCIATION, INC.

DISTRIBUTION LINE

TRANSMISSION LINE (69 KV)

TRANSMISSION LINE (230 KV-TRI-STATE)

EL PASO TELEPHONE COMPANY

MAJOR DISTRIBUTION ROUTES (BURIED)

SCALE: (IN MILES)

1/8 1/2 1 3

0 1/4 1 2

NORTH

*SOURCES;

JOE ALEXANDER, EL PASO COUNTY TELEPHONE

T13S T14S T15S T16S

R61W R62W R63W

REMOTE TELPHONE SWITCH

ELLICOTT SUBSTATION

CHEROKEE WATER TANK

EL PASO COUNTY TELEPHONE CO. BUSINESS OFFICE MAIN SWITCHING OFFICE

AREA SERVED BY MOUNTAIN BELL

CALHAN HIGHWAY

SOUTH CALHAN RD.

LAUPPE RD.

HANISH RD.

WEST

LIBERTY RD.

JONES RD.

BIG SPRINGS RD.

LITTLE SPRINGS RD.

SANBORN RD.

HIGHWAY 94

SOAPWEED RD.

BAGGETT RD.

ELLICOTT RD.

ELLICOTT HIGHWAY

GARRETT RD.

EAST

SPEER RD.

MCCLELLAND RD.

CONSTANTINE RD.

LOG RD.

D. JOHNSON RD.

DANIELS RD.

BANNING LEWIS PARKWAY

ENOCH RD.

BOOK LANE

HENDERSON LN.

HENDERSON RD.

FARMER RD.

PEYTON HIGHWAY

process of extending its lines to the Falcon Air Force Station. A further extension to the Ellicott area would only be economically justified if considerable additional development takes place.

Law Enforcement

Law enforcement in the planning area is the dual responsibility of the State Patrol and the El Paso County Sheriff's Department. The State Patrol operates out of south Colorado Springs and is responsible for patrolling State Highway 94 and for responding to vehicular accidents on either State or County Roads. Highways 94 and 24 comprise one patrol area and this normally is given two eight-hour shifts per day. If asked the State will back up County personnel in responding to criminal situations. The State currently has no plans to substantially upgrade service or to build any additional substations closer to the planning area.

The County has primary responsibility for criminal investigations in the planning area. They also operate out of downtown Colorado Springs and have an officer on duty in the eastern sector of the County during all shifts. This sector includes all of the County east of Marksheffel Road. The County also has no present plans to build any substations closer to the Ellicott area.

Proponents of the Front Range Toll Road concept have indicated that their facility would be patrolled internally. If this transportation option were replaced by a State-operated interstate by-pass, local patrols would likely be increased and these units would be available for response outside of the corridor.

Clearly, the key law enforcement consideration in the Ellicott Valley Planning Area is response time. While one can almost be assured that one law officer will be available somewhere in the eastern County, this individual could be 30 or more miles away when an incident occurs. Added rural residential and urban development in the planning area will add to the demands on law enforcement agencies, but it will also justify increased patrols. The distance between Ellicott and the presently urbanized area will continue to cause problems when timely backup assistance is needed. For this reason, extra security provisions may need to be made for initial developments in the Ellicott Valley in order to tide them over until overall services are expanded.

Fire Protection

The primary fire suppression service for the Ellicott Valley Planning Area is the Ellicott Fire Protection District with its fire station located almost in the center of the planning area (refer to Map 6). The eastern portion of the planning area falls under the jurisdiction of the Tri-County Volunteer Fire Department. Tri-County's station is located nine miles east of the eastern edge of the planning area, at Rush, Colorado. The Hanover and Edison

Volunteer Fire Departments serve the southern perimeter of the planning area, and the Peyton Fire Protection District and Calhan Volunteer Fire Department provide protection for the northern edge. The fire stations maintained by all of these volunteer departments are between 5 and 9 miles distant from the planning area boundaries.

The Ellicott Fire Protection District is a tax-supported entity of the State of Colorado. It operates through an elected five member board which in turn contracts with the Volunteer Department for the operation and maintenance of the District and its equipment. The District maintains 7 vehicles including one ambulance and has a present membership of 15 active volunteers.

Unlike the Ellicott District, the Tri-County Fire Department is operated solely on contributions. All members are strictly volunteers, and these individuals have financed and constructed two trucks. The portion of the planning area served by this Department is sparsely populated and lacks adequate water supplies for fire suppression. Plans are underway to form a taxing district for Tri-County. The Calhan, Edison, and Hanover Fire Departments are all funded through local contributions. Calhan is considering creation of a district and a taxing district, has recently been formed for the Peyton area.

The Insurance Service Office (ISO) has given the Ellicott Fire Protection District a rating of 9. The Tri-County, Hanover, Edison, Peyton and rural portions of the Calhan service areas all have a rating of 10. Ratings are on a scale of 10 to 1 with 10 being lowest. The low ratings are based on factors such as access to fire hydrants, staffing, distance and response time. Each of these entities has plans for upgrading their service.

All of the fire districts and departments in the planning area cooperate through mutual aid agreements. These agreements extend to the Falcon Fire Protection District and the Falcon Air Force Base, both of which lie to the west of the planning area. Because of these arrangements, it is likely that at least two entities would eventually respond to any call for assistance in the planning area.

Emergency medical service and ambulance service is provided by the Ellicott Fire Protection District. All of the fire departments in or around the planning area have trained Emergency Medical Technicians. In extreme emergency situations, all departments will ask for assistance from Flight for Life, MAST from Fort Carson or professional paramedics.

The nearest full service hospital to the planning area is the Penrose complex on Academy Boulevard in Colorado Springs. Peterson Air Force Base has an emergency ward available to military personnel. Given the current oversupply of hospital beds in the region, it is unlikely that a full service hospital will be constructed closer to the planning area in the near future.

MAP NO. 6

ELLICOTT VALLEY
COMPREHENSIVE PLAN

FIRE PROTECTION DISTRICTS

- ELLICOTT FIRE DISTRICT
- HANOVER VOL. FIRE DEPARTMENT
- TRI-COUNTY VOL. FIRE DEPARTMENT
- CALHAN VOL. FIRE DISTRICT
- PEYTON FIRE DISTRICT
- EDISON VOL. FIRE DISTRICT

SCALE: (IN MILES)

1/8 1/2 1 3

0 1/4 1 2

NORTH

*SOURCES;

EL PASO COUNTY
PLANNING DEPT. 1989

TRI-COUNTY VOLUNTEER FIRE DEPT.

EDISON VOLUNTEER FIRE DEPT.

HANOVER VOLUNTEER FIRE DEPT.

CALHAN VOLUNTEER FIRE DEPT.

PEYTON FIRE PROTECTION DISTRICT

ELLICOTT FIRE PROCTECTION DISTRICT

WATER SUPPLY TANK

WATER SUPPLY TANK

FIRE STATION

T13S T14S T15S T16S

R61W R62W R63W

CALHAN HIGHWAY

SOUTH CALHAN RD.

LIBERTY RD.

HANISH RD. WEST

MIDDLE SPRINGS RD.

LITTLE SPRINGS RD.

HIGHWAY 24

HANDLE RD.

SAWBURY RD.

BAGGETT RD.

SALADAY RD.

ELLICOTT RD.

HIGHWAY

GARRETT RD.

SPEER RD.

MCCLELLAND RD.

FALCON RD.

EAST LOG RD.

LOG RD.

J.D. JOHNSON RD.

PEYTON HIGHWAY

MC BANTZ RD.

BAR LO WAY

ENOCH RD.

HENDERSON LN.

HENDERSON RD.

FARMER RD.

BOOK LANE

PEYTON HIGHWAY

LAUPPE RD.

ANTIOCH RD.

FRENCE RD.

A more realistic alternative would be for an emergency care facility to be built closer to Ellicott. These facilities require a "market area" of approximately 30-50,000 persons so it is not reasonable to expect one to be constructed in the planning area itself in the near future.

As the Ellicott Valley area develops, it will both require and be able to support higher levels of fire protection and emergency medical service. The ability to provide this service in an efficient and cost-effective manner will be determined in part by the pattern of development which takes place.

Conclusion - Public Facilities and Community Services

Each of the various facilities and services which are necessary to support the needs of area residents has certain characteristics which make it unique. Some will have to be substantially redefined and restructured in order to allow for continuued development in the Valley, while others can be expanded incrementally without having to change the overall approach.

Most local school districts would immediately benefit from some additional increased enrollment which would allow for a more complete utilization of existing classroom space. Moderate growth in mixed use development would also be beneficial because it would allow expansion of the tax base and the ability to enhance educational programs without overextending the districts' ability to finance new facilities.

The introduction of urban density development into the Ellicott Valley will establish a need to provide neighborhood park and recreation facilities. A regional park may or may not ultimately be developed within the planning area. The Upper Black Squirrel Creek corridor could eventually be developed as a stream valley park.

The potential availability of local water suppplies gives the Ellicott Valley some relative locational advantages over other areas of the County. Substantial urban density development could be initiated based on these supplies if they were reallocated from their present non-municipal or external uses.

State policies and high start-up costs combined to encourage the utilization of larger regional wastewater treatment facilities rather than numerous independent plants. This orientation toward regionalization and interconnection may combine with other factors to limit the number of independent satellites which can be expected to develop.

It is anticipated that the only feasible way to handle drainage facility planning in the area will be on a "stand alone" basis. However, some coordination of plans will be necessary to ensure that the overall quality, quantity and peak flows of runoff are controlled.

Given the fact that fire protection services are now locally provided, it should be possible to incrementally upgrade levels of service to keep up with overall growth. Police protection and medical services will be more difficult to

incrementally improve given the distance to existing facilities. Initial urban developments may have to make special provisions to address short term deficiencies in all public safety services.

Transportation

Introduction

The transportation system, in and adjacent to the Ellicott Valley Planning Area, will play a pivotal role in determining the type and extent of development which will take place over the next few decades. Both the internal and external transportation systems are largely adequate to meet present needs, but they will not accommodate large scale urban-density development without substantial upgrades and additions. In this section, the existing transportation network in the planning area is first discussed, and this is followed by a consideration of future transportation issues. Because they could have a profound effect on the future of the planning area, options for a toll road corridor or other regional bypass are treated separately. Finally, transportation modes other than the automobile are considered.

Existing Transportation System

Classifications and Conditions

When considering the transportation system, which presently serves the Ellicott Valley Planning Area, it is as important to look at external linkages as it is to view things internally. Without connections to other communities along the Front Range, it will be difficult for the Ellicott area to continue developing. Highways 94 and 24 currently provide the most important regional linkages. Highway 94 is a two-lane, high grade paved Secondary State Highway. It bisects the northern and southern halves of the planning area and provides the primary connection to the Colorado Springs metropolitan area situated 16 to 20 miles to the west. Highway 94 also continues to the east, but does not carry much traffic in this direction. Although it never passes closer than 5 miles from the nearest planning area boundary, U.S. Highway 24 also functions indirectly as a regional connection for residents in the northern half of the planning area. Although it is built to approximately the same standards, Highway 24 is classified as a Primary Federal Aid State Highway, which gives it precedence over Highway 94. Highway 24 provides the primary connection between the eastern County and the Interstate transportation network to the east.

Including the 11-mile segment of Highway 94, which falls within the planning area, there are a total of only about 29 miles of paved roadways in or adjacent to the planning area. These principally include all of Ellicott Highway and the portion of Calhan Highway north of Highway 94. Also, included in or alongside of the planning area, are about 39 miles of "chip and seal" roadways. These gravel-based roads are surface treated with a layer of fine-grained gravel impregnated with tar. Several of the roads along the periphery of the planning area

have been given this treatment. These include portions of Peyton and Calhan Highways, as well as Squirrel Creek and Judge Orr Roads. In addition to the above, there are also about 117 miles of "connecting" gravel roads maintained by the County in the planning area. This figure does not include several gravel and graded roads which provide internal access to subdivisions and may or may not be part of the County system. The entire major existing road system in the planning area is depicted on Map 7.

The map clearly shows that there is a relative shortage of direct through roads, especially in the southern half of the planning area. The southeast quarter of the area, which is dominated by State lands, has almost no road system at all. Map 7 also shows that almost every principal roadway is located along a section line. Given the general lack of environmental constraints in the planning area, and the relative ease with which the County can obtain rights-of-way along section lines, it is likely that this grid pattern will predominate in the future.

Present Roadway Use

There is no question that most roadways in the planning area are lightly used at present. However, there are indications that rates of use are increasing rapidly. As of 1980, only Highway 94 and Ellicott Highways had average daily traffic counts in excess of 150 vehicles. Ellicott Highway was carrying between 600 and 700 vehicles per day near its intersection with Highway 94. Highway 94 itself carried 1,700 vehicles per day at its intersection with Ellicott Highway. Traffic on Highway 94 dropped off to 1,000 vehicles per day at Ellicott Road. This indicates that the Ellicott area is responsible for much of the traffic on State Highway 94 on this segment.

Recent increases in staffing at Falcon Air Force Base (FAFB) have resulted in significant peak loads occuring on Highway 94 in the vicinity of its intersection with Enoch Road. This has had the effect of increasing travel times between Ellicott and the metropolitan area during those specific shift changes.

Table 4 indicates the maximum hourly lane capacity of various types of roads according to various land uses under ideal conditions. For both Ellicott Highway and Highway 94, the most applicable capacity would be 750 to 800 vehicles per lane per hour. Based on this criteria, it is evident that no part of the roadway system in the Ellicott Planning Area is presently over capacity. It is much more likely that the need to pave roads in order to be consistent with State dust mitigation regulations will be the triggering mechanism for any substantial road improvements in the near future.

Limited information regarding traffic safety in the planning area is available, but it appears that per vehicle accident rates for Highway 94 are comparable to the State average. As traffic increases system improvements will have to be made to eliminate dangerous turning movements.

TABLE 4: MAXIMUM LANE CAPACITY
(VEHICLES PER HOUR)

Functional Classification	Central Business District	Fringe	Residential	Rural
Freeway	1,600	1,600	1,600	1,600
Expressway	1,425	1,425	1,425	1,425
Major Arterial				
Two-lane Roads	545	745	810	810
Four or More Lanes	545	745	810	1,425
Minor Arterial				
Two-lane Roads	475	530	470	470
Four or More Lanes	475	530	470	760
Collector				
Two-lane Roads	355	400	350	350
Four or More Lanes	355	400	350	570

Source: Year 2000 Transporation Plan, PPACG

Other Transportation Modes

Automobiles are the dominant form of transportation in the planning area today, and it is unlikely that this situation change in the near future. The closest operating rail line is the Cadillac and Lake City Line which provides limited service parallel to Highway 24. There is no regional bus service available and no formal carpooling program is in effect. The Ellicott Highway/ State Highway 94 intersection would be a logical meeting place if a formal or informal Park and Ride arrangement were set up. No officially recognized bikeways exist in the planning area.

