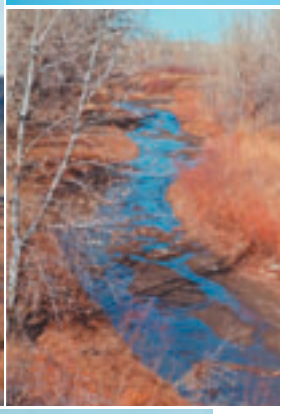
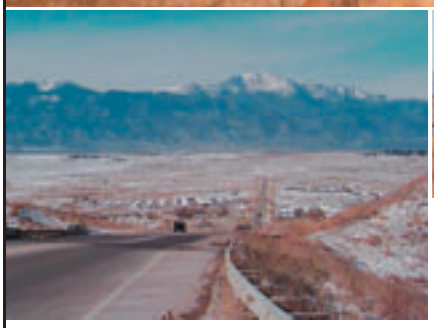
2003 Highway 94

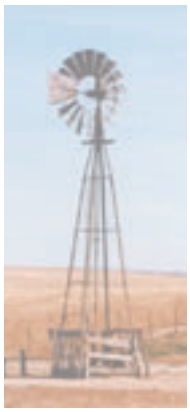


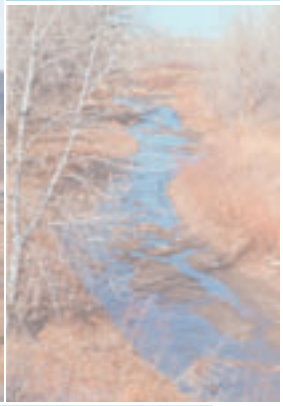


July 15, 2003

Comprehensive Plan

2003 Highway 94





July 15, 2003

Comprehensive Plan

ACKNOWLEDGEMENTS

The 2003 Highway 94 Comprehensive Plan is the result of a five-year process to provide a framework for future growth and development in the Highway 94 Planning Area. The update effort included surveys, staff research, agency interviews, open houses, and numerous Citizens' Advisory Committee meetings. The Planning Department Staff would like to thank all the citizens, referral agencies, other County departments, and adjoining municipalities for their participation and comments during the update process. A special debt of gratitude is extended to the core Citizens' Advisory Committee members listed below, who weathered an extended update process, but remained committed to the completion of the Update. Their commitment to their community is noteworthy. We look forward to a continuing dialogue with members of the community as the Plan is implemented and updated over the next twenty years.

Citizens' Advisory Committee
Huey Allen, Chair
Charlie Ververs, Co-Chair
Terry Bernstein, business owner and resident
Bob Cordova, rancher and resident
Carolyn Cordova, rancher and resident
Dave Litzelman, City of Colorado Springs Planner
Ralph Mitchell, Schriever Air Force Base Planner

Planning Commission 2003
Regular Members
Lowell Bell
Gwilym Brown
Stephen C. Mason
Diane M. Miller
Joseph C. Salute
Barbara Wait

Associate Members
Tim Amthor
Jim Brewer
Verlin Dickman
John Heiser
Dennis Hisey
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Angela Bratton, Geographic Information Systems Analyst

Former Staff
Joanne Long-Woods, Planner

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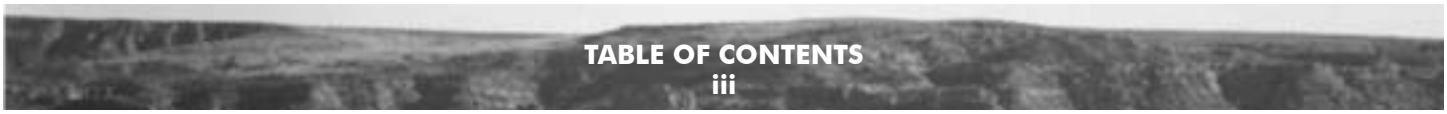

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CHAPTER 7 - COMMUNITY SERVICES

CHAPTER 8 - FUTURE LAND USE PLAN

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Executive Summary

- **Background**
- **Planning Process**
- **Background Research**
- **Future Land Use**
- **Implementation**

Executive Summary

The 2003 Highway 94 Plan Update is the official policy document guiding long-range planning and community development in the Highway 94 Planning Area. Adopted as an element of the County Master Plan by the County Planning Commission on July 15, 2003, the Update provides a basis for zoning and subdivision regulations. It is intended to provide guidance for property owners, residents, and decision-makers regarding land use. Listed below are several key components that emerged from the 2003 revision process.

Background

The Highway 94 Plan was first written in 1985. Since that time, Schriever Air Force Base (AFB) has expanded to the point that it now employs approximately 4,500 people. Both the State and the federal governments have funded transportation projects to accommodate increased travel on area roadways. For its part, the Colorado Department of Transportation has made several modifications to State Highway 94. The federal government has funded the construction of the Defense Access Road. Despite these projects, roadway safety and congestion concerns remain. The Colorado Centre is now an urban density unincorporated satellite community with more than 2,000 residents. In 1988 the City of Colorado Springs annexed the 21,400-acre Banning-Lewis Ranch property, effectively bringing the city limits to the western edge of the Planning Area. In 1991, El Paso County approved a landfill expansion north of the current site. The City of Colorado Springs also made substantial changes to the Municipal Airport, including the construction of a new terminal and a 13,500-foot eastern runway.

Planning Process

Because the Highway 94 Update encompasses goals and objectives affecting the entirety of the Planning Area, it was important to integrate a cross-section of the community into the Highway 94 Update. In order to gather substantive input, staff included the following steps in the Update process:

- Form Citizens' Advisory Committee
- Complete survey of area residents and landowners
- Interview key community stakeholders
- Draft and review background chapters
- Formulate goals and sub-area scenarios

Background Research

Staff utilized the County's Geographic Information System, interviews, the internet, and various publications to glean information regarding the Plan's seven background chapters. Background research was an important precursor to the formulation of goals and a concept map.

Future Land Use

The future land use component of the Highway 94 Comprehensive Plan Update emphasizes the following:

- Goals, objectives, policies, and implementation strategies to accomplish the intent and the purpose of the Plan
- A Concept Map to illustrate the planned location and general amount of residential, commercial, industrial, agricultural, park, and open space lands
- A Radio Frequency Coordination Area to support the continued operational integrity of Schriever AFB and its space-related mission
- Enhancement of the rural character of the area, including significant natural and cultural features

Implementation

Goals provide the basis for guiding future development in the Highway 94 Planning Area. A desire for change alone, however, will not lead to the achievement of a community vision. Implementation tools, such as revised subdivision regulations, the Major Transportation Corridor Plan Update, and rezonings, provide the means to achieve that vision.

Chapter 1 – Introduction

1.1 Preface

1.2 Legal Context

- Authority to Prepare
- Relationship to the Overall County Master Plan

1.3 Planning Context

1.4 Planning Process

- Citizens' Advisory Committee
- Citizen Surveys
- Plan Update

1.5 Plan Organization

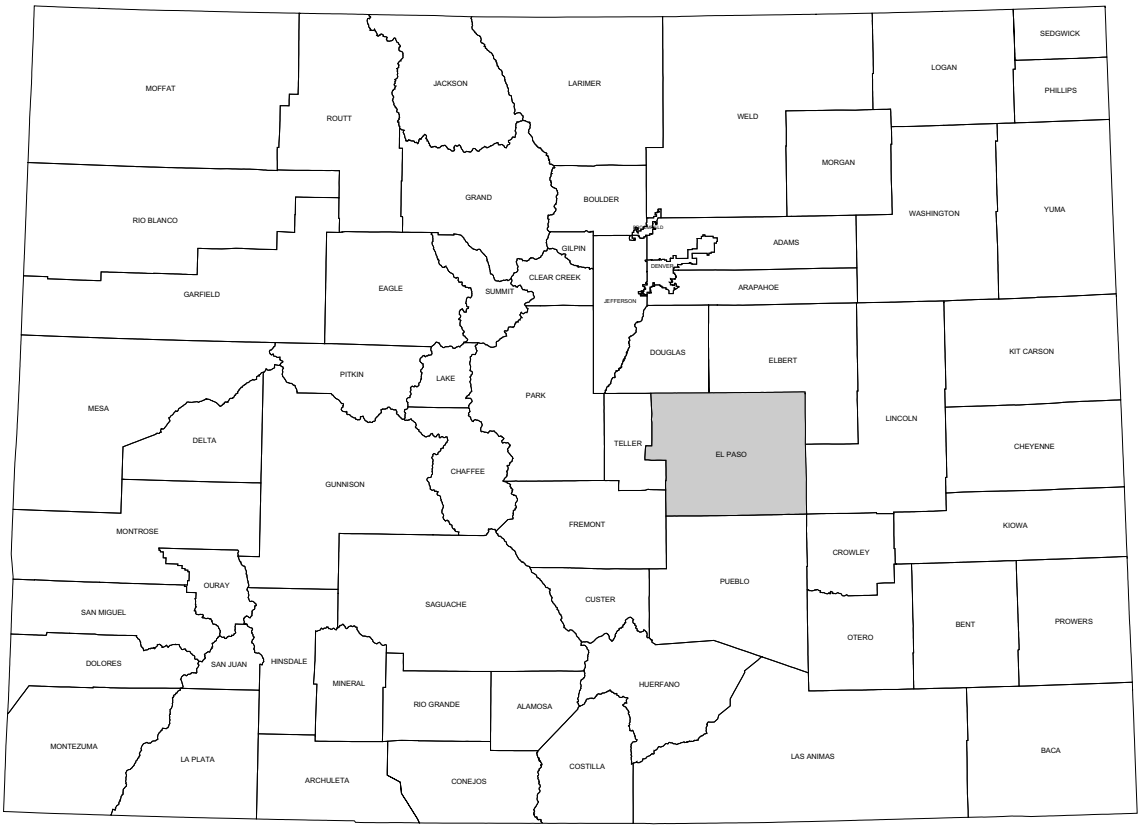
1.1 PREFACE

The 2003 Update to Highway 94 Plan represents the culmination of a five-year process to provide a framework for future growth and development in the 120-square mile Highway 94 Planning Area. Map 1.1 (page 3) depicts the Planning Area. The Plan was developed through an analysis of the area and input from County decision-makers, landowners, and the community at large. It provides a comprehensive land use plan with goals, policies, and actions to guide future public and private land and resource management planning.

Overall, the Plan is an advisory document designed to inform policy-makers and the public of various issues and their future ramifications and to guide area growth in a manner that respects the vision of the community.

1.2 LEGAL CONTEXT

Map 1.2 Colorado Counties



Authority to Prepare

El Paso County is a statutory government. Statutory governments have only those powers explicitly given to them or implied by State statutes. If there is no explicit or implied grant of power, the government cannot engage in the activity (Colorado Revised Statutes (CRS) 31-15-102(2) and 103). Among the explicit powers of the county are several regarding master plans, also referred to as comprehensive plans. Pursuant to State statute it is the duty of the County Planning Commission to "make and adopt a master plan for the physical development of the unincorporated territory of the county" (CRS 30-28-106).

State statutes also mention that…

> …[t]he county or regional master plan shall be made with the general purpose of guiding and accomplishing a coordinated, adjusted, and harmonious development of the county or region which, in accordance with present and future needs and resources, will best promote the health, safety, morals, order, convenience, prosperity, or general welfare of the inhabitants, as well as efficiency and economy in the process of development… (CRS 30-28-107)

While State statutes recognize the essential role of the master plan, the plan is generally held to be advisory, not the equivalent of zoning, nor binding on the zoning discretion of the legislative body (CRS 30-28-106(3)(f)). So while the master plan embodies policy determination and guiding principles, zoning ordinances provide the detailed means to give effect to those principles (Theobald v. Board of County Commissioners, 644 P.2d 942 (Colorado 1982)).

Despite the general advisory nature of the master plan…

> …a county has the authority to require compliance with a master plan when the county includes compliance with the master plan in its legislatively adopted subdivision regulations so long as the master plan is drafted with sufficient exactitude that proponents of a subdivision are afforded due process, the county does not retain unfettered discretion, and the basis for a county's decision is clear for purposes of a reasoned judicial review. (Board of County Commissioners v. Conder, 927 P.2d 1339 (Colorado 1996))

Additionally, the Highway 94 Plan has no formal jurisdiction in those parts of the Planning Area within either the City of Colorado Springs or Schriever Air Force Base (AFB). The expectation is that those entities will recognize the Highway 94 Plan in a spirit of cooperation and coordination.

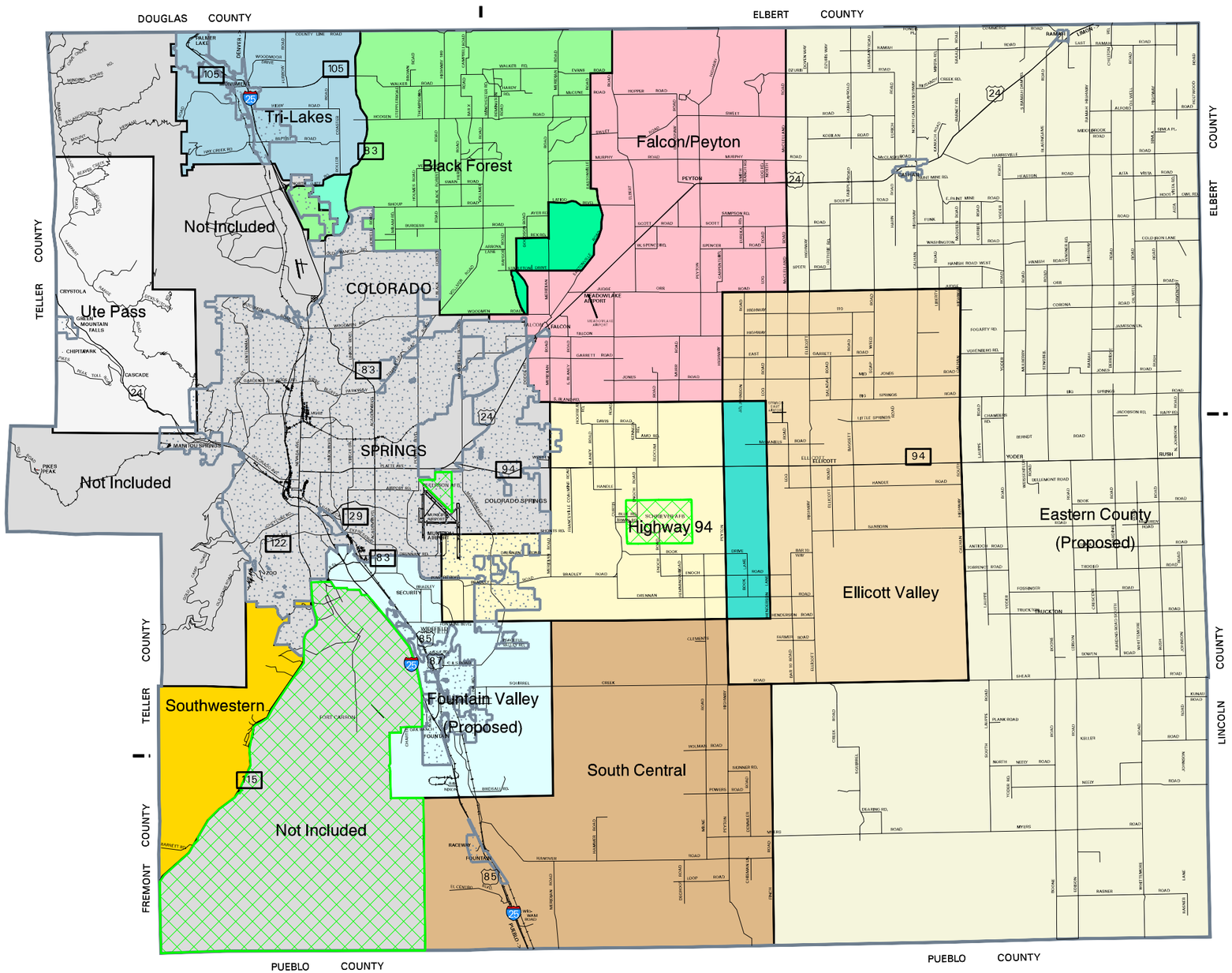
Unlike areas within Colorado Springs or Schriever AFB, the Highway 94 Plan applies to areas owned by the State of Colorado. El Paso County has land use jurisdiction in these areas by reciprocal agreement with the State of Colorado.

Relationship to the Overall County Master Plan

State statutes further allow the County to adopt a master plan in whole, in parts, or by functional subject matter (CRS 30-28-108). El Paso County's approach is to adopt an overall Countywide Policy Plan augmented by a series of small area plans that respond to conditions and circumstances unique to different areas of the County. The expectation is that private and public bodies will rely on small area plans for site-specific land use guidance. The Highway 94 Comprehensive Plan is further supported by and related to a series of topical Master Plan elements. These include the Major Transportation Corridors Plan (1987), the El Paso County Parks, Trails and Open Space Plan (1997), the Master Plan for the Extraction of Commercial Mineral Deposits (1996), and the El Paso County Wildlife Habitat Maps and Descriptors (1996). Sub-Area 3 of the Highway 94 Plan also overlaps with a portion of the Ellicott Valley Plan, which was approved by the El Paso County Planing Commission in 1989. In cases where these documents conflict with one another, the more recent or specific document normally applies. Potentially competing policies or direction must be balanced for the ultimate betterment of County inhabitants. Decisions-makers must recognize the externalities associated with policy decisions.

Map 1.1
Location Map

Highway 94 Comprehensive Plan
El Paso County, Colorado



LEGEND

SMALL AREA PLANS

- Black Forest
- Black Forest/Falcon Peyton
- Black Forest/Tri-Lakes
- Ellicott Valley
- Ellicott Valley/Highway 94
- Falcon/Peyton
- Highway 94
- Not Included
- Eastern County (Proposed)
- Fountain Valley (Proposed)
- South Central
- Southwestern
- Tri-Lakes
- City Limits
- Military Installations

SCALE IN MILES

0 5 10

Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

1.3 PLANNING CONTEXT

The County adopted the original Highway 94 Plan in 1985. Compared to other unincorporated County areas, the Highway 94 Planning Area has experienced relatively modest land development activity over the past 18 years. Much of the Area remains undeveloped. With the exception of the Colorado Centre development, few privately initiated development plans have been implemented. Nevertheless, several factors justify re-evaluating and modifying the Plan. Since the original plan was adopted, a number of changes have occurred:

- Schriever AFB expanded to the point where it now employs a total of approximately 4,500 military, civil servant, and contractor personnel. Base expansions to 6,000 personnel are planned. Further expansions to 10,000 personnel are possible. Since its opening in 1985, the original 640-acre, or one square mile, Air Force property expanded six-fold to 3,840 acres of owned and leased land.
- Congress funded a second limited access road connection to Schriever, known as Bradley Road or the Defense Access Road (DAR), which was completed in 2000 with County participation.
- Although the Colorado Department of Transportation (CDOT) made several modifications to State Highway 94 and its connecting roads, automobile safety and peak-hour congestion concerns remain.
- With the exception of a portion of the Colorado Centre area, all urban density projects proposed at the time the original Plan failed to materialize. Altogether, these development proposals would have added approximately 110,000 residents and 235,000 jobs to the area.
- Since 1985, Colorado Centre has developed as an urban density unincorporated satellite community with 727 platted residential lots and an estimated 2,201 residents.
- In 1991 the County approved a major and controversial expansion of the Colorado Springs Landfill northeast of the existing site on Blaney Road. The current landfill is projected to close in 2007 and operations shifted to the expansion site.

Photo 1.1 - Schriever AFB

Photo 1.2 - Junkyard and Landfill

Photo 1.3 - Waste Management Landfill

- The approximately 21,400-acre Banning-Lewis Ranch property was annexed by the City of Colorado Springs in 1988 with accompanying urban density zoning. Included in the action was most of the 4,000-plus-acre Colorado Centre property. Although City of Colorado Springs plans and models suggest that the majority of the Banning-Lewis property will not be developed prior to 2020, various portions could be developed well before that time.

- The City of Colorado Springs made major changes to the Colorado Springs Municipal Airport including the addition of a 13,500-foot runway and a new terminal.
- The Falcon area, northwest of the Highway 94 Planning Area, is developing into a major exurban satellite community. Low density development is now reaching south from Falcon into the Planning Area.
- The Ellicott area, east of the Planning Area, is developing as a rural community with proposed urban density developments. As with Falcon, development from Ellicott is now reaching into the Planning Area. In 1999, after an extended and controversial process, the remaining unzoned areas north and east of the Planning Area were zoned, primarily to the A-35 (Agricultural) District.

Photo 1.4 - Colorado Springs Airport

- The Southern Delivery System, a major water delivery project designed to provide additional water to Colorado Springs, Fountain, and Security, was proposed. The project entails the construction of a 43-mile raw water pipeline, a water treatment plant, and two storage reservoirs. The pipeline and treatment plant are to be completed by 2006 and the reservoirs after 2012.
- Overall, parcelization continues in the Planning Area as large parcels are divided into five-acre lots and 35-acre tracts with impacts on County infrastructure, drainage, agricultural operations, and natural resources.

1.4 PLANNING PROCESS

To assess and respond to these changes, the Board of County Commissioners directed the Planning Department to update the Highway 94 Comprehensive Plan in 1998. Key to the Plan's development was the identification of citizen concerns and the creation of a citizen vision for the area's future. The Planning Department determined a number of steps to integrate citizen ideas and concerns into the Plan and to ensure that the Plan represents the needs and values of the general public. Within this framework, public input was encouraged from the start of the planning process. These included the appointment of a Citizens' Advisory Committee (CAC) to oversee development of the Plan, a survey of County residents and landowners to identify key issues and attitudes, and research and analysis by the County Planning Department to gain insight into various facets of the Planning Area.

The following is a general synopsis of the steps taken by the CAC and County Planning staff to develop the plan:

- Develop initial approach, planning assumptions, and focus
- Form Citizens' Advisory Committee
- Complete survey of area residents and landowners
- Draft and review background chapters
- Develop Planning Area and Sub-Area preferred growth scenarios
- Conduct public meetings for Plan review
- Present Plan to Planning Commission for review
- Present Plan to Board of County Commissioners for review
- Present Plan to County Planning Commission for adoption
- Implement Plan recommendations

Citizens' Advisory Committee

The CAC included local property owners and professionals with varying backgrounds so that diverse perspectives could be represented, ideas generated, and planning issues debated. The CAC used a planning horizon of nearly 17 years, though the year 2020. Given the inexact nature of land use projections, the Committee anticipates a major revision to the 2003 Plan in approximately ten years.

In the course of their work, the CAC held over a dozen informational meetings with 17 agencies and organizations to provide a forum for public input. County citizens, particularly those within the Planning Area, were encouraged to attend. Research and discussion covered key concerns including natural resources, water and wastewater, transportation, and community services.

Overall, the Committee met up to twice per month from 1998 to 1999. In 1999 the meeting schedule was suspended due to staff shortages in the County Planning Department. The process recommenced in late 2000 with the hiring of a new comprehensive planner.

Citizen Surveys

To obtain the views of local citizens, the Committee and staff designed a survey and distributed it to property owners and residents within the Planning Area. The survey addressed issues such as land use, recreation, public facilities and services, historic resources, housing, and transportation. The Plan's position statements, goals, policies, and land use scenarios were predicated on, but not limited by, the results of the survey.

A total of 1,153 surveys were mailed to property owners in Fall 1998. Of this total, 321 property owners completed the survey for a response rate of 28 percent. Approximately 89 percent of respondents reside within the Planning Area. Responses were stratified for two areas due to differences in development patterns. The first area included the original 1985 Planning Area: 100 square miles roughly centered on Schriever AFB. The second area was Sub-Area 4: a 20-square mile area roughly centered on the Colorado Centre development south of the Colorado Springs Airport.

Major survey results include the following:

- The majority of the respondents felt that preservation of the rural character of the Planning Area was important. 91 Percent favored a policy of slow to moderate growth.
- 56 Percent of respondents cited various historical, cultural, aesthetic, and natural assets in the area that should be protected, including views of the Front Range, open spaces, agricultural operations, and natural landforms.
- The majority of respondents were generally satisfied with current public services and facilities, with the exception of parks and trails. The vast majority of respondents indicated a desire for public trails and recreational facilities.
- 83 Percent of those responding opposed additional multi-family housing within the Planning Area and 92 Percent opposed additional mobile home parks.
- Two-thirds wanted small businesses to locate in the area, with gas stations, convenience stores, and neighborhood shopping centers noted.

- 78 Percent of respondents opposed any type of industrial or manufacturing in the area. Those favoring industry stipulated that it should be "clean" and "light."

A summary of survey responses is included as Appendix A.

Plan Update

County staff drafted the Plan text and created all area maps. Planning staff incorporated numerous elements of the overall County Master Plan to broaden the scope of the Highway 94 Plan and to ensure that all pertinent issues were included. Throughout the update, the CAC reviewed staff work and offered guidance. The public could review draft documents on the County website, at the Planning Department, at public sites throughout the area, and during public meetings with the Planning Commission and the Board of County Commissioners.

Research resulted in a plan that accommodates growth, recognizes a variety of land uses, preserves environmental quality, and protects natural resources. It also considers community services, such as education, open space, and public facilities. The Plan's goals, objectives, and policies are designed to ensure the orderly growth of the Planning Area.

The planning process culminated on July 15, 2003 with the approval of the 2003 Highway 94 Comprehensive Plan by the El Paso County Planning Commission as an amendment to the El Paso County Master Plan.

1.5 PLAN ORGANIZATION

The Highway 94 Update is a comprehensive, long-range, and area-specific plan. The first section is an executive summary, designed as an encapsulation of the plan. Chapters 1 through 7 are primarily descriptive. Chapter 8 contains a concept map, sub-area scenarios, goals, and objectives. Supporting materials are included in appendices.

Chapters in the Plan include:

- Executive Summary - Includes descriptions of community issues, the planning process, future land use scenarios, and implementation measures.

1. Introduction - Establishes the broad purpose, describes the legislative authority, describes the planning context, and outlines the organization of the Plan.

2. Description and Issues - Describes the location and the general character of the Planning Area, identifies ownership patterns and key environmental factors, describes the major trends and forces affecting the area, and describes each sub-area in detail with special attention to unique assets and characteristics.

3. Community Profile - Describes the present and future population, economy, land use, and the County land development system.

4. Resource Management - Describes the area's natural and cultural resources, including soils, geology, vegetation, wildlife, hydrology, agriculture, historic features, and open space resources, and assesses the land's suitability for development.

5. Utilities - Describes and assesses the adequacy of existing community services, including water, wastewater, gas, electric, and phone services.

6. Transportation - Describes the transportation network in the area, identifies limitations in the existing system, and discusses future system enhancements.

7. Community Facilities - Describes current and anticipated public and quasi-public facilities in the Planning Area, including schools, fire protection, law enforcement, parks, recreation, open space, and library services.

8. Land Use Plan - Includes a concept map, sub-area scenarios, goals and objectives, and implementation measures.

- Appendix A, Survey – Summarizes survey responses.

- Appendix B, Planning Commission Resolution - copy of July 15, 2003 El Paso County Planning Commission resolution adopting the Plan.