Airport Facilities

The Ellicott Planning Area is served by the Springs East Airport. The Valley will also soon be the site for a separate auxillary airfield which will be used by the Air Force Academy. Both facilities are shown on Map 12. Springs East Airport is located two miles north of State Highway 94 off of Log Road. Approximately 30 general aviation aircraft are presently based at this facility and there are commitments to add 50 more planes. In May of 1988 the airport's 3,000 foot runway was extended to 5,140 feet, widened to 60 feet and paved with a chip and seal surface. With these improvements, the Airport is able to

MAP NO. 7

ELLICOTT VALLEY
COMPREHENSIVE PLAN

EXISTING TRANSPORTATION

PAVED

CHIP & SEAL

GRAVEL

T13S T14S T15S T16S

R61W R62W R63W

CALHAN HIGHWAY

SOUTH CALHAN RD.

LAUPPE RD.

ANTIOCH RD.

TORRENCE RD.

LIBERTY RD.

HANISH RD.

WEST

JONES RD.

MID SPRINGS RD.

SOAPWEED RD.

BIG SPRINGS RD.

LITTLE SPRINGS RD

HIGHWAY 94

HANDLE RD.

SANBORN RD.

U.S. AIR FORCE ACADAMY AUXILIARY AIRFIELD

BAGGETT RD.

HIGHWAY 110

GARRETT RD

SALADAY RD

ELLICOTT RD.

ELLICOTT HIGHWAY

SPEER RD.

MC CLELLAND RD.

EAST SPRINGS AIRPORT

EAST LOG RD.

FALCON LOG RD.

J.D. JOHNSON RD.

MC DANIELS RD.

BAR 10 WAY

BAR 10 RANCH RD.

HENDERSON LN.

ENOCH RD.

FARMER RD.

BOOK LANE

PEYTON HIGHWAY

SCALE: (IN MILES)

1/8 1/2 1 3

0 1/4 1 2

NORTH

*SOURCES)

EL PASO COUNTY
PUBLIC WORKS DEPT.

service small jets if demand for this occurs. Future planned improvements include the addition of a directional beacon for instrument navigation.

The Springs East management has lease arrangements which predominantly control uses on most of the land in the vicinity of the airfield, but very little of this property is zoned. Expansion of the airport should provide economic benefits to the planning area, but it will limit the potential for residential development in the immediate vicinity.

The Air Force Academy's auxillary airfield is currently under construction on a parcel of State land in the south central area of the Valley. When completed, the facility will be used by Cadets who will fly small T-41 Cessna aircraft over from the Academy as part of their pilot training. No public uses will be allowed at this air field, and it is anticipated that development of the property itself will be limited.

Future Transportation Considerations

While it is difficult to speculate about the direction development in the planning area may take, it is altogether clear that the overall potential for development will quickly become more limited unless transportation options are allowed to remain open. Given the flexible growth and land use framework advocated in this plan, the only transportation plan would be one which seeks to maximize future options by assuming the highest reasonable eventual development densities. This subsection focuses on a few of the key future transportation planning considerations which will affect the planning area over the next several decades. These include the preservation of major corridors, access limitations, requirements for paving and planning for alternative transportation. It will also be critically important to plan for the possible location of a toll road or interstate by-pass in the area. This issue is discussed in a separate subsection.

Major Transportation Corridors

As the only State highway in the planning area, Highway 94 can be expected to continue carrying a major portion of the traffic between Ellicott and the current metropolitan area. The State has studied the possibility of obtaining additional right-of-way along Highway 94 for the purpose of eventual widening to 4 or 6 lanes, but no firm timetable has been set for this. However, even if Highway 94 is substantially upgraded, there will be an eventual need to upgrade or develop several other arterial connections between the planning area and urbanized areas to the west.

El Paso County adopted a Major Transportation Corridors Plan which formally extends east to the planning area boundary. Its purpose is to generally identify and preserve major corridors so that they will be available when needed. The Plan is not intended to show specific alignments or prioritize which roadways should be built at any given time.

Logically, it would be reasonable to develop a corridors plan for the planning area which is based on an extension of the adopted plan. This is what is shown on Map 8. The basic pattern established for the Ellicott area is a grid system with a two mile spacing between major arterials. As development plans become more refined, a need may arise to modify this network. Individual property owners may propose modifications to the system so long as its overall integrity is preserved. Fewer major corridors may be needed where densities are primarily rural residential, and the pattern may need to be intensified in the vicinity of major development areas.

The key to successful employment of this system will be the aggressive reservation of the maximum potential rights-of-way which may be required along these corridors. If it turns out that the plans for a particular corridor were too ambitious, than development plans can be later modified and any excess right-of-way returned to the appropriate property owner. Approximate necessary rights-of-way for the types of roadways shown on the Ellicott Valley Major Transportation Corridors Map are the following:

Expressway	210 feet
Major Arterial	150 feet
Minor Arterial	120 feet

These numbers are general in nature, but they provide a rule of thumb and can be compared to the 60 feet of right-of-way typically associated with the County-maintained roads which presently exist in the planning area. To ensure that these rights-of-way will be available, if needed in the future, the full right-of-way should be dedicated or reserved where possible and extra setbacks should be used where the right-of-way can not be obtained in advance. This will reduce the need for costly condemnations in the future. Adequate setbacks will also reduce the negative impacts of the noise generated by large amounts of traffic. An incomplete proposed roadway system is shown for the State lands in the southeastern quarter of the planning area because this property is under single ownership. A future corridors plan for this area will have to be developed in conjunction with the County, prior to any significant development of the property.

Access Limitation

Adequate rights-of-way and lanage alone will not be sufficient to ensure efficient traffic movements within the planning area and between it and the metropolitan area. An excessive number of access points could compromise the ability of an otherwise effective thoroughfare system by introducing a large amount of congestion. Extreme congestion of the routes between Ellicott and the metropolitan area could greatly impair the potential growth of this area.

In an effort to preserve the integrity of their present and future road system, the County has recently adopted an access code to go along with their Corridors Plan. Designations in this code range from 1 to 5 and correspond to the range of functional classifications from freeways through local residential streets. A preliminary classification has been given to the major roadways defined in the planning area. Several of these roadways are designated as potential expressways and are given an

MAP NO. 8

ELLICOTT VALLEY
COMPREHENSIVE PLAN

PROPOSED ROADWAY PLAN

PROJECTIONS OF CORRIDOR MAP ALIGNMENTS

- EXPRESSWAY
- MAJOR
- MINOR
- MILITARY

COMPLETION OF BASIC TWO MILE GRID (MEDIUM DENSITY)

- EXPRESSWAY
- MAJOR

SCALE: (IN MILES)

0 1/4 1/2 1 2 3

NORTH

*SOURCES;
EL PASO COUNTY
PUBLIC WORKS DEPT.

T13S T14S T15S T16S
R61W R62W R63W

access code of 2. These include State highway 94, Ellicott Highway, Calhan Highway, Peyton Highway, Judge Orr and Squirrel Creek Roads as well as an extension of Drennan Road along the present Enoch Road alignment. The stated purpose of Category 2 roadways is to carry through traffic. Local access is therefore considered subordinate. For this category, the recommended spacing between intersections is one mile. Private accesses would be allowed only where no other alternative for access exists. Several other roadways in the Ellicott Valley are designated in access category 3. The criteria for this category are substantially the same except that a one half mile intersection spacing is recommended.

Clearly, strict compliance with these access standards could place a hardship on local uses and it may seem unreasonable to enforce them over the short term. One means of reducing these potential hardships and short-term inefficiencies is to allow for temporary access through a system of permits and only begin to strictly limit access as traffic increases and the roads are upgraded. The County has the mechanisms to do this through its current access permitting process.

Paving

While several of the main transportation corridors in the Ellicott Valley Planning Area have at least a chip and seal surface, many of the secondary corridors are currently unpaved. State and County Fugitive Dust standards call for dust mitigation measures to be taken once traffic levels reach 200 vehicle trips per day. Although other dust control measures may be available, paving is ordinarily the only long-term solution. Because one single family home generates about 10 vehicle trips per day it only takes the equivalent of 20 homes accessed by the same roadway to induce the need to pave. Since a two lane paved road may be able to handle several thousand vehicle trips per day problems may arise related to reconciling who benefits from the paving improvement versus who had to pay for it. For urban density developments and larger rural residential subdivisions, the on-site proportion of this paving requirement can be met through subdivision improvements agreements because the development being assessed is generating most of the need for the upgraded road. The problem arises when several developments combine to generate an off-site need for paving. Various regional cost sharing proposals are being considered to address this situation

Interstate 25 Bypass

If the Ellicott Valley Planning Area is chosen as the alignment for a multi-purpose toll transportation corridor or a State financed Interstate bypass, the planning impacts could be profound. This possibility is discussed in detail in a separate section in Chapter III of this document.

Regional Roadway Financing

The County is presently investigating the possibility of adopting a site-specific model for assessing the share of regional roadway financing costs which are uniquely attributable to an individual development. Since this model would identify trip origins and destinations and then calculate total

vehicle miles attributable to a specific development, it becomes clear that a remote development could often be assessed a higher-than-average share of costs consistent with its high transportation impact. Sensitive land use and transportation plans could result in a reduction of these transportation impacts.

Alternative Transportation Systems

Although single passenger automobiles are the prime mode of transportation today in the Ellicott area, this situation may change in the future. Gasoline shortages, air pollution concerns or changes in technology may limit the use of automobiles and increase the need to explore other options. These alternatives include ridesharing, paratransit and mass transit. Ridesharing, which mainly involves carpooling and vanpooling, is the most reasonable short term option. The Ellicott area is well-suited to take advantage of car pooling opportunities because most traffic funnels through to the intersection of Ellicott Road and Highway 94.

Transportation Conclusions

The Ellicott Valley Planning Area may be greatly influenced by a major north/south expressway or multi-purpose transportation/utility corridor which would travel through or adjacent to the area. The development of such a corridor would place Ellicott in the "path" between major urban growth centers along the Front Range and could therefore enhance the area's development potential. Care will need to be taken to ensure that land uses are compatible with any corridor, and provisions are made to avoid the potential for a corridor to act as a barrier between uses. The County Public Works Department has identified numerous additional potential major corridors spaced about two miles apart throughout the area. This spacing assumes that the entire planning area will eventually build out at urban densities, although this will not fully occur for several decades. This extended planning horizon makes it critical to reserve rights-of-way for the ultimate system. However, it is important to carefully phase in only those improvements which are needed to satisfy current demand. Several existing roadway links in the Ellicott area will need to be paved for dust mitigation reasons well prior to the need for major system upgrades such as additional lanes or roadway links. New short-term and long-term funding methods will have to be devised to support these system upgrades. Most alternative transportation systems will only be viable in the future if plans are made to accommodate them now.

Land Use

Introduction

The Ellicott Valley has recently been undergoing a land use transition. Traditional agriculture is being deemphasized and replaced to a degree by rural residential uses and some mobile home development. Development of one urban density satellite project is expected to be initiated soon and other comparable plans are being contemplated. Overall, however, the planning area can still be characterized as being predominantly "undeveloped". There are

only a few existing uses which will limit or greatly influence future development options for the area. Considered from the opposite perspective, this wealth of options and limited number of physical constraints will make it difficult to predict exactly what the land use future of the Ellicott Valley will be.

Existing Uses

Agriculture

Since the planning area was first settled in the late 19th century, agriculture has been its predominant use. After the open range was fenced around the turn of the century, grazing and marginal dryland agriculture became the major use. With the advent of electric pumping in the 1930's, irrigated farming began to displace dryland farming in the Black Squirrel Basin. By the 1960's, diversion of substantial amounts of groundwater to the metropolitan Colorado Springs area combined with changes in the agricultural economy to reduce the influence of irrigation in the Valley. Several parcels are still under irrigation today, including a number of sod farms, but most land is used for dryland grazing. Probably the most notable agricultural commodity being raised in the Valley today are Texas Longhorns which can be observed during most trips through the area. Map 9 shows farm houses and agricultural service buildings identified from an air survey completed in 1986. These tend to be clustered in the northern and central parts of the planning area, especially in association with major alluvial deposits. Very few agricultural buildings are located in the state-owned southeastern quarter of the planning area.

From Table 5, it can be determined that almost 90% of privately owned land in the planning area is classified for agricultural uses by the County Assessor. Most of this agriculturally taxed land is used for grazing. Grazing is also the predominant use of the 37,000 acres of state land in the planning area. About 2,400 acres or 2% of the planning area is classified as irrigated farmland. Most of these irrigated parcels are located along a line extending north/south through the planning area along and just to the east of Ellicott Highway.

Residential Uses

In the socioeconomic section of this chapter, it was estimated that there were 417 households in the planning area as of the Spring of 1986. This equates to a total population of about 1,400 persons. At about the same time, a total of 495 residential units were identified in the air survey, with a number of these assumed to be vacant. It was further estimated that the population may have grown to 1,500 by 1988.

As shown on Map 9, up to 50% of all of the housing units in the planning area are clustered within two miles of the Ellicott town site. Very few structures are located in the state-owned southeast quarter of the planning area.

TABLE 5: LAND USE BY ASSESSOR'S CLASSIFICATION

ELLICOTT VALLEY PLANNING AREA

Use	# of Parcels	% of Total	Acres	% of Total	Average Parcel Size in Acres
Grazing	318	35.26	73,953.89	58.57	232.56
Dry Farm Land	31	3.44	3,337.86	2.64	107.67
Irrigated Land	17	1.88	2,395.00	1.90	140.88
State Land	28	3.10	37,164.13	29.43	1,327.29
Vacant (1-100+ Acres)	84	9.31	2,229.14	1.77	26.54
Unimproved Residential	185	20.51	1,027.08	0.81	5.55
Single Family Residential	151	16.74	3,393.46	2.69	22.47
Mobile Home (Owned Land)	53	5.88	1,471.77	1.17	27.77
Mobile Home Park	2	0.22	154.82	0.12	77.41
Merchandising*	9	1.00	522.61	0.41	58.07
Other**	24	2.66	610.16	0.48	25.42
TOTALS	902***	100.00	126,259.92	99.99	139.98

* 478.66 of this is Springs East Airport.

** Includes Residential Land at 28%, Partial Exempt, Unimproved Land, Commercial Land @ Residential Rate, Agricultural Land w/ Improvements Only, Orchard Land, Wasteland, County, Political Subdivision, Religious Worship and Private Schools.

*** Larger than total on Table 8 because some parcels are assessed for two or more uses.

Source: Calculated manually from El Paso County Assessor's Printouts, July, 1988.

MAP NO. 9

ELLICOTT VALLEY
COMPREHENSIVE PLAN

STRUCTURAL INVENTORY

- COMMERCIAL
- SCHOOL/CHURCH
- ABANDONED
- RESIDENCE
- FARM HOUSE
- TRAILER
- SERVICE BUILDING

SCALE: (IN MILES)

1/8 1/2 1 3

0 1/4 1 2

NORTH

*SOURCES;

CITIZENS ADVISORY COMMITTEE
AIR SURVEY 1986 WITH
REVISIONS

Two hundred twenty-seven (or 46%) of the structures identified in the 1986 survey were mobile homes. This proportion of mobile homes is a great deal higher than the County-wide average of about 4%. Probable explanations for this high proportion of mobile homes include a lack of zoning restrictions and affordable land. Approximately 50 of these mobile homes are located in one cluster just to the southwest of Ellicott. There is also one multifamily structure located in the planning area to the north of Ellicott. Its location is shown on Map 10.

Most of the homes on foundations in the planning area are situated on lots of 5 or more acres, and these structures are served by individual well and septic systems. About 50% of the mobile homes are also located singely or in small clusters on individual lots. The remaining mobile homes are located in larger clusters where several may be tied to the same water system or septic tank.

A total of 5,020 acres, or about 4% of the planning area, are assessed by the County as some type of improved residential property. An additional 1% of the area is designated as residential unimproved (see Table 5). The average size of these residential parcels is about 25 acres, but each of these lots may contain more than one residence.

Commercial and Office Uses

Many of the business uses and almost all of the retail commercial operations in the planning area are clustered adjacent to Highway 94 near its intersection with Ellicott Highway. A visual survey of the planning area, conducted in the summer of 1988 identified about 10 retail businesses and 6 miscellaneous business uses. These are shown along with other non-residential uses on Map 10 and listed below. The numbers correspond to those depicted on the map.

Retail/Service Establishments

1. Tina B's
2. Ellicott Plaza
   - Ellicott Tire and Auto Parts Center
   - Ellicott Country Store
   - Country Profile Beauty Salon
   - C.J.s Country Cafe (may not be open)
3. Ellicott Inn Restaurant and Lounge
4. Harding Home and Ranch Center (building supplies)

Miscellaneous Businesses

1. Dickenson Cattle Company
2. Dickenson headquarters
3. Apartment Building
4. Dog kennel
5. Nursery
6. Houghton's Dairy

Five hundred and twenty-three acres in the planning area are classified in the merchandising category for tax purposes, but almost all of this total is accounted for by the Springs East Airport. There is no commercially zoned property in the planning area except for a small amount associated with the Sunset Village development.

Industrial/Repair and Extractive Uses

The existing industrial activities in the planning area are also depicted on Map 10. There are about nine businesses which would probably qualify under this category, and these are listed below. Most of these are clustered in the vicinity of Ellicott. No significant mineral or aggregate extraction is taking place in the planning area at this time. A total of 10 acres just to the east of Ellicott are zoned for industrial uses. All of the active industrial uses appear to be taking place on unzoned land.

1. Webb's Salvage Yard
2. Repair Garage
3. Henderson Propane
4. Ellicott Garage
5. Black Smith (abandoned)
6. Gordon's Concrete
7. Hollingsworth Welding
8. Truck and Implement Repair
9. Salvage Operation

Institutional and Other Uses

Institutional and other uses in the planning area include four churches, two schools, one existing airfield and another under construction, the fire station, a water tank, a sewage treatment plant under construction and telephone company buildings (actually located just outside the planning area). The locations of these facilities are shown on Map 10 and they are listed below.

Churches

1. Open Door Church
2. United Methodist Church
3. New Hope Church
4. Ellicott Baptist Church

Public/Utility Uses

1. Cherokee Water Tank
2. Springs East Airport
3. Ellicott Elementary School
4. Ellicott Junior/Senior High School
5. Ellicott Volunteer Fire Department
6. El Paso County Telephone
7. Sunset Metro District Wastewater Plant
8. El Paso County Telephone Remote Switch

Table 5 and Map 12 describe the quantity and location of state-owned land in the planning area. Most of these state lands are concentrated in large parcels in the southern and eastern part of the area. These larger parcels are almost completely undeveloped and are often not very accessible from the existing transportation system. Most of this state land is administered by the State Board of Land Commissioners for the purpose of securing revenues for state educational programs. Although the State is actively seeking to develop a large block of property located to the south and west of the Falcon Air Force Base, there are no current major development plans for the parcels within the planning area.

Presently, most state land is leased for grazing. Leases ordinarily go for a few dollars per acre per year and run for 10 years. Because the existing leaseholder is normally offered first right of refusal when the lease comes up, some parcels remain in use by the same family for generations. Although the Land Board can sell parcels outright, it is legally simpler for them to enter into various types of long-term leases.

MAP NO. 10

ELLICOTT VALLEY
COMPREHENSIVE PLAN

COMMERCIAL AND INSTITUTIONAL USES

- RETAIL/SERVICE
- PUBLIC/UTILITY
- INDUSTRIAL/ REPAIR
- CHURCH
- OTHER

NOTE:
Refer to text for explanation of numbers.

SCALE: (IN MILES)
0 1/4 1/8 1/2 1 2 3

NORTH

*SOURCES;
EL PASO COUNTY
PLANNING DEPT.
WINDSHIELD SURVEY
1988

The Land Board has recently entered into a lease arrangement with the Air Force Academy to allow construction of an auxiliary airstrip to the south and east of Ellicott (see Map 9). It is possible that the State will participate in other comparable public or private development projects in the future.

Existing Zoning

Over 85% of the planning area is currently unzoned. Map 11 shows the distribution of parcels which do have zoning, and these are summarized by category in Table 6. The two mile wide strip of A-4 and A-35 (Agricultural) property along the western boundary of the planning area was zoned in 1983 as part of the Highway 94 and South Central area planning efforts. All of the zoned property in the planning area is designated for agricultural or rural residential uses except for 480 acres which are zoned R-4 (Planned Unit Development) and 10 acres zoned for industrial purposes.

There have been no Variance of Use requests approved within the planning area boundaries and only four Special Use approvals. Three of these approvals have to do with utility locations, the other is for outside storage associated with a lumber yard. The limited amount of zoning combined with the short time it has been in effect probably accounts for the low number of special approvals in the area.

By County Commissioners' resolution any land which is legally subdivided must first be zoned. This regulation will result in zoning being applied to any new subdivisions which result in parcels of 35 acres or less. Area landowners also have the option of voluntarily seeking zoning of their own property. In addition, the Board has the authority to zone all or part of the planning area at their discretion. Whether or not the Board exercises its prerogative, at least some additional zoning of the planning area will take place if higher density development occurs.

Subdivision Activity

Beginning in 1972, land which is divided to create parcels of less than 35 acres has had to go through a legal subdivision process. Prior to that time, the requirements were not as restrictive. The subdivision process may involve a number of steps including consideration of notice to adjacent property owners so that they may respond with any concerns, land use compatibility, access, utility availability, payment of certain exactions and legal recording of the subdivision plat. The subdivision process also allows the property owner the option to record certain restrictive covenants which will govern the use of the land.

Of the total of 900 or so tax parcels in the planning area, 250 are included in one of 15 legal subdivisions. These subdivisions are summarized in Table 7. All of these subdivisions have average lot sizes in excess of 5 acres. Together, the total subdivided area accounts for only about 1¼ percent of the land in the planning area.

Given the status of their wastewater plant, it is reasonable to expect that the first approved urban density subdivision in the planning area will be in Sunset Village. Up to 3,558 single-family lots will be allowed on 593 acres, along with the additional number of lots needed to accommodate the 1,722 planned multifamily units.

MAP NO. 11

ELLICOTT VALLEY
COMPREHENSIVE PLAN

EXISTING ZONED AREAS

- A-35 RURAL RESIDENTIAL DIST.
- A-4 AGRICULTURAL DIST.
- A-2 AGRICULTURAL DIST.
- PID PLANNED INDUSTRIAL DIST.
- R-4 PLANNED UNIT DEVELOPMENT

SCALE: (IN MILES)

1/8 1/2 1 3

0 1/4 1 2

NORTH

*SOURCES;

EL PASO COUNTY ZONING MAPS 1988

TABLE 6: SUMMARY OF ZONING

ELLICOTT VALLEY PLANNING AREA

Zoning Category	Total Acres	Percent
A-35 (Agricultural) District	3,840	3.0
A-4 (Agricultural) District	13,695	10.8
A-2 (Agricultural) District	350	0.3
R-4 (D-1 + C + T) (Planned Unit Development, Single Family, Condominiums & Townhomes)	480	0.4
PID (Planned Industrial) District	10	-
Unzoned	108,345	85.5
TOTAL	126,720	100.0

Source: Visual inspection of El Paso County Zoning Maps, 6/88.

TABLE 7: SUBDIVISION ACTIVITY

ELLICOTT VALLEY PLANNING AREA

Subdivision Name	Date Recorded	Number of Lots	Total Acres	Average Lot Area
Antelope Acres	1971	24	159.66	6.65
Antelope Acres #2	1973	28	156.14	5.58
Antelope Park Ranchettes	1973	44	320.00	7.27
Ellicott Subdivision	1980	3	37.09	12.36
Hancock's Corner	1981	4	40.00	10.00
Langness Wilderness #2	1981	13	153.86	11.83
Muhe	1983	2	19.73	9.87
Nicely	1987	1	18.60	18.60
Oasis #1	1984	35	187.00	5.34
Oasis #2	1985	78	445.00	5.70
Peakview Mini Ranches	1986	4	39.90	9.97
S & J	1988	3	20.15	6.72
Spillman	1980	3	79.30	26.43
Tierra Mia	1986	4	40.00±	10.00
Veghte	1986	4	39.00	9.75
TOTALS		250	1,755.43	7.02

Source: Review of El Paso County Zoning Maps and Subdivision Information System (SIS) Files, 6/88.

Sketch Planned Areas

Sunset Village is one of only two Sketch Planned projects found within the planning area. The other is the 16 lot Langness Wilderness development which was approved in 1979. As a rural residential development, it would not require processing as a Sketch Plan under current regulations. Sketch Plans are used to conceptually plan uses for larger projects as an extra step prior to actual subdivision. Subdivision is often accomplished in several sequential filings based on the overall plan. Any future projects in the planning area, which involve either mixed uses or multiple phasing, will need to be processed as Sketch Plans.

Parcel Sizes

Map 12 shows the distribution of Assessor's parcel sizes in the planning area. This map shows that the vast majority of the property in the Ellicott Valley remains in large holdings. Almost 98% of all property is accounted for in lots of 35 acres or greater (see Table 8). The smaller rural residential lots tend to be clustered loosely in the vicinity of Ellicott. There are only a few lots of less than 2½ acres, and these are mostly associated with the commercial uses in the town center area.

TABLE 8: PARCEL SIZE DISTRIBUTION

ELLICOTT VALLEY PLANNING AREA

Lot Area (Acres)	Number of Lots	% of Total	Total Acreage	% of Total
0 - 4.99*	95	10.76	400.70	0.32
5.00 - 19.99	279	31.60	1,969.50	1.56
20.00 - 34.99	21	2.38	469.19	0.37
35.00 - 159.99	291	32.96	18,769.40	14.87
160.00 - 639.99	151	17.10	43,692.04	34.60
640+	46	5.21	60,959.54	48.28
TOTALS	883	100.01	126,260.37	100.00

* 44 of these lots fall within Antelope Park Ranchettes. Assessor's records indicate no acreage for these so it was assumed all were 4.95 acres.

Source: Manual calculations from El Paso County Assessor's Records, July 1988

MAP NO. 12

ELLICOTT VALLEY
COMPREHENSIVE PLAN

PARCEL SIZE DISTRIBUTION

- LESS THAN 5 AC
- 5-34 ACRES
- 35-159 ACRES
- 160-639 ACRES
- 640+ ACRES
- STATE OWNED LAND

SCALE: (IN MILES)

1/8 1/2 1 3

0 1/4 1 2

NORTH

*SOURCES;
EL PASO COUNTY
ASSESSOR'S MAPS
1986

CHAPTER III

REGIONAL DEVELOPMENT CONTEXT AND POTENTIAL BUILDOUT SCENARIOS

Introduction

This chapter provides an overview of the general development context of the planning area and examines some of the possible scenarios for its future buildout. In keeping with the direction of the Citizens' Advisory Committee, no attempt is made to assume site-specific uses. Because of the tremendous range of possible development rates, there is also no attempt to specifically establish a time frame for any particular development scenario, although many of the factors which will determine the timing of growth are considered. The purpose of this discussion is only to examine how the Valley may fit into the overall development scheme for the region, and to begin to focus on what kind of development could ultimately occur on a regional basis. This second exercise is important if an open ended and flexible land use planning approach is advocated. If the majority of the planning area is considered to be theoretically available for urban density development, each specific development proposal will need to be evaluated in terms of whether it will function when all of the areas around it are fully developed.

Regional Development Context

Introduction

While residents of the Ellicott Valley have a strong sense of their own destiny, much of their development future will be shaped by outside influences. External development decisions, market considerations and the growth management and financing choices made by area elected officials will go a long way in determining if, when and how the planning area develops.

One purpose of this section is to briefly describe regional population, employment and land absorption forecasts to determine their relationship to the potential for growth in this planning area. Also discussed will be the effects that potential developments in the vicinity of the planning area may have. These existing and potential projects include the Falcon Air Force Base (FAFB) and its environs, the Strategic Defense Initiative (SDI) Test Facility, a possible north-south toll road or Interstate By-pass, the State Lands Project and others. Other sections of this Profile will consider the likely impact of factors which are internal to the planning area.

Regional Population and Employment Forecasts

Over the past two decades, population and employment in El Paso County has grown at a continuous, but extremely uneven rate. Between 1970 and 1987 County population has increased from 235,972 to an estimated 380,000. This equates to an annual growth rate of about 2.7%. The Pikes Peak

Area Council of Governments (PPACG) has predicted that this growth will continue over the next 20 to 25 years, but at the slightly declining rate averaging out at approximately 2% annually. Roughly, this equates to about 10,000 persons and 5,000 employees being added to the County population each year. The housing and commercial, office and industrial construction created by this additional increment of population is the "demand" that the planning area will have to compete for in the future.

As an essential element of their Regional Transportation Planning Program, the PPACG has attempted to "allocate" their regional socio-economic projections to approximately 300 individual traffic zones throughout the western half of the County. These projections are based on a mathematical model which considers such factors as existing employment and population, available land, existing and planned transportation systems capacity and time of travel.

Three of the PPACG traffic zones make up the western half of the Ellicott Valley Planning Area. No projections were done for the eastern half (east of Ellicott Highway), because it was not included in the transportation planning area boundaries. The most recent PPACG projections indicate a very substantial growth rate for the western half of the planning area. Total employment was expected to grow from 69 in the 1980 base year to 588 in the year 2010. Population is projected to grow at an even higher rate from 377 in 1980 to 6377 in the year 2010. It must be emphasized, that due to the uncertainties involved, these projections amount to little more than a "best guess". The numbers do clearly indicate that the Ellicott Valley Planning area will be competing with several other areas of the County for a limited share of population and employment growth. Actual growth will depend on the area's success in meeting the demand for certain submarkets of the development economy. This success in turn will depend on the cooperation of local residents and the ability of the area to provide cost-effective public facilities.

Regional Supply and Demand Forecasts

To understand the potential for urban and rural residential land absorption in the region and in the planning area, it is helpful to convert population and employment forecasts into equivalent acres which will be absorbed and then compare these to available supplies in various land use categories.

Supply Considerations

Momentarily setting aside other considerations including public policy, financing, water availability and the local market, the key factor which ultimately limits the amount and location of urban density development is an ample "supply" of vacant, developable and available land.