Chapter 2 – Planning Area Description

2.1 Location and General Character

2.2 History

2.3 Natural Features

- Corral Bluffs
- Crow's Roost
- Burial Rock
- Jimmy Camp Creek

2.4 Cultural Features

- Amo
- Drennan School
- Edwards Windmill
- Ellicott
- Fountain Valley School
- Franceville
- Jimmy Camp

2.5 Land Development Influences

- Urban Services
- Drainage
- Utilities
- Schriever Air Force Base
- Colorado Springs
- Historical Growth
- Environmental Constraints
- General Development Principles
- Ownership Patterns

2.6 Sub-Areas

- Sub-Area 1, Corral Bluffs
- Sub-Area 2, North Central
- Sub-Area 3, Ellicott Cooperative Area
- Sub-Area 4, Colorado Centre
- Sub-Area 5, South Central
- Sub-Area 6, Schriever

- **References**

2.1 LOCATION AND GENERAL CHARACTER

As shown in Map 2.1 (page 11), the Planning Area encompasses approximately 120 square miles roughly centered on Schriever Air Force Base (AFB) in central El Paso County. Most of the area lies within the unincorporated portion of El Paso County with a portion within the City of Colorado Springs. The original Planning Area consisted of a 10-mile by 10-mile square with Schriever AFB roughly at its center. The updated Planning Area consists of the original 100-square mile area along with an additional 20-square mile area centered on the Colorado Centre development. Because the original Planning Area and the Colorado Centre area often differ in terms of density and land use, these areas are sometimes segregated for the purposes of analysis and policy direction. The Planning Area has six defined sub-areas, based largely on unique area characteristics.

The 2003 revision recognizes the Colorado Centre area as a significant interface between the City of Colorado Springs and the unincorporated areas of central El Paso County. The City of Colorado Springs annexed much of the Colorado Centre area. Inclusion of the Colorado Centre area provides context and helps recognize the need for inter-jurisdictional cooperation. The easternmost 20 square miles of the Planning Area, Sub-Area 3, overlap with the Ellicott Valley Planning Area.

Photo 2.1 - Colorado Centre Subdivision

Photo 2.2 - Golden Eagle

With the exception of the steep Corral Bluffs area, the Planning Area features gently sloping to rolling open terrain. Most of the area enjoys a panoramic view of the Front Range and Pikes Peak. State Highway (SH) 94 runs east-west through the northern portion of the Planning Area and offers direct access to the metropolitan Colorado Springs area. Vegetation consists primarily of short and medium prairie grasses. A limited number of trees are confined to creek areas. Numerous floodplains and waterways exist throughout the Planning Area. The Corral Bluffs roughly form a north-south spine through the west-central portion of the Planning Area. East of Corral Bluffs, water flows east toward Ellicott. West of Corral Bluffs, water flows west toward Colorado Springs. The area is home to a number of raptors such as the golden eagle, and provides habitat for sensitive species, including the mountain plover.

Photo 2.3 - Jimmy Camp Creek Floodplain

Except for Schriever AFB, the area contains almost exclusively residential and agricultural activity. Most of the residential development is scattered throughout the area on 2½, 5, and 35-acre lots. Cattle grazing occurs on many of the larger parcels in and around the Planning Area. Map 2.2 (page 12) depicts some land use influences, both historic and contemporary.

Photo 2.4 - Cattle

2.2 HISTORY

Topography and weather have combined to shape much of the history of the Highway 94 area. Like the rest of El Paso County, it is a semi-arid environment. As a part of the High Plains, hazardous weather, including blizzards, extended droughts, intense localized rainfall, flash floods, regional floods, hail, high winds, and tornadoes, are not uncommon. Fires can spread rapidly across the prairie. Erosion is a consideration due to the sandy soils.

Photo by Emergency Management

Photo 2.5 - Tornado Damage to Ellicott High School

The earliest inhabitants of the area were early plains Indians including the Ute, Arapaho, and Cheyenne. They followed buffalo across the area and left only pieces of their nomadic culture. Early settlers were plagued by sporadic Arapaho and Cheyenne Indian attacks. Young Cheyenne "Dog Soldiers," known for their warring tradition, defied their elders' judgment and tried to drive the earliest settlers off. The Cheyenne were eventually subdued and moved to reservations.

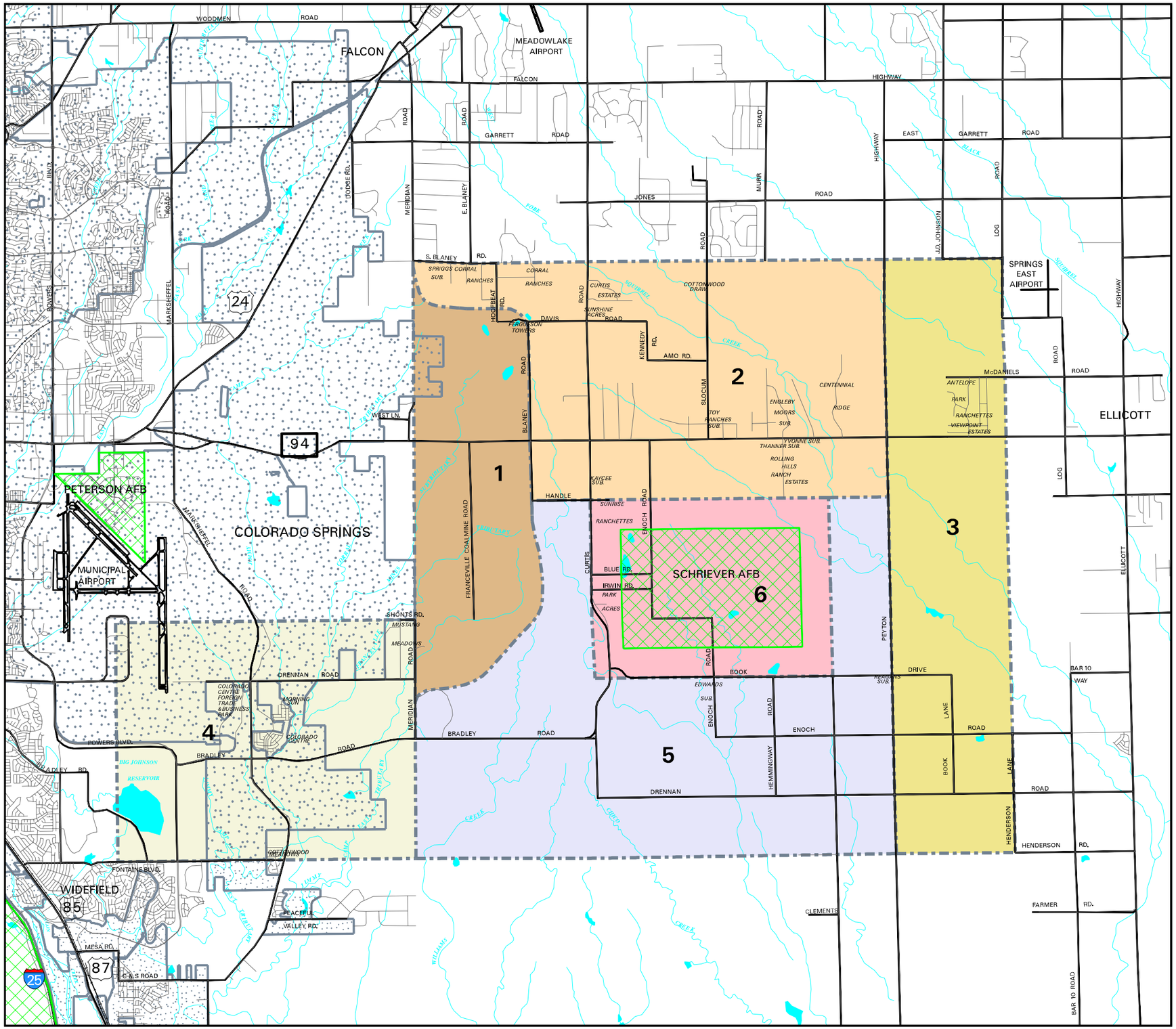
The area left a strong impression on one of the first explorers to the region, Doctor Edwin S. James, a botanist in the Major Stephen H. Long expedition of 1820. He described the area as "The Great Desert" and "worthless for agricultural purposes" (Whittemore, 1990, 1). Dr. James went on to describe the area as follows:

> This region, however, viewed as a frontier, may prove of infinite importance to the United States, inasmuch as it is calculated to serve as a barrier to prevent too great an extension of our population westward and secure us against the machinations of excursions of an enemy that might otherwise be disposed to annoy us in that part of our frontier. (Whittemore, 1)

Despite the harsh nature of the area and Dr. James' pessimistic view of it, a number of settlers braved the elements and immigrated to the area. At the time of the Civil War, the Great Plains were divided by the government and offered free to anyone willing to settle and work a quarter-section, or 160 acres, under the 1862 Homestead Act signed into law by President Lincoln. Eastern El Paso County featured some of the last land available for homesteading. Parcels of 160 acres were reasonable for the eastern and midwestern United States, given their soil conditions and annual rainfall. In the semi-arid West, however, lack of water and sparse vegetation rendered the traditional 160-acre parcel insufficient to provide a livelihood. The Planning Area generally receives from 12 to 14 inches of rainfall a year compared to approximately 30 inches for the Midwest. In addition to sparse amounts of rainfall, the cyclical nature of the rainfall presents problems. Drought is a frequent and recurring event on the Plains. Local ranchers lobbied to have the acreage increased to 2,500 acres in an effort to increase the chances of success for homesteaders. In

Map 2.1
Sub-Area Boundaries

Highway 94 Comprehensive Plan
El Paso County, Colorado



LEGEND

SUB-AREA NAME

- 1 Corral Bluffs
- 2 North Central
- 3 Ellicott Cooperative Area
- 4 Colorado Centre
- 5 South Central
- 6 Schriever
- City of Colorado Springs
- City of Fountain
- Military Installations
- Sub-Area Boundaries

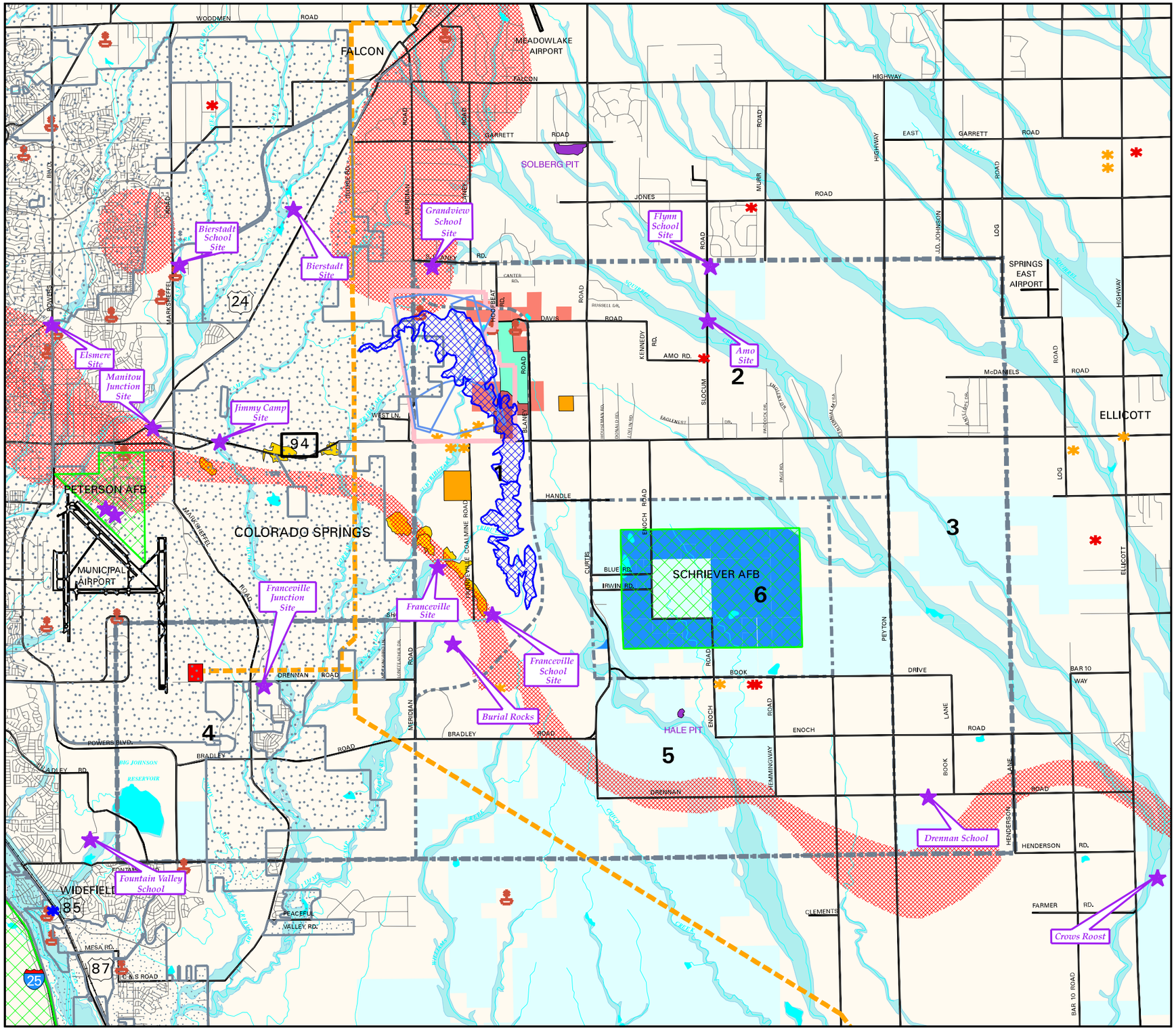
SCALE IN MILES

0 1 2 3

Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

Map 2.2
Land Use Influences

Highway 94 Comprehensive Plan
El Paso County, Colorado



LEGEND

MAJOR LAND OWNERS OF NOTE
- United States of America (3220 Acres)
- State of Colorado School Lands (14048 Acres)
- Waste Management (1101 Acres)

MINED REGIONS
- Undermined Regions
- Strip Mined Regions

MINERALS
- Coal Deposits

SITES FOR POTENTIAL UNIQUE USES
- Valero Petroleum Storage Tanks
- Known Sites of Present Day Firing Ranges
- Waste Management Landfill
- Waste Management Landfill Extension
- Aggregate Pits
- Floodplain
- Corral Bluffs
- Cell Towers
- Junkyards (Code Enforcement)
- Junkyards (Non Conforming)
- Junkyards (Special Uses)
- Historic Cultural Places and Past Sites
- City of Colorado Springs
- City of Fountain

Military Installations
- Former Peterson AFB Gunnery
- Former Peterson AFB Gunnery Ranges
- Valero Petroleum Line
- Sub Area Boundaries
- Planning Boundary

SCALE IN MILES

0 1 2 3

N

Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

1909 the Act was amended to 320 acres. By that time, however, settlers had filed for most of the parcels in El Paso County and fenced them.

Photo 2.6 - Cattle

In the aforementioned expedition of 1820, Major Long recorded that "[t]he whole of this region seems peculiarly adapted as a range for buffaloes" (Whittemore, 1). Ranchers took advantage of Major Long's observation in that cattle have the same rudimentary digestive system as buffalo and thrive on these prairie grasses. Even during poor years, native grasses possess a significant protein content and are well suited for cattle operations. In addition to cattle ranches, sheep ranches were prevalent in the area. While it was available, sheep ranchers took advantage of the unfenced government lands to graze their flocks.

By the turn of the century a network of small communities developed to serve the early farmers and ranchers. As happened in 1888, crippling snows returned to the area in 1915 but again replenished the subsoil with moisture. The late 1920s brought the next extended drought. During the drought of the late 1920s, the ensuing Dust Bowl, and the Great Depression that followed, much of the farmland in eastern Colorado lost topsoil and was rendered unusable. The drought was particularly acute from 1931-1934. According to the local office of the Natural Resources Conservation Service (NRCS), topsoil in the Great Plains regenerates at a rate of only one inch every 500 to 1,000 years. El Paso County was on the far western edge of the Dust Bowl. A devastating flood followed the drought in 1935. Given these hardships, many farmers and ranchers moved. Over time, many small property owners in El Paso County sold their properties to larger interests, such as the Banning-Lewis, Big Springs, Brackett, Engel, and Bohart Ranches. Ranches replaced farms and gradually grew in size to meet the grazing needs of their cattle.

Today, the majority of the area is used for grazing. Large amounts of land are required for dry land grazing and remain productive only through effective stewardship by ranchers. In general, thousands of acres are required for successful ranching operations. Those limited sections of the Planning Area with water-intensive crop production rely on center pivot or sideroll irrigation systems supplied by well water.

2.3 NATURAL FEATURES

In contrast to the Front Range and nearby Pikes Peak, the Planning Area, with its rolling hills and nondescript waterways, is a subtle landscape. Despite the subtlety, the landscape and natural features maintain a grandeur of their own and reflect the prehistoric forces, such as glaciation, erosion, and deposition of sand and gravel, which shaped the area. Features of note, as depicted on Map 2.2, include:

Photo 2.7 - Corral Bluffs

Corral Bluffs

Corral Bluffs is a rugged and distinctive sandstone outcropping covering a ten-square-mile area east of Jimmy Camp Creek. In some places the bluffs drop nearly 400 feet. There is evidence that early Native Americans hunted buffalo by driving them over

these cliffs. Later, ranchers relied on the barrier created by the Bluffs to corral their stock. From 1943 through 1949, the Army Air Corps leased 2,220 acres of the Bluffs north of SH 94 as a firing range to train World War II aerial gunners. The distinctiveness of the Bluffs were diminished in the 1960s when a private landfill was opened on the edge of the bluffs. The bluffs are bisected by SH 94, which forms a gateway for the Planning Area and the communities of eastern El Paso County.

Photo 2.8 - Crow's Roost Rock Outcropping

Crow's Roost

Crow's Roost is a sandstone outcropping approximately seven miles south of Ellicott and just east of the Planning Area along Black Squirrel Creek. Its name is possibly derived from its use by Native American peoples, including the Crow tribe, as a campsite during seasonal hunting trips. Another explanation holds that crows inhabited the formation during the arrival of the first settlers. Yet another more humorous explanation holds that a cowhand, bored of working in a nearby cow camp, exclaimed "I've had enough of this old crow's roost," and quit.

Many artifacts have been recovered at Crow's Roost although it is unlikely that the Crow tribe frequented the area. The Kiowa, Arapaho, and Cheyenne, however, traveled through the area. Early settlers discovered Native American pictographs on the walls of its natural rooms. In the 1890s the site became a favorite picnic spot for pioneer families. A post office operated nearby from 1913 to 1916. The flood of 1965 permanently altered this formation, washing much of it away, along with several old cottonwood trees, some ranch facilities, and 20 miles of fence. The flood was so intense that it carried a tractor from Ellicott 25 miles downstream. Since the flood of 1965 two archeological studies have documented the formation's use by Native American tribes. A 1985 study at a seasonal campsite unearthed projectile points, scrapers, choppers, pottery shards, and refuse flakes from tool-making. These artifacts were dated from 360 through 1490. A second study in 1990 described other artifacts. These artifacts have been severely degraded by erosion and graffiti. (McDonald, 4)

Burial Rock

Photo 2.9 - Burial Rock

Located approximately two miles south of Franceville, Native Americans reportedly used this rock outcropping as a ceremonial burial site. Here, bodies could be protected from predators and hunters could scout for enemy tribes and buffalo herds. In the past, golden eagles have used the outcropping as a nesting area.

Photo 2.10 - Jimmy Camp Creek

Jimmy Camp Creek

Jimmy Camp Creek is a tributary of Fountain Creek and one of the most significant and sensitive water features in the Planning Area. It runs north-south west of Corral Bluffs and through the Colorado Centre area.

According to the Army Corps of Engineers, it is one of the few remaining intact and functioning aquatic ecosystems in the County. It is home to the Arkansas Darter and other sensitive aquatic species. As a natural waterway the creek absorbs flood waters, slowly releases those waters, filters contaminants, reduces soil and bank erosion, and releases water during dry periods. Currently the Creek is under significant pressure by concrete structures and channelization disruptive to the natural aquatic system.

2.4 CULTURAL FEATURES

With a few exceptions, the cultural features of the Planning Area are simple structures. While area homesteads and windmills are modest compared to some of the grand estates built in nearby Colorado Springs, both reflect the economies that built them. These cultural features provide a link to the area's heritage and help define a vision for the future.

Several small communities grew during the early 20th Century, largely associated with mining, ranching, and the attendant rail lines. Mining and rail lines helped guide the location of communities. While most of the old community facilities such as post offices and schools are gone, some exist as reminders of the area's heritage. Recent suburbanization is again increasing the area's population and residents are slowly building community facilities, which help provide an identity and a focus for the area. The following are representative of the area's heritage. They include:

Amo
Amo is the site of a one-room school house and a rural post office in operation from 1899 to 1916 that served the northern portion of the Planning Area.

Drennan School

Photo 2.11 - Drennan School

The land surrounding the Drennan community was used for sheep grazing and opened for settlement in 1906. It was one of the last areas to be homesteaded due to its distance from the railroads. The community was named after W.O. Drennan, a rancher who donated land to build a one-room school. The school was rebuilt in 1917 and closed in 1955 (Davant, 129). It also served as a post office and telephone exchange and continues to serve as a community center.

Edwards Windmill
Originally located at 16310 Drennan Road, the windmill pumped water beginning in 1918. The windmill was built by Fred Edwards and refurbished in the 1970s by Ward Edwards, Fred Edward's son. The windmill has since been removed from the premises. At one time hundreds of windmills dotted the landscape of El Paso County. Today only a few remain in working order. (Freed, 9)

Ellicott
Ellicott is a rural community east of the Planning Area built in a shallow valley. In the early 1890s the Ellicott Valley was opened for homesteading.

The town of Ellicott, established in 1897, was named after George Ellicott, a homesteader and the first postmaster ... By the 1920s, the Ellicott Valley had filled up with claimants, who had to work the land for five years to gain ownership. Hazards such as prairie fires, the blizzard of 1888, the drought of the late 1920s and the Depression of the 1930s forced many people to abandon their claims, but some hung on. The roads in the area bear the names of longtime ranchers and farmers. (Davant, 129)

Fountain Valley School

The Fountain Valley School overlaps the southwest corner of the Planning Area. The School was founded just days after the stock market crash of 1929. Sited on a pristine prairie extending eastward from the Pikes Peak massif, the once isolated campus is now an oasis surrounded by Fort Carson, Interstate Highway (IH) 25, suburban development, and the Colorado Springs Airport. The school site was originally part of the Lazy B Ranch, owned by Jack Bradley. The main building of the site, the Hacienda as it is called, continues to serve the campus. The Southwestern flavor is reflected throughout the campus, in both historic and contemporary structures. Boardman Robinson, renowned artist and the first head of the art department, completed several murals in buildings throughout the campus. Originally a boarding school for boys, the campus now boasts an international coed student body. Challenging academics, an extensive riding program, an enviable arts program, and personalized instruction continue as hallmarks of the school. (Lavender, ix-x)

Photo 2.12 - Fountain Valley School Campus

Franceville

Franceville was a community supported by coal mining operations located south and west of Corral Bluffs. The first mine opened in 1882. A spur of the Union Pacific Railroad served the area. The mine boasted an underground shaft 165 feet deep and produced 300,000 tons of coal, dug by hand. The mine was flooded severely in 1884 and finally closed when the railroad pulled its tracks at Franceville in 1910. In 1948, strip mining operations began and lasted until 1965 when the mine was again flooded (City of Colorado Springs, 2-3). Although no town or community exists at the site today, the area is now a winter habitat for golden eagles.

Jimmy Camp

Jimmy Camp refers to a camp site near the spring which formed the headwaters of Jimmy Camp Creek. It was the only source of fresh water for many miles along the Old Cherokee Trail. Jimmy Camp is said to be named after Jimmy Hayes, a trader and the first settler to make a permanent residence in the area, and a friend to local Native Americans. In 1833 he established a trading post for trappers, cattlemen, and settlers. Hayes would travel each year to St. Louis with a supply of pelts and furs to trade for various supplies and transport them back to his camp. He was eventually killed by a group of bandits. Legend says that his Native American friends discovered his body, caught the murderers a few days later, and avenged his death. Nothing remains of the camp today.

2.5 LAND DEVELOPMENT INFLUENCES

Urban Services

With the exception of telephone service, electricity, and some roads, urban services are limited in most of the Planning Area. Within a 20-year planning horizon, contiguous development is not expected to extend east from the City of Colorado Springs to the Planning Area, nor is it likely that Colorado Springs will extend extra-territorial services. If urban services become available, they will result from some combination of local start-up facilities, gradual upgrades to existing services, or extensions of services from outside the Planning Area.

Currently, the Ellicott Fire and School Districts serve most of the Planning Area. The Fire District provides only a rural level of service. School and fire facilities are located outside of the Planning Area. Over time, services may be extended or improved for the entire Planning Area, but the level of services is expected to remain rural for most areas. Large developments can expect challenges of facility and service adequacy.

The El Paso County Sheriff's Office provides professional law enforcement services within the Planning Area. Due to the expansive area, response times for Sheriff patrols are quite lengthy, especially in the southern portion of the Planning Area. The nearest patrol station is in Colorado Springs. Response time to the center of the Highway 94 Planning Area can be as long as 45 minutes.

Drainage

The County has not studied most of the drainage basins in the Planning Area in detail or established associated basin-specific development fees. Significant urban development in any basin will trigger the need to complete a drainage basin planning study and adopt basin specific drainage and bridge fees. Although they add time and monetary costs to the development process, basin studies are a critical part of the development process and help protect future landowners against property damage.

Utilities

Electric rates are somewhat higher in the Planning Area than in Colorado Springs largely due to the distance between users and the associated installation costs. Mountain View Electric provides electric service to most of the Planning Area. Electric rates should not significantly constrain large-lot residential development in the area but might constrain nonresidential uses that consume large amounts of electricity. Natural gas service is available in areas north of Schriever AFB by Peoples Natural Gas and in Colorado Centre by Colorado Springs Utilities. Natural gas service is currently not available in areas south of Schriever AFB.

Schriever Air Force Base

A key factor within the Planning Area is Schriever Air Force Base (AFB). Schriever currently employs approximately 4,500 people. The number is expected to grow to more than 6,000. Schriever is discussed more thoroughly under Sub-Area 6. While Schriever AFB is a strong influence for the Planning Area, there are additional factors that influence land use. These include proximity to the Colorado Springs Airport and the City of Colorado Springs.

Colorado Springs

The Colorado Springs Metropolitan Area is the major economic driver and market in the region. Colorado Springs and other areas to the west will continue to provide employment opportunities and services for Planning Area residents and much of the housing for Planning Area employees. In 2000, the City of Colorado Springs alone accounted for 360,890 residents and 148,690 housing units (US Bureau of the Census).

In 1988 the City of Colorado Springs annexed the 21,400-acre Banning-Lewis Ranch and the majority of the Colorado Centre development, effectively bringing its city limits to the western boundary of the original Planning Area. The Banning-Lewis Ranch Master Plan will have a major influence on both potential development within the Planning Area and its pattern. The Banning-Lewis property is under the jurisdiction of the City of Colorado Springs, and is zoned for a variety of urban density uses. It has changed hands six times since 1963. Its 21,400 acres equate roughly to 33 square miles, roughly the size of the City of Pueblo, which is 35 square miles. The master plan allows 76,000 housing units and 76 million square feet of commercial space. It depicts low density urban residential uses along most of its eastern boundary near the Highway 94 Planning Area. Although it is not likely that contiguous growth will extend from the west to the Planning Area within the next 20 years, pressures to leapfrog undeveloped Banning-Lewis property to take advantage of either short term development opportunities or less restrictive development conditions within the County are expected. Owing to ample open lands suitable for development within their boundaries, the City of Colorado Springs is unlikely to extend services to the Planning Area. Lack of these services could temper development in the unincorporated portions of the County east of Banning-Lewis.