At the most general level it has been estimated that approximately 70% of the 2,159 square miles of property within El Paso County are "undeveloped" and theoretically available. Table 9 provides a summary of the developable status of all property within the County.

TABLE 9: GENERAL DEVELOPMENT STATUS OF LANDS IN EL PASO COUNTY

Category	Percent of Total	Approximate Square Miles
Federal Lands	15%	324
Presently Urbanized	5%	108
Presental Rural Residential	5%	108
Environmentally Constrained (non federal)	5%	108
Vacant Developable	70%	1,511
total	100%	2,159

Source: El Paso County Planning Department, 1986

Although there are many other factors influencing the availability of developable land, it is clear from this table that the County has an enormous supply of potentially developable land. By logical extension, it can be determined that the majority of the County will remain undeveloped, or be used for non-urban purposes in the foreseeable future. The Ellicott Valley Planning Area, comprising 198 square miles, is roughly equivalent in area to the sum total of all non-federal developed land in the County. The clear implication here, is that regardless of public policy or this area's relative competitive advantage, the overall supply of developable land in the planning area will not be a limiting factor over a reasonable planning horizon.

A somewhat shorter term and more site-specific approach to the concept of "supply" of developable land would be to consider only those areas which have been master planned or sketch planned for urban land uses. As of January, 1986, this total for the Cities of Colorado Springs and Fountain, along with El Paso County, was about 87.4 square miles. Included in this figure is the 1,063 acre Sunset Village Sketch Plan which is located within the Ellicott Planning Area. When the recently approved Banning Lewis Ranch Master Plan is included in the calculation, the total urban density master/sketch planned area rises to 121.8 square miles. Many of these plans call for densities greater than those which characterize the presently urbanized area of the County. The result is that these plans, in aggregate, account for more potential additional housing and employment than the total which exists today. Because these planned developments, together, have an imbalance toward commercial, office and industrial (COI) uses, there is a disproportionately larger additional supply of planned COI land.

Another indication of the supply of developable land can be obtained by considering the total amount of vacant developable property within incorporated areas. As of 1988, approximately 130,000 acres or 200 square miles of the County were located within incorporated areas.

At least 50 percent of this property is currently undeveloped. A few additional parcels are now being considered for annexation by either Colorado Springs or Fountain.

Based on the factors outlined above, it appears clear that irrespective of public policy, the Ellicott Valley Planning Area will have to compete to some degree with several municipalities which have substantial capacities to absorb growth. In some categories, these municipalities will have an advantage since they have the present capability to deliver many urban services. The Ellicott Valley may have an advantage in the areas of lower land cost and the marketing of a "rural lifestyle".

Demand Considerations

The various measures of developable land in the region must be balanced against the "demand' for land absorption. Demand can be estimated either by analyzing past trends or by attributing acreages to the population and employment forecasts generated by regional government agencies.

While growth in the Pikes Peak region has not taken place at an even rate, the trend over the past few decades has been for approximately 8,000 persons and 4,000 employees to be added to the region each year. Population growth accounts for the largest share of housing units and commercial space which is added to the area each year. The trend toward decreasing household size and the need to replace a small number of units has the effect of further increasing the need for additional housing and, to some degree, commercial space. Altogether, the total amount of land "absorbed" by additional development each year averages somewhat less than 2,000 acres. This acreage tends to be allocated according to the following formula:

-residential uses: (approximately 5,000 units)	1,000 acres
-commercial, office, -industrial uses:	200 acres
-all other uses: (public, open, streets, drainage etc.)	800 acres
total	2,000 acres

Two thousand acres is approximately equal to three square miles.

Specific numbers for rural residential land absorption in the County have not been collected, but it is clear that rural residential development (residences ordinarily on individual well and septic systems) account for a substantial amount of all land absorbed in the County. It is roughly estimated that while only 3-4% of the County's population could be classified as rural residential these uses account for up to 50% of all land absorption due to their large lot sizes. Assuming a County-wide absorption rate of 200-300 rural residential units per year, and a five acre average lot size, an average of two to three square miles of land would be needed to absorb rural residential uses each year. Because of its relative independence from the need for urban services, rural residential development is often not as sensitive to location. The dispersal of only a few full square miles of rural residential subdivisions can exert an influence over a much larger area. For this reason, a substantial portion of

the Ellicott Valley Planning Area has already begun to take on a fairly rural residential area even though only a very small percentage of the total area is actually occupied by these uses.

Regional Supply and Demand Conclusions

All of these regional supply and demand calculations and measures indicate that, from a regional perspective, the supply of available land greatly exceeds the demand for growth. There are three major possible implications for the Ellicott Valley Planning Area. The first is that the Valley will have to compete with numerous other areas in the County if it desires to obtain a share of regional urban density development. The second unavoidable conclusion is that, with most of its total of 198 square miles theoretically available for development, only a very small percentage of the planning area is likely to be developed at urban densities during a reasonable planning horizon. This will be the case even if the area captures a significant share of regional urban density growth. Based on a combination of regional trends and the special character of the planning area, it is very likely that rural residential growth will account for a major share of the total land absorbed in the planning area over the next few decades. Because rural residential growth tends to be somewhat dispersed, it could easily impact very large areas of the Valley even though only a fairly small percentage of the planning area ends up being absorbed each year.

Surrounding Influences

While the growth potential of the Ellicott Valley Planning Area will be generally influenced by development in the region as a whole, it is likely to be more specifically influenced by existing and potential developments in the more immediate vicinity. Over the past few years, a number of events have taken place which together have begun to significantly alter the character of the planning area. Additional influences are likely to become factors in the not to distant future. Several of these present and potential future influences are discussed below.

Falcon Air Force Base

The opening of the Falcon Air Force Base (FAFB) in 1984 had the overnight effect of putting the Ellicott Valley over 50% closer to a major employment center than it had been previously. The Air Force Base is located 2 miles south of State Highway 94 and 3 miles west of the westernmost boundary of the planning area by straight line measure. Presently, approximately 4,400 personnel are employed at the facility. This number may rise to over 6,000 as additional missions are added at the facility. The primary active missions at FAFB relate to the command and control of military satellite systems, or to research for the Strategic Defense Initiative (SDI).

Missions related to (SDI) will more than offset staff reductions associated with the fact that the originally programmed military Space Shuttle operations mission was cancelled. Plans are well underway to construct a National Test Facility (NTF) building for SDI on site at the Falcon Air Force Base (FAFB). Funding levels will effect the timing and extent of these facilities and programs. Because of its focus on research and development, the impact of SDI employment could well be greater than just an additional increment of primary employment. The National Test Facility Socioeconomic Assessment (October, 1987) projects a total impact of 5,700 new jobs and 11,200 new residents by 1991, if the project had been fast-tracked and fully funded. It is now known that full buildup for this facility will be spread over a longer period. This impact would be spread over the entire region. Total direct employment by SDI is estimated in the report at 2,730. Most of these workers would be contract employees. Unlike command and control activities which require a minimum of outside support, and generate little in the way of secondary and spin-off impacts, research and development programs such as SDI, would have much more potential to generate significant secondary and tertiary economic impacts.

A 1987 survey of 606 present employees then at FAFB, indicated that over 80% have Colorado Springs mailing addresses and only 1% might possibly reside in or near the planning area at this time. This indicates that housing demand thus far has been absorbed by the urbanizing area around Colorado Springs. The present lack of housing options in the planning area may be part of the reason that essentially no FAFB employees have yet chosen to reside there. There are any number of potential effects of an expanding FAFB on the Ellicott Valley Planning Area. However, due to its location and distance in the opposite direction from the metropolitan area, the most likely near-term impact will be an increased reliance on the area for some employee housing. Housing demand will be somewhat contingent on the ability of the area to provide urban density single and multifamily housing. If substantial residential development occurs, there will be a parallel demand for additional local commercial and service sector growth.

Planned Developments in the Vicinity of FAFB

The decision to construct Falcon Air Force Base in the early 1980's precipitated a flurry of land speculation and development planning over an area extending several miles in all directions from the facility. Between 1983 and 1985, over 6,000 acres have been master planned for urban density uses within a few miles of the installation. The majority of these projects are heavily oriented toward commercial, office and industrial (COI) uses. Two of these sketch planned developments (East Glen Heights and Sagedowns) border the planning area along Peyton Highway. Due to a combination of speculation, a periodic downturn in the economy and problems with obtaining adequate public services, there has been little or no movement in these projects during the past two years.

The impact of the activity surrounding the Falcon Air Force Base on the Ellicott Valley will likely be indirect. Due to their large scale and the distances involved, it is not at all likely that contiguous expansion from these potential developments will reach very far into the Ellicott Valley. Even if these projects are extremely successful, a more realistic result will be a demand for separate urban growth satellites in the planning area.

Year 2001 Highway System Report

As part of their 1985 publication, Colorado a Forecast of the Year 2001 Highway System, the Colorado Division of Highways prepared an extensive "wish list" indicating projected new facilities, system upgrades and maintenance projects. The most extensive projected new system addition is an I-25 Bypass. No specific alignment is defined, but the report shows it located just to the west of the planning area. The bypass would address system deficiencies which are forecast along the majority of I-25. Taken together, the cost of constructing all of the projected improvements in the report is equal to 300-400 percent of anticipated revenues. What this means is that there is no guarantee that any or all of this project will be funded even if there is a demonstrated need.

Alternative Interstate 25 Expressway or Toll Corridor

Partly in response to the above concerns, the option of a privately financed multi-purpose transportation and utility corridor has been proposed and studied. A Front Range Toll Road Company has been formed to pursue this private corridor option. The initial corridor proposal includes up to two rail tracks, two toll lanes in each direction for vehicular traffic, a water line, and a high voltage conduit along with other utility lines. Total required right-of-way has been estimated to be 400 feet. At present the proposed alignment is shown as running north/south generally in Ranges 63 and 64 West. Hazardous waste transport has been considered by the promoters as one of the uses of this corridor. Interchanges along the corridor would be kept to a minimum, with only one likely in the planning area itself. The rail portion of the proposal would provide an alternative to the present north/south alignment along the more urbanized areas of the Front Range.

The construction of almost any major corridor through the planning area would have the effect of putting the Valley on a major route connecting the large Front Range population centers. Location between two points, rather than substantial isolation as is the case now, may have the effect of inducing urban density and other development. With a rail line there would be added potential for industrial development and the possibility that one or more locations in or near the planning area could develop as commodity transfer points. It is also possible that a regional transportation corridor could function as a local inhibitor of, or barrier to, certain types of development, depending on how it was planned and designed.

State Lands Project

In 1984 the Colorado State Board of Land Commissioners initiated a study of 16,000 acres of fairly contiguous State-owned lands situated to the south and west of Falcon Air Force Base. At its nearest point, the boundary of this project is two miles west of the westernmost boundary of the planning area. The purpose of the study was to evaluate the potential of this land for urban density development. It has been initially determined that approximately 11,000 acres would be potentially developed over the next 50 years. The most likely point of initial focus would be along Drennan Road south of Curtis Road. Recently, the project has been somewhat put on hold while the regional market is further analyzed and questions on the funding of Strategic Defense Initiative Programs are answered.

If a decision is made to move forward on the State Lands Project the near and medium term impacts on the planning area are likely to be only indirect. This is first because the State is contemplating a slow initial buildup for the project (if they proceed at all) and secondly due to the distance between the focus of this development and the planning area. Eventually the State Lands Project could end up competing with the Valley for a share of urban density development demand.

Calhan

The incorporated town of Calhan is situated 5 to 6 miles north of the planning area boundary. The town, which has been in existence since the late 1800's, has experienced steady growth over the years. Its population now stands at near 1,000. Calhan provides a number of services (including shopping, churches and a post office) to the residents of the northern portion of the planning area. Although moderate additional growth is forecast for Calhan, its fairly distant location will limit its direct impact on the planning area.

Adjacent Counties

Assuming that a major transportation corridor or other comparable facility is not located in the eastern County, it is not likely that any of the adjacent counties will exert significant development pressure on the planning area over a reasonable development horizon. Elbert, Lincoln and Crowley Counties all have very low population densities (less than 15,000 total population for all three) and none are experiencing growth adjacent to eastern El Paso County. Growth in Pueblo County has been low to moderate over the past few decades and has been principally confined to the City of Pueblo and the Arkansas Valley.

Summary of Surrounding Influences

The anticipated additional missions at the Falcon Air Force Base are the most certain of several developments which may occur in the areas to the west of the planning area. The future of the several privately initiated urban developments, along with that of the State Lands project, is more uncertain. If substantial development does take place in the vicinity of Falcon Air Force Base, its impacts on the planning area may be significant, but they will be indirect. It is very unlikely that contiguous growth would extend from these projects into the Ellicott Valley. Much more likely would be the development of independent satellite centers which would logically relate to growth occurring farther to the west. Another, and maybe the most likely scenario, would be an increased demand for rural residential housing in the planning area. Possibly, the most profound impact to the planning area would occur if a major north/south transportation corridor were located within or adjacent to its boundaries. This would place the planning area on a corridor between two urban centers (Denver and Pueblo) and at the intersection of a major corridor leading to another (Colorado Springs). Ellicott might then be better positioned to accommodate industrial development.

Potential Buildout Under Various Conditions

Introduction

The first part of this chapter provided a picture of the demand factors which may influence the nature and rate of future development in the Ellicott Valley. The other side of the equation concerns the amount of growth the planning area could theoretically accommodate under various buildout assumptions.

The absence of zoning or approved development plans in the majority of the planning area makes it especially difficult to establish the development capacity of the planning area even under current conditions. Future holding capacity is much more difficult to predict since it is contingent on the interaction of several independent factors including land use patterns, decisions of local officials and residents, and availability of services, especially water. Nevertheless, consideration of a few alternative growth scenarios should be beneficial in helping understand various potentials for development. These scenarios run a continuum from no additional subdivision to buildout at primarily urban densities. To keep things simple, commercial, office and industrial (COI) development is ignored in low density scenarios. Vacancy rates are assumed to be zero in all cases. The most reasonable scenarios clearly fall toward the middle of the range, but within these there is a wide range of viable future possibilities.

Scenario 1 - No Additional Subdivision

If only the existing vacant parcels smaller than 100 acres were developed with one residential unit on each lot a total of 269 additional units could be accommodated. This would represent a 65% increase over the 417 households identified in the planning area in 1986, and would raise the population of the planning area to about 2,250. This scenario does not account for the fact that more than one unit can be constructed on some unzoned lots. The alternative is also not very responsive to existing zoning or approved development plans such as Sunset Village. It is also not very reasonable to assume no that additional subdivision will occur.

Scenario 2 - Existing Zoning Combined with a Rural Residential Assumption for Remaining Property

Assuming maximum allowable gross buildout under current zoning and a density of one unit per 10 acres for all currently unzoned property, the planning area would have the following approximate holding capacity:

108,345 unzoned acres @ 10 acres/du =	10,835 units
14,045 acres zoned A-2 or A-4 @ 6 acres/du =	2,341 units
480 acres R-4 (PUD) @ 0.2 acres/du =	2,400 units
total	15,576 units

note: densities used are reduced to account for a small amount of COI development as well as the space needed for roadways and other public facilities.

This scenario would allow for 15,576 total units at buildout or an additional 15,159 units over what existed in 1986. Using a mixed urban/rural residential assumption of 2.8 persons per household, this buildout scenario would generate a total population of 43,613 persons. A weakness of this scenario is that it ultimately includes too high a rural residential component to be consistent with overall County trends. Typically, rural residential units account for only about 3 to 4% of the total County residential market in any given year. Even if the Ellicott area absorbs a disproportionate share of rural residential uses, it is unlikely that it will fully build out with large lot development before there is substantial pressure from the urban density market. There are also other areas of the County (primarily north along the Platte/ Arkansas divide) which compete for portions of the rural residential market.

Scenario 3 - Seventy-five Percent Rural Residential and Twenty-five Percent Urban Density

If 25% of the gross developable land in the planning area were devoted to urban density development, and the remainder were rural residential, the overall buildout could look something like this:

31,680 acres at urban density		
50% residential @ 5 units per acre =	79,200	units
@ 2.5 persons per household =	198,000	persons
10% commercial, office and industrial =	3,168	acres
@ 27 employees per acre =	85,536	employees
40% public and open space uses =	12,672	acres
95,040 acres at rural residential density		
95,040/6 acres per unit =	15,840	units
@ 3.0 persons per household=	47,520	persons
total units =	95,040	
total population =	245,520	
total employment =	85,536	

This could be a very realistic long range buildout scenario for the Ellicott Valley since it reflects substantial urban density development, but also accommodates large areas which would be used for rural residential or otherwise non-urban purposes. This scenario would be comparable to shifting about 60% of the existing metropolitan area out to the Ellicott Valley, and allowing for large buffers or pockets of large lot development around it. For purposes of comparison it would be helpful to note that the existing urbanized metropolitan area in El Paso County occupies about 110 square miles (not including military facilities). About 340,000 persons currently live in this area. The Ellicott Valley Planning Area includes 198 square miles.

Scenario 4 - Fifty Percent Rural Residential and Fifty Percent Urban Density

63,360 acres at urban density		
50% residential @ 5 units per acre =	158,400	units
@ 2.5 persons per household =	396,000	persons
10% commercial, office and industrial =	6,336	acres
@ 27 employees pr acre =	171,072	employees
40% public and open space uses =	25,344	acres
63,360 acres at rural residential		
63,360/6 acres per unit =	10,560	units
@ 3.0 persons per household =	31,680	persons
total units =	168,960	
total population =	427,680	
total employees =	171,072	

Scenario 4 would roughly amount to taking an area somewhat larger than the existing metropolitan area along with some of its surrounding rural residential development and developed military areas, and transplanting it in the Ellicott Valley. However, this scenario does show a slight employment dependence on the existing area. A balanced system would have about one employee for every two residents.

This Scenario may be a good very long term "worst case" development scenario for the Valley. One can readily imagine the overall extent of infrastructure and services which would eventually be necessary to allow this kind of an urban system to function. In actuality, there are some factors which might make it difficult for the planning area to ever develop at these densities. One such factor would be a continuation of the present trend toward rural residential development. Another would be the intervention of a public or private entity that would take a substantial amount of the land in the planning area off the market. An example would be the development of a large land intensive government facility such as a military installation, educational institution or very large utility.

Scenario 5 - Seventy-five Percent Urban Density and Twenty-five Percent Rural Residential

95,040 acres at urban density	
50% residential @ 5 units per acre =	237,600 units
@ 2.5 persons per household =	594,000 persons
10% commercial, office and industrial =	9,504 acres
@ 27 employees per acre =	256,608 employees
40% public and open space uses =	38,016 acres
31,680 acres at rural residential density	
31,680/5 acres per unit =	5,280 units
@ 3.0 persons per household =	15,840 persons
total units =	242,880
total population =	609,840
total employees =	256,608

note: to make this scenario a bit more realistic a higher employment density should be used to make total employment equal to about 50% of total population. Average employment densities of about 55.5 employees per acre are being proposed in recent City and County master plans in the vicinity of the urbanized area.

For this scenario to take place, there would have to be an almost complete cessation of low density development in the planning area. Densities on the order of those found in the existing metropolitan area would have to occur over almost all of the planning area. This is unlikely over anything but the extremely long term, since there is currently no widespread pressure for urban density development in the area. Substantial portions of the planning area can be expected to be removed from the development market for various lower density uses prior to the advent of pressure to fully urbanize. This alternative can therefore be considered a "very worse case" scenario which might be used as a planning tool to assess future impacts. It might be helpful to keep this scenario in mind when doing advance planning for such things as right-of-way acquisition, even though it may be assumed that plans might have to be scaled back once a more definitive development pattern begins to emerge.

Impact of Water Supply on Development Scenarios

Of the numerous variables which may influence which of the above scenarios may end up occurring in the planning area, water availability is likely to be one of the more critical.

It is estimated that about 9,000 acre feet of water are annually recharged to the alluvial aquifer which underlies the planning area. Most of this recharge actually occurs in the reaches of the basin beyond the northerly limits of the planning area. Presently, essentially all of this alluvial water is appropriated for agricultural uses or external sale. If all of this 9,000 acre feet were diverted to support development in the planning area, it could meet the domestic use needs of the equivalent of 22,500 single family units assuming an annual use rate of 0.4 acre feet and no reuse. This amount of water would supply all of the residential development assumed in Scenario 2 with enough left over to provide for supporting non-residential uses so long as these were not water intensive. It needs to be reemphasized that not all of this water is presently available for use within the planning area.

On average, there is also about 60 acre feet per acre of water in storage in the various bedrock aquifers under the planning area. This amount is higher in the northerly sections where deposits are thicker and lower toward the south where they thin out. Unlike alluvial supplies, this water is legally considered to be non-renewable. For practical purposes, this means that once it is withdrawn for consumptive use, it will not be replace by nature. Based on the State's "100-year withdrawal rule" as promulgated under Senate Bill 5 the 60 acre feet per acre would equate to a maximum annual supply of 0.6 acre feet per acre. The total amount of water which would then be theoretically available under the

126,720 acres in the planning area each year would be 76,032 acre feet. This would be enough to provide water for the equivalent of 190,000 residential units. However, when the County's recently adopted 300-year Subdivision Regulation is applied to this supply, the number of units which can be theoretically supported drops by two-thirds to 63,333.

A potential complication to this formula has to do with the tributary versus non-tributary status of the groundwater. Although water in the Upper Black Squirrel Designated Basin is now exempt from Senate Bill 5 rules, it is possible that essentially all of the bedrock water under the planning area could eventually be declared to be legally tributary to downstream surface supplies. This would necessitate the preparation of sometimes cumbersome augmentation plans which would provide for the recharge of any tributary water which was consumptively used. Besides adding complexity, this process effectively reduces the amount of water available for use each year. An additional complicating factor will be the effect high levels of bedrock pumping will have on existing shallow wells. This, and other factors, should be taken into consideration by the electors of the Upper Black Squirrel Designated Groundwater Basin when they set their policies for water withdrawal.

With the above caveats in mind, it appears that a combination of alluvial and bedrock groundwater supplies could meet the needs of at least half of the population assumed for Scenario 3, if these supplies were diverted from existing uses. This would give the planning area a good start based on local supplies. Ultimately, outside sources would have to be brought on line to support full development of the Valley. In the interim, water availability is likely to exert a strong influence over the location and growth of growth clusters. Areas with access to a developed water supply will have a significant advantage over those which will have to acquire and develop water. The County's subdivision regulations may have the effect of temporarily removing some land from the development market because their associated water rights could end up being tied to development plans for surrounding properties.

Summary of Development Scenarios

The preceding review of development scenarios for the Ellicott Valley sheds some light on the long-term future of the area. Due to the absence of other policies or plans which can be counted on to divert substantial property to other uses, it is advisable to project the ultimate land use pattern of the area as a fairly balanced mix of rural residential and urban density uses. The easiest way to visualize this scenario would be to imagine the existing Colorado Springs metropolitan area being shifted out to the Ellicott Valley along with the lower density development in its environs. This scenario then essentially becomes the best case for economic development and the "worst case" for analyzing planning impacts.

In making these extrapolations, it is important to remember that it took about 120 years for the existing metropolitan area to grow to the point that it has. This means that the important inference to make about the Ellicott Valley is that one needs to plan for the relative densities and impacts, and probably not for the overall amount of growth. Planning in detail for events projected to happen beyond a 20 year horizon is usually counterproductive. However, it is never to soon to consider overall patterns and impacts, especially when the future is open-ended. It is also realistic to assume that before the Ellicott Valley would ever achieve the development saturation described in the final few scenarios, the existing metropolitan area will expand to the point where it would at least be comparable in size to metropolitan Denver. At that point in time the Ellicott Valley would no longer be remote from other urban density areas. When considered from this perspective, topics such as reservation of expressway alignments and regional stream corridor parks begin to take on an immediacy which they would not normally have.

The planning approach taken in the last chapter of this document seeks to reconcile the potentially immense ultimate development holding capacity of the Valley with the much more modest potential for immediate growth. The objective of the recommended Growth Clusters Scenario and Growth Management Approach is to allow site specific urban densities to progress independently while at the same time addressing some of the regional development impacts which they will create.

CHAPTER IV

POLICY PLAN AND LAND USE SCENARIOS

Introduction

Although the residents of the Ellicott Valley have an overall vision of the future of their planning area, they realize that this future will be dynamic and therefore not fully predictable. For this reason it has been decided that no attempt should be made at this time to comprehensively establish site-specific uses through the adoption of a land use map. Instead, graphic elements will be used only as a resource to help in the application of a more performance-based approach. Written policies and a textual development scenario will be relied on as the operative elements of the Plan. This approach combines a flexible set of guidelines (the policies) with a general vision of the future (the scenarios) to ensure that growth takes place in an orderly, compatible, environmentally sensitive and cost-effective manner. As development patterns begin to emerge, it may be necessary to update the Plan to include more location-specific considerations. As flexible and open-ended as this Plan is, even its present content will certainly be tested by new and unanticipated circumstances. As a scenario or policy is tested, it should be reevaluated and revised as appropriate to ensure the long-term integrity of the overall document.

In the meantime, it is the purpose of this Plan to establish a dynamic future vision for the Ellicott Valley and to ensure that short-sighted or narrow focussed decisions, that could diminish this future, are not made. Finally, it needs to be understood that a Comprehensive Plan is always to some degree the voluntary prerogative of area residents. This will be especially the case in the Ellicott Valley where much of the area remains unzoned. Specific areas where the County government will be able to cooperate in Plan implementation are discussed in a separate section.

Policy Plan

Fundamentally, this policy plan consists of a set of criteria which can be used to comprehensively evaluate the potential "performance" of a proposed land use. The goals and policies which have been developed for this purpose are organized under several subject headings. Unless clearly specified they are meant to apply to the entire planning area. They are intended to be used collectively to ensure that as many of the benefits and impacts of a particular project are clearly understood when it is being reviewed. For this reason, consistency or inconsistency of a proposal with the whole body of policies is typically more important than its relationship to any single policy.

Again, because of the dynamic nature of this planning area, few specific actions are proposed at this time. It is anticipated that additional policies and actions will need to be recommended as the area evolves.

1. Growth and Land Use

Goal Statements

1.A. - Promote the Ellicott Valley Planning Area as a desirable place to live and work.

1.B. - Support the development of the Ellicott Valley as a self-sustaining satellite community which compliments the Colorado Springs metropolitan area.

1.C. - Accommodate a balanced mix of urban density and rural residential uses in the planning area in a manner which is sensitive to both existing conditions and the need to preserve future development options.

1.D. - Evaluate proposed land uses according to how they relate to specific performance criteria rather than how they compare to a predetermined location-specific land use plan.

Policies

1.1 - Encourage the development of "growth clusters" as described in the Overall Growth Scenarios.

1.2 - Approve urban density developments where there will be adequate facilities to guarantee urban levels of service.

1.3 - Encourage the phased development of urban facilities and services so that urban density projects are able to maintain an adequate cash flow during their early stages.

1.4 - Encourage the use of growth management planning tools where appropriate to ensure that adequate facilities and services are provided when needed (refer to detailed discussion later in this chapter).

1.5 - Approach urban density development proposals with the philosophy that they will largely proceed independently, and that they should therefore be internally responsible for most urban services and impacts.

1.6 - Where adequate regional infrastructure for an entire proposed urban development cannot be currently guaranteed the use of a rural cluster approach is preferred. Under this option, development of a portion of the property would be allowed while construction on the balance would be deferred until adequate facilities and services are available or could be guaranteed (see discussion later in this Chapter).

1.7 - Encourage new development to locate in areas where existing facilities can efficiently be extended.

1.8 - Encourage new developments to demonstrate compatibility with existing surrounding land use in terms of: general use, building heights, scale, density, dust and noise as applicable.

1.9 - Provide for the phased zoning of sketch planned urban density growth centers so that use relationships can be defined, but discourage large-scale zonings or rezonings which are speculative in nature.

1.10 - Allow "low impact uses" in areas designated for rural residential uses, either through the Special Use review process or as part of carefully defined planned unit developments. Variances for low impact uses should be used sparingly and in all cases approvals should not result in a deviation from the predominantly rural residential character of these areas.

2. Economic Development

Goal Statements

2.A. - Promote the economic development of the Ellicott Valley Planning Area by emphasizing its positive attributes, continuing to develop necessary facilities and amenities and preserving its long-range development options.

2.B. - Encourage the development of an economically independent growth center in the Ellicott area by allowing for a full range of employment and residential uses.

Policies

2.1 - Support the development of infrastructure which will be necessary to support economic development in the Ellicott Valley.

2.2 - Encourage the development of appropriately located and planned industrial and transportation centers in the planning area. Appropriate planning includes adequate provisions for public facilities and services.

2.3 - Maintain, improve and promote the amenities of the Valley which may influence firms toward locating in the area (examples include schools, natural features and recreational facilities).

Proposed Action

2.a. - Use the material in this plan and in subsequent studies as an information source and aid for potential developers.

2.b. - The County should make its technical information available to support appropriate economic development efforts in the area.

3. Residential

Goal Statements

3.A. - Promote the Ellicott Valley Planning Area as a quality residential living environment.

3.B. - Allow for a balanced mix of residential densities and housing types in the planning area.

Policies

3.1 - Where possible, cluster residential units in order to reduce development and maintenance costs, preserve natural features and maximize open space.

3.2 - Encourage residential development plans to be consistent with the "growth clusters" approach as described in the Land Use Scenarios.

3.3 - Discourage the division of existing and planned residential neighborhoods by major transportation arteries.

3.4 - Encourage compatible relationships between residential uses and potentially hazardous or intrusive uses such as major transportation corridors, heavy industry, extractive uses, etc.

3.5 - Ensure that existing and planned rural residential development is adequately buffered from new urban uses.

4. Commercial

Goal Statement

4.A. - Support commercial development which meets the retail and service needs of area residents.

Policies

4.1 - Encourage new commercial uses to locate either in association with existing commercial areas or within planned urban density projects.

4.2 - Phase commercial land use approvals so that they are consistent with the scale and character of approved residential and employment uses, and market demand.