Historical Growth

In 1983 there were 15 platted and eight unplatted subdivisions in the original Planning Area, having a total of 571 lots with an average lot size of ten acres. In the intervening 20 years, nine subdivisions have been approved in the area. Within the Colorado Centre Area there are a total of three subdivisions encompassing 255 acres. Unlike the original Planning Area, most of the subdivision in Colorado Centre has occurred since 1983. A summary of all subdivisions in the Planning Area is included in Table 3.8. Most are single-family.

By the time ground was broken for Schriever AFB in 1983, a series of secondary actions and impacts were triggered. These began with the County Commissioners' decision to develop a land use plan for the area that subsequently became the 1985 Highway 94 Comprehensive Plan. In addition, at the recommendation of the original Highway 94 Citizens' Advisory Committee (CAC), the area was zoned for the first time in April 1983. By the end of 1986, developers proposed a number of sketch plans for large urban density projects surrounding the Base. Sketch plans are conceptual representations of proposed land developments. The largest of these was the 1984 Aerospace Center Sketch Plan that encompassed approximately 3,800 acres and was planned to accommodate 86,000 employees. By the end of the 1980s, a combination of factors, including excessive real estate speculation, tax law changes, and the national Savings and Loan crisis caused a major market downturn in County real estate and development. The effects were particularly pronounced in the Highway 94 Planning Area, where only the Colorado Centre development started. Many of the other sketch-planned properties have subsequently changed ownership, in some cases with divided interests.

A number of existing land uses impact future development within the Planning Area. These include landfills, telecommunications towers, transmission lines, rifle ranges, and junkyards.

Sketch plans and other key factors that influence land development decisions are highlighted on Map 3.2 (page 44). Sketch plans are discussed in more detail in Chapter 3, Community Profile.

Environmental Constraints

At first glance, much of the Highway 94 area appears subject to fewer environmental constraints than other parts of the County. The Corral Bluffs area poses the most obvious natural constraints to development due to the steep slopes and unstable rocks. Less obvious constraints include hydric soils, ephemeral streams and ponds, and sandy soils. Degradation of any one feature might appear to have little impact but cumulative effects manifest themselves through lowered water tables, flooding, erosion, and drought. In the area, frequent localized downpours can unleash destructive amounts of water and sediment significantly altering large areas and drainage patterns. Another feature related to the sandy soils is the potential for blowing dust. Winds can easily blow exposed soils onto adjacent properties, particularly during droughts. Fugitive dust from dirt roads can cause respiratory problems. Most of the soils in the Planning Area are sandy and have severe limitations associated with septic systems due to excessive percolation rates and the associated poor filtering action. Septic systems located on sandy soils can leach into alluvial groundwaters and contaminate wells.

Photo 2.13 - Jimmy Camp Creek Floodplain

The lack of centralized water is another consideration. To support high intensity urban uses, water must be imported from outside the Planning Area. If water is obtained from alluvial sources to the east it will likely have a limiting effect on agricultural operations. Much of the development in the Planning Area relies on individual water wells drilled into the Denver Basin. The Denver Basin can be thought of as a large bowl that underlies an area from central El Paso County north to Greeley. The Basin is discussed in greater detail in Chapter 5.

Because of the importance of water, El Paso County requires a 300-year supply of water for all newly approved subdivisions. Recent recommendations by the State Engineer's office indicate that higher intensity residential uses of more than one dwelling unit per five acres that rely on individual wells and septic systems should be restricted. The result may be a limit on development in the Planning Area with the encouragement of either high intensity uses supplied by imported water or low intensity uses utilizing on-site sources.

General Development Principles

With the exception of Colorado Centre and a few other properties, almost all the Planning Area is zoned for five-acre development, primarily in the RR-3 (Rural Residential) District. The mass RR-3 zoning is largely a product of a 1983 zoning action that preceded the adoption of the 1985 Plan. The County's intent was for the RR-3 zone to function as a "holding zone" to allow some form of regulation pending the development of a site-specific Plan. Although the RR-3 district is somewhat effective as a holding zone, one of its disadvantages is that it allows five-acre rural residential subdivisions as principally permitted land

uses at any location where the minimum technical requirements are met, resulting in a scattered five-acre residential subdivisions. Because of the difficulty in extending urban services to the Planning Area, the creation of five-acre subdivisions served by individual sewage disposal systems is expected to continue. In some parts of the Planning Area, the development of additional five-acre subdivisions may limit the potential for comprehensively-planned development projects and agricultural productivity. Individual residences on what were infrequently used arterials may also find their quality of life degraded as increased development places more high-speed traffic on roads in front of their residences. Map 2.3 (page 21) depicts parcel sizes in the Planning Area.

Photo 2.14 - Davis Road Residence

Although the 1985 Comprehensive Plan acknowledged the potential for mixed-use urban density development in the area surrounding Schriever AFB, as of this date, private urban development has not been initiated. One of the major reasons for the lack of action is the effort required to provide urban services for development. Compared to infill sites throughout the metropolitan region with existing urban services, the Highway 94 Area has prohibitive start-up costs. Additionally, there is only a limited market for major urban development in the area.

The predominant land use in the Planning Area is grazing, primarily in the south, which will likely remain a prominent activity into the future. A number of ranchers graze their cattle on a combination of their own property and, through leases, adjoining federal, State, and private lands. As the area becomes further subdivided and developed, it will be a challenge to maintain both the continued integrity of these ranching businesses and their compatibility with other land uses.

Potential ranching concerns include the division of property by proposed roads, stray dogs, conflicts with "hobby farms," blowing trash, the spread of invasive noxious weeds from unmanaged adjacent properties, trespassing onto private and leased public property, and complaints from new residents concerning the impacts of agricultural operations.

Photo 2.15 - Cattle

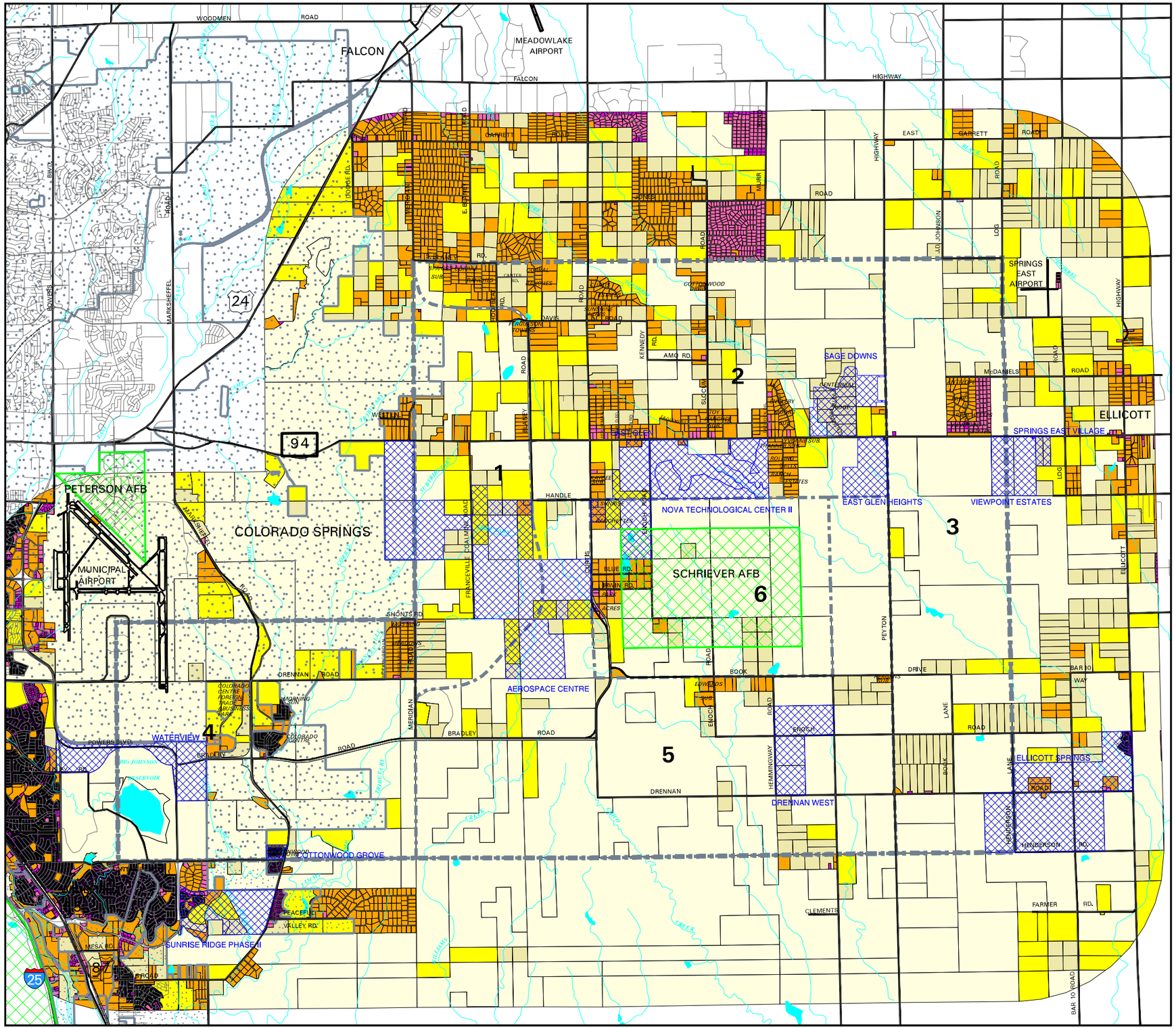
As land uses change and economic pressures make it more difficult for ranching operations to continue, some property owners may opt to parcel off their property into 35-acre tracts. Currently, the division into 35-acre tracts is not processed through the County and thus avoids the expense, time, and risk associated with subdivision (CRS 30-28-101 (10) (c) (I)).

Ownership Patterns

Ownership patterns have a strong influence on development in the Planning Area. Map 2.4 (page 22) shows ownership patterns for holdings of 500 or more acres. Approximately one-third of the lands in the Planning Area are owned or managed by these large landowners. The actions of any one owner can have ramifications for the entire area. While large land holdings are necessary for sustainable agricultural activities the potential exists for their quick conversion to large scale nonagricultural uses.

Map 2.3
Parcel Sizes

Highway 94 Comprehensive Plan
El Paso County, Colorado



LEGEND

PARCELS BY ACREAGE CLASSES

- < 0.5 Acres
- 0.5-2.49 Acres
- 2.5-4.74 Acres
- 4.75-34.99 Acres
- 35-49.99 Acres
- 50-159.99 Acres
- 160+ Acres

Methodology Note: All parcels totaling 158 acres or more have been classified as at least a quarter of a section or 160 acres for the purposes of this map.

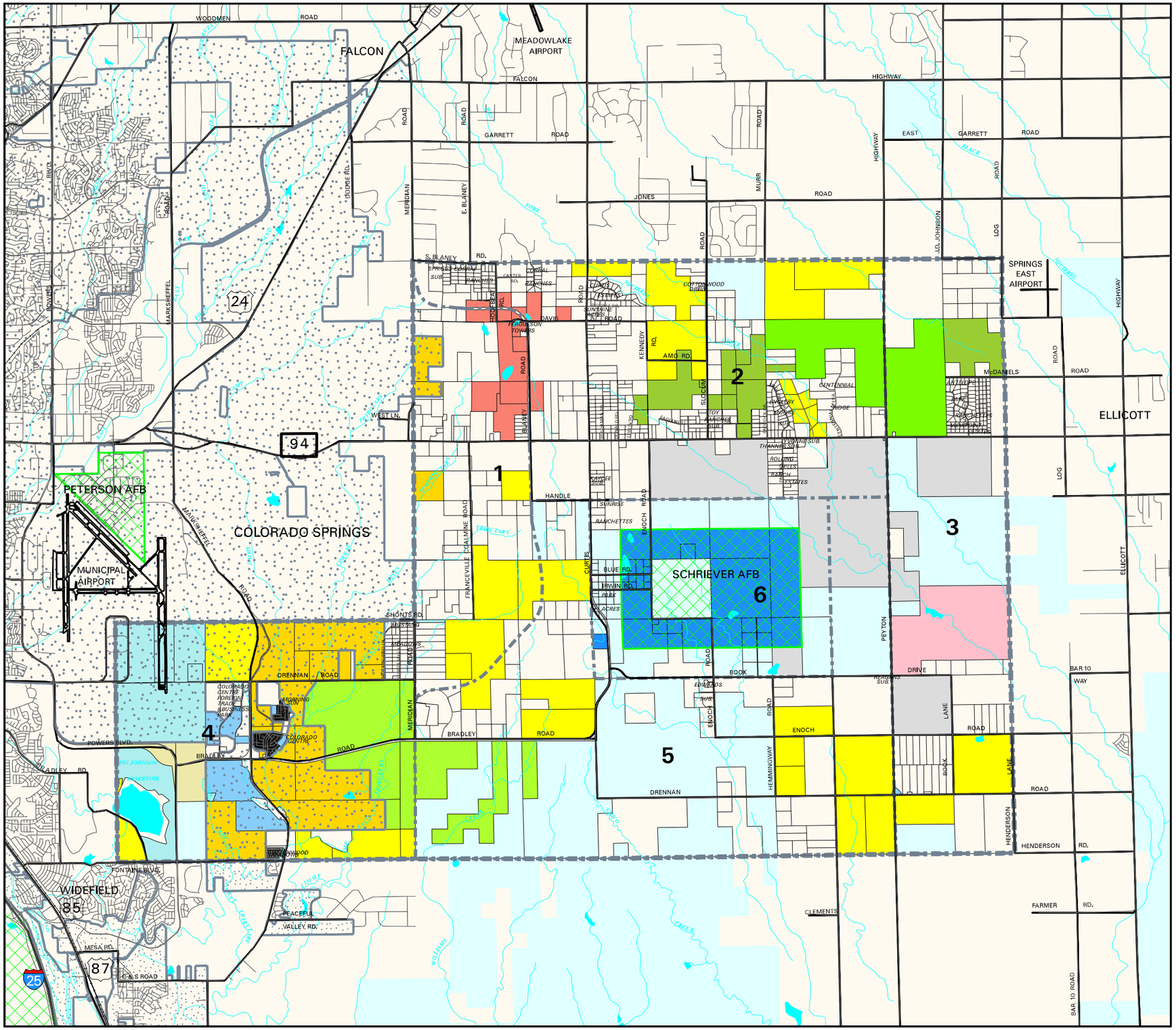
Source: El Paso County Assessor

- Sketch Plans
- City of Colorado Springs
- City of Fountain
- Military Installations
- Sub Area Boundaries
- Planning Boundary

SCALE IN MILES

0 1 2 3

Prepared by: El Paso County Planning Department
Print Date: December 10, 2003



Map 2.4
Publicly-Owned Lands & Major Land Owners

Highway 94 Comprehensive Plan
El Paso County, Colorado

LEGEND

Military Installations

MAJOR LAND OWNERS

- United States of America (3220 Acres)
- State of Colorado School Lands (14048 Acres)
- El Paso County (733 Acres)
- City of Colorado Springs (2520 Acres)
- Norris Ranch and Family (3085 Acres)
- M-D Inc. (2219 Acres)
- Edwards Ranch (1535 Acres)
- B.D. Paddock Trust (1603 Acres)
- Ververs Estate (5386 Acres)
- Book Ranch Limited Partnership (1511 Acres)
- Cygnet Land LLC (456 Acres)
- CPH Banning Lewis Ranch LLC (4122 Acres)
- Waste Management (1101 Acres)
- Other Ownerships of 500+ Acres

Source: El Paso County Assessor Office

City of Colorado Springs

City of Fountain

Sub Area Boundaries

Planning Boundary

SCALE IN MILES

0 1 2 3

N

Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

2.6 SUB-AREAS

Due to unique circumstances throughout the Planning Area, the Planning Area was divided into six separate sub-areas. Sub-area boundaries were based on the development patterns, ownership, uses, and individual characteristics of each sub-area. As shown on Map 2.1, the portion of the Highway 94 Planning Area east of Peyton Highway overlaps the boundary of the 1988 Ellicott Valley Comprehensive Plan and is included as Sub-Area 3.

- Sub-Area 1, Corral Bluffs
- Sub-Area 2, North Central
- Sub-Area 3, Ellicott Cooperative Area
- Sub-Area 4, Colorado Centre
- Sub-Area 5, South Central
- Sub-Area 6, Schriever

Sub-Area 1, Corral Bluffs

Site Character

Sub-Area 1 is the most diverse sub-area in terms of topography, land uses, and wildlife. Corral Bluffs is the predominant land feature and imposes topographic limitations on the area. The Bluffs are comprised of Badlands soils featuring steep, rough, eroding areas with rapid runoff and high erosion potential. Slopes range from 0 to 100 percent. Most Bluff areas are extremely gullied and lack vegetation. While the Badland areas are unsuitable for development they create wildlife habitat and a prominent landmark for the area. During the mid-1980s, a landfill of approximately 10 acres was located on Blaney Road. The landfill is now known as the Colorado Springs Landfill and is operated by Waste Management, Incorporated. With the exception of the landfill on the face of the Bluffs, the Bluffs retain much of their natural character. The bluffs are also bisected by SH 94, which forms the western gateway for the Planning Area.

Other land use influences include the Fergueson Towers Subdivision, created for the siting of several communications towers, and Dragon Man's shooting range and related facilities. Access for the towers is from Blaney Road while access for the shooting range is from Curtis Road and across an adjacent property. The Izaak Walton Gun Club operates further south along the west side of Franceville Coal Mine Road.

Other uses in the Sub-Area include several automobile junkyards along SH 94. Local residents who responded to the 1998 attitudinal questionnaire cited the junkyards as the least desirable land use in the Planning Area. The junkyards date to the 1960s and 1970s when they relocated from the City of Colorado Springs to what was then an unzoned area. When the Planning Area was zoned as an Agricultural (A-4) District in 1983, the junkyards became legal nonconforming uses. Because the current zoning does not allow these uses, they can not expand significantly beyond their physical dimensions as of the date of the zoning, although the uses can continue.

Photo 2.16 - Highway 94 Hill

Throughout the 1990s, the area also featured approximately 718,000 scrap tires along SH 94 and west of Corral Bluffs. By 1998, the County removed all the tires with the assistance of a Colorado Waste Tire Clean-Up Program Grant.

The 1985 Highway 94 Plan recommended that junkyards be relocated to a more suitable location. The Plan specifically proposed conversion of the area to light industrial as a private market strategy to eliminate these uses through replacement. These replacement uses, however, ordinarily require a full range of urban services to become established. Lack of urban services, along other market factors, may postpone such a conversion.

In the mid-1980s the 3,832-acre Aerospace Centre Sketch Plan was proposed in the Area. It was the largest of the sketch plans proposed at the time.

Issues

In 1991, after a controversial series of hearings, the County approved a major landfill expansion to the north and east of the present landfill. The current landfill will close around 2007 and operations shifted to the adjoining site. Unlike the current landfill, the landfill expansion will be an engineered facility that will include a clay liner, on and off site groundwater monitoring, and an indoor holding facility for periods of high winds. It will be completely separate from the existing landfill and accessed from Blaney Road. The new location will be outside of the Bluffs but will ultimately have a relatively high vertical profile, 110 feet above the existing topography at its highest point. It will be masked by berms. Unlike the existing landfill, the new landfill will not be highly visible from SH 94.

Waste Management acquired some adjoining property in conjunction with the 1991 landfill expansion. Waste Management is now one of the larger owners in the Planning Area with 1,001 acres. As a condition of approval, the land cannot be reconveyed until the owner prepares a master plan for it.

Photo 2.17 - Corral Bluffs and Graded Landfill

With the exception of its top portion, the existing landfill is largely in its final graded state. After the existing landfill is closed, Waste Management will monitor and mitigate leachate from the landfill, as contamination will continue to flow from the landfill indefinitely.

Subsurface and surface mining operations from the Franceville Coal Mine in the late-1800s through the mid-1900s have resulted in subsidence, seeps, and low areas created by strip mining, which are now prone to flooding. In the mid-1990s a plan for the Wild Horse subdivision was considered in the area but not approved due to the lack of central services, the prevalence of mining issues, the extended distance to schools, and the extended distance to fire facilities.

SH 94 offers spectacular views of Pikes Peak and the Front Range. Despite the presence of some uses, such as a landfill and several junkyards, the potential exists for SH 94 to function as a gateway for the area. Limiting the impact of the junkyards would eliminate the largest impediment to that transformation. One option is to accommodate auto recycling in the area. Auto recycling would generally be enclosed within buildings and screened from public rights-of-way.

Photo 2.18 - Highway 94 Hill and Pikes Peak

A proposed County regional trail at the foot of the Bluffs may help encourage compatible land uses, preserve the Bluffs as a landmark, provide a County-wide recreational amenity, and maintain wildlife habitat.

Sub-Area 2, North Central

Site Character

Photo 2.19 - Rural Residential Subdivision

Sub-Area 2 features a number of residential subdivisions along with several large parcels used for grazing cattle. The largest land holdings belong to M-D, Incorporated, the B.D. Paddock Trust, and the Ervers Estate. Although it retains several large parcels used for agricultural operations, the northern portion of the Planning Area is the most densely populated. Residential development continues to spread southward from the Falcon area into the Planning Area. Residential uses in the area include the 55-lot Arrowwood Acres mobile home park on Curtis Road, the Rolling Hills Ranch Estates Subdivision, and a number of minor subdivisions.

SH 94 currently functions as a channel for growth, carrying increasing amounts of traffic. SH 94 is easily accessible to the Colorado Springs area. Curtis Road is a north-south arterial. It starts west of Schriever AFB and runs north toward Falcon and US 24. According to a 2000 Base survey, most Schriever AFB employees live in northeast Colorado Springs. Curtis Road has become one of their primary commuting corridors.

Photo 2.20 - Ervers Ranch Sign

Photo 2.21 - Ervers Ranch

Issues

A number of urban density Sketch Plans were developed in the Sub-Area in 1985 including East Glen (788 acres), East Glen Heights (398 acres), and Nova Technological Center II (1,082 acres). These plans were deleted as elements of the County Master Plan in 1992.

Photo 2.22 - Dragon Man's Sign

Traffic and the secondary effects of that traffic have a significant influence on the Sub-Area. Sub-Area 2 includes portions of SH 94 and Curtis Road. To abate traffic impacts, the Base established a Ride-Sharing program and is working with the City of Colorado Springs to reestablish bus service to the Base. Despite these programs, traffic will continue to be a significant issue for the Base and the surrounding roadways.

North of SH 94, Curtis Road is a two-lane road with no shoulders. Due to the rolling terrain, the road has been known to mask "black ice," drifting snow, and stalled vehicles. A number of five-acre residential lots line the road. Due to increasing traffic on the corridor, the County now plans to widen the road.

Over the long term, SH 94 may be widened to 4 lanes, within at least a portion of the Planning Area, to accommodate Schriever AFB traffic and an increasing number of residents from central and eastern El Paso County.

Sub-Area 3, Ellicott Cooperative Area

Site Character

Sub-Area 3 lies east of Peyton Highway. The Area is a cooperative area coincident with a portion of the 1989 Ellicott Valley Comprehensive Plan. Like Sub-Area 5, Sub-Area 3 features a significant number of State and privately owned lands used for grazing. North of SH 94 is the Antelope Park Ranchettes, a residential subdivision with 5 and 2½-acre lots. While most of the five-acre parcels are already occupied, most of the 2½-acre parcels have yet to be developed. Several other scattered 40-acre residential parcels exist throughout the Sub-Area. The historic Drennan School is located in the southern portion of the Sub-Area along Drennan Road. Significant floodplains run through the Area.

Peyton Highway is a two-lane north-south road that forms the western edge of the Sub-Area. Large parcels used for grazing abut Peyton Highway. Owing in large part to the adjoining agricultural uses, Peyton Highway functions well as a regional corridor with few uses to interrupt connectivity and functionality.

The Springs East Airport is immediately adjacent to the northeast corner of Sub-Area 3. Currently, the Airport has 30 based aircraft and supports flight training and aeronautical club activities for both the US Air Force Academy and Peterson AFB. The Airport expects to attract some activity from the busy Meadow Lake Airport in Falcon, given its favorable terrain, a lack of encroachment problems, and a lack of congestion in its traffic pattern. For general aviation aircraft, Springs East also makes a suitable emergency alternative to the Colorado

Photo 2.23 - Springs East Airport

Springs and Meadow Lake Airports. Springs East is nine miles from the Meadow Lake Airport and 15 miles from the Colorado Springs Airport. Because of these distances, weather conditions may be favorable at Springs East even if adverse conditions have already developed at the other fields. The Airport has a small centralized water system.

Issues

The Upper Black Squirrel Creek Alluvial Aquifer is a potential source of some semi-renewable groundwater for private development in the Sub-Area. The aquifer is centered in the Ellicott Valley but extends into the Planning Area.

Development pressures are expected both along SH 94 and Drennan Road. Many of the influences lie to the east of the Sub-Area in the Ellicott Valley but influence land use in Sub-Area 3.

School and fire protection facilities for the Highway 94 Planning Area are currently located in the Ellicott Valley. The Town of Ellicott is evolving as a minor rural commercial center and focus of quasi-rural housing development, including rural mobile home parks and manufactured housing developments. Development in Ellicott may evolve to include somewhat higher densities if a sewer line is extended to Ellicott from the south. Rapid development near the Ellicott town center is increasing traffic along SH 94.

To the southeast, Sunset Village, also known as Ellicott Springs, currently has the only operating wastewater treatment plant potentially accessible to the main Planning Area. The western portion of the Ellicott Springs Sketch Plan extends into Sub-Area 3. If the development plans for Ellicott Springs move forward, the resulting traffic will impact the southern half of the main Planning Area, in particular Drennan Road. The current sketch plan for Ellicott Springs calls for three village centers, urban density and rural residential lots, multi-family units, schools, a cemetery, and research and development centers. If developed as planned, the Ellicott Springs development would add approximately 4,800 residences and 12,800 people to the area.

Although unlikely to develop as such in the near future, Peyton Highway is being considered by a private corporation as a major north-south limited access highway corridor. Such a configuration would impact school facilities, park facilities, State Stewardship Trust Lands, and residences.

Sub-Area 4, Colorado Centre

Site Character

Sub-Area 4 features the most intense residential development within the Highway 94 Area. It also features significant waterways, floodplains, hydric soils, and wildlife habitat. Jimmy Camp Creek and its tributaries run through the area. Significant prairie dog colonies occur throughout the area. The Big Johnson Reservoir is sited at the western edge of the Sub-Area. The City of Colorado Springs has recently purchased some areas south of the airport property surrounding the Big Johnson Reservoir through the City Trails and Open Space Parks (TOPS) program. The lands are designated as permanent open space. The TOPS program uses revenues from a one-tenth of one percent City sales tax for parks and open space acquisition.

Photo 2.24 - Big Johnson Reservoir

The Colorado Centre Sub-Area features approximately 800 single-family homes. A significant portion of the Sub-Area is within Colorado Springs. Under the City 2020 Land Use Plan, an area west of Jimmy Camp Creek is proposed as an employment center.

Photo 2.25 - Colorado Centre

Another residential use is the Cottonwood Meadows Sketch Plan at the south-central portion of the Sub-Area along Marksheffel Road. The Sketch plan calls for 93 residential units on 104 acres. Originally designed with 2½-acre lots, the sketch plan was modified to 1/3-acre lots.

Photo 2.26 - Colorado Centre

In terms of employment, a number of companies operate in the Foreign Trade Zone within Colorado Centre. One is Colorado Gold Chips, a manufacturer of potato chips. Colorado Gold Chips employs approximately 65 people. The US Olympic Committee also has a warehouse facility in the Colorado Centre employing approximately 250 people. Valero operates a significant gasoline storage facility nearby with connecting underground pipelines. Chapter 5 discusses the pipeline in greater detail.

The Colorado Springs Municipal Airport sits at the northwest corner of the Sub-Area. It is the second largest airport in the State, after Denver International. For the calendar year 1996, the direct economic impact associated with the provision of air service at the Airport totaled over $52.7 million. The total number of people employed at the Airport for the same year totaled 784 (CDOT Division of Aeronautics). In addition to commercial services, the Airport hosts military flights from Peterson AFB. Peterson AFB serves as critical link for both military deployments and a locally based C-130 cargo and fire-fighting mission.

Photo 2.27 - Colorado Springs Municipal Airport Terminal

Issues

Like many areas, the Colorado Centre development experienced difficulties during the late 1980s including a period when property owners could not market their homes while the underlying special district was reorganized to avoid default. By the early 1990s, Colorado Centre emerged from bankruptcy.

In the late 1980s the City of Colorado Springs annexed the majority of the Colorado Centre project with the exception of the residential areas. Much of the annexed area is zoned for commercial uses and is undeveloped.

Colorado Centre can expect some urban development pressure from Colorado Springs and the Security-Widefield area. In many cases urban services in these areas will be available either from existing special

districts or municipalities. Pressures to develop in the Colorado Centre area relate largely to its proximity to the Colorado Springs Airport, land affordability, and the existence of large parcels zoned and suitable for development. A proposed roadway network could carry traffic through the area.

The Colorado Springs Airport provides a focus for future development. Several companies have expressed interest in developing distribution centers near the airport within or near the Planning Area. Manufacturers may also consider development within the Colorado Centre.

The Airport features only a limited number of roadway connections to its passenger and freight terminals from the west. Peterson AFB access is from the northeast. None of these connections lie within the Planning Area. People traveling from the Planning Area to the Airport must therefore travel west or north to these access points before traveling east onto airport property. Within the Sub-Area, the Airport Authority limits structure heights within and around the airport property to protect the integrity of its flight operations as part of the Federal Aviation Administration's Part 77 Surfaces.

Encroachment is one of the biggest concerns of the Airport. In 1992, a 13,500-foot east runway was constructed. The County's Airport zoning overlay, first adopted in 1969, does not reflect the new runway and is in need of revision. In 2001, the Airport also completed a noise study, as part of the Airport master plan, and developed new noise contours. The contours are a critical planning tool, to avoid noise impacts to housing, schools, churches, and other sensitive land uses. An increase in the number of night and evening flights by a new passenger or cargo carrier could have a profound impact on noise levels. Increases in flight operations are difficult to predict. Ideally, encroachment along aircraft approach and departure paths would be limited to preclude future conflicts.

East of the Colorado Centre area, portions of Jimmy Camp Creek are below ground. Jimmy Camp Creek and the Corral Tributary join near the Morning Sun II Subdivision. Soils east of the Subdivision along the waterway are not well suited for urban development and have experienced significant erosion during the past decades. Overall, given its proximity to the City and the Airport, waterways are under significant pressure in the Sub-Area.

Photo 2.28 - Streambed Erosion along Jimmy Creek Camp

Photo 2.29 - Transmission Towers

A vacant 86-acre tract zoned for a mobile home park lies northeast of Colorado Centre. The site lies adjacent to high power transmission lines and a Diamond Shamrock petroleum pipeline. A 100-year floodplain covers the southern portion of the area adjacent to Drennan Road. Given its location and the numerous negative influences on the property, siting a mobile home park on the land is questionable.

The Waterview Sketch Plan, first proposed by Cygnet Land in 2000, is north of Big Johnson Reservoir and south of Powers Boulevard. The proposal covers 800 acres and contains residential, commercial, and industrial development. It is discussed more thoroughly in Chapter 3.

Sub-Area 5, South Central

Photo 2.30 - Edwards Ranch Entrance and Schriever AFB

Site Character

Sub-Area 5 features a large concentration of parcels, both privately owned and owned by the State, used for ranching. The Edwards and Norris Ranch Estates own significant portions. To the south and east of the Planning Area are other concentrations of agricultural lands. Sub-Area vegetation is largely short-grass prairie grasses. In addition to feed for cattle, the short-grass prairie provides a habitat for a number of prairie birds. South of the Planning Area, water supplies from the Denver Basin become limited to nonexistent.

The Bradley Road extension, built in 1999, runs through the Sub-Area and is used primarily by Schriever AFB commuters.

The Drennan West Sketch Plan, which lies in the eastern portion of the Sub-Area, was proposed and approved in 1989.

Issues

Photo 2.31 - Cordova Ranch Sign

Due to a prevalence of State Lands, agricultural uses are expected to continue in Sub-Area 5.

To its southwest, residential development from both the unincorporated County and the City of Fountain may impact Sub-Area 5. Existing and potential future residential densities range from urban to five-acre lots. Noncontiguous urban density developments are possible in the areas surrounding the City of Fountain. These create pressures for the sale and development of nearby State lands, diminishing the viability of State lands for large-scale agricultural operations.

Photo 2.32 - Cordova Ranch

Sub-Area 6, Schriever

Site Character

Schriever AFB is considered the single most important planning influence in the Highway 94 Planning Area. The 1982 announcement by the US Department of Defense (DoD) to locate a Consolidated Space Operations Center (CSOC) east of Colorado Springs permanently changed the fabric of the Planning Area. The DoD initiated construction of the facility in May of 1983. The facility opened in 1985 on a 640-acre site with a new name, Falcon Air Force Station. In 1991, the Base acquired an additional 3,200 acres of land surrounding the site from the State of Colorado and private landowners to help protect radar "look angles" for satellite tracking. The facility was renamed Schriever AFB in 1998. The installation is now home to the 50th Space Wing whose mission is "defending the United States by providing combat power from space." (50th Space Wing, 3-3) Among other activities the facility supports the operation of 110 satellites used for operations such as global positioning, communications, and information gathering.

Current land uses at the Base occupy only about a third of the Base property. Most activity takes place within a 640-acre restricted area. To the north of the restricted area is the base community center currently under development. To the south of the restricted area is an industrial support area. Much of the remainder of the Base is currently leased to adjoining landowners for grazing. Regional access to the facility is provided from SH 94 to the north and Bradley Road to the south via Enoch and Curtis Roads.

The Cherokee Metropolitan District provides potable water for the Base through a 30-inch line that parallels SH 94. Cherokee also provides wastewater treatment.

In terms of natural resources, Base water features generally flow from the northwest to the southeast. The Base recognizes the necessity of water and sediment transport and has used prudent line setbacks to protect its people and equipment. Despite a tremendous amount of water unleashed during a localized thunderstorm in the recent past, the drainage ways conveyed the water with no damage to either the drainage ways or Base property. Two large playa lakes in the far northwest corner of the Base also help mitigate the effects of water. Playas are pond-like depressions that fill intermittently with stormwater, decrease the velocity of storm flows, and slowly release the water. In addition to their utility as inexpensive drainage solutions, playas support flora and fauna. Playas are interspersed throughout the Planning Area.

Issues

While the current Schriever AFB boundaries are expected to remain static, the Base may substantially expand both in developed area and mission. Housing for Base personnel is met through the private housing market generally outside the Planning Area, largely in the City of Colorado Springs. Military-related housing, research and development, electronics, and aerospace support industries in proximity to Schriever AFB are tempered by both limitations in urban services and competition from a variety of urban locations within the Pikes Peak Region. Base needs can be met through these surrounding urban locations provided that the functional integrity of the roadway system serving the Base is maintained. The Base Master Plan calls for the development of security facilities, an indoor firing range, a clinic, a headquarters addition, and new antennas.

The possibility also exists for the Base to become a self-sufficient military installation with on-base housing, commissary facilities, a base exchange, and a golf course. This scenario is unlikely in the immediate future given the cost of facilities and the availability of housing and services in the Colorado Springs area to the west. Such possibilities are dependent on annual Department of Defense appropriations.

One of the most significant impacts on the area is the traffic the Base generates. Transportation issues are discussed more thoroughly in Chapter 6, Transportation.

The current site for Schriever AFB was chosen largely to avoid land use conflicts. Existing installations, such as Onizuka AFB in Sunnyvale, California, have experienced conflicts, which have resulted in the discontinuance of several space-related operations and their transfer to Schriever. To protect the future integrity of its operations, Schriever AFB has already negotiated height easements with several surrounding land owners to protect radar "look angles." Perhaps more critical to the ability of Schriever AFB to continue its mission is the prevention of Radio Frequency (RF) interference. RF interference can occur from telecommunications towers, television stations, radio stations, microwave repeaters, satellite television, and transmission antennas. Although the Base is not presently negotiating RF easements for areas surrounding

the installation due to lack of federal funding, the construction of such uses generally within a three-mile radius of Base radars could severely compromise Schriever operations.

Related to these factors is an interest on the part of the both the Air Force and the local community to preserve the investments made in the facility and thereby minimize the chances of a future base closure. As of mid 2001, the federal government spent $293 million for land acquisition and construction at Schriever AFB. Base planners estimate a 2003 facility replacement value of $379 million.

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Chapter 3 – Community Profile

3.1 INTRODUCTION

A community profile documents the social and economic makeup of a community. In addition to the current face of the community, a profile helps identify historical and current trends. If current trends do not match the community's vision for the future, policy tools can be brought to bear to encourage change and facilitate a transition to a more desirable future vision. The primary source of information for the community profile is Census 2000 data.[1]

3.2 POPULATION

Population Estimate

Using Census information, the April 1, 2000 population estimate for the Planning Area was 3,704. Of the 3,704 people in the Planning Area, 2,127, or 57 percent, reside in Sub-Area 4, which includes the Colorado Centre, Morning Sun, and Mustang Meadows Subdivisions. The remaining 1,577 people, or 43 percent, reside in the remaining five sub-areas. These five sub-areas formed the original Planning Area for the 1985 Highway 94 Plan. Table 3.1 lists the population change in the Planning Area since 1983.

Table 3.1 Population Growth

	1983 Population	2000 Population	Population Increase
Original Planning Area	1,000	1,577	58%
Sub-Area 4	150	2,127	1,318%
Current Planning Area	1,500	3,704	147%

Source: El Paso County Planning Department, US Bureau of the Census

Population Density

The Planning Area population represents 0.7 percent of the County total population spread over 5.6 percent of the County area. Table 3.2 compares population densities for the County and the Planning Area.

Table 3.2 Population Density

	Population Density (persons per square mile)	Population Density (as a percentage of County density)
Original Planning Area	16	7%
Sub-Area 4	106	44%
Current Planning Area	31	13%
El Paso County	242	not applicable

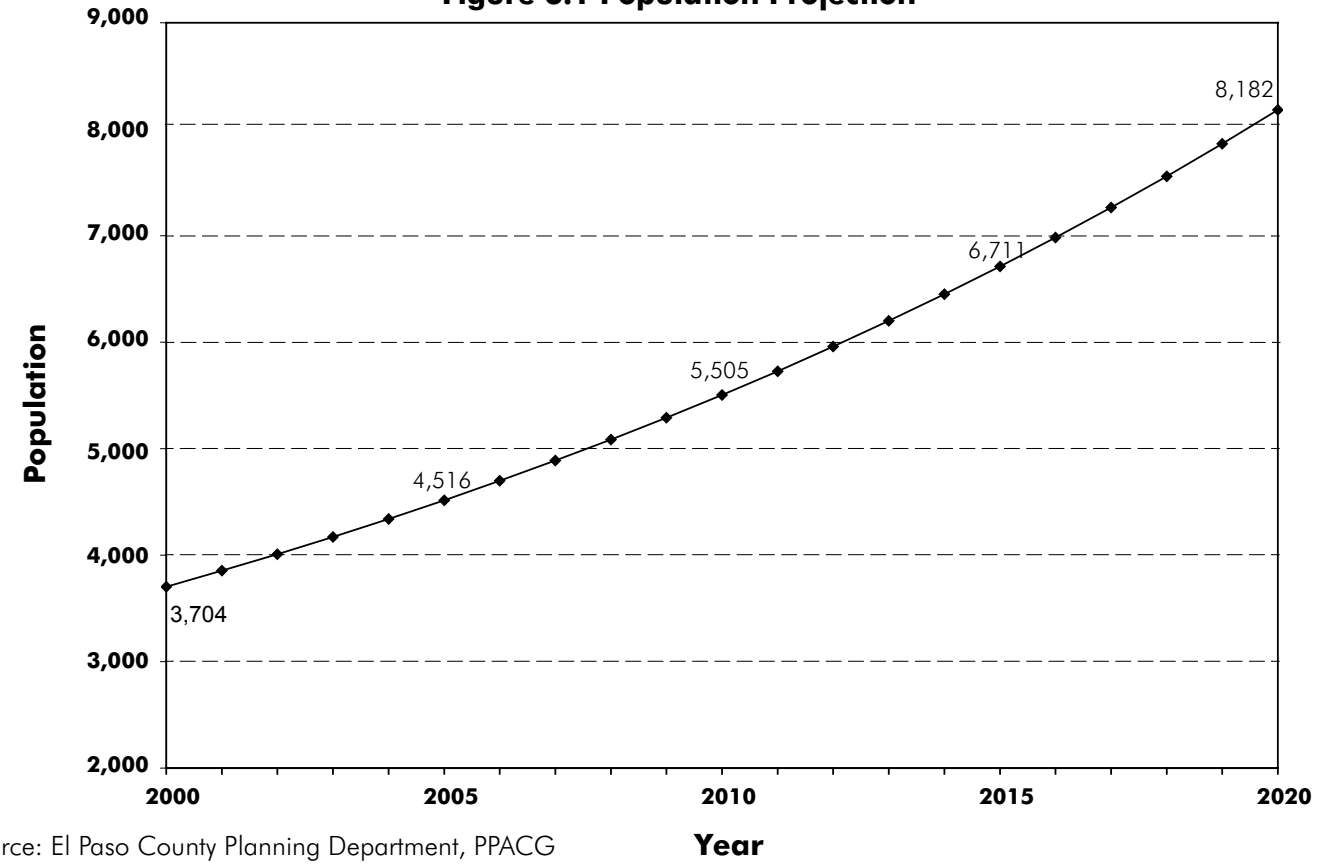
Source: El Paso County Planning Department, US Bureau of the Census

[1] Another source of information is the County Assessor parcel database. Among other things, the database features information concerning parcel size, zoning, tax assessment category, and ownership. While it is possible to infer other information, such as land use, from the database, the accuracy of the information cannot be guaranteed.

Population Growth

The Pikes Peak Area Council of Governments (PPACG), the metropolitan planning organization for the Pikes Peak region, predicts an average annual growth rate of slightly more than 4 percent through 2020. If current trends continue and a 4 percent growth rate occurs, the Planning Area population will rise from 3,704 for April 1, 2000 to approximately 8,200 by 2020. The increase is driven in large part by the growth of Colorado's Front Range communities. Although the population in the Planning Area has not grown as dramatically as neighboring municipal areas, leapfrog development now affects the Planning Area. The population forecast for the overall Planning Area is subject to a large amount of potential variance, especially in later years. Even when growth occurs in accordance with long term projections, annual changes are rarely even. Figure 3.1 depicts projected population growth for the Planning Area.

Figure 3.1 Population Projection

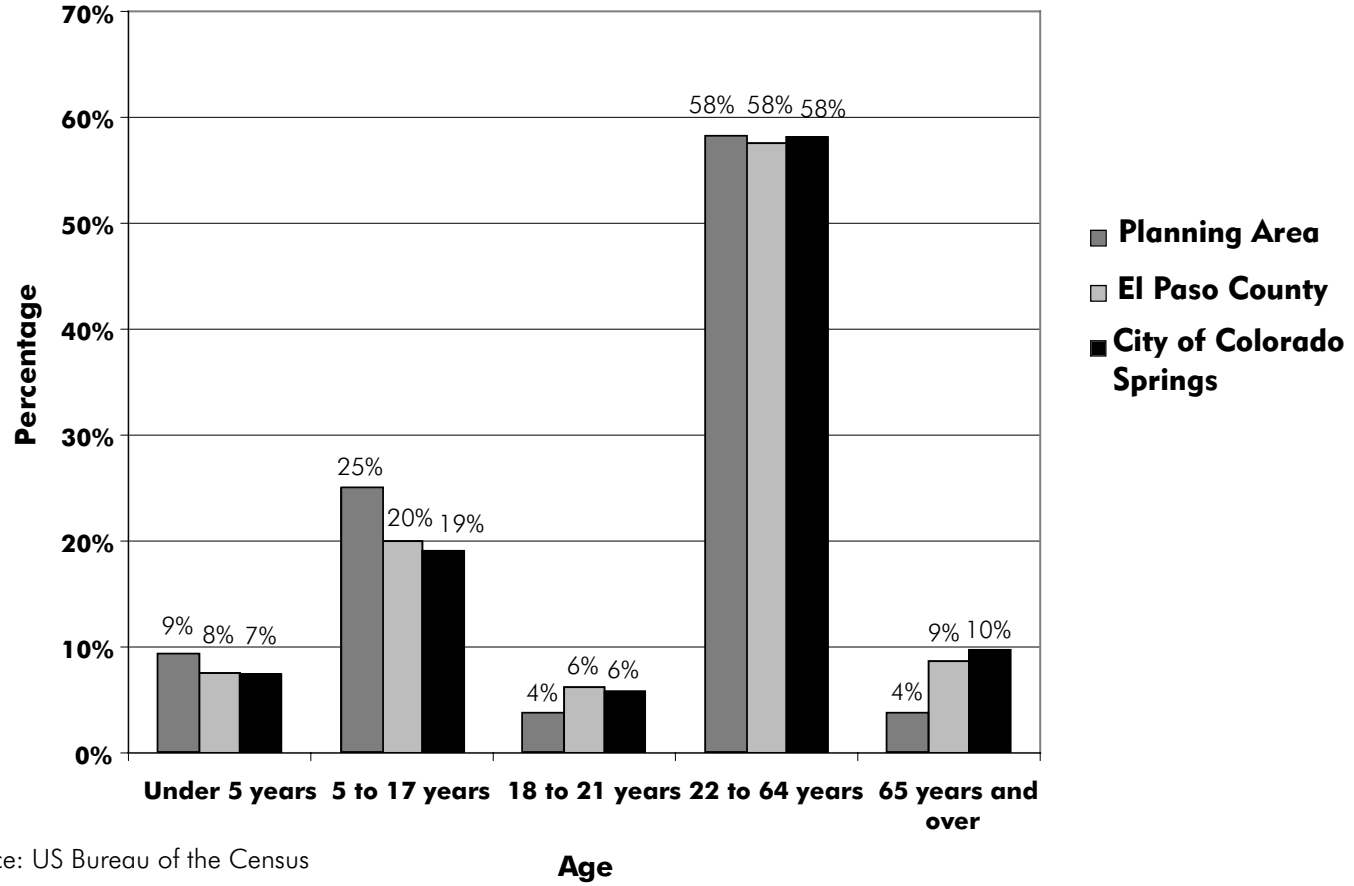


Source: El Paso County Planning Department, PPACG

Age

The average age of residents in the Planning Area is lower than residents of El Paso County as a whole and the City of Colorado Springs. The Planning Area has a greater percentage of school-age children than either El Paso County or Colorado Springs and a lower percentage of college-aged and retirement-aged persons. Figure 3.2 compares the percentage of residents in various age groups in the Planning Area, El Paso County, and the City of Colorado Springs.

Figure 3.2 Age (Year 2000)



Source: US Bureau of the Census

Race

Race within the Planning Area is comparable with El Paso County and the City of Colorado Springs.[2]

Table 3.3 Race (Year 2000)

	Planning Area	El Paso County	City of Colorado Springs
White alone	76.5%	76.2%	75.3%
Black alone	7.1%	6.3%	6.3%
American Indian and Alaska Native alone	0.8%	0.6%	0.6%
Asian alone	1.6%	2.5%	2.8%
Native Hawaiian and Other Pacific Islander alone	0.3%	0.2%	0.2%
Some other race alone	0.1%	0.2%	0.2%
Two or more races	3.2%	2.7%	2.7%
Hispanic or Latino	10.3%	11.3%	12.%

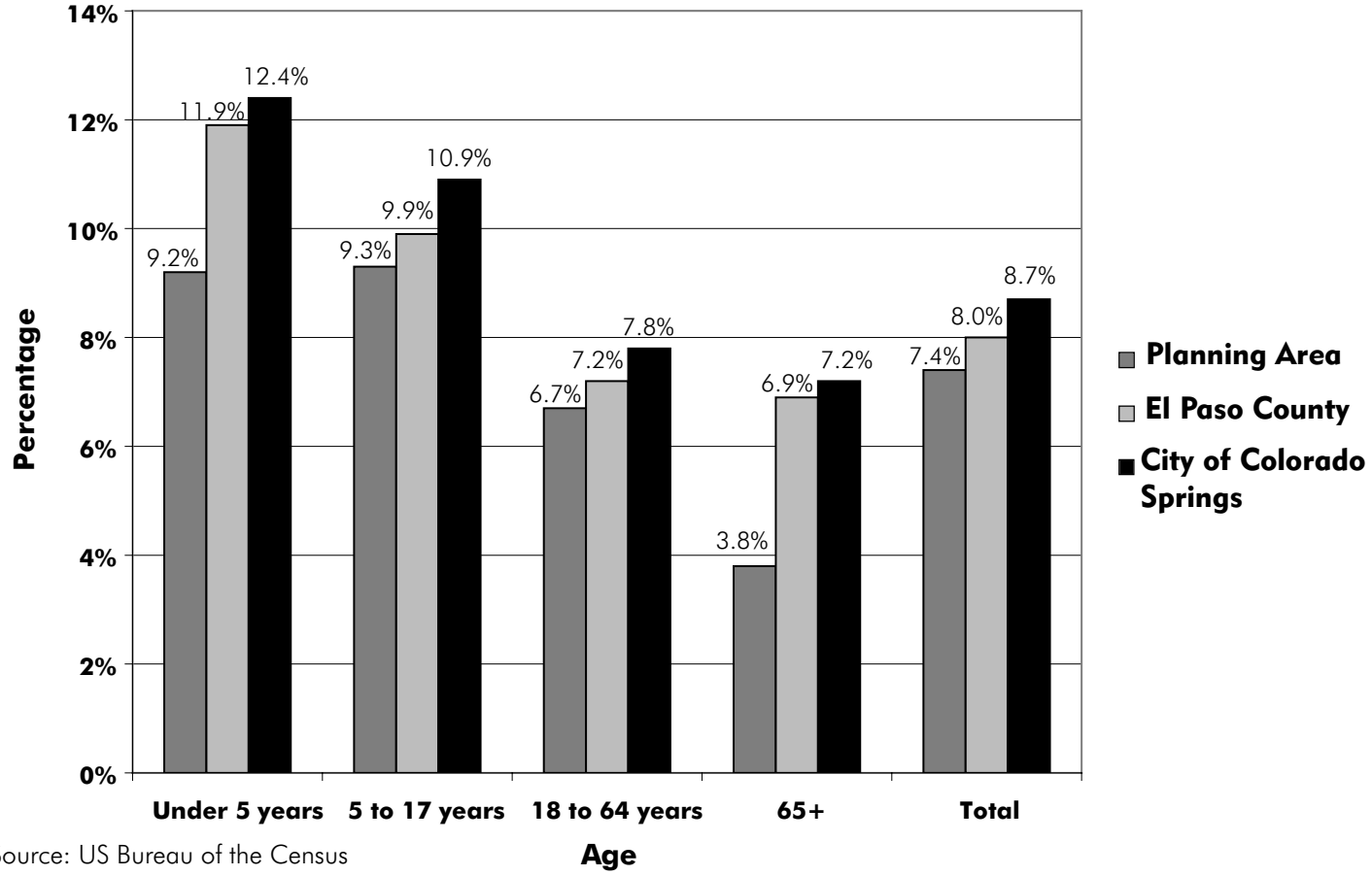
Source: US Bureau of the Census

[2] Although Hispanic origin is distinct from race, the two topics are closely related in practice. For convenience, race and Hispanic origin are both considered in the Highway 94 Plan under the rubric of race. The first 7 racial categories in Table 3.3 are for non-Hispanic people. The final category, Hispanic or Latino, includes all races of Hispanic origin.

Poverty

For all age groups, poverty rates within the Planning Area were less than El Paso County or Colorado Springs. Figure 3.3 compares poverty rates for various age cohorts in the Planning Area, El Paso County, and the City of Colorado Springs.

Figure 3.3 Poverty (Year 1999)



Source: US Bureau of the Census

Poverty can be a complicating issue for school districts. While education remains the primary focus of our school districts, poverty affects the education of children in myriad ways. Poverty related issues, such as nutrition, must be handled for children to be receptive to instruction. Table 3.4 compares 1997 Census Bureau poverty estimates for school districts that serve the Planning Area. Map 7.1 (page 116) depicts school district boundaries.

Table 3.4
Estimated Poverty within Planning Area School Districts (Year 1997)

District	Percentage of children aged 5-17 in poverty
Ellicott School District (22)	22.1%
Falcon School District (49)	8.7%
Widefield School District (3)	10.2%
County Average	**12.0%**

Source: US Bureau of the Census

3.3 HOUSING AND LAND USE

Housing Characteristics

According to 1990 and 2000 Census counts, occupancy rates were comparable for the Planning Area, El Paso County, and the City of Colorado Springs. The persons per household, however, were markedly higher for the Planning Area, likely due to the presence of young families. The Planning Area also had a greater percentage of owner-occupied housing. One factor influencing the high rate of owner-occupancy is the absence of multi-family housing in the Planning Area. Table 3.5 lists housing characteristics. Occupancy rates and owner-occupied housing rates increased from 1990 to 2000 for all three areas.

Table 3.5 Housing Characteristics

	Occupancy Rate		Persons per Household		Percentage Owner-Occupied	
	1990	2000	1990	2000	1990	2000
Planning Area	88%	96%	3.05	3.09	79%	85%
El Paso County	89%	95%	2.7	2.61	57%	65%
City of Colorado Springs	89%	95%	2.54	2.5	55%	61%

Source: US Bureau of the Census

Housing Types

In 1983 there were an estimated 319 dwelling units in the original Planning Area. 213, or two-thirds, were single-family homes and 107, or one-third, were mobile homes. The high percentage of mobile homes in the Planning Area is consistent with the pattern throughout most of the central and eastern portions of the County. Today the number of single-family dwellings, both stick-built and modular, has increased to 324 while the number of mobile homes has remained basically static at 107. Table 3.6 lists housing totals along with the percentage change for the original Planning Area.