4.3 - Discourage spot commercial zoning as well as clearly speculative commercial zoning.

4.4 - Encourage the continued development of the intersection of State Highway 94 and Ellicott Highway as a commercial and industrial community center.

4.5 - Limit potential commercial developments in rural residential areas to those which meet the convenience and specialty needs of local residents.

5. Industrial and Employment Uses

Goal Statement

5.A. - Promote and accommodate those industrial uses which will not result in adverse impacts to the natural environment or facilities systems in the planning area.

Policies

5.1 - Attempt to mitigate any potential adverse impacts of industrial development by carefully applying industrial performance criteria.

5.2 - Encourage industrial uses, with potentially adverse impacts, to locate in planned industrial parks which are sufficiently separated from other development.

5.3 - Allow lower impact industrial and office uses to be integrated as parts of larger planned urban density projects.

5.4 - Support the development of industrial and employment uses which are not overly water intensive in order to allow for more total development and employment.

Proposed Action

5.a - Encourage proposals for industrial and major employment uses to prepare public safety contingency plans which address all relevant subjects including adequacy of fire protection, emergency medical facilities and evacuation procedures.

6. Agriculture, Mineral Extraction and Special Uses

Goal Statement

6.A. - Allow for agricultural, extraction and other comparable uses when these can be accommodated without adversely impacting surrounding development and overall environmental quality.

Policies

6.1 - Because of changes in the agricultural economy, do not attempt to make agricultural development a major priority, but seek to assure that non-agricultural development is compatible with existing active agricultural operations.

6.2 - The "open rural character", traditionally associated with the Ellicott Valley, should be preserved and enhanced through careful planning.

6.3 - New development should be responsible for mitigating the safety concerns which may result from "attractive nuisances" located on adjacent or nearby agricultural operations.

6.4 - Mineral aggregate extraction operations in the planning area should not be located where they may adversely impact groundwater supplies. Potential operations should be reviewed for their visual and environmental compatibility with adjacent uses.

6.5 - Expansions of extractive uses should not be allowed if compliance with conditions attached to previous approvals of the same petitioner's projects has not been demonstrated.

6.6 - Transmission lines and communication towers, which are necessary to serve the needs of local residents, should be collocated where possible and should not be sited within developed rural residential areas.

6.7 - Utilities lines should not be placed in or adjacent to roadways in a manner which will compromise the ability to fully expand those roadways in the future.

6.8 - Discourage the location of sanitary landfills in those portions of the planning area which are underlain by alluvial or bedrock aquifers or are characterized by sandy soils.

7. Public Facilities and Community Services (Transportation Considered Separately)

Goal Statement

7.A. - Provide adequate, efficient and economically feasible community services and public facilities to the planning area.

Policies

7.1 - Because of its location and current uses, consider the intersection of State Highway 94 and Ellicott Highway as one logical place to centralize public services and facilities.

7.2 - Coordinate the review of proposed urban density developments so that the plans and capacities of all existing, operating and approved service providers are fully considered.

7.3 - Develop tailored public safety plans for all proposed developments, as described in the discussion of Growth Management Planning.

7.4 - Encourage the eventual location of a Sheriff's substation in eastern El Paso County.

7.5 - Support the development of regional wastewater plants in order to gain economies of scale and to prevent contamination of groundwater (see also Natural Environment Policies).

7.6 - Support the continued joint utilization of school facilities for other community purposes.

7.7 - Prioritize a limited number of stream corridors for inclusion in a linked public open space network and protect them for this purpose.

7.8 - Ensure that urban density developments provide accessible neighborhood parks, along with the mechanisms for keeping them maintained.

8. Transportation

Goal Statement

8.A. - Allow the maximum potential for eventual development in the planning area by ensuring that transportation planning options remain open.

Policies

8.1 - Promote the location of a north/south Interstate bypass or toll road corridor through or adjacent to the planning area.

8.2 - Protect adequate rights-of-way to allow for the eventual construction of a complete arterial system throughout the planning area (refer to the County's Major Transportation Corridors Plan).

8.3 - Aggressively protect the integrity of major transportation connections to the metropolitan area by limiting access, signalization and uses which may compromise through-traffic capacity.

8.4 - Encourage the development and upgrading of additional east/west arterial or expressway corridors including Drennan/Enoch and Judge Orr Roads.

8.5 - Predicate the approval of any land uses, but especially those generating truck traffic, on the adequacy of the existing road system.

8.6 - Refine the generally adopted road pattern to be sensitive to environmental features, existing residential areas and to minimize expensive stream crossings.

8.7 - Discourage the division of existing land uses and agricultural operations by major traffic corridors and mitigate impacts which do occur by planning for suitable crossings.

8.8 - Use care in the planning of airport facilities to minimize their impact on adjacent land uses and transportation systems.

8.9 - Provide for Park and Ride facilities in all major developments and especially in association with primary intersections.

8.10 - Encourage the establishment of pedestrian and bicycle routes within urban growth clusters and provide for connections between centers as appropriate.

8.11 - Investigate rural transportation options (including special bus service) for those without access to automotive transportation.

9. Natural Environment (Water Resources Treated Separately)

Goal Statement

9.A. - Preserve or protect the sensitive and unique environmental features in the planning area, but seek also to capitalize on the general lack of natural constraints to create a new and liveable environment.

Policies

9.1 - Evaluate all land use proposals in the planning area in terms of both their individual and potential collective impact on the alluvial aquifers which provide the area with its water supply.

9.2 - Encourage the preservation of major stream corridors in a predominantly natural condition in order to minimize flood hazards, facilitate aquifer recharge, provide for wildlife corridors and allow for open space linkages.

9.3 - Integrate unique natural features such as slopes, outcrops and stream valleys into planned developments in order to add diversity and character.

Proposed Actions

9.a. - Select a manageable number of the most appropriate stream corridor segments for eventual integration into a linear park system. Orient development (with proper setbacks) toward these and allow for adequate public access (also see Policy under Facilities and Services).

9.b. - Cooperate with the State Division of Wildlife in tailoring land use plans to the needs of wildlife populations.

9.c. - Work with the Soil Conservation Service to prepare range management and soil erosion control plans for both rural residential and urban density projects.

9.d. - Determine the degree to which any proposed land use may produce on- or off-site fugitive dust problems and design appropriate solutions for mitigation of any problem.

10. Water Resources
(See Policy 9.1 under Natural Environment)

Policies

10.1 - To the degree possible under its land use authority the County should discourage any use of land or water which would adversely effect either the quantity or quality of groundwater in the planning area.

10.2 - Encourage all developers to coordinate with the Upper Black Squirrel Water District, the State Engineer, the United States Geological Survey, applicable special districts and the County Hydrogeologist to ensure that water supplies are available and protected.

10.3 - Encourage the eventual use of local water resources by uses within the planning area.

10.4 - Support development which integrates water conservation practices which include on-site handling of runoff.

10.5 - Encourage individual developers to coordinate with adjacent property owners in the development and implementation of master drainage basin studies.

11. Visual and Historical Features

Policies

11.1 - Protect views to the Front Range, major ridge lines and the Upper Black Squirrel Valley.

11.2 - Preserve the open rural character of the Valley by clustering development, maintaining some open space and providing view corridors.

11.3 - Create new and diversified local visual environments by encouraging compatibility of design and landscaping.

11.4 - Buffer unsightly uses such as junk yards and mineral extraction operations through careful location, berming and screening.

11.5 - Locate public facilities such as water tanks and substations as unobtrusively as possible and further minimize their impact through the use of screening, berming and natural colors.

12. Government

Policies

12.1 - Support the equitable representation of all area residents in the consideration of future land use proposals.

12.2 - Refer all applicable land use items to the Ellicott Valley Citizens' Advisory Committee or a comparable group for review and comment. It is suggested that proposals be informally presented by the applicant to planning area residents prior to formal submittal.

12.3 - Continue the involvement of area residents in the development of any County-wide mechanisms for the financing of regional infrastructure.

12.4 - Support the independent creation of an economic development organization for the Ellicott Valley if area residents choose to pursue this option.

Land Use Scenario

Introduction

This textual Land Use Scenario is meant to be used in conjunction with the preceding policies and inventory information as a guide in the review of land use proposals in and around the planning area. In the absence of a site-specific land use map or concept plan, it is especially important that this Scenario be given a complete and careful consideration when decisions are made regarding the future of the Valley.

The Scenario begins with a brief Introduction to selected issues which are critical to successful development in the planning area. The description of the Growth Clusters Approach which follows provides the fundamental framework for the planning area. This discussion is in turn followed by a detailed consideration of Growth Management Planning as the preferred method of allowing for development while at the same time giving adequate consideration to the needs and interests of other planning area residents and the County. This section concludes with a preliminary discussion of the Satellite Cluster approach as an option for maximizing the range of early development opportunities.

Development Pattern

In the Ellicott Valley, a mix of urban density satellite communities and rural residential developments should be promoted. Where possible elements of the existing rural character should be incorporated into approved development plans. Because the planning area has such a large amount of vacant land potentially available for development, it is unrealistic to fully predict where the areas of initial growth focus will or should be. For this reason, decisions regarding the specific location and land use mix of future development should be largely left up to the private market. Once projects or uses have been proposed, factors such as adjacent uses, environmental features and the availability of facilities and services may then be considered as part of the development review process. As the area further develops, it can be expected that various "growth

clusters" will begin to emerge. At that time it will be more appropriate to develop detailed location-specific land use policies. The "growth clusters" concept is further discussed in a separate section.

Economic Development

Where appropriate, the information in this document should be used as a resource to promote economic development of the planning area. Mixed-use projects which can be expected to allow the planning area to develop with a degree of economic stability and self-sufficiency should be given particular support. The promotion of these types of development concepts can also be expected to incrementally reduce long distance commuting between the Ellicott Valley and the existing metropolitan area. It is recognized that, over the near term, small and medium scale employment generators are likely to be most competitive and more easily accommodated through logical expansions of existing facilities and services. Over the longer term, it is the expectation of Valley residents that larger scale mixed use and employment centers can be accommodated in the region.

Many area residents also conditionally support the alignment of a north/south transportation/utility corridor through the planning area. Either a public Interstate bypass or a privately-operated corridor, could put the Valley in the path of economic development.

Preservation of Transportation Options

To allow for a maximum number of future development options, adequate rights-of-way for a full urban density major transportation corridor system should be reserved. These alignments can be modified on a case-by-case basis when areas are more specifically planned, as long as the overall integrity of the system is not compromised.

Growth Management

A combination of growth management and project phasing plans should be utilized to ensure that adequate public facilities and services become available as they are needed to serve both the on-site and off-site needs of development. Some suggested elements of these plans are discussed in a separate section. Plans should be structured to allow projects to "get off the ground", with a minimum of front-end commitments, while at the same time providing mechanisms to require all urban density projects to equitably participate needed improvements when they become necessary. The use of the "satellite cluster" land banking option, which is also described in a separate section, may be helpful in achieving this objective.

Resource Management and Protection

Outside of available land and a constituency interested in cooperative development, the most important asset of the Valley is probably its groundwater. The occasional chance of major flooding is certainly the most important environmental concern.

All land development proposals should be reviewed by appropriate entities to determine their impact on the overall water supply of the planning area. Projects which emphasize water conservation and reuse should be supported, and those which might result in groundwater contamination should not be located over shallow aquifers. Floodplains should be predominantly left in their natural state in order to reduce overall drainage engineering costs and to maximize groundwater recharge. Soils which are prone to wind or water erosion should be stabilized during and after construction.

Growth Clusters Concept

Introduction

The development concept which is proposed for the Ellicott Valley Planning Area might best be described as one of "enhancing what naturally develops". It is anticipated that what will naturally develop in the planning area is a pattern made up of fairly unique growth centers which are likely to be separated or surrounded by considerable expanses of agricultural and grazing land. It is further anticipated that once the development of a given cluster is successfully initiated, there will often be a tendency for additional comparable uses to be attracted to the same general location. This will occur first because additional uses naturally tend to gravitate toward areas where the same use has previously been established and secondly because there will likely be less front-end infrastructure cost associated with developing in this manner. The centers or clusters which are established will be connected through a network of major roadways and utility lines. Potential centers or clusters may include mixed use urban satellites, and Ellicott "town center", rural residential communities, transportation corridor-related industrial and shipping centers and government installations. As these clusters or centers emerge, there will be a need for more detailed planning policies to enhance their continued development and to reduce potential incompatibilities and inefficiencies.

Urban Satellites

Urban satellites will need to be designed to meet urban needs and be connected to an adequate major roadway and utility network. In order for these communities to function effectively, master plans and growth management plans should be used in conjunction with planned zoning districts to ensure a proper match between the phasing of development and needed public improvements and services.

Direct adjacency to either rural residential or heavy industrial uses should be discouraged in most cases. Economic and service self-sufficiency should be encouraged, but it needs to be recognized that the majority of satellite residents and employees will still need to commute to other areas for either employment, housing or retail opportunities. Partly for this reason, urban satellite developments are encouraged to be located in areas with access to major transportation corridors. Because these satellites can be expected to largely "stand alone" from other

developments for some time, emphasis should be placed on creating a system of independent services and facilities. These may include fire stations, neighborhood schools and parks, interim water and sewer treatment facilities and possibly remote County service centers. The distance factor can be further reduced by incorporating design and service features such as emergency medical transit centers, high fire prevention and suppression standards, additional security measures and special road and drainage maintenance arrangements into development plans. These features are further discussed under the topic of Growth Management Planning.

Town Center

The establishment of an Ellicott "town center" could result from a combination of new development, with the existing uses located around the intersection of Highway 94 and Ellicott Highway. New development could take advantage of the character and sense of place associated with the original town site, as well as the high traffic volumes, which may pass through this high profile intersection in the future. These projected high traffic volumes will represent a mixed blessing since they will eventually reduce direct access to traditional institutional and retail uses in the area. This potential problem could be partially ameliorated by developing a system of frontage roads or by slightly offsetting either the major roadways or the town center to allow the major corridors to bypass it.

Rural Residential Clusters

Over the past decade, a major component of development activity in the planning area has been rural residential subdivisions. These developments may vary greatly in overall size, but typically consist of individual lots in the 5 to 10 acre range. Rural residential subdivisions are almost exclusively served by individual well and septic systems. Full urban amenities such as street lights, curb and gutter and sidewalks are not normally required, but street paving is being mandated more and more often in order to mitigate fugitive dust problems in compliance with State statutes.

When asked, many rural residential property owners explain that their primary reason for moving to or remaining in the Ellicott Valley is its rural lifestyle and consequent lack of urban hustle and bustle. For this reason, rural residential and urban development do not always make good neighbors. As rural residential areas begin to emerge, the larger concentrations should be encouraged to develop as their own growth clusters and should largely be kept free of more urban intrusions. Major transportation corridors should specifically be routed around them, and commercial uses should be kept at a small and local scale. In order to limit fugitive dust problems, however, access to a system of paved roads will likely be necessary for all but the smallest of proposed rural residential developments.