Table 3.6 Housing: Original Planning Area

	1983	2001	Change
Single-Family Homes	213	324	52.1%
Mobile Homes	106	107	0.9%
Total Dwelling Units	319	431	35.1%

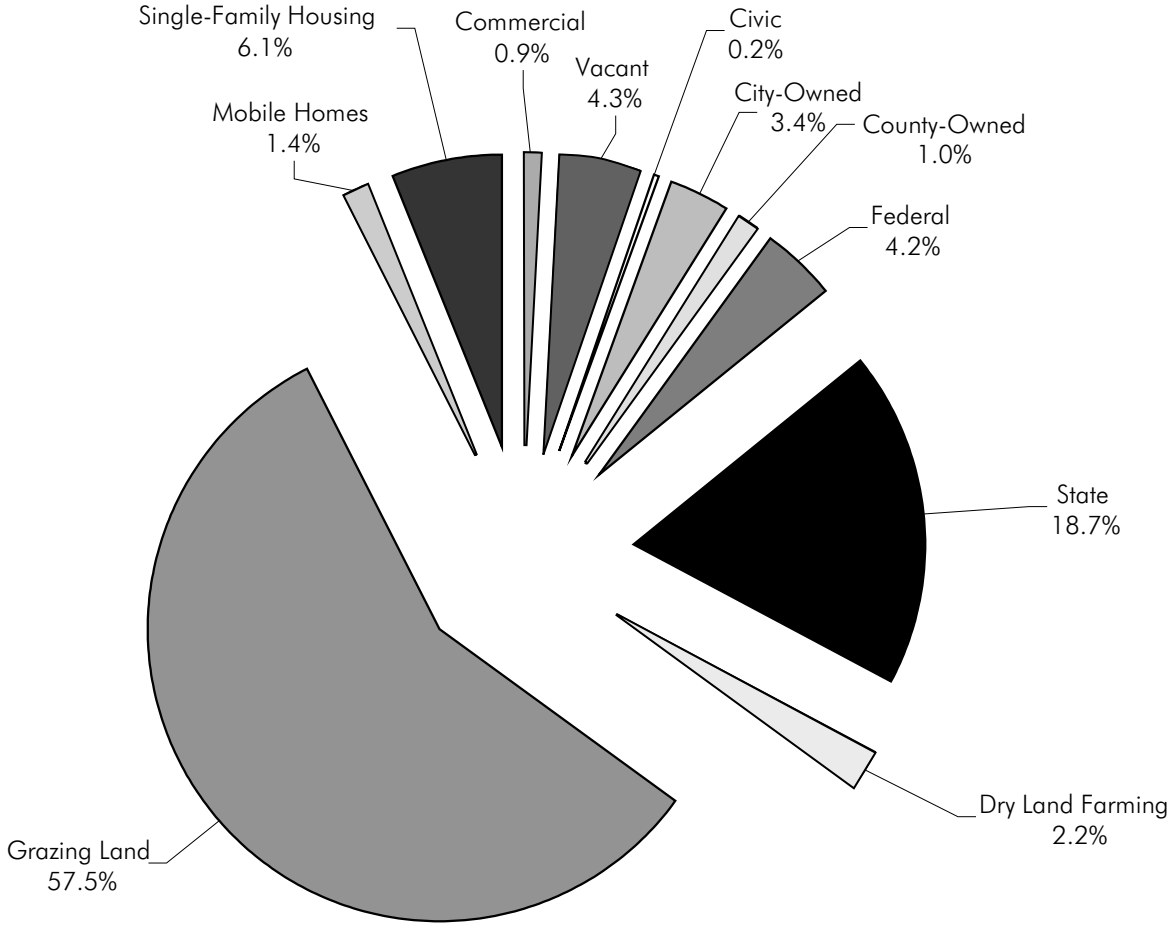
Source: El Paso County Assessor, El Paso County Planning Department

Tax Assessment Categories

The largest tax assessment category in the Planning Area is grazing land, at 58 percent. With the exception of a 640-acre parcel leased to the Air Force at Schriever Air Force Base (AFB), nearly all State lands are leased for grazing. Overall, three-quarters of the lands in the Planning Area are used for grazing.

The remaining lands are divided among several uses. Schriever AFB accounts for all the federal lands in the Planning Area. The Colorado Springs Municipal Airport accounts for the City-owned lands. Together, single-family and mobile homes account for 8 percent of the land area. Although not included in the chart, there also exists a single five-acre industrial parcel within the Planning Area. Figure 3.4 compares tax assessment categories within the Planning Area.

Figure 3.4 Planning Area Tax Assessment Categories



Source: El Paso County Assessor (April 1, 2002)

State Lands

The State of Colorado owns a significant amount of land in El Paso County, most concentrated south of SH 94 and east of IH 25. The State Board of Land Commissioners (State Land Board) administers these lands to generate revenue for the State's school system. The majority of these State-owned lands are privately leased to ranchers for grazing cattle. While these lands are closed to the public, selected leases allow people to ride horses, hunt, or hike on some properties. Amendment 16, a citizen-initiated amendment to the Colorado Constitution, was passed in November 1996 and affects the administration of these lands by the State. Amendment 16 fundamentally modified the mission of the State Land Board by eliminating the requirement that State lands be managed for maximum short term revenue generation. The Amendment also mandates that approximately 300,000 acres of State lands with important natural resource and scenic values be managed with an eye toward long term revenue production and multiple amenity values, such as education, ranching, and farming. While recognizing the unique nature of the selected lands, the Stewardship Trust is not designed to set aside land permanently as open space.

Map 3.1 (page 41) shows the location of State lands and Stewardship Trust lands within El Paso County. The 48,000-acre Bohart Ranch lies to the east of the Planning Area and is the closest of the Stewardship Trust lands. The 87,000-acre Chico Basin Ranch is south of the Planning Area and straddles El Paso and Pueblo Counties. The nearly 18,000-acre Frost Ranch Stewardship Trust lease is in south-central El Paso County. All of the Bohart Ranch and the Frost lease and approximately half of the Chico Basin Ranch are part of the State Stewardship Trust.

Previously, in 1986, a conceptual master plan was developed for the State Land Board to identify the development potential of 16,000 acres of State School Trust lands to the south and east of Schriever AFB. Initially, the Board intended to enter into an agreement with a private developer to implement the conceptual master plan with the potential for 60,000 residents and 100,000 employees. Like other proposed developments surrounding Schriever AFB, the Land Board's conceptual master plan was never implemented. The State's plan has been superceded by Amendment 16 and subsequent Stewardship Trust designations for the Bohart, Frost, and Chico Basin Ranches.

Federal Lands

Federal lands occupy five square miles of the study area with Schriever AFB as the only major federal facility in the area. Schriever occupies 3,840 acres. The core Base occupies approximately 640 acres near the center of the tract where most facilities are located.

Private Lands

Scattered single-family residential housing is the most prevalent developed land use with the heaviest concentrations in subdivisions north of SH 94. These subdivisions are of a low density nature with one dwelling unit per 2½ acres or more. The most noteworthy concentration of medium to high density residential development is Colorado Centre.

Mobile homes represent the second most prevalent residential type. The majority of mobile homes are located on individual lots outside a mobile home park. There is one mobile home park in the study area, Arrowhead Acres, south of SH 94 on Curtis Road.

There are only a few commercial and industrial uses within the study area. These are concentrated primarily along SH 94 in Sub-Areas 1 and 2. Uses include junkyards, salvage yards, firearms sales, liquor stores, a motocross track, a sanitary landfill, and abandoned coal mines. The junk and salvage yards are legal nonconforming uses.

Subdivisions

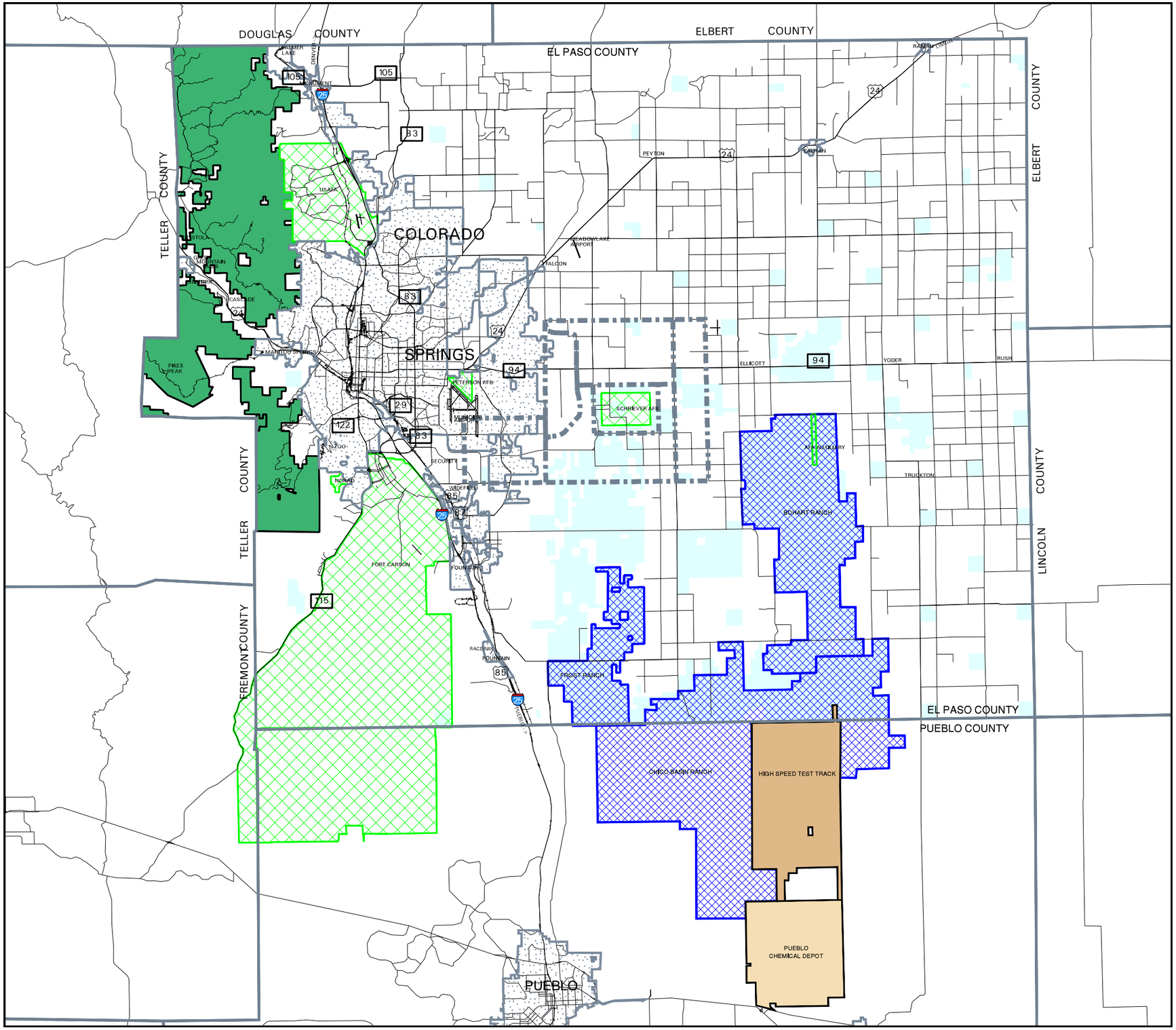
Table 3.7 lists the subdivisions in the Planning Area. Map 3.2 (page 44) shows subdivision locations. Sub-Area 4 is the most populated of any sub-area. It contains the Colorado Centre, Morning Sun, Cottonwood Meadows, and Mustang Meadows developments. Sub-Area 3 is sparsely developed with Antelope Park Ranchettes as the only subdivision.

Photo 3.1 - Viewpoint Estates Subdivision

Table 3.7 Subdivisions

Name	Sub-Area	Use	Zoning District	Acreage	Average Lot Size	Number of Lots	Vacant Lots	Percentage Built Out
Antelope Park Ranchettes	3	Single Family	RR3	225	5.1	44	0	100%
Burns	2	Single Family	RR3	5	4.8	1	0	100%
Centennial Ridge	2	Single Family	RR3	827	39.4	21	12	43%
Clouse	6	Federal Government	RR3	19	6.4	3	0	100%
Colorado Centre	4	Single Family	PUD/R2	88	0.2	509	6	99%
Colorado Centre Foreign Trade Zone & Business	4	Grazing/Vacant/Industrial/Commercial	PID/City	122	24.4	5	4	20%
Colorado Springs Airport	4	City	City	969	322.9	3	0	100%
Colorado Springs Airport & Industrial	4	City	City	950	237.5	4	0	100%
Corral Heights	1	Single Family	RR3	7	7.1	1	0	100%
Corral Ranches	2	Single Family	A1	319	5.1	62	12	81%
Cottonwood Draw	2	Single Family	RR3	19	9.6	2	0	100%
Cottonwood Meadows	4	Single Family	PUD	31	0.4	84	48	43%
Crimmins	2	Single Family	RR3	10	4.8	2	0	100%
Curtis Estates	2	Single Family/Mobile Home	A1	191	5.5	35	8	77%
Edwards	5	Single Family/Grazing	RR3	90	14.9	6	1	83%
Engleby Moors	2	Single Family	RR3	219	5.1	43	17	60%
Fergueson Towers	1	Single Family Telecommunication Towers	RR3	37	18.5	2	1	50%
Hensley	2	Single Family	A1	10	4.9	2	0	100%
Kaycee	2	Single Family	A1	20	9.8	2	0	100%
Morning Sun	4	Single Family	R2	45	0.2	218	4	98%
Mulvey	2	Single Family	RR3	6	5.8	1	0	100%
Mustang Meadows	4	Single Family/Mobile Home	RR3	267	5.0	53	9	83%
Park Acres	6	State/Federal Government	RR3	422	9.8	43	30	30%
Rolling Hills Ranch Estates	2	Single Family/Mobile Home	RR3	240	12.7	19	7	63%
Spriggs	2	Grazing	A1	74	37.1	2	1	50%
Sunrise Ranchettes	2, 6	Single Family/Grazing	RR3	177	22.2	8	3	63%
Sunshine Acres	2	Single Family	RR3	37	9.3	4	2	50%
Thanner	2	Single Family	A1	19	9.7	2	1	50%
Thompson	2	Single Family	RR3	5	4.8	1	0	100%
Toy Ranches	2	Single Family	RR3	146	6.6	22	5	77%
Viewpoint Estates	3	Single Family/Mobile Home	RR2	205	2.9	72	35	51%
Yvonne	2	Single Family	RR3	39	9.7	4	2	50%
Total				**5,840**		**1,280**	**208**	**84%**

Source: El Paso County Planning Department (April 2003)



Map 3.1
Regional Land Uses

Highway 94 Comprehensive Plan
El Paso County, Colorado

LEGEND

- Military Installations
- Stewardship Trust Ranches
- State Lands (El Paso County Only)
- Pueblo Chemical Depot
- CDOT High Speed Test Track
- Forest Lands (El Paso County Only)
- City Limits
- Highway 94 Planning Area
- County Boundaries

SCALE IN MILES

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Prepared by: El Paso County Planning Department
Print Date: December 15, 2003

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Zoning

Zoning is intended to minimize conflicts between incompatible uses and plays a fundamental role in land use. Rezoning may be initiated after a careful and deliberate review of the present and reasonably foreseeable needs of the community. It should only be undertaken in accordance with the fundamental land use policies and development plans of the community as set forth in the County's Master Plan. Overall, rezoning must suit a public purpose and demonstrate that the new zoning will best suit that public purpose. If a rezoning affects only an individual's property and deviates from a basic zoning plan it is considered an illegal spot zoning. Spot zoning can result in the non-uniform application of the zoning law and render the zoning regulation ineffective. Zoning totals for the Planning Area are shown in Table 3.8.

Table 3.8 Planning Area Zoning

Zoning Code	District Title	Acreage	Percentage
RR3	Rural Residential (5 acres)	68,083	82.6%
A1	Agricultural (5 acres)	3,392	4.4%
PID	Planned Industrial	1,092	1.4%
RR2	Rural Residential (2.5 acres)	311	0.4%
R2	Residential (4,500 square feet)	360	0.5%
PUD	Planned Unit Development	271	0.4%
PBC	Planned Business Center	151	0.2%
R4	Planned Residential	33	0.04%
PBP	Planned Business Park	128	0.2%
MHP	Mobile Home Park	86	0.1%
A35	Agricultural	44	0.1%
Colorado Springs	Multiple zones	7,448	9.8 %

Source: El Paso County Planning Department (March 2003)

Sketch Plans

Many of the proposed sketch plans within the Planning Area have not advanced beyond the conceptual phase and are not expected to proceed as currently approved. Because of their earlier Master Plan status, the County must now officially revoke plans that it deems outdated. Table 3.9 lists the sketch plans within the Planning Area. Map 3.2 (page 44) shows the location of each sketch plan.

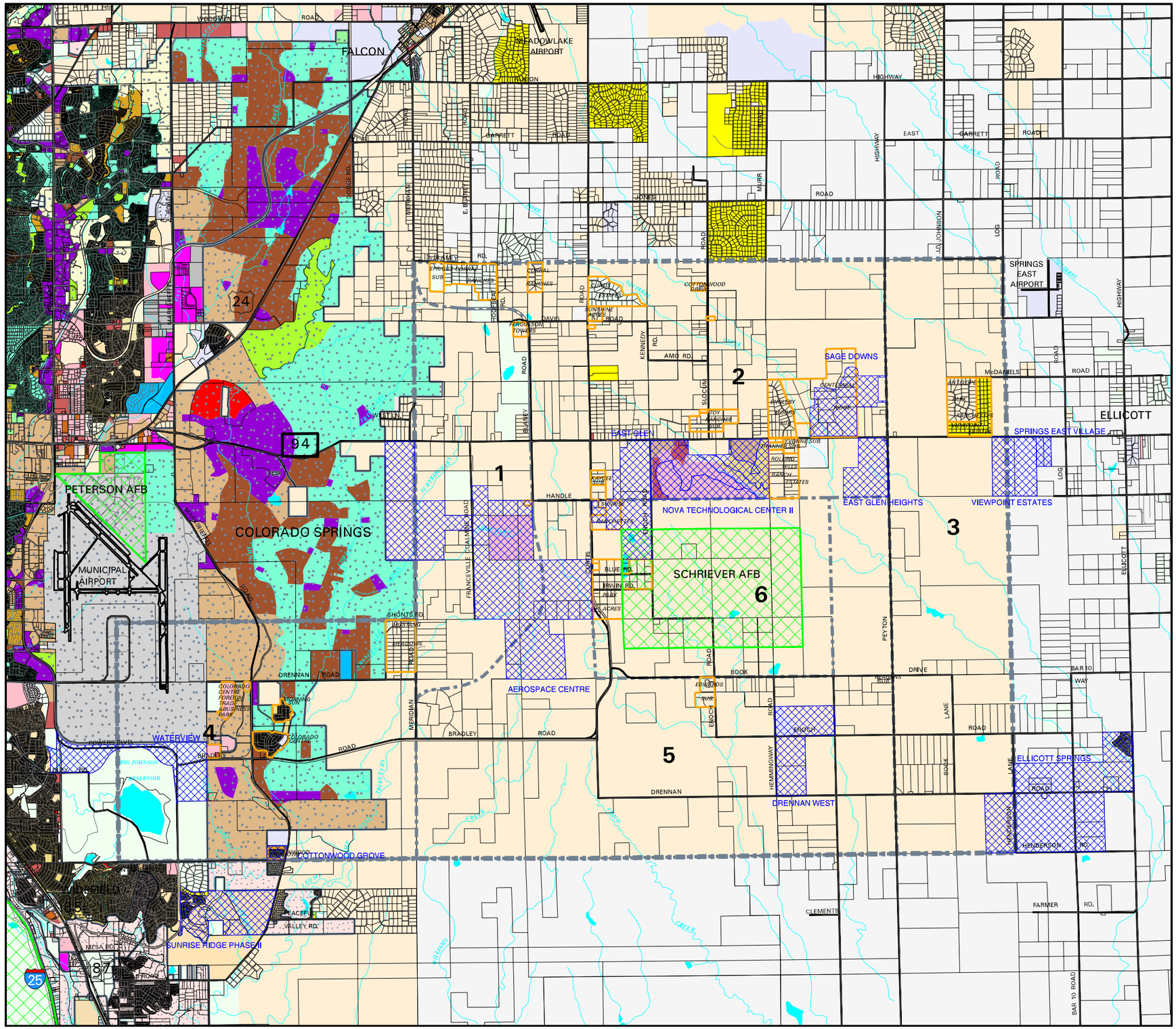
Photo 3.2 - Sunset Village Subdivision

Table 3.9 Sketch Plans

Name	Acreage	Uses	Dwelling Units	Population	Non-Residential Building Area (square feet)	Employees	Status
Aerospace Centre (1984)	3,832	Commercial, office, hotel, research and development, 2 golf courses	0	0	28,056,986	86,101	Sketch plan expired 11-19-1986; deleted from County Master Plan, 12-17-1991; final 360-acre parcel was to be rezoned to RR3 on Jul 1, 1994
Cottonwood Meadows (1998)	108	Residential	93 SF	288	0	0	Active
Davis Ranch (1986)	664	Residential, commercial	2,414 SF	7,483	250,470	626	Approved by PC 10-22-1986
Drennan West (1989)	640	Residential, commercial, industrial, recreational uses	1,305 SF; 115 MF; 1,420 total	4,288	345,103	1,259	Sketch Plan approved 11-20-1989
East Glen (1985)	788	Residential, commercial, research and development, golf course	1,200 SF	3,900	2,167,110	6,991	Sketch plan expired 7-22-1987; deleted from County Master Plan, 4-21-1992
East Glen Heights (1985)	398	Residential, commercial, research and development, school	540 SF; 570 MF; 1,110 total	2,871	1,465,358	4,848	Deleted from County Master Plan, 4-21-1992
Ellicott Springs (1999)	2,006	Residential, office, research and development, cemetery, school	2,605 SF; 2,249 MF; 4,854 total	12,799	878,823	1,653	Approved by BoCC on 4-20-2000
Nova Technological Center II (1983)	1,082	Residential, commercial, office, research and development	1,580 SF	4,898	8,015,040	25,855	Deleted from County Master Plan, 4-21-1992
Sagedowns (1985)	557	Residential, commercial, research and development, school	1,440 SF; 486 MF; 1,926 total	5,484	1,001,880	3,232	Sketch Plan expired 11-18-1987, rezoned to RR3 on 3-11-1993
State Lands Project (1986)	16,000	Residential, commercial, industrial	Approximately 21,000 total	60,000	40,000,000	100,000	Prepared by State Land Board, never approved
Viewpoint Estates (2000)	479	Residential, commercial	774 SF	2,399	136,125	681	Approved by BoCC on 8-31-2000
Waterview1 (2001)	800	Residential, commercial, industrial	1,922 SF; 665 MF; 2,587 total	7,355	2,428,470	4,047	Approved by BoCC 5-10-2001; lies within noise contours for Colorado Springs Airport
Total	**27,354**		**38,958**	**111,765**	**84,745,365**	**235,293**	

1. 83 percent of Aerospace Centre lies within the Planning Area.
2. 16 percent of Ellicott Springs lies within the Planning Area.
3. 84 percent of the State Land Project lies within the Planning Area.
4. 33 percent of Viewpoint Estates lies within the Planning Area.
5. 60 percent of Waterview lies within the Planning Area.

Source: El Paso County Planning Department (April 2002)



Map 3.2
Zoning, Sketch Plans, & Subdivisions

Highway 94 Comprehensive Plan
El Paso County, Colorado

LEGEND

COUNTY ZONING

- A1 Agricultural
- A35 Agricultural 35 Acres
- MHP Mobile Home Park
- PBP Planned Business Park
- PID Planned Industrial
- PUD Planned Unit Development
- R1 Residential (6,000 sq.ft.SF)
- R2 Residential (4,500 sq.ft.SF 7,000 sq.ft.DUP)
- R3 Residential (5,000 sq.ft.MF)
- RR2 Rural Residential 2 1/2 acres
- RR3 Rural Residential 5 acres

Source: El Paso County Planning

COLORADO SPRINGS ZONING (GENERALIZED)

- Agricultural
- Airport Planned Development
- Commercial/Office
- Industrial
- Public Facilities
- Public Park
- Planned Unit Development
- Single Family Residential
- Multi Family Residential
- Special Use

Source: City of Colorado Springs

- Sketch Plans
- City of Colorado Springs
- City of Fountain
- Military Installations
- Subdivisions
- Sub Area Boundaries
- Planning Boundary

SCALE IN MILES

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Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

Sketch Plan Rezonings

Due to a blanket rezoning in 1983 to the RR-3 (Rural Residential) District, the majority of the Planning Area remains RR-3. In the intervening years several rezonings occurred for various sketch plans. While most have reverted back to the RR-3 designation owing to a lack of project activity, some sketch plan rezonings remain. The largest collection of remaining sketch plan rezonings is associated with the Nova Technological Center II (Nova) Sketch Plan. The Nova rezonings include the following:

Table 3.10 Nova Technological Center II Zoning

Zoning Code	Title	Acreage	Percentage
PID	Planned Industrial	572	50%
PBP	Planned Business Park	118	10%
PBC	Planned Business Center	150	13%
R2	Residential (4,500 square feet)	241	21%
RR3	Rural Residential (5 acres)	72	6%

Source: El Paso County Planning Department

The largest and most intense sketch plan of the mid-1980s was the Aerospace Centre Sketch Plan located in Sub-Areas 1 and 5. The sketch plan covered 3,832 acres and encompassed business, research and development, and commercial uses. It was proposed to include four phases and a 30-year buildout. The project has since reverted or been conveyed to multiple owners. One 360-acre parcel remains zoned as PID. Based on the lack of activity associated with the parcel and an agreement with the County in 1993, the PID zoning was to revert to its original zoning in 1994. The zoning as it stands is considered a spot zoning and is not in conformance with the Highway 94 Plan Update.

Also in Sub-Area 5 is the Drennan West Sketch Plan. It has an 83-acre parcel zoned R4, an obsolete Planned Development District.

Another sketch plan is Waterview, first proposed by Cygnet Land in 2000. It is north of Big Johnson Reservoir and south of Powers Boulevard. The proposal covers 800 acres and contains residential, commercial, and industrial development. Originally the project contained 1,444 acres. Approximately 646 acres adjacent to the Big Johnson Reservoir were sold to the City of Colorado Springs in 2000 as the Blue Stem Prairie Open Space.

The nearby Fountain Valley School, the Widefield School District, and the Colorado Springs Airport, among others, oppose the Waterview development. Although the developer offered a school site to the Widefield School District, the District does not support the construction of a school within the development based on aircraft safety issues, additional construction costs, and airport noise incompatible with school sites.

Overall, sketch plans have the potential to alter the character of an area. In the case of Waterview, with no school in the area, children would not be guaranteed a consistent school attendance area. School boundaries could change on a yearly basis leading to disruption for affected students, classmates, and teachers. Frequent moves from school to school are cited by the Colorado Board of Education as a risk factor for students. Children in the development would also be bused to other areas adding substantial operating costs to the Widefield School District, moneys unavailable for education.

In terms of airport noise, noise from these operations can disrupt student learning and have psychological and physiological effects. Special construction methods and noise mitigation would be necessary for any school in the development. The additional cost to mitigate airport noise would range between $500,000 and $600,000 per school, moneys that would be taken from other construction projects. While interior noise can be mitigated to some degree, albeit at considerable cost, nothing can be done for the outside environment, a critical area for any school.

Proximity to an airport also raises safety concerns. On March 3, 1991, a Boeing 737 airliner crashed almost four miles short of the west runway in Widefield Community Park causing the deaths of all 25 people aboard. At the time of impact, the plane was traveling approximately 250 miles per hour.

Photo 3.3 - Widefield Community Park Memorial

Photo 3.4 - Widefield Community Park Memorial

The Waterview project demonstrates the profound effect of a single project, including the costs, both monetary and otherwise, borne by the community.

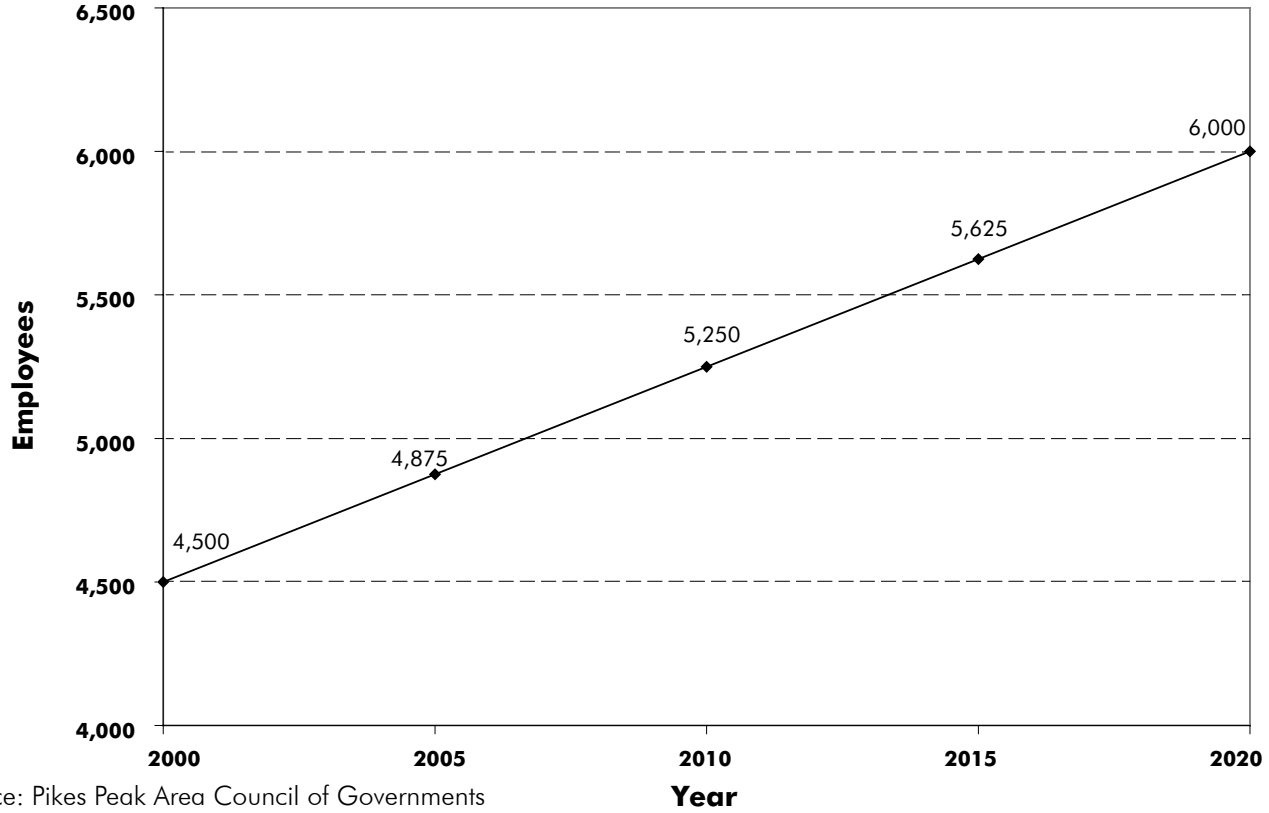
While some of the sketch plans are no longer part of the County's Master Plan, a number are technically still in effect. If built as proposed, these sketch plans would add 111,000 residents, 84.7 million square feet of office space, and 235,000 employees to the area.

3.4 EMPLOYMENT CHARACTERISTICS

Schriever Air Force Base

Although expansion of Base operations and increases in Base personnel are dependent on yearly Department of Defense (DoD) appropriations, it appears that Schriever AFB will continue to grow steadily to about 6,000 personnel by 2020. The possibility also exists for future expansions to 10,000 personnel after 2020. Provided that significant land use conflicts are precluded and encroachments issues do not become problematic, Schriever should be relatively safe from future base closures given the unique nature of its mission. Figure 3.5 depicts employment growth for Schriever AFB.

Figure 3.5 Schriever AFB Employment Forecast



Source: Pikes Peak Area Council of Governments

The PPACG estimates a $357 million annual economic impact from the Base, although most of the economic impact accrues to areas outside the Planning Area. The total impact is the sum of annual payroll, expenses, and indirect payroll[3]. The Base has an annual payroll of more than $112 million and total annual expenditures of more than $183 million. Estimated indirect payroll created for the local area by the Base is estimated at more than $62 million (GCSEDC, 32-35).

General Employment

The Planning Area has a total of 11 parcels coded by the Assessor as commercial encompassing 692 acres. Significant employers in these areas include the Colorado Springs Landfill, Colorado Gold Chips, and the US Olympic Committee. Other employers include a number of small commercial, industrial, and agricultural businesses, along with several home occupations.

Photo 3.5 - Colorado Gold Chips

It is noteworthy that, because of Schriever AFB, the Planning Area has substantially lower population than employment. Ordinarily, the ratio of total population to total employment is on the order of 2:1. Because of the Base, that ratio is reversed. Table 3.11 lists the number of Planning Area employees.

[3] Indirect payroll refers to secondary jobs created due to the infusion of the Base payroll and installation expenditures into the local economy.

Table 3.11 Employment Estimates

Employer	Estimated Employment
Schriever AFB	4,500
Colorado Springs Landfill	10
Colorado Gold Chips	65
US Olympic Committee	250
Other	100
Total	**4,925**

Sources: Schriever AFB, Waste Management, USOC, Colorado Gold Chips, El Paso County Planning Department, and PPACG

Recently, the PPACG completed socioeconomic zonal forecasts for El Paso County for the years 2000 through 2025. Although the forecasts predict employment and housing growth in the area, the growth is not as pronounced as Colorado Springs, largely because of the large development capacity within the city limits of Colorado Springs and the increased costs to provide central services in the Planning Area.

3.5 AGRICULTURE

Historically, agriculture dominated the Planning Area. Cattle and sheep ranching were the primary agricultural operations with scattered dryland farming of wheat and alfalfa. Abundant and nutritive native grasslands supported ranching operations. By some estimates, without supplemental feed, approximately 30 to 35 acres are needed within the Planning Area to graze one head of cattle and approximately 300 cattle are needed for profitable ranching operations. In total, without significant supplemental feed, approximately 10,000 acres are needed to run a ranch.

Photo 3.6 - Ranch Lands

Photo 3.7 - Horse on Rural Residential Lot

Several properties in and near the Planning Area are also used to raise horses. As with cattle, supplemental feed is needed for horses on five to 35-acre lots.

Agriculture is still a viable economic force in the Planning Area today, although residential development is diminishing its influence, particularly in the northern portions of the Planning Area. In several cases, agricultural water rights have been sold for residential development and lands taken out of agricultural production. In other cases, agricultural areas have become surrounded by residential development. Residences bring with them blowing trash, loose dogs, vandalism, and trespass problems. Such external problems diminish the viability of agricultural regions. For cattle operations, unbroken areas allow ranchers to rotate pastures and keep cattle free of harassment. Particularly in the northern portion of the Planning Area near SH 94, large agricultural operations have been divided and operations shifted to other areas or states. Agriculture remains a more significant influence in the southern portion of the Planning Area, particularly near State Lands. Overall, even with a more diversified economy, agriculture remains a key component of the County's economy.

REFERENCES

The Greater Colorado Springs Economic Development Corporation (GCSEDC). "El Paso County Military Installation Profiles: June 2002 for Fiscal Year 2001." GCSEDC, Colorado Springs, Colorado, 2002.

Chapter 4 – Resource Management

4.1 Introduction

4.2 Topography

4.3 Climate

4.4 Regional Geology

4.5 Mineral Resources
- Mineral Deposits
- Mining Operations
- Mineral Rights

4.6 Geologic Constraints

4.7 Soils

4.8 Surface Water Resources
- Floods
- Floodplain Management
- Stormwater Management
- Drainage and Bridge Fees
- Prudent Line Setbacks
- Streamside Overlay

4.9 Flora and Fauna
- Overview
- Planning Efforts
  - Colorado Division of Wildlife
  - County Master Plan
  - Colorado Natural Heritage Program
  - The Chico Basin

4.10 Cultural Resources
- Paleontological
- Archeological
- Historical

4.11 Visual Resources
- Features
- Influences

4.12 Parks, Trails, and Open Space
- City of Colorado Springs
- El Paso County Parks and Leisure Services Department
- Schriever Air Force Base
- Widefield School District
- Colorado Centre Metropolitan District
- Ellicott Metropolitan District

- **References**

4.1 INTRODUCTION

Although only 20 miles or less from the center of Colorado Springs and other urbanized areas, the open nature of the Planning Area stands in stark contrast to the City. The Planning Area features a wealth of flora, fauna, and paleontological resources not present in the City. Urban development has not yet occurred in most parts of the area, and it retains much of its natural character. The area therefore has the enviable opportunity to develop with due consideration of the natural features of the area and the natural forces that have shaped the land.

Natural forces have a profound impact on the area. Disregard for natural processes can jeopardize residents' health, safety, and welfare. Ignoring natural forces can lead to depleted or irretrievable resources, more frequent and more destructive floods, more pervasive droughts, increased energy demands, higher construction and maintenance costs, and a characterless and disconnected urban form.

Rather than a superficial embellishment, natural forces are an essential part of the built environment. The suburbs and the countryside can be seen as a single, evolving system within the natural environment. Development alters natural systems and natural systems, conversely, shape developments. Optimally, natural processes are recognized and respected and the social value of nature and its processes realized.

Photo 4.1 - Area Landscape

The majority of residents and landowners cited rural character as their favorite aspect of the Planning Area. As more growth occurs in the area, rural character is, in many ways, at risk. The Highway 94 Plan seeks not to prevent change in the area, but rather to preserve the benefits of the area to future populations. The Plan recognizes that the benefits of the area can be made available and enhanced by people and that the area should have a character and an identity distinct from other parts of the County.

Within this context, respect for the natural processes and the area's features are of paramount concern. Environmental factors help determine the development suitability of the land and can be used to adjust the location, type, and design of development. Once the characteristics of the landscape are inventoried, data can be translated into explicit policy statements, as listed in Chapter 8.

Photo 4.2 - Horse on Rural Residential Lot

4.2 TOPOGRAPHY

With alluvial high plains and occasional rock outcroppings, the Planning Area topography is characteristic of the eastern plains of El Paso County. At first glance the area appears to have little topographic variation. A closer examination reveals a diverse combination of landforms with slopes ranging from near zero in the east to 100 percent on Corral Bluffs. Elevation varies from approximately 6,680 feet above mean sea level in the northwest corner of the Planning Area to 5,720 feet in the southwest corner for a maximum relief of

approximately 960 feet. The average elevation is approximately 6,200 feet. Map 4.1 (page 51) depicts topographic lines and drainage patterns.

Photo 4.3 - Corral Bluffs and Landfill Edge

Topography and natural drainage provide both opportunities and constraints to future land development. Topographical constraints to development include steep and unstable slopes. South facing slopes offer the potential for effective wind breaks or the utilization of solar energy. Natural drainage ways may present flooding problems, but can also create unique siting and open space opportunities.

4.3 CLIMATE

Residents of the Planning Area are familiar with seasonal changes and the wide range of climatic conditions. Mean annual relative humidity in eastern El Paso County is between 50 to 55 percent. The mean annual evaporation rate of 60 to 70 inches exceeds the mean annual precipitation of 12 to 14 inches, resulting in a semi-arid climate. Temperatures range from -30° to 105° Fahrenheit. There is an average of over 300 sunny days a year. Although the majority of the Planning Area receives less than 40 inches of annual snowfall, high winds and a lack of windbreaks often combine to produce severe winter storms.

Climate influences land use and development to the extent that site selection, siting, orientation, design, and materials should be carefully planned to avoid unnecessary economic and environmental problems. Both weather and geologic forces help control soil formation, erosion, plant distribution, plant growth, and the amount and quality of water in the ecosystem.

4.4 REGIONAL GEOLOGY

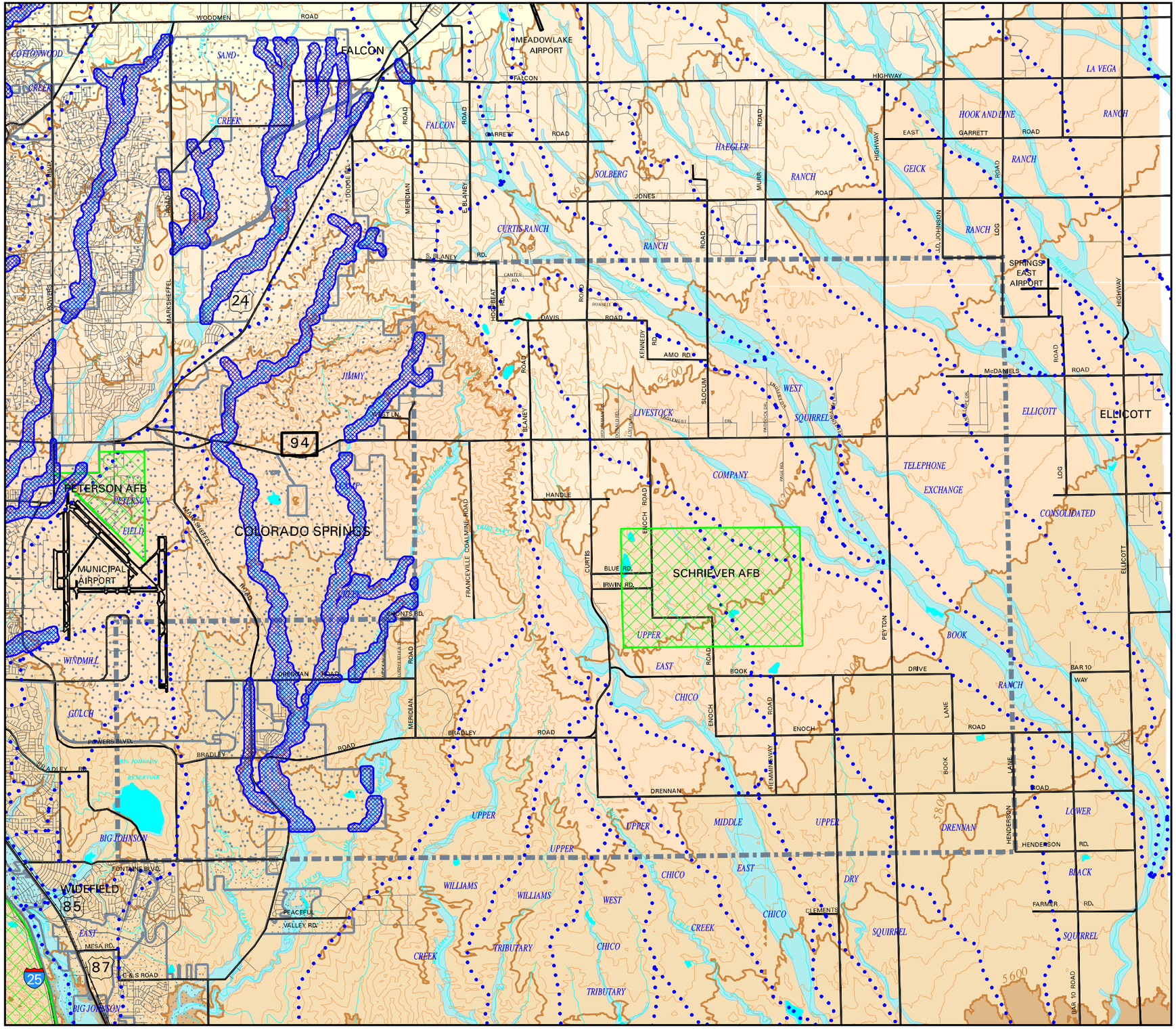
The regional geology of the area is dominated by the contact between the Front Range and the Great Plains Physiographic Provinces. The Front Range is a major upthrust mountain belt featuring some of the oldest rocks on earth. While the Front Range was being upthrust and eroded, several thousand feet of material were deposited into the Denver Basin. Some of the Planning Area's sand and gravel deposits are the result of more recent glaciation. Glaciation resulted in both water (alluvial) and wind (eolian) deposition of sand and gravels.

Photo 4.4 - Corral Bluffs

Much of the Planning Area is located within the southern edge of the Denver Basin. The consolidated and unconsolidated sediments of the Denver Basin are approximately 30 million years old and part of the Middle Tertiary age and later periods. Pierre Shale underlies the formation. The Pierre Shale is a fossil-bearing Cretaceous rock laid down as the muddy bottom of a sea that stretched from the Arctic to the Gulf of Mexico 75 million years ago.

Map 4.1
Water Management

Highway 94 Comprehensive Plan
El Paso County, Colorado



LEGEND

Ground Elevation (ft)

- 6800-7200
- 6400-6800
- 6000-6400
- 5600-6000
- 5200-5600
- No Data

- Floodplain
- City of Colorado Springs
- City of Fountain
- 250′ Streamside Overlay Buffer
- Military Installations
- Drainage Basins
- 40 Foot Contour Lines
- 200 Foot Contour Lines
- Planning Boundary

SCALE IN MILES

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Print Date: December 10, 2003

Rock outcroppings of the Denver Basin form the western face of Corral Bluffs, unlike landforms typical of the High Plains: rounded with low reliefs. The Corral Bluffs thin toward the south. As described in Chapter 5, the sandstone layers of the Denver Basin provide an important source of bedrock groundwater.

Throughout most of the Planning Area, a thick cover of alluvium obscures the bedrock. The alluvium is of Quaternary age, 3 million years ago and later (Chronic, 58). Within certain stream channels, these alluvial deposits provide an important source of groundwater.

Photo 4.5 - Rock Outcroppings near Meridian Road

4.5 MINERAL RESOURCES

Mineral Deposits

Colorado House Bill 1529, the Preservation of Commercial Mineral Deposits Act of 1973, directed all counties with a 1970 population of 65,000 inhabitants or more to prepare a plan for the preservation of its commercial mineral deposits. In response, the Board of County Commissioners adopted the Master Plan for the Extraction of Commercial Mineral Deposits, El Paso County, in 1975. The document was amended in 1996 following a 1991 aggregate resources study commissioned by the County.

There are several identified commercial mineral resources within the Planning Area consisting of strippable coal and various grades of sand and fine aggregates. The coal is in a seam in the southern part of the Planning Area. The seam is part of the Denver Basin and ranges up to about ten feet in thickness. Up to 200 feet of overburden covers the coal seam. Many of the beds were mined during the early 1900s. Extraction of the remaining coal is not considered economically feasible.

Commercial sand and fine aggregate resources are located throughout most of the Planning Area and consist primarily of sands of varying qualities and gravels of lower quality. Most aggregate deposits fall into 3 general categories:

- Upland deposits - sands and gravels with silt and clay deposited on benches or other topographic high areas by remnant streams.
- Eolian deposits - wind-blown sands.
- Floodplain deposits - generally well sorted sands and gravels deposited by water along present stream corridors.

As a general rule, the gravel deposits in the Planning Area do not contain materials suitable for high quality construction applications, such as the production of concrete or asphalt. Neither are they appropriate as materials spread on roads during snow and ice conditions. High quality gravels are better sorted and have angular fractures that come from crushed rock. Any future gravel mining in the Planning Area will likely be limited to pits that provide road base and related lower-quality materials.

Although sand in the Planning Area is of high quality, permitted sand mines outside the Planning Area provide ample supplies for the County. It is unlikely that supplies from the Planning Area will be needed to meet regional needs.

In addition to generally lower quality or more common aggregate deposits in the original Planning Area, the Colorado Centre area has some Valley Fill deposits. These are located along Jimmy Camp Creek. Mining these areas is tempered by their nature as riparian corridors with a diversity of wildlife and high quality habitat.

Mining Operations

Currently there are only two active mining operations in or near the Planning Area. The first is a large gravel extraction operation, known as the Solberg Pit, north of the Planning Area. It is used extensively by the County for maintaining gravel roads in the east-central part of the County. The other active gravel pit is a small operation, known as the Hale Pit, south of Schriever Air Force Base (AFB). Both pits are shown on Map 4.2 (page 54). Six smaller gravel, sand, or clay pits in the Planning Area have been closed and reclaimed.

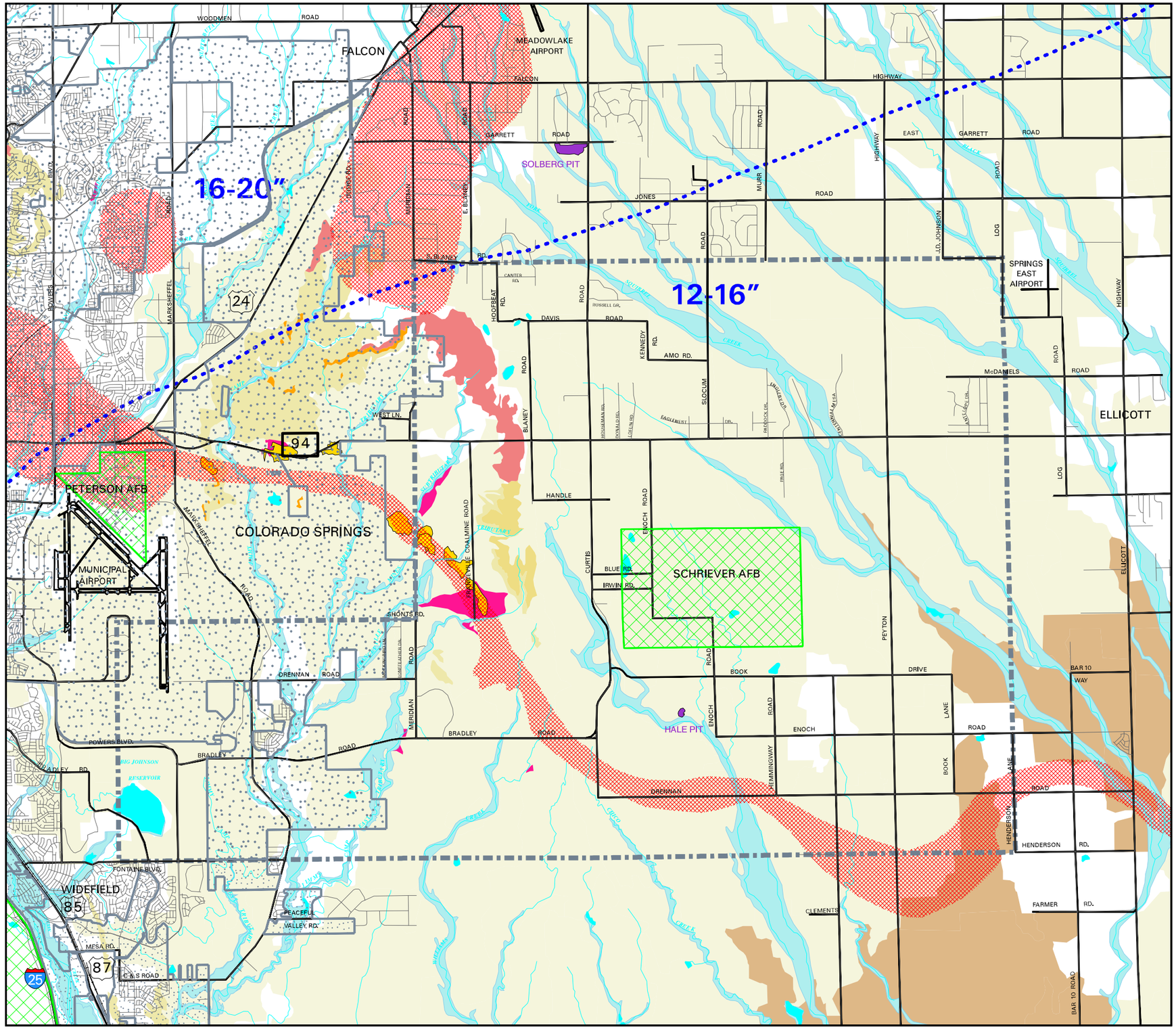
The abandoned Franceville Coal Mine is located in the western part of the Planning Area along Franceville Coal Mine Road. It was opened in 1882 and was the first major mining operation in the Colorado Springs area. The coal was used largely for domestic purposes, but significant amounts were used by the railroads, the Colorado Springs Electric Company, and by the gold reduction mills in Colorado City and Cripple Creek. The Franceville Mine ceased operations following the floods of the summer of 1965. Surface subsidence is a significant hazard in various areas as a result of the abandoned mines. Mining hazards are depicted on Map 4.2.

Mineral Rights

In Colorado, surface estates and mineral estates are separate and distinct entities in real property and may be severed from the other. Because of the possible separation of rights, Title 24 of Colorado Revised Statutes states "[i]t is the intent of the general assembly that this article provide a streamlined procedure for providing notice to owners of mineral interests concerning impending surface development" (CRS 24-65.5-101). Mineral rights include interests in oil, gas, minerals, or geothermal energy. Applicants for most developments must therefore research available records and provide advance notice to any owners of severed rights for the affected properties. If severed rights are present, possible solutions include extraction of sand and gravel as a part of site preparation. Rezoning plans can also include resource extraction as a special use, so as not to preclude the use. Although the scope of severed mineral rights in El Paso County may not be as expansive as some neighboring counties, such as Teller, prudence dictates a thorough search for severed rights before development actions commence.

4.6 GEOLOGIC CONSTRAINTS

Charles S. Robinson and Associates conducted an environmental and engineering investigation of surficial deposits in portions of El Paso County in 1977. The coverage area includes some of the Planning Area. The investigation identified potential geologic hazards and recommended the geologic and soils studies necessary for land use planning. The El Paso County Land Development Code requires such soils and geology reports as part of preliminary plan submittal.



Map 4.2
Environmental Influences

Highway 94 Comprehensive Plan
El Paso County, Colorado

LEGEND

GEOHAZARDS

- Potentially Unstable Colluvium And Bedrock On Moderate To Steep Slopes
- Stable Colluvium And Bedrock On Steep Slopes
- Rockfall And Potential Rockfall Hazard And Talus Deposits
- Unstable Or Potentially Unstable Colluvium Or Bedrock On Steep Slopes
- Debris Fans

SELECTED VEGETATION TYPES

- Grass Prairie
- Sand Dune Complex

MINED REGIONS

- Undermined Regions
- Strip Mined Regions
- Aggregate Pits

MINERALS

- Coal Deposits
- Floodplain
- City of Colorado Springs
- City of Fountain
- Military Installations
- Annual Precipitation Range Boundary
- Planning Boundary

SCALE IN MILES

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Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

The identified geologic hazards within the Planning Area include rockfalls, flood hazard areas, unstable and steep slopes, mining subsidence, and debris fans. These hazards are shown on Map 4.2 along with important natural resources and environmental hazards.

4.7 SOILS

In many parts of the Planning Area, soils are a major determinant of land use suitability. There are 49 different soil types within the Planning Area. Some soil characteristics, such as high shrink-swell potential, can necessitate costly construction practices, while other soil characteristics, such as high erosion or blowing potential, can lead to environmental problems. Other soil types are associated with high water tables, particularly near the northern border of the Planning Area.