Transportation Corridor-Related Centers

If a major north-south transportation and/or utility corridor were located within or adjacent to the planning area, it would be likely that impetus would be provided for the development of one or more shipping or industrial centers related to it. These centers would most probably be located at the intersections of such a corridor with existing or future east-west routes. The purposes of these centers could include the transshipment and storage of materials, corridor service, or industry dependent on the corridor. Many of these potential uses will require access to the corridor as well as a range of public facilities and services. Often, these types of developments are fairly compatible with any negative impacts such as noise, visual clutter or safety hazards, which are associated with the corridor. Incompatibilities which do exist occur more often between the uses in these industrial and transportation-oriented areas and those which may be adjacent to them. For this reason, it is important to develop these areas to adequate standards and provide buffers between them and other less intensive or potentially noxious uses.

Proposals for transportation and industrial centers should be carefully reviewed in order to avoid the possibility that they could adversely impact the groundwater supplies on which surrounding developments are dependent.

Government Installations

Several sites within the planning area should be considered as potential locations for future government installations. Among the reasons for this are the overall military and institutional influence in the region, the supply of vacant developable land in the planning area and the fact that much of this vacant available land is in State ownership. The planning area has already been chosen as a location for the Air Force Academy's alternate T-41 landing strip. Government installations often provide additions to the economic base of the surrounding community and result in an enhancement of property values. They can also produce minor environmental impacts when compared to other land development options. In many cases, these facilities can internally accommodate many of their own utility and service needs if these are not generally available. Potential negative aspects of government installations include the fact that they do not directly pay property taxes and they may generate significant off-site impacts. These impacts may include traffic generation, noise, light pollution, dust and utility needs.

While area residents generally support the location of government installations within the planning area, each proposal should be evaluated based on its own merits. Impacts to the surrounding community should be mitigated through the provision of buffering and necessary infrastructure.

Growth Management Planning

Introduction

Regardless of the exact development pattern which ultimately emerges in the Ellicott Valley Planning Area, it is important that future residents be provided with efficient, cost-effective and equitably shared facilities and services. Conventional service delivery and financing systems which rely on phased extensions from centralized facilities can only partially meet the needs of the dispersed growth centers which are anticipated for the Ellicott Valley. Additional facility and service management mechanisms will be necessary to serve these dynamic and independent centers. A flexible combination of conventional and uniquely tailored planning and financing tools is often the most viable means to support the development of independent growth centers while at the same time ensuring that the needs of all County residents are best served. Collectively, this approach is known as growth management planning.

The purpose of growth management planning is to allow more or less independent development to get off the ground, while assuring that effective and equitable urban services and facilities will ultimately be made available to project residents. It is often unrealistic to provide a full array of urban services concurrently with construction of the first residential or nonresidential units in a development. In some cases, it may actually be prudent to defer the construction of certain facilities, such as roads, until an adequate user base is available. Growth management plans respond to situations where growth rates are uncertain by typically tying specific improvements or levels of service to particular milestones in project phasing. The assumption should be that each project is uniquely dynamic. In the initial stages, other planned developments should not be overly depended on to create markets and provide external services, even though the long-term goal may be for several separate developments to be unified into an efficient and cohesive regional urban system. Therefore, a viable growth management plan should consider the context of surrounding land use by accounting for its ultimate buildout, but the feasibility of the primary project should not be contingent on that surrounding development occurring within a defined time frame. To summarize, the growth management planning technique has the advantage of being able to identify and move toward preferred ultimate arrangements while still allowing development to occur under interim conditions. While many growth management plans will contain common elements and implementation measures, each should allow for the special circumstances associated with its particular project. Several key aspects common to many growth management plans are considered in the following discussion.

Milestone or Step Approach

A fundamental component of many growth management plans is a milestone or step approach wherein specific improvements, levels of service or actions are tied to

completion or approval of particular phases of a project. Subdivision or zoning approval for either the initial or certain latter phases of a project may be made contingent on satisfaction of various predetermined conditions. Conditions may include completion of prior phases to a defined point, provision of specified internal and external facilities and services, the formation of districts or the signing of certain contracts for services. With zoning approvals, it is possible to include clauses to prompt reconsideration of original zoning if specified conditions are not met. All pertinent aspects of the El Paso County Zoning and Subdivision Regulations also need to be adhered to.

Relationship to General Fund and Potential Impact Fee Financing Systems

It is likely that the best public services financing system for Growth Clusters will actually consist of a combination of approaches. The first approach is to rely as much as practical on existing service delivery and financing systems, especially during the initial phases of the project. This may include use of existing County services and arrangements with operating districts and utilities. Developers of growth clusters should also participate in any county-wide infrastructure financing fees if these are adopted and applicable. Because County General Fund and potential impact fee arrangements may not be sufficient to guarantee timely availability of certain needed services and utilities, additional stand alone financing systems may need to be implemented. These may include up front payments, financial guarantees or the formation of districts. During consideration of financing approaches, analyses need to be performed to ensure that both the developer and future residents do not end up either being subsidized by the general taxpayer or being assessed for a disproportionate share of infrastructure and service financing costs. With the availability of more advanced and accessible Countywide socio-economic, land use and financial databases, it will become more practical to perform more sophisticated fiscal impact analyses for future projects.

Formation of Districts

Although the use of one or more financing districts may be the preferred means of providing certain facilities and services to an emerging growth cluster, it is also good policy to limit the overall proliferation of districts. This minimizes administrative complexity, avoids inefficient and overlapping services and should reduce the possibility that districts may become insolvent and be forced to raise mil levies. Where possible, a desired option might be to annex to an operating district or to design a system which can eventually be physically and administratively combined with others in the same vicinity. Where existing districts are not a viable option, the formation of a single metropolitan district may be preferred when compared to several single purpose districts.

The service plans, which are required prior to the legal creation of districts by the Board of County Commissioners, can provide a mechanism for integrating financing policy into an overall growth management package. However, it needs to be made clear that once districts are authorized by the Board of County Commissioners and the court system, they operate with a great deal of autonomy from County government. They can, for example, annex additional territory without an amendment to the service plan. Since the residents of the district are ultimately responsible for the tax liability they incur, it is important to design, authorize and administer special districts prudently.

Tests For Adequacy

Plans for satellite developments will have to meet tests for service and facility adequacy which are determined on a County-wide basis. These include compliance with various County Subdivision Regulations governing such subjects as water supply, sanitary sewer service, drainage facilities, road access and numerous other important considerations. Additional adequacy standards are being developed as the County continues to perfect its land development regulations and public facilities financing mechanisms. The challenge is to determine the approaches which allow development to proceed most efficiently and still meet these adequacy standards.

Land Use Mix

For most growth clusters, a reasonable balance between employment, residential and commercial uses will be desirable. At least in theory, this balance will eliminate the need for other projects in the vicinity to skew their land use mix to compensate for a project weighted toward one particular use. A balanced project will also, at least theoretically, minimize the need for external automobile trips. Initially, developments are often planned to include a disproportionate amount of commercial, office and industrial uses, but there are instances where not enough employment or retail space is planned.

In practice, market conditions and service availability will combine to dictate which uses end up getting built at what time. Often, a satellite growth center will not have the initial marketability to attract significant employers or enough population base to support many commercial establishments. These realities need to be taken into consideration in determining the appropriate land use mix for earlier project phases. Regional and small area land use statistics and multipliers are available from various local and state agencies for use in evaluating an appropriate land use mix.

Transportation

Transportation planning is often the most critical element in the formulation of a successful growth management plan. This is because transportation systems are almost always the most costly capital

improvement associated with development. The ultimate added cost of retrofitting a system which was not adequately planned in the first place can be exorbitant.

Effective growth management planning for transportation actually begins with decisions regarding land use mix, phasing and project layout. A transportation responsive land use plan can minimize total vehicle miles traveled by allowing for employment centers and retail uses close to residences. A responsive transportation plan will also be flexible enough to allow for external transportation impacts which can not be completely determined during early planning stages.

A complete growth management transportation element will be based on a well-prepared traffic impact analysis. This analysis should address both on-site and off-site impacts of both the proposed project and existing or contemplated adjacent development. Based on these data, recommended interim and ultimate systems can be determined along with adequate funding mechanisms. In performing the impact analysis, it is important to not initially overstate the proportion of trips that can be expected to be internally diverted within a project, especially during peak commuting hours. As a development matures and enlarges, more vehicle trips can be expected to be captured internally. Traffic impact analyses may have to be periodically updated to keep pace with changing conditions in and around the project. It is very important that the "trigger" for transportation improvements be based on measures of actual impact such as vehicle trips on a given roadway or deterioration of the level of service to a predetermined point. Arrangements, which tie improvements to project phasing, number of housing starts or a particular date and time are likely to be less responsive to actual need.

Some proposed satellite developments, within the planning area, may face an almost immediate need to participate in the upgrading of either on-site or off-site unpaved roads to meet County and State Fugitive Dust Regulations. These regulations require that dust control measures be undertaken before unpaved road segments reach a threshold of 200 vehicle trips per day. If the Ellicott Valley ever becomes a non-attainment area for particulate emissions, this standard will be reduced to 150 trips per day. Since one single-family home accounts for about 10 daily trips, it only takes the equivalent of 20 occupied units with exclusive access to the same roadway link in order to trigger the need to pave. Once a roadway is paved, its daily capacity may be increased to several thousand trips depending on what kind of functional classification and access control it has. In these situations careful consideration should be given to mechanisms for sharing the cost of improvements if external users will ultimately benefit from the improvement.

The transportation element should be sensitive to uncertainties about the actual rate of project buildout. It should also take into account

the need to tie into regional systems. Non-automotive transportation modes such as pedestrian and bikeways, mass transit and aviation should also be considered, and plans should remain flexible enough to account for future changes in technology.

One means of reducing concerns with future roadway financing in an uncertain development environment is to aggressively protect the rights-of-way necessary for a "worst case" development situation, but only construct those facilities which are needed to satisfy present demand. If it turns out that right- of-way and road design projections were too aggressive, plans can eventually be scaled back.

Satellite growth clusters, such as those contemplated for Ellicott, are typically planned in areas where only a very basic transportation system is available. Roadways may be adequate to serve rural transportation needs along with a small increment of urban growth, but they will not be sufficient to meet the needs of large scale development.

Connections between the proposed development and major roadways or metropolitan areas often also need upgrading. Improvements may not be needed until a certain traffic threshold is reached and then, once the improvement is made, the system may have a large excess capacity for several years. One of the primary challenges of growth management plans for the Ellicott Valley will be to design a system where construction can be correlated as closely as possible with the actual need for improvements. El Paso County and the Pikes Peak Area Council of Governments are in the process of designing a transportation impact model for the County. This information will provide a good point of beginning for individually tailored plans.

Educational Services and Facilities

School Districts typically have the largest per capita combined operating and capital budgets of any local government entities. They ordinarily account for about 60% local property tax levies even though property taxes generate less than one half of the total revenue needed to finance the total district budgets. The State of Colorado provides most of the balance. Clearly, there is a distinct relationship between the land value in a district and its ability to provide quality education.

While salaries and other operational expenses make up the bulk of school expenses over time, capital construction costs can present a major burden to growing or changing school districts. The per student cost of providing one classroom space (student station) can be up to $12,000, although it is possible to lower this figure significantly in non-urban areas. The new Ellicott Jr./Senior High School, for example, cost $6,000 per student based on its $3,000,000 price tag and 500 student capacity. It quickly becomes apparent that the capacity issue can be very troublesome since construction and location decisions need to be made several years ahead of time based on the best available projections. Small districts are in an especially sensitive position since the decision to build or not to build may

represent a doubling of their facilities. Cooperative growth management planning between the County and the school districts can help assure that capital improvement decisions are made in the most equitable and efficient manner.

Because school districts are highly autonomous in their authority, growth management plans for school facilities will vary with the needs and policies of each district. Growth management plans for education might include developer guarantees for school site preparation and utility availability at a defined point in the development process. Where there may be large growth impacts which are difficult to gauge, the developer might participate in building one or more facilities to be leased back and eventually acquired by the districts.

In situations where a satellite project is contemplated for an area remote from any existing community services, the district and the developer may have to "fill more shoes" by designing a stand alone service approach. Special needs may include plans for emergency medical situations, meal programs, latch-key services, special library facilities, computer and television links and maintenance facilities.

Educational services growth management plans should also incorporate the potential positive benefits of satellite communities. Some rural school districts, including Ellicott #22, have some excess building capacity and could benefit from some additional students and an enhanced tax base. If non-residential development can be successfully incorporated into the project, additional revenue will be generated without the need to provide added services. In these cases, the first increment of growth may be viewed as a net benefit to the district, and any growth management arrangements should take these benefits into account.

Water

Responsibility for reviewing the adequacy and quality of proposed water supplies for new and existing developments rests primarily with the State of Colorado. The County indirectly has some involvement through the administration of their 300-year water supply Subdivision Regulations. In many parts of the Ellicott Valley, it should be possible to start up one or more new developments based on on-site well water supplies and rely on future regional sources once the project reaches a certain growth threshold. The point where water supply guarantees must be fully in place is at the subdivision platting stage. Land use approvals up to that point can be given based on reasonable evidence that adequate water will be available to serve the entire development. Since the amount of water available in the Ellicott Valley and vicinity is finite and primarily appropriated for existing uses, it is unlikely that even preliminary approvals would be given for multiple large scale projects all at one time unless there is a change in the supply situation.

The key component to a successful water management plan for a satellite development will likely be an integrated phasing approach which ties initial development approvals to reasonable water availability and

culminates with full guarantees at the time of platting. It is also likely that commitments to water conservation and reuse in project design and implementation will be an integral part of a complete management plan.

Wastewater

The potential for availability of wastewater service often ends up being a very critical factor in determining whether a satellite urban development proposal will be privately or publically viable. This is first because the local and State approval process for a new plant is inherently time consuming and secondly because start-up facility costs are often very substantial. These front end plant costs of ordinarily a million dollars or more often place a substantial burden on either the developer or a district he creates, especially if initial project buildout is not rapid. Although technologies exist for small package plants which do not require continuous on-site monitoring, these ultimately may not end up being cost-effective or be acceptable to health officials. In any case, facilities must be place and up to State Health Department specifications prior to occupancy of any urban density structures.

Because of these potential time and money constraints associated with building a new plant from scratch, a more acceptable alternative may be to connect by either gravity or force main to the plant at Sunset Village. The cost of installing pipe and/or lift stations is substantial, but the timing is not as drawn out, and it may be possible to obtain partial reimbursement from other property owners along these lines who may also wish to participate.

The local and State "208" Water Quality Management Planning processes are well defined and should provide the basis for wastewater growth management planning elements. The Pikes Peak Area Council Of Governments (PPACG) is the local lead agency for this function. The growth management plans for satellite developments might take this process one step further by establishing arrangements in cooperation with other regional projects to move toward eventual regionalization of facilities through steps to be taken at defined points in the buildout of the development.