The Natural Resources Conservation Service developed a rating system for various land use activities within each soil area. The ratings are as follows:

- Slight limitations - soil properties are suitable for the indicated activity. Limitations are easily overcome.
- Moderate limitations - soil properties and site features are unsuitable for the indicated activity. Limitations can be overcome with good management and careful design.
- Severe limitations - limitations are so severe that the indicated activity is questionable. Even special design practices may not overcome limitations.

These ratings are generalizations meant to screen areas for potential problems and to prevent costly future damage. The County's Subdivision Regulations require more detailed site specific soil studies as part of preliminary plan review.

The main limitation of the Soil Survey is that it identifies broad soil categories only to a depth of five feet. More specific geological studies are needed for greater depths.

4.8 SURFACE WATER RESOURCES

With the exception of the Corral Bluffs area, the Planning Area features gradual elevation changes and relatively broad streambeds and floodplains. All surface streams in the Planning Area are considered ephemeral, or intermittent. They flow primarily after heavy thunderstorms or during extraordinarily wet years. With intense rainfalls, which are common in the Planning Area, and without barriers such as vegetation or rough ground, storm flows mount quickly and reach stream channels in minutes leading to rapid rises in discharge rates. The fastest response times are for urbanized areas where storm sewers route water directly into stream channels. In areas where floodwaters are artificially constricted by obstructions, floodwaters rise even higher (Marsh, 185-187).

Surface waters within the Planning Area are shown on Map 4.1 and include Chico Creek, a west fork of Black Squirrel Creek, Williams Creek, and various tributaries of Jimmy Camp Creek. Natural drainage ways traverse the Area in a general north-south direction. The headwaters of Jimmy Camp Creek originate at the base of Corral Bluffs and nearby canyons to the west. The main fork of Jimmy Camp Creek is the primary surface water feature within the Colorado Centre development. Williams Creek and the east forks of Jimmy Camp Creek flow southwesterly and ultimately join Fountain Creek above the Arkansas River.

The surface area east of Corral Bluffs is drained by Chico and Black Squirrel Creeks, which flow in a southeasterly direction. These creeks eventually drain directly into the Arkansas River, although in most years there is no surface flow. Virtually all flow in these creeks is lost to evapotranspiration and infiltration.

The only significant water body in the Planning Area is the 280-acre Big Johnson Reservoir near the western boundary of the Colorado Centre Sub-Area. The facility is used primarily to store irrigation water and is owned by the Fountain Mutual Irrigation Company. Other area water bodies are limited to livestock ponds. Surface water is generally not available for domestic use.

Floods

Most of the floods in El Paso County occur from May through August. Although the available flood history for El Paso County is concerned almost exclusively with flooding on Monument and Fountain Creeks, simultaneous flooding probably occurred on smaller streams and drainage ways throughout most of the County. Table 4.1 lists some of the most significant flooding events in County history that almost certainly impacted the Planning Area.

Table 4.1
El Paso County Flood Events

Date	Documented Location	Event
June 10, 1864	Colorado Springs	Torrential rains, 3" hail, extensive flooding
May 20, 1878	El Paso County	Cloudburst, hail, heavy losses
July 26, 1885	Templeton Gap Basin	Localized estimate of 16" of rain, apparently the most severe storm in the basin
May 30, 1894	Colorado City	Fountain Creek flooding, bridge and house washed away
June 2-7, 1921	Shooks Run, Sand and Fountain Creeks	Worst storm in 25 years, extensive regional flooding
May 27, 1922	Templeton Gap Basin, Eastern Colorado Springs	6-inch rainfall recorded, extensive damage in Colorado Springs, eastern neighborhoods inundated
July 27-30, 1932	El Paso County	Flooding in most of northern Colorado Springs, Black Forest, and along all of Fountain Creek, maximum known flood in Templeton Gap
May 31, 1935	Monument Valley, Eastern Colorado Springs	Greatest known flood on Monument Creek, which reached flood stage in less than one hour, personal property damage of $1.2 million throughout city ($16.1 million in 2003 dollars), flooding killed 18
June, 1965	El Paso County	Flood levels far in excess of 500-year intervals, exceeded all known floods in County history, 15 days and over 14" of rain
August 14, 1977	Colorado Springs	2.78" of rain in one hour
August 13, 1989	Northern Colorado Springs	Street flooding
May 30, 1990	Colorado Springs	3" of rain in 3 hours
June 17, 1993	Colorado Springs	4" of rain, flash flooding, Fountain Creek overflowing
April-May, 1995	El Paso County	Black Squirrel Creek inundated, railroad track and bed washed away, 40 roads damaged, 3" hail, 3" of rain, 24 roads closed due to heavy May rains
July 30, 1998	Security-Widefield	3" to 4" of rain
May 1, 1999	El Paso County and 11 other counties	Extensive flooding, disaster declared

Sources: FEMA, Emergency Management

It is noteworthy that the floods of 1935 and 1965 both exceeded 500-year flood magnitudes.

Floodplain Management

Floodplains are delineated as a means to protect life and property from the effects of periodic flooding. Floodplain boundaries may have little to do with physical appearances. Floodplains within the Planning Area are particularly deceptive. Given the prevalence and subtlety of floodplains throughout the Planning Area, encroachment into floodplains is a serious concern. Encroachment into floodplains by construction or fill leads to a number of problems, including:

- Reductions in flood-carrying capacity
- Increased flood heights and velocities
- Increased flood hazards for areas beyond the encroachment

Photo 4.6 - Floodplain along Slocum Road

Structures within floodplains, which may otherwise appear benign, may exacerbate flood problems. Chain-link fences, for example, can collect debris and act as dams. Impounded waters then rise above flood levels and inundate previously flood-free areas. Once the force of the floodwaters washes away the obstacle, a sudden rush of water is released, further inundating downstream properties.

Culverts have been used to channel floodwaters under some obstacle, such as a bridge. Generally culverts are inadequate to handle periodic floodflows in the Planning Area. Floodwaters typically wash out culverts, which can be carried downstream causing damage to bridges.

Several creeks within the Planning Area were identified as flood prone areas in the Flood Insurance Study (FIS) by the Federal Emergency Management Agency (FEMA) in 1997. FEMA maps 100-year floodplains and sets regulations for construction and land modification in these designated areas. The Floodplain Administration Office of the Pikes Peak Regional Building Department enforces FEMA regulations and issues floodplain development permits for new construction, alterations to existing structures, and changes to properties within floodplains.

The official floodplain designation is important to land development. Most of the floodplains in the Planning Area are designated as A Zones. Although annotated on FEMA maps, A Zones have not been accurately studied and surveyed. Land in an A Zone is entirely deemed a floodplain without defined elevations and floodways. AE Zones, conversely, are floodplains that have been studied, surveyed, and accurately recorded on FEMA maps. When splitting or subdividing parcels, land in an A Zone must be converted to an AE Zone before final plat approval.

As a final note, although floodplain boundaries are fairly accurate when a floodway is first studied, they become less accurate as land develops and drainage patterns change.

Stormwater Management

Given the frequency of intense storm events in El Paso County, stormwater management is a vital concern for any development. Delineated floodplains play a key role in controlling large amounts of water but represent only one aspect of stormwater management. In addition to floodplains, the Planning Area

features a number of drainage ways, surface streams, and underground streams not associated with floodplains, all of which impact stormwater management. Already, stream bank erosion and undercutting have occurred along some of these drainage ways due to changes in stormwater loading.

Photo 4.7 - Jimmy Camp Creek Floodplain

El Paso County requires that developments maintain historic flow rates from a site. Three basic strategies are available to manage stormflows:

- Store the excess water on site and slowly release it
- Return the excess water to the ground
- Plan the development so that runoff is not increased

The first strategy is the most common and generally involves the use of detention basins. These ponds contain the waters from a storm and release it at a specified rate. To limit degradation of the water feature, detention basins should be built off-channel. While the typical development solution is a detention basin, the Planning Area features several playa lakes, or small pond-like depressions. Playa lakes basically function as natural detention basins to store and absorb storm flows, control surface runoff, and filter contaminants.

The second strategy uses soil infiltration. Stormwaters flow to vegetated areas, shallow depressions, troughs, or pits, where they slowly percolate into the ground. The second strategy is useful for small storms and for managing the initial runoff from a storm, sometimes referred to as the first flush.

The third strategy utilizes prudent site planning. Strict attention is paid to surface materials, avoiding impervious surfaces whenever possible, and to the balance between open spaces and developed land. Clustering is one means to reduce impervious surfaces by grouping buildings and facilities. Some parking lot pavers also feature openings for some limited percolation.

Each of these strategies has implications for water quality. Most stormwater management plans utilize multiple strategies (Marsh, 158-160). Overall, recognition of and deference to the natural forces ensures reduced risk to residents' health, safety, and welfare.

Drainage and Bridge Fees

Throughout the County stormwater management has largely been limited to the traditional engineering approaches involving gutters, pipes, and basins tied to street networks. Particularly in developed areas with large amounts of channelization and impervious surfaces, changes in stormwater loading have increased the frequency and the magnitude of peak flows. Increased flows usually necessitate costly solutions to drainage problems, especially for downstream properties.

Recognizing that impervious surfaces and landform alterations have dramatic impacts on runoff characteristics, the Board of County Commissioners passed a resolution in 1999 establishing drainage and bridge fees. The drainage fee system essentially pro-rates fees on the basis of impervious cover associated with a proposed land use. Impervious surfaces include things such as parking lots, roofs, sidewalks,

driveways, roads, and any other surfaces which prevent water from percolating into the ground. Under the fee system a commercial development with almost 100 percent surface cover would pay nearly the entire fee while a low density residential development would pay a reduced percentage. Table 4.2 lists typical impervious cover percentages.

Table 4.2 Typical Impervious Cover

Type of Development	Percentage of Impervious Cover
Commercial	95%
Industrial	85%
Multi-family	65%
Single-family (0.25-acre lots)	38%
Single-family (0.5-acre lots)	25%
Single-family (2.5-acre lots)	11%
Single-family (5-acre lots)	7%

Source: 1999 El Paso County Drainage Fee Resolution 99-383

Prudent Line Setbacks

Recognizing the dynamic nature of stream channels, the County is pursuing the use of "prudent line setbacks" as an addendum to the County Drainage Criteria Manual to manage stream channels. Although not as detailed as drainage basin planning studies, prudent line setbacks offer low-cost guidance designed to negate the worst of the drainage, flooding, and erosion problems associated with incremental channel-side development. As opposed to a site specific drainage basin planning study, prudent line setbacks are based on general criteria and can be applied throughout the County. The prudent line approach considers the 100-year floodplain boundary, erosion caused by a 100-year storm, and long term erosion over a 30-year period.

Photo 4.8 - ATV in Jimmy Camp Creek Tributary

Currently, parcels may be developed to the edge of the drainage way, with no one taking responsibility for the drainage way. Problems are generally compounded with adjacent urban density developments. The predictable result is an incremental degradation of the channel and significant public outlays to rectify the situation at a later date.

Channels generally migrate over time through incremental erosion or the actions of single storm events posing problems for adjacent development. Typically, channels are lined with erosion resistant materials, such as concrete, to protect adjacent uses. Such hard-lining methods generally destroy the natural aquatic habitat, increase the speed at which floodwaters build, increase flooding depths, preclude recharge of underlying aquifers, exacerbate droughts, reduce water quality, help induce a heat island effect in the area, preclude the use of the drainage way as a recreational amenity, increase downstream flooding and erosion, and carry with them increased construction and maintenance costs. Prudent line setbacks recognize that channels left in a more natural state avoid most of these problems and more effectively manage flood flows, water quality, aquifer recharge, and habitat.

The prudent line approach is recommended for open channel segments located downstream from land having less than or equal to 15 percent impervious surface cover under future conditions and having a main channel that can adequately convey 10-year event flows under future conditions (Draft Prudent Line Addendum to Drainage Criteria Manual, 2). Factors which preclude prudent line setbacks include channel construction upstream of the prudent line reach, an excessive number of stream crossings, improperly designed transitions at road crossings, and on-line detention ponds. For successful prudent line planning, road crossings should generally span an entire floodplain so that sediment does not drop out. In rural basins, the costs of oversized crossings and land acquisition are more than offset by cost savings for channel stabilization. An excessive number of road crossings, approximately more than one per mile, jeopardize the applicability of the prudent line approach. On-line detention, built into a stream channel, causes sedimentation problems.

The prudent line approach allows a stream to function naturally within the constraints of existing infrastructure. It provides for future development by determining a safe distance both horizontally and vertically from the creek. If a channel is encroached upon, the prudent line concept allows selective erosion barriers or countermeasures. Because of potential encroachments, prudent line applications should incorporate a "maintenance line." Maintenance lines are half the distance of the prudent line. If a channel encroaches upon a maintenance line, remedial measures should be considered so that the prudent line is not jeopardized. Remedial measures could include rock riprap, regrading, revegetating, spur dikes, or other channel stability measures. So while the prudent line approach requires less maintenance than typical hard-line approaches, maintenance is not necessarily eliminated.

Streamside Overlay

Currently, County streams are regulated under provisions of the National Flood Insurance Program (NFIP). Under the NFIP, developments typically use fill within the floodplain to raise structures above the floodplain. NFIP requirements generally do not consider the functional, environmental, or visual impacts of fill, or the elimination of the natural floodplain and its associated vegetation. As streams are developed they generally lose their flood carrying capacity, site amenities, significant natural features, wildlife habitat, natural vegetation, and community visual resources. Water quality is also degraded.

While the County has proposed prudent line setbacks as a simplified means to deal with drainage concerns, the City of Colorado Springs has proposed the use of a site-specific streamside overlay to deal with the multiple values associated with a waterway. The overlay considers streams as an amenity, preserves streamside character, and helps to advance greater stream functionality. An overlay integrates drainage, flood control, water quality, water recharge, habitat, and recreation. The City's proposed Streamside Overlay relates directly to surface water features in Sub-Areas 1 and 4 as shown on Map 4.1.

4.9 FLORA AND FAUNA

Overview

Prairie short grasses are the primary vegetation within the Planning Area. These native grasses are ideally suited for the area. The roots of prairie plants hold soil in place during droughts and prairie fires and act as reservoirs for moisture. Dead grasses supply organic matter and replenish the soil. Under certain conditions, plains grasses remain dormant until the seeds have enough water to survive.

Various forbs and shrub cover, such as the prickly pear, yucca, loco, rabbit brush, and sagebrush, may be present in localized areas. There is some scattered coniferous and deciduous vegetation, most prominently along natural drainage ways, around built-up residential uses, and on the slopes of Corral Bluffs. Tree growth is isolated. Riparian corridors and Corral Bluffs contain some natural tree stands. Trees have also been established as windbreaks and plantings around farms and residential developments. Some mid and short grasses of the area are exotic species that have established themselves as a result of over 100 years of cattle grazing.

Photo 4.9 - Southern Corral Bluffs

Photo 4.10 - Drennan Road Residence

Previously, being unaware of the natural processes and the utility of native plants, early settlers plowed the native grasses leaving nothing to protect the thin topsoil. The most dramatic repercussions of these actions occurred during the Dust Bowl Era of the 1930s. The drought was particularly acute from 1931-1934, when many grasses didn't sprout.

Overall, the Planning Area ecosystem has experienced significant changes through the years, according to the Environmental Resources Study of 1974. Droughts, over-grazing, and cultivation of the soil have, in many cases, produced vegetation ineffective in controlling soil erosion. Proper erosion control techniques, such as phased grazing, immediate revegetation of disturbed areas, supplemental feed for horses on parcels less than 35 acres, and proper selection of vegetative cover, can mitigate many of the problems associated with land development.

Compared with much of the County, noxious weeds are not problematic within the Planning Area, primarily due to the lack of moisture. There have been some occurrences of Canada thistle and diffuse knapweed along Enoch Road and on Schriever AFB, but these have been effectively managed by Schriever personnel. Areas around Colorado Centre have had some incidences of Canada thistle, but much of the infestation has occurred on property within the City of Colorado Springs.

Planning Efforts

Colorado Division of Wildlife

Although the majority of the Planning Area exhibits an open character seemingly devoid of wildlife, a diversity of wildlife exists in the area, including the Golden Eagle, prairie dogs, pronghorn, burrowing owls, the swift fox, and the mountain plover. The Colorado Division of Wildlife and the Environmental Resources Study have identified wildlife that may be found within the Planning Area. The list is general and does not include specific species of wildlife. Some of the animals are migratory or seasonal. The study also recognizes that habitat and migration corridors are important for the viability of the species.

Photo 4.11 - Golden Eagle

Table 4.3 Wildlife

Class	Genus
Amphibians & Reptiles	Lizards, snakes, frogs, toads, salamanders
Mammals	Shrews, coyotes, bats, rabbits, chipmunks, squirrels, weasels, badgers, skunks, mice, rats, porcupine, fox, raccoons, deer, antelope
Birds	Eagles, falcons, owls, doves, quail, shrikes, bluebirds, hawks, finches, larks, magpies, towhees, sparrows, wrens, plovers

Source: The Colorado Division of Wildlife and the Environmental Resources Study

County Master Plan

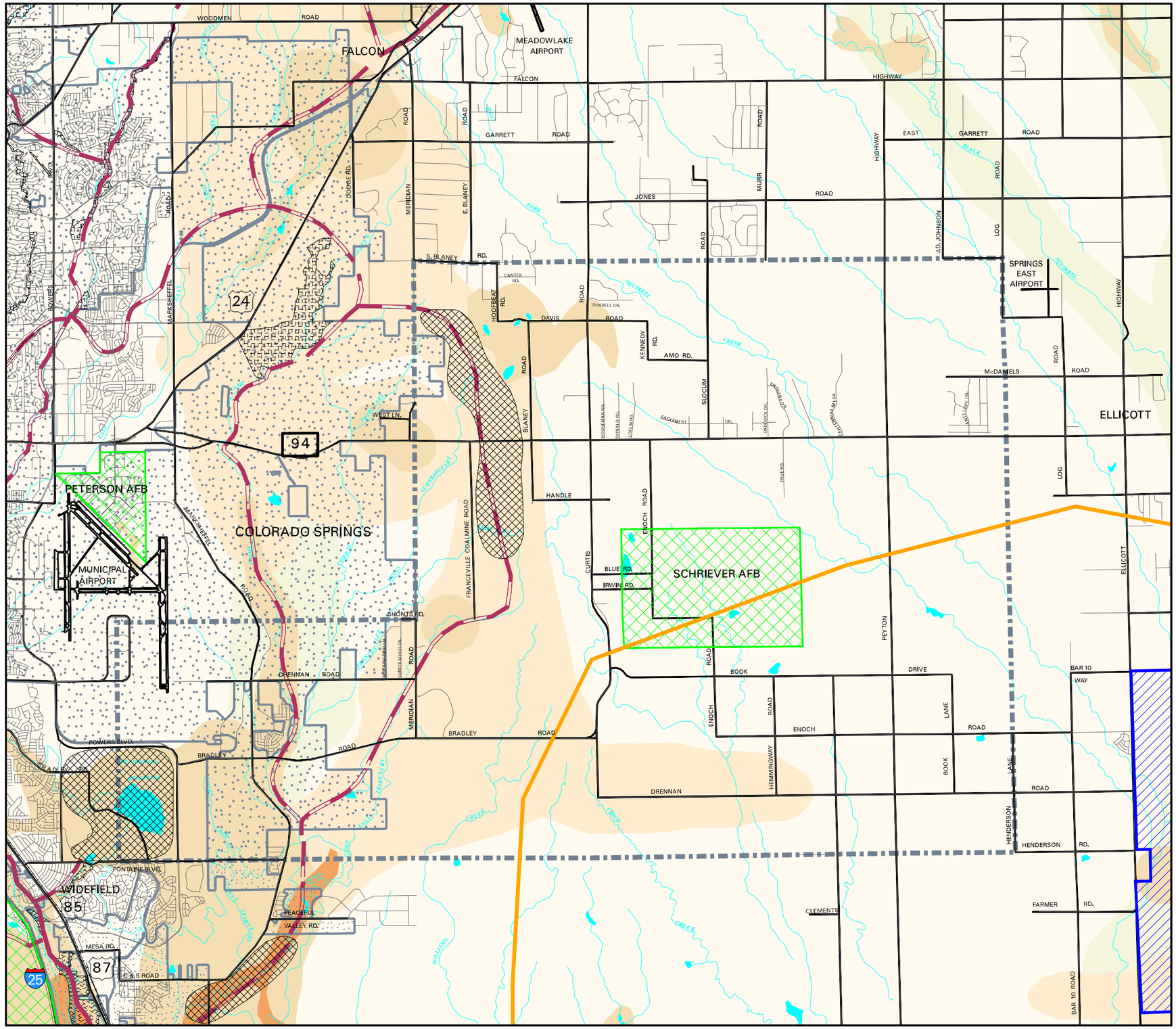
In 1996, the El Paso County Planning Commission adopted a series of Wildlife Habitat Maps and Descriptors as an element of the County Master Plan. The mapping includes various habitat categories for about 30 different game and non-game species. For a given species, one type of habitat, such as summer range, might be broadly distributed while another type, such as nesting areas or winter range, might be more limited. On the basis of the overall species occurrence and relative importance of each habitat type, composite potential wildlife impact categories were created. These categories are intended as an initial screening tool. The categories range from low potential impact to very high potential impact, as depicted on Map 4.3 (page 63). Areas of impact are summarized on Table 4.4. Generally, the Planning Area is characterized by areas of high potential impact to the west and lower impact to the east. Areas of particularly high potential impact correspond with the Corral Bluffs area, the Jimmy Camp Creek corridor, the Big Johnson Reservoir, and land adjoining the Big Johnson Reservoir. Species with habitats that contribute to these higher potential impact designations include the following: golden eagle, blue heron, mule deer, pronghorn, scaled quail, ducks, and geese.

Photo 4.12 - Pronghorn

Table 4.4 Areas of Potential Constraints To Wildlife

Potential Constraint Category	Square Miles	Percentage of the Planning Area
Low	76	64%
Low/Moderate	3	3%
Moderate	29	24%
High	11	9%
Very High	0.02	0.02%

Source: El Paso County



Map 4.3
Natural Systems

Highway 94 Comprehensive Plan
El Paso County, Colorado

LEGEND

POTENTIAL WILDLIFE IMPACT

- Very High (Eagles/Blue Heron)
- High (Ducks/Geese)
- Moderate (Mule Deer/Scaled Quail)
- Moderately Low (Dove)
- Low

Source: Colorado Division of Wildlife

- High Priority Lands for Conservation
- Existing County Parks
- Colorado Springs Open Spaces

Source: El Paso County Parks, Trails and Open Space Plan

- City of Colorado Springs
- City of Fountain
- Bohart Ranch
- Military Installations
- Proposed Trails
- Existing Trails
- Chico Basin Study Area
- Planning Boundary

SCALE IN MILES

0 1 2 3

N

Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

Colorado Natural Heritage Program

In 2000, the Colorado Natural Heritage Program was commissioned by the County to inventory significant flora and fauna. The inventory identified and classified Potential Conservation Areas (PCAs). The Planning Area features several of the PCAs. The PCAs include the following:

- Colorado Springs Airport – big bluestem-prairie sandreed tallgrass community (very high significance)
- Schriever Playas – playa grassland community (very high significance)
- Marksheffel Road – black-tailed prairie dog and burrowing owl (moderate significance)
- Big Johnson Reservoir – wintering bald eagle (general significance)

Photo 4.13 - Prairie Dog near Bradley Road

The Chico Basin

The non-profit Nature Conservancy is sponsoring an analysis of the Chico Basin, an area that encompasses approximately 500,000 acres in southeastern El Paso County and north-central Pueblo County. The area is sparsely populated, largely due to limited groundwater and arid conditions. The area was identified by the Nature Conservancy because of its unique and threatened natural and cultural heritage. Working with local landowners, the Nature Conservancy hopes to share information and coordinate land use decisions. The northwestern edge of the defined Chico Basin area overlaps with the southeast and south-central portions of the Planning Area, as shown on Map 4.3.

One of the main concerns in the Chico Basin is grassland bird populations. Grassland birds inhabit the shortgrass prairie, which is prevalent in the Planning Area. According to the Colorado Bird Observatory, a non-profit organization, grassland birds are experiencing the steepest and most consistent population declines of any American birds and are now a high conservation priority.

Included in the Chico Basin study area are the 48,000-acre Bohart Ranch, the 87,000-acre Chico Basin Ranch, and the nearly 18,000-acre Frost Ranch State lease. All of the Bohart Ranch and the Frost lease and approximately half of the Chico Basin Ranch are part of the State Stewardship Trust, a 300,000-acre collection of significant State lands. Inclusion in the Stewardship Trust represents a judgment by the voters of Colorado that certain State trust lands are more valuable in the future if kept in the Trust land portfolio rather than quickly disposed of for short term profit. Colorado established the Stewardship Trust with the passage of Amendment 16 by Colorado voters in November 1996. The Stewardship Trust is not intended to set aside land to preserve it in a pristine condition. Lands in the Trust may still generate revenue, including uses such as grazing, crop production, oil and gas production, and mining, provided these uses are compatible with the long term protection of the land's natural resource values. Currently, El Paso County has one of the largest collection of State lands and Stewardship Trust lands of any county in Colorado.

4.10 CULTURAL RESOURCES

Cultural resources, as described here, encompasses paleontological, archaeological, and historical resources.

Paleontological

The Planning Area contains resources of paleontological interest. Certain exposures of the Denver Formation are scientifically significant because they represent the boundary between the Mesozoic and Cenozoic Eras. Within the Planning Area are fossils of prehistoric plants and animals, which represent life associated with the ancient seas that once covered the region. Fossils of turtles, crocodiles, and palm trees, as well as other carbonaceous debris, have been discovered in the area.

Sites within the Planning Area are being actively studied by vertebrate paleontologists under the direction of Dr. Middleton from the University of Colorado Museum in Boulder, Colorado. The research was conducted in conjunction with the Colorado Natural Areas Program of the Department of Natural Resources.

The Department of Natural Resources is currently pursuing the protection of significant sites through the cooperation of landowners and the conservation community. They have proposed two alternatives to achieve their goals:

- Conservation (open space) easements acquired from private land owners adjoining the sites
- Cooperation with local, State, and federal agencies to preserve the paleontological resources within the Planning Area

Archaeological

Archeological resources originate primarily from the early plains Indians, including the Ute, Arapaho, and Cheyenne. These were the earliest inhabitants of the area. These tribes followed buffalo across the area and left pieces of their nomadic culture. Artifacts related to these peoples include lithic sites, implements, and arrowheads. Archaeological artifacts has also been unearthed at Crow's Roost, southeast of the Planning Area, as described in Chapter 2.

Historical

The sky and rolling hills of the plains provide a backdrop for the remaining historic structures of the area. Without recognition or appreciation, unique cultural landmarks run the risk of becoming forgotten, denigrated, or destroyed. The following is a list of historical landmarks in or near the Planning Area to consider in the development review process:

Photo 4.14 - Historic Drennan School

Photo 4.15 - Fountain Valley School Horses

- Burial Rock
- Drennan Schoolhouse
- Fountain Valley School
- Franceville Mining Site
- Franceville School Site
- Jimmy Camp (Spring and Campsite)
- Wooden-Slatted Windmills

4.11 VISUAL RESOURCES

Features

Photo 4.16 - Corral Bluffs South of SH 94

Visual resources include natural, sculpted, and cultural landscapes. Each introduced element can be considered as an interrelated continuation of the natural landscape. View corridors and open spaces are important elements of the Planning Area.