Drainage

Growth management plans for satellite developments will need to take a unified approach to controlling storm water runoff. In some cases, it will be preferable to design the facilities in the development so that only historic flows are allowed offsite. Normally this will involve some form of on site detention. In other cases, the only feasible solution will involve doing a detailed study of a basin which may extend beyond the limits of the development and planning for improvements on a wider scale. Full implementation of this approach will require the participation of surrounding land owners. However, in keeping with the stand alone philosophy of satellite development, surrounding development should not be overly depended on to make a drainage control plan feasible. In all cases, the "big picture" for drainage needs to be considered, and compliance with relevant County regulations including those in the City/ County Drainage Criteria Manual will be necessary.

Fire, Emergency Medical and Police Protection

Rural and rural residential areas such as the Ellicott Valley Planning Area, as it is characterized today are considered to be adequately served by all-volunteer taxing fire protection districts which primarily rely on off-site water supplies. Due to their density and complexity, urban style developments have more stringent requirements including the installation of fire hydrants. Response times are typically expected to be faster. To supplement existing facilities and equipment, satellite community development plans may need to include fairly immediate provision for an emergency communications facility and set aside space for a future fire station. Where fire protection is still considered to be inadequate, additional steps, such as providing supplementary equipment on a lease back basis or reduction of fire danger through the mandatory installation of alarm and sprinkler systems may be necessary.

Because it takes a fairly large population base (on the order of 30-35,000 persons) to justify the cost of a fully staffed outpatient emergency medical center, ambulance and helicopter transportation to fairly distant metropolitan facilities will have to be relied on for some time. Having an effective emergency medical communications and response plan in place is more important than designating a specific helicopter landing area, since helicopters will try to land as close as possible to a medical emergency site once they have been given official go ahead from the ground.

The police protection situation in the Ellicott Valley is complicated by the fact that County Sheriff and State police patrol areas are quite large, and both of their headquarters are located in Colorado Springs about 25 miles distant from the center of the planning area. The same attention to an emergency response plan, as described for fire protection, would be applicable here also. Until such time as densities increase to the point that additional patrols and substations can be justified, supplementary security measures may be necessary. These could include pertinent additions to the emergency response plan described above, additional contracted services or the possible creation of a law enforcement authority. The latter alternative can be legally complex and expensive. Extra security measures, including lighting and alarm systems, could also be integrated into design elements.

Other Utilities and Services

Utilities and services other than water, wastewater and public safety tend to be less sensitive to location and therefore relatively less important as growth management considerations. Electric and telephone service can almost always be extended, provided that the developer is willing to pay a share of the extension costs. Rural Electric Cooperatives are often looking for additional customers to dilute some of their fixed costs. Natural gas service is not currently available within several miles of any planning area boundary, but it can be extended once a threshold of an urban density development is reached.

Because externally stored propane gas is not considered as safe an energy source for densely populated areas, provision should be made in growth management plans for eventual connection to natural gas when this becomes viable. Comparable threshold could also be arranged to deal with the issue of installing certain utilities underground.

Parks and Recreation

With a satellite development, chances are good that no formal regional and neighborhood parks will initially be available. It is understood that urban density residents will have a greater need for these facilities because their lot sizes will be much smaller than those in rural residential neighborhoods. However, during the early stages of satellite development, urban density residents will have the benefit of a lot of "perceived" open space because much of the area around them will be undeveloped. For this reason, it is important that the park and recreation element of a growth management plan consider both the immediate and longer range situation. This element should address the issues of land dedication, park development and maintenance over the life of the proposed project. Relationships to an eventual overall regional park and open space system should be considered in the growth management report. The most important early steps in this planning process include the reservation of adequate land to met all future park and recreation needs, and the establishment of a mechanism which ensures that parks will be developed and maintained when they are needed.

Updates

As one satellite project develops over time, more will become known about both it and the situation in areas around it. As circumstances change, it will be advisable to periodically review and possibly update individual growth management plans to make sure their assumptions, conditions and arrangements are still valid. Appropriate changes should be made so long as they are consistent with the spirit and intent of the original plan.

Conclusion

The chief purpose of satellite community growth management planning is to "ask all the appropriate questions" regarding land use mix and planning, and their relationship to public services, facilities and financing. These management plans should be structured to most efficiently meet all current needs and to provide a flexible, but also effective approaches to the future service and utility needs of the project. They should be designed to meet the needs of development as they occur, but they should also be forward looking to ensure that the ultimate public service and facility systems are the most effective and efficient.

Satellite Cluster Land Banking Option

For several of the possible growth scenarios which have been considered in the preceding discussions, there is likely to be a lag between an immediate desire to initiate development and the availability of a fully integrated urban infrastructure and service system.

This may especially be the case if one or more previously approved or pending projects in the region have already "monopolized" much of the available short-term development capacity. One of the more pertinent examples of this potential situation is with roadway capacity. The existing regional system of two lane roadways is probably adequate to meet the needs of a few scattered satellite developments with relatively minor upgrades, but the next proposal in line might create a situation where substantial upgrades to four lanes would be needed to accommodate the next increment of growth. Slightly less direct but comparable situations could occur in the areas of regional drainage, regional water supply and police protection where it could be demonstrated that major changes or system upgrades will need to be made once a defined "overall density" is reached for the entire area.

A Satellite Cluster Land Banking Option may provide a means of "opening up" more of the urban density development market at an earlier juncture than with a traditional sequential approach. Under this cluster option, only a portion of a larger parcel, contemplated for eventual urban development, would be given immediate approval while the remainder of the land would be "banked" until specified levels of regional services were available. These benchmarks might include construction of a second arterial link to the metropolitan area, availability of an outside water supply or location of a law enforcement substation closer to the planning area.

This land banking would provide a means of artificially holding a percentage of land in each participating project out of development during the earlier stages of urbanization in the Valley. The effect would be to allow some high density development while guaranteeing that overall densities remained low enough to not overburden the regional infrastructure system while it was in the process of being upgraded. This approach would differ substantially from traditional overall density approaches which emphasize permanent limits on overall density through preservation of large tracts of open space. With this scenario the only permanent open space requirements in many cases would be those necessary to satisfy general County park dedication standards.

An example of the application of this option would be the following:

> A landowner with 1,000 acres, desiring to develop at urban densities, would know from previous and accepted determinations that the regional holding capacity of his land had been established at one dwelling unit per acre based on a system of improved two lane arterial roads, locally obtained ground water supplies and Sheriff's protection provided remotely from downtown Colorado Springs. The owner would then have the option of initially constructing

five units per acre on 200 of the acres and placing development restrictions on the other 800 for a specified time or until certain specified changes in conditions were demonstrated. Obviously, this is a simplified example since more of a mixed use development approach would be preferable in most cases.

One implied assumption for utilizing this land banking option would be the full knowledge and consent of all controlling interests in the effected property.

At present, the County Land Development Code does not include procedures to implement this type of clustering option, but these mechanisms could be developed without too much difficulty if they were desired by elected officials. A more difficult related task would be to determine what overall regional holding capacity is appropriate for the region under current service and facility conditions. However, the necessary tools, such as detailed transportation modeling packages are becoming available to make these analyses possible.

AMENDMENT TO THE MASTER PLAN (Approved)

Commissioner Breuning moved that the following Resolution be adopted:

BEFORE THE PLANNING COMMISSION

OF THE COUNTY OF EL PASO

STATE OF COLORADO

RESOLUTION NO. MP-89-1

WHEREAS, the Ellicott Valley Citizens' Advisory Committee and the El Paso County Planning Department request approval of and amendment to the Master Plan for El Paso County by the adoption of the Ellicott Valley Comprehensive Plan, within the designated areas of the unincorporated area of El Paso County; and

WHEREAS, a public hearing was held by this Commission on April 18, 1989; and

WHEREAS, based on the evidence, testimony, exhibits, study of the master plan for the unincorporated area of the county, comments of the El Paso County Planning Department, comments of public officials and agencies, and comments from all interested parties, this Commission finds as follows:

1. That proper posting, publication and public notice was provided as required by law for the hearing of the Planning Commission.

2. That the hearing before the Planning Commission was extensive and complete, that all pertinent facts, matters and issues were submitted and that all interested parties were heard at that meeting.

3. That all data, surveys, analyses, studies, plans, and designs as are required by the State of Colorado and El Paso County have been submitted, reviewed, and found to meet all sound planning and engineering requirements of the El Paso County Subdivision Regulations.

4. That the proposal shall amend the Master Plan for El Paso County.

5. That for the above-stated and other reasons, the proposal is in the best interests of the health, safety, morals, convenience, order, prosperity and welfare of the citizens of El Paso County.

WHEREAS, Section 30-28-108 C.R.S. provides that a county planning commission may adopt, amend, extend, or add to the County Master Plan.

NOW, THEREFORE, BE IT RESOLVED that the Amendment to the Master Plan for El Paso County by the adoption of the Ellicott Valley Comprehensive Plan be approved for the following described unincorporated area of El Paso County:

All of Range 62 West, Township 13 South; All of Range 62 West, Township 14 South; All of Range 62 West, Township 15 South; Sections 6, 7, 18, 19, 30, 31 of Range 61 West, Township 13 South; Sections 6, 7, 18, 19, 30, 31 of Range 61 West, Township 14 South; Sections 6, 7, 18, 19, 30, 31 of Range 61 West, Township 15 South; Sections 1-4, 9-16, 21-28, 33-36 of Range 63 West, Township 13 South; Sections 1-4, 9-16, 21-28, 33-36 of Range 63 West, Township 14 South; Sections 1-4, 9-16, 21-28, 33-36 of Range 63 West, Township 15 South of the 6th P.M., El Paso County, Colorado.

BE IT FURTHER RESOLVED that the following condition shall be placed upon this approval:

1. §30-28-109, C.R.S. requires the Planning Commission to certify a copy of the Master Plan, or any adopted part or amendment thereof or addition thereto, to the Board of County Commissioners and to the Planning Commission of all municipalities within the County. The Planning Commission's action to amend the Master Plan by the approval of this document shall not be considered final until the applicant submits a minimum of ten (10) complete sets of the final documents and maps to the Land Use Department and such documents and maps are certified by the Chairman of the Planning Commission and distributed as required by law.

Commissioner Pfalmer seconded the adoption of the foregoing Resolution.

The roll having been called, the vote was as follows:

Commissioner Ingersoll	aye
Commissioner Grogger	aye
Commissioner Conover	aye
Commissioner Lipskin	aye
Commissioner Pfalmer	aye
Commissioner Breuning	aye
Commissioner Rixon	aye
Commissioner Routh	aye
Commissioner Routh	aye
Commissioner Hyer	aye

The Resolution was adopted by a unanimous vote of 9 to 0 by the Planning Commission of the County of El Paso, State of Colorado.

In making his motion Mr. Breuning noted the geology must be considered before any landfill is located in the area inasmuch as the water level is high and the area has sandy soil and the major source of domestic water is via wells.

DATED: April 18, 1989.

LIST OF RESOURCES

The following is a partial list of the resources which can help in the implementation of this Plan:

Interpretation of the Document

- El Paso County Planning Department (719) 520-6300
  27 East Vermijo Avenue Attention: Comprehensive
  Colorado Springs, Colorado 80903 Section

- Ellicott Valley Citizens' Advisory Committee
  c/o Buddy Babcock
  Mountain View Electric Association, Inc.
  11140 East Woodmen Road
  Peyton, Colorado 80831 (719) 495-2283

Economic Development

- Above two contacts, plus -

- El Paso County Office of Economic Development and Public Finance
  27 East Vermijo Avenue
  Colorado Springs, Colorado 80903 (719) 520-6480

Zoning and Subdivision

- County Planning Department (see above)

Transportation

- Department of Public Works
  Attention: Merv Casey/Dave Watt
  3105 North Stone
  Colorado Springs, Colorado 80907 (719) 520-6460

- Colorado State Highway Department (Highway 94)
  Attention: David D. Miller
  P. O. Box 536
  905 Erie Avenue
  Pueblo, Colorado 81002 (719) 544-6286

Water

- Upper Black Squirrel Creek Groundwater District (good initial contact)
  c/o Dr. Neal Clement, President
  6255 East Blaney Road
  Falcon, Colorado 80831 (719) 683-3177

- Colorado Division of Water Resources
  Engineer's Office (Well Permits)
  1313 Sherman Street, Room 818
  Denver, Colorado 80203 (303) 866-3581

- Cherokee Water & Sanitation District (Supplier)
  Attention: Stuart Loosley
  1335 Valley Street
  P. O. Box 9908
  Colorado Springs, Colorado 80932 (719) 597-5080

- Sunset Metropolitan District
  Attention: Rodney Preisser
  5475 Mark Dabling Boulevard, Suite 300
  Colorado Springs, Colorado 80918 (719) 593-0700

Wastewater

- El Paso County Health Department (Septic Permits)
  Attention: Frank Otoupalik
  501 North Foote
  Colorado Springs, Colorado 80909 (719) 578-3125

- Pikes Peak Area Council of Governments
  ("208" Area-wide Water Quality Planning)
  27 East Vermijo Avenue, 5th Floor
  Colorado Springs, Colorado 80903 (719) 471-7080

Air Quality (Dust Permits)

- El Paso County Health Department (Septic Permits)
  501 North Foote
  Colorado Springs, Colorado 80909 (719) 578-3139

Building Permits (Zoned Areas)

- Regional Building Department
  101 West Costilla
  Colorado Springs, Colorado 80903 (719) 578-6801

Fire Protection

- Ellicott Fire Protection District
  Rural Route 2
  Calhan, Colorado 80808 (719) 683-2534

- El Paso County Planning Department can provide contacts for other districts and departments

Schools

- Ellicott School District #22
  Dr. Lionel Robertson, Superintendent
  Route 2
  Calhan, Colorado 80808 (719) 683-2328

- Planning Department can provide contacts for other school districts

Floodplains

- Dan Bunting, Regional Floodplain Administrator
  Regional Building Department
  101 West Costilla
  Colorado Springs, Colorado 80903 (719) 578-6801

Wildlife

- Colorado Division of Wildlife, Regional Office
  Attention: Bruce Goforth
  2126 North Weber
  Colorado Springs, Colorado 80907 (719) 473-2945

State Land

- Colorado State Board of Land Commissioners
  Attention: Larned Waterman
  1313 Sherman Street, Room 620
  Denver, Colorado 80203 (303) 866-3454

Range Management and Soil Conservation

- El Paso County Soil Conservation District
  Attention: Ed Spence
  1826 East Platte Avenue, Suite 114
  Colorado Springs, Colorado 80909 (719) 473-7104

Electricity

- Mountain View Electric Association
  Attention: Rod Broome
  P. O. Drawer M
  Limon, Colorado 80828 (303) 775-2861

Telephone

- El Paso County Telephone Company
  Attention: Joe Alexander
  480 Petyon Highway
  Colorado Springs, Colorado 80909 (719) 683-2501

Police Protection

- El Paso County Sheriff's Department
  15 East Cucharras
  Colorado Springs, Colorado 80903 (719) 520-7100
- Colorado State Patrol (Highway 94 and all accidents)
  18 East Arvada Dispatch = (719) 635-3581
  Colorado Springs, Colorado 80906 Administration = 635-0385

Airport

- Springs East Airport
  c/o Carl Susemihl
  1757 Log Road, Route 2
  Calhan, Colorado 80808 (719) 683-2701