Corral Bluffs is the most recognizable natural visual feature within the Planning Area. According to the Highway 94 questionnaire, the Bluffs are considered the most important natural asset in the area. Because of their distinctiveness from the surrounding landscape, they focus visual attention and create an entry point to the Planning Area. Looking east, the Bluffs are part of a distinctive panorama. Looking west, the Bluffs form a foreground for scenic vistas onto the Front Range. The light gray color and coarse texture of the Bluffs contrast with the fine texture of the prairie grasslands. It is recommended that new development along the Bluffs be carefully reviewed for its potential impact on the visual and natural environment. Structures sited atop ridgelines generally have the greatest impact on viewsheds. Strong consideration should be given to preserving this area as open space during the platting process. The recognition of scenic vistas is important during the land development process. Siting can readily take advantage of views of the Front Range. Views can also be considered when developing a trails and open space plan for the area. Rock outcrops are another consideration, particularly near the western edge of the Planning Area.

Photo 4.17 - Rock Outcroppings

Influences

Photo 4.18 - Junkyard

Land development can significantly affect visual character. These effects are most noticeable in grasslands or plains where topographic relief is minimal and little vegetation is available to screen development. Scattered developments and improperly designed projects can monopolize the visual environment. The Environmental Resources Study prepared for Project Aquarius in 1974 recommends that special attention be given to open space by regulating scattered sprawl along public rights-of-way on the eastern plains.

Photo 4.19 - Microwave Tower

The most visible man-made elements within the Planning Area are the landfill and the junkyards along SH 94. Other influences include:

- Roads – SH 94, Curtis Road, Peyton Highway
- Schriever AFB
- Telecommunications towers
- Signs
- Road cuts and site grading
- Overhead utilities
- Scattered buildings
- Mining and other heavy services

Photo 4.20 - Waste Management Landfill

4.12 PARKS, TRAILS, AND OPEN SPACE

Parks, trails, and open space are valuable public assets. Park areas provide opportunities for both active recreation and passive uses. Together, these uses become visual amenities, buffer incompatible uses, link uses, protect hazardous or fragile environments, and create an identity for the area. Overall, these spaces provide structure and a community focus. Additionally, park amenities can increase the value of proximate properties, which results in an incremental increase in taxes received by the municipality. In the attitudinal questionnaire, area residents expressed a strong desire for adequate park and recreation facilities that would accommodate future population levels. Currently, there are no public recreation areas within the Planning Area. No open spaces are reserved and no measures are in place to reserve park and recreation lands. Without a plan in place before development occurs, opportunities to create an open space network are lost. With an existing plan, development can be sensitively developed to be compatible with future park and recreation lands, thereby enhancing new developments.

There are a wide variety of components that could comprise a future open space system. These include:

- Recreation areas maintained by developers or associations
- Portions of Schriever AFB in which high intensity uses neither exist now, nor are programmed for the future
- The southern and eastern portions of the Planning Area, particularly near State Lands, where agricultural uses predominate
- The Corral Bluffs area where uses could be limited for visual and environmental reasons and to protect against geological hazards
- Open spaces associated with watercourses, largely in conformance with floodplain restrictions, prudent line setbacks, and streamside overlays
- Open spaces dedicated in conjunction with the subdivision process as part of a greater community open space plan

Public entities that provide parks and recreation services in or near the Planning Area include El Paso County, the Widefield School District, the Ellicott Metropolitan District, and Schriever AFB.

Table 4.5 Parks and Recreation Service Providers

Entity	Current Facilities and Services	Potential Future Facilities and Services
El Paso County Parks Department	None	Corral Bluffs Regional Trail and Open Space
Widefield School District	An extensive recreation program for School District 3 residents. Parks and athletic facilities are outside the Planning Area	None
Schriever AFB	A variety of facilities for Base personnel	Additional on site facilities for Base personnel
Ellicott Metropolitan District	Recreational programs	Expanded recreational programs and new facilities
City of Colorado Springs	Big Johnson Open Space	Regional park on Jimmy Camp Creek
Colorado Centre Metropolitan District	Two neighborhood parks in the Colorado Centre Subdivision	None

Source: Respective service providers

City of Colorado Springs

Some recreational needs of local residents will ultimately be met by the proposed 694-acre Jimmy Camp Regional Park north of SH 94. The land for the park was dedicated to the City of Colorado Springs as part of the Banning-Lewis Ranch annexation agreement in 1988. The area lies approximately six miles from the center of the Planning Area. It may be connected to a similar facility near the City of Fountain by a regional trail along Jimmy Camp Creek. The City of Colorado Springs plans to build a reservoir on the Jimmy Camp Creek Park site as part of the Southern Delivery System project, an effort to bring water to Colorado Springs from Pueblo. The reservoir is intended as an active recreation area to be developed after 2017. The City will construct other park facilities and trail connections after the reservoir is developed. Jimmy Camp Creek Trail will run through the park and ultimately connect with the east fork of Sand Creek, the Rock Island Trail in Falcon, and the Corral Bluffs Trail to the east.

El Paso County Parks and Leisure Services Department

El Paso County covers an area of approximately 1.4 million acres or 2,158 square miles. Owing to the sheer size of the County, the El Paso County Parks and Leisure Services Department emphasizes the provision of large, regional scale parks versus neighborhood parks and the provision of natural and historic interpretation programs. Current efforts are concentrated on high growth areas and new subdivisions primarily in a pie-shaped area bounded by IH 25, the northern County line, and US 24. At present, the Department does not maintain any facilities or property within the Planning Area.

In 1997 the Parks Department completed the El Paso County Parks, Trails, and Open Space Master Plan, which included the following goals:

- Provide a coordinated system of parks, trails, and open space that is equitably distributed and serves the needs of County residents.
- Protect and enhance El Paso County's legacy of unique natural features, open areas, and natural areas.
- Create a continuous system of regional trails.
- Provide high quality and safe recreational and educational experiences for users of County park facilities.
- Acknowledge the importance of parks and open space in El Paso County by providing adequate funding to develop, operate, and maintain these resources.

Within the Highway 94 Planning Area, the 1997 Master Plan identified the Corral Bluffs area, both north and south of Highway 94, as one of the "High Priority Lands for Conservation." A proposed regional trail would run along the foot of the Bluffs. The southern portion of the trail would run along Jimmy Camp Creek and connect to Colorado Centre. At the northern tip of the Corral Bluffs, the trail would turn west toward the planned Jimmy Camp Creek Park. Such a trail would provide a recreation venue for the residents of central El Paso County, an amenity currently lacking, ensure compatibility with the existing landfill and the expanded landfill site, facilitate future monitoring of landfill contamination, and prevent development on the geological hazards associated with Corral Bluffs. Map 4.3 depicts features from the 1997 County Parks, Trails, and Open Space Master Plan.

The County Park staff is now considering a Parks Master Plan update. The update will likely address the provision of park services to residents in central and eastern El Paso County. While a regional park within or near the Planning Area could be difficult, largely due to low residential densities, the potential exists for the creation of regional trails throughout the area. Linear corridors can connect residential developments to significant natural features and parks. Trails in other communities have become "green" infrastructure and increased property values along the trails.

Unlike parks, trails require only a narrow band of land and do not necessitate large outlays for the acquisition of a single property. They do, however, require a great deal of work to piece together individual trail segments. If identified early, trail dedication becomes part of the development process. Trails could connect isolated developments and provide a link to regional parks. Trails also become local amenities with developers generally charging a premium for lots adjacent to trails. Despite their utility, low impact nature, and many benefits, opposition from adjacent landowners may be strident if trails are proposed after development occurs, largely due to fears of vandalism and crime. Although studies have shown these fears to be unfounded, trails should generally be constructed before adjoining development.

As urban development takes place, the Planning Area may require neighborhood and community park and recreation facilities not provided by the County Parks Department. For such situations a local park association or district can be established to acquire, operate, and maintain park and recreation facilities in the area. Optimally, the formation and financing of such an organization would be coordinated with the County Parks Department so that District plans are integrated into County plans.

The County Parks Department faces a number of obstacles in the provision of parks and leisure services in the rural portions of the County. Overall, because of limited staff, the Department is limited in what they can do for the County. Despite limited resources, the Department is constantly seeking creative solutions to the provision of parks and leisure services. One possible initiative is to work with the Widefield School District to create a network of trails west of the Planning Area. Overall, the Department is hampered in serving rural communities because the County currently has no ongoing mechanism to fund parks, trails, and open space.

Schriever Air Force Base

Schriever Air Force Base (AFB) buildings are designed and sized to meet its unique space-related mission and are not open to the public. The Base Master Plan calls for the construction of various fitness facilities and athletic fields on the Base property. The Base also plans to build a trail near the perimeter of the Base for walking and running with some naturalized areas along the path. These facilities will serve the needs of the military, military dependents, and civil service employees at Schriever AFB. If Base housing is built in the future, it will create the demand for increased parks, trails, and recreation opportunities near the Base. If the Base population expands to 10,000, the demand could be substantial.

Widefield School District

The Widefield School District has assumed some responsibilities for parks and recreation services, a service traditionally left to general purpose local governments or Title 32 special districts. Under a special provision of the State statutes, the Widefield School District provides these services using a share of the proceeds from the Colorado Lottery. Although the School District has no recreational facilities within the Planning Area, nearby facilities serve those near the western edge of the Planning Area.

Colorado Centre Metropolitan District

The Colorado Centre Metropolitan District maintains two neighborhood parks within the Colorado Centre Subdivision. The first is a children's park of approximately ½-acre. The second facility is approximately 1½-acres and located adjacent to a vacant school site.

Ellicott Metropolitan District

The Ellicott Metropolitan District is a non-taxing entity formed in 1992 to serve the recreation needs of people in the Ellicott area. With the exception of some areas in the Sunset Metropolitan District and the Cherokee Metropolitan District, District boundaries are coincident with those of the Ellicott School District. All funding for the District comes from State Lottery proceeds. Great Outdoors Colorado (GOCO) is the trust fund that distributes those funds for recreation, parks, and open space preservation. The Ellicott Metropolitan District has approximately 2,200 people within its boundaries and receives approximately $5 per person per year from those funds. As a relatively new district with limited funding, the Ellicott District does not yet have facilities or assets of its own. Through an intergovernmental agreement with the Ellicott School District, the Metropolitan District uses school facilities for after-school and summer programs along

with School District drivers and buses for trips. The District has a number of recreational opportunities available for patrons. These include:

- Fitness Classes
- Sport Leagues - both youth and adult
- Open Gym for exercise
- Youth Summer Camps
- Student Advisory Board

An ongoing issue for the District is facility availability. The District uses many Ellicott School District facilities. As the owner of the facilities, the Ellicott School District has priority for all facilities. Together, the School District and the Metropolitan District keep all facilities heavily scheduled. Intensive use leads to increased wear and maintenance. In the future, the Metropolitan District would like to grow sufficiently to support its own athletic and community facility. Currently the District is working with developers to assess and meet the parks needs of District patrons.

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Chapter 5 – Utilities

5.1 INTRODUCTION

The first half of the Utilities Chapter provides a context for discussion and focuses on water resources. Understanding water resources is critical to its continued utility for residents and landowners. The second half of the chapter focuses on the traditional provision of services, such as electricity, natural gas, and phone service. Many of the issues are germane to both the Utilities and Resource Management Chapters.

5.2 WATER RESOURCES

The water resources section applies almost exclusively to groundwater. At the present time, groundwater is the sole source of water for the Planning Area, whether from bedrock sources or buried stream deposits. The potential exists for the use of surface water in the future within the Planning Area, but not to any great extent during the timeframe of this Plan.

Groundwater

Groundwater is a critical component in the hydrologic cycle and a finite resource. It is the single largest reservoir of fresh, liquid water on the earth (Marsh, 128). Within the Planning Area, large amounts of groundwater supply residents and livestock. Lesser amounts supply commercial and industrial uses. A limited amount of water irrigates commercial crops.

The importance of an adequate water supply is becoming increasingly evident. As land development and population growth occur in the Planning Area, groundwater resources become more valuable. In several parts of the County, people have already experienced groundwater declines.

With the exception of Colorado Centre, almost all residents in the Planning Area use individual wells for their drinking water. Some of these wells draw water from one of the formations in the Denver Basin, a large bedrock aquifer underlying the Planning Area. The majority of wells rely on alluvial water, or water in buried stream deposits. Water for the Colorado Centre area is from on site wells drilled into the Jimmy Camp Creek alluvium.

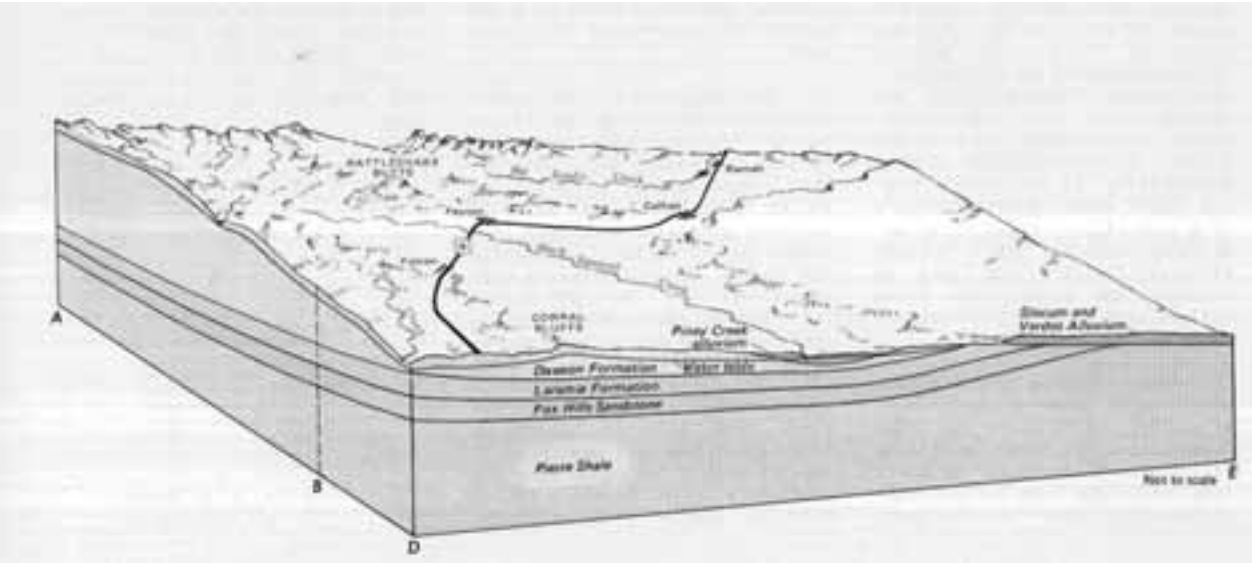
The boundaries of the Denver Basin are depicted on Map 5.1 (page 74) along with general well locations. Surface recharge areas, the boundaries of the designated Upper Black Squirrel Creek Groundwater Management District, and groundwater wells are shown on Map 5.2 (page 75).

The Denver Basin

Description

The Denver Basin underlies a 6,700 square-mile area along the Front Range. Boundaries of the basin are the Front Range to the west, a point near Limon to the east, Greeley to the north, and central El Paso County to the south. Sedimentary rocks comprise the formations in the basin and range up to 3,000 feet thick in the deepest part of the basin. The five major formations in the Denver Basin from the uppermost to the deepest are the Dawson, Denver, Arapahoe, Laramie, and Fox Hills. Within the formations are four aquifers, or water bearing formations, the Dawson, Denver, Arapahoe, and Laramie-Fox Hills. The Denver Basin stops at approximately 3,000 feet below the surface due to a layer of Pierre Shale. The Pierre Shale is composed of approximately 4,500 feet of clay shale with some minor sandstone beds.

Figure 5.1 Denver Basin Cross-Section



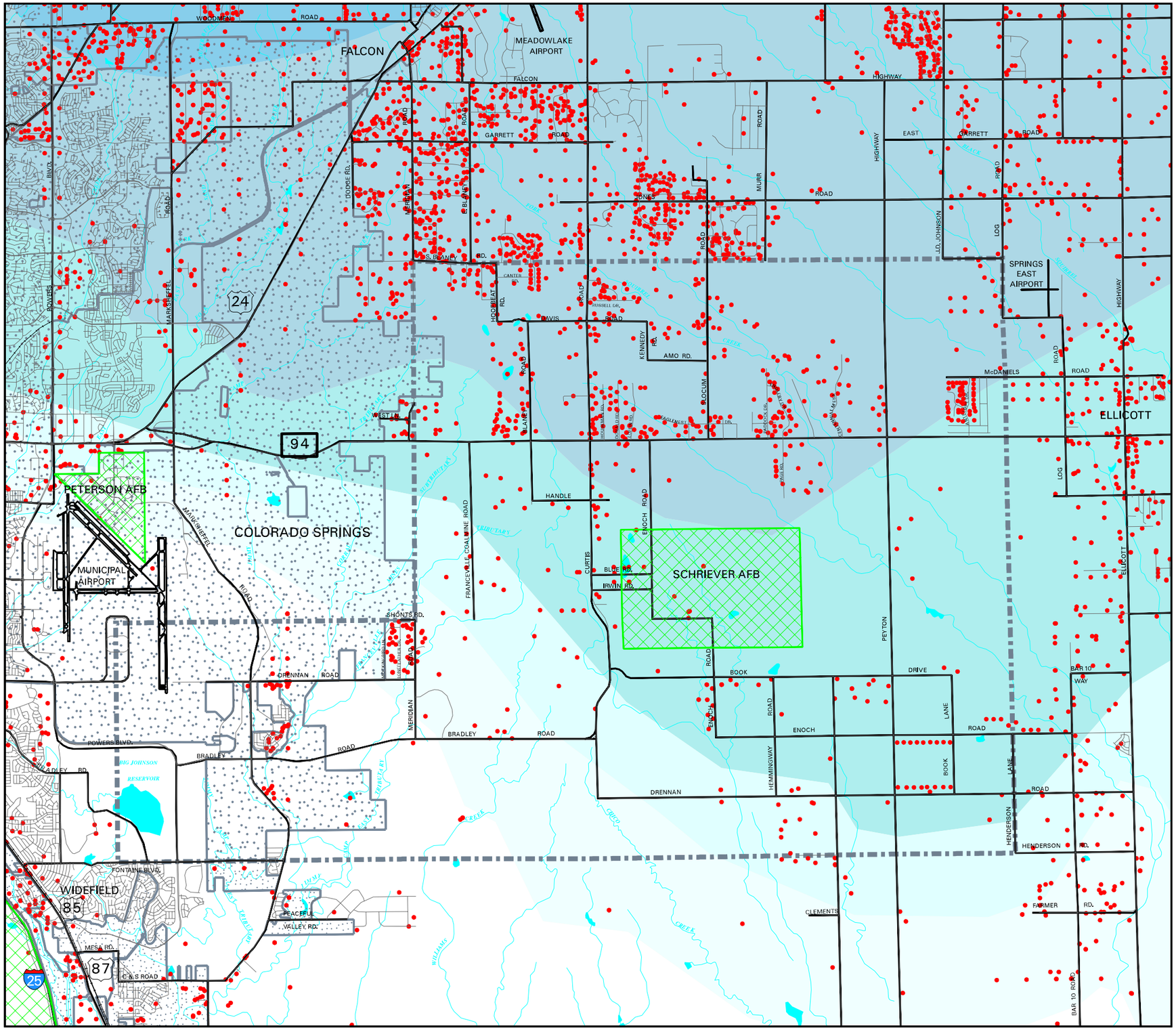
Source: Livingston, 45

In 1985, the Colorado legislature passed Senate Bill (SB) 5, refining the law pertaining to nontributary groundwater in the Denver Basin. SB 5 is the most recent and detailed study of the Denver Basin aquifer system. During the study, the Colorado Division of Water Resources collected information on the nature of the aquifers, the occurrence of groundwater in the aquifers, and the effects of groundwater pumping on surface streams throughout the basin. SB 5 refined the definition of nontributary groundwater in the Denver Basin and determined an allocation scheme for its groundwater. Further direction is provided by Colorado Revised Statute (CRS) 37-90-137, which required that the State Engineer promulgate rules applying exclusively to the Denver Basin aquifers. The purpose of the rules is to ensure that withdrawal of groundwater from the aquifers will not materially affect vested water rights to the flow of any natural stream. The Denver Basin rules became effective January 1, 1986. Statewide Nontributary Groundwater Rules became effective March 3, 1986. Without the Denver Basin rules, groundwater would be classified as tributary and require developers of the groundwater to obtain judicial approval of plans for augmentation. An augmentation plan is a court approved document designed to protect existing water rights by replacing water used in a new project. With a nontributary designation, the State Engineer and Ground Water Commission have the authority to grant or deny well permits based on the recommendation of the Management District without an augmentation plan.

Supplies

Because the aquifers of the Denver Basin become more shallow near the edges, there is progressively less potential for bedrock groundwater-based development toward the southern portion of the Planning Area. Prior to 1988 there was little comprehensive information concerning water supplies in the Denver Basin. Since 1988, the Colorado Division of Water Resources has regularly monitored water levels in the bedrock aquifers of the Denver Basin along with the alluvium of the Upper Black Squirrel Creek. In the future, the El Paso County Water Authority may also investigate County water levels.

Currently aquifer levels are constant because the basin is under artesian, or confined, conditions. Water is trapped beneath impermeable material throughout much of the basin and the hydrostatic pressure level is above the top of the aquifer. As the artesian aquifer is pumped, the water pressure is reduced. Ultimately, artesian conditions will no longer exist and pumping will cause water levels to drop below impermeable materials.



Map 5.1
Denver Basin

Highway 94 Comprehensive Plan
El Paso County, Colorado

LEGEND

AQUIFERS

- Dawson
- Denver
- Arapahoe
- Laramie
- Laramie Fox Hills

WATER WELLS

- Wells

Source: Office of the State Engineer Division of Water Resources, 2000

Wells data may not be completely accurate due to changes or additions that may have occurred since this data set was received.

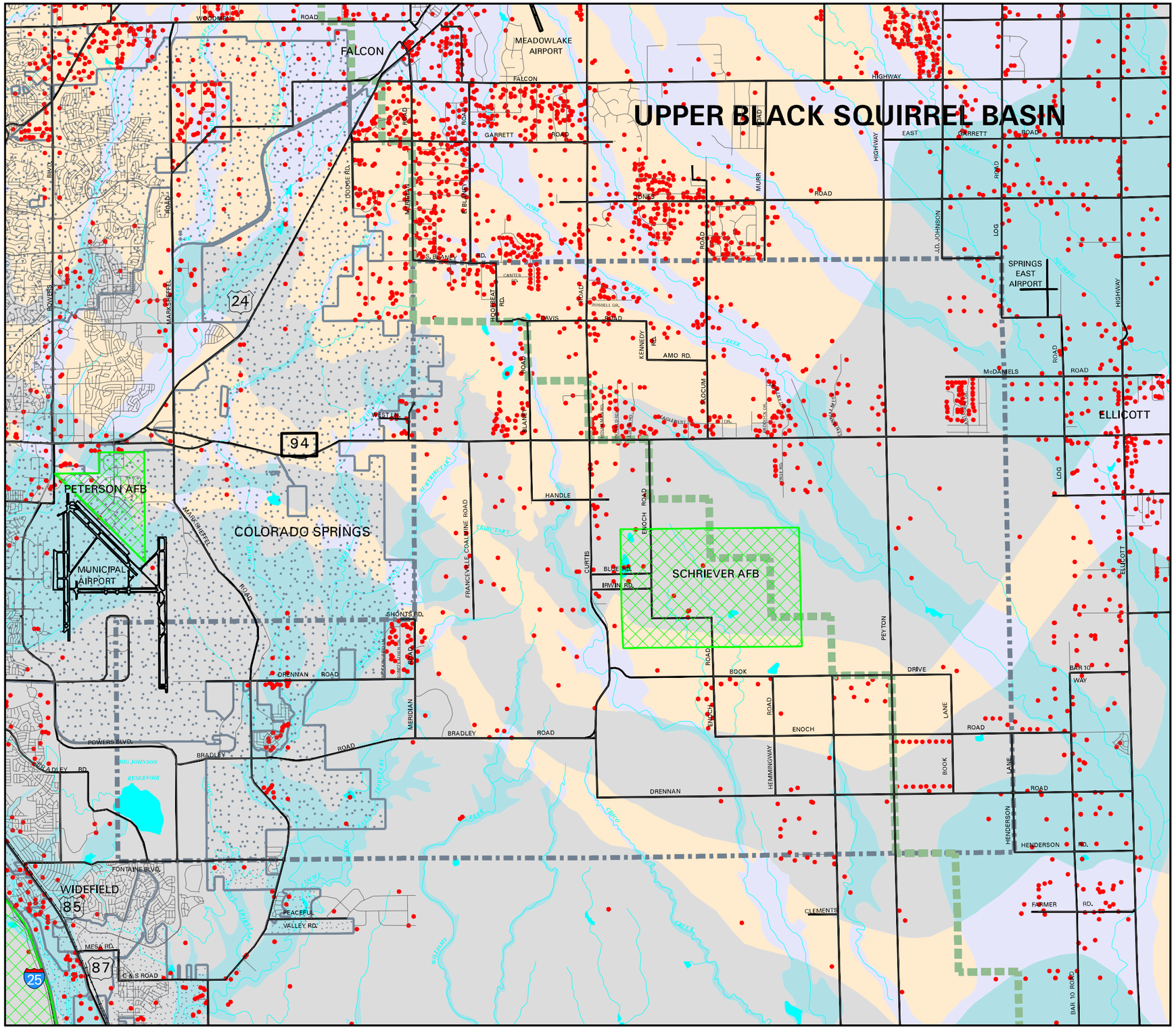
- City of Colorado Springs
- City of Fountain
- Military Installations
- Planning Boundary

SCALE IN MILES

0 1 2 3

N

Prepared by: El Paso County Planning Department
Print Date: December 10, 2003



Map 5.2
Water Recharge

Highway 94 Comprehensive Plan
El Paso County, Colorado

LEGEND

GROUNDWATER RECHARGE

- Intersection of Alluvial & Bedrock Aquifers
- Minor/Nonexistant Water Bearing Formations
- Principal Alluvium Aquifers
- Principal Bedrock Aquifers

WATER WELLS

- Wells

Source: Office of the State Engineer Division of Water Resources, 2000

Note: Well classifications derived by grouping Use Codes based on discussions with Colorado Division of Water Resources.

Wells data may not be completely accurate due to changes or additions that may have occurred since this data set was received.

- City of Colorado Springs
- City of Fountain
- Military Installations
- Upper Black Squirrel Basin
- Planning Boundary

SCALE IN MILES

0 1 2 3

N

Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

Recharge

According to a 1979 Curtis Wells Study, the principal water bearing formations in the area are Alluvium, Dawson Arkose, Arapahoe Sandstones, and Laramie-Fox Hills Sandstones. The deepest aquifer within these formations, the Laramie-Fox Hills, extends to the lower limit of the Denver Basin, approximately 3,000 feet below the surface. Above 3,000-foot depths, aquifers need an average of 300 years for complete renewal. Below 3,000 feet aquifers require an average of 4,600 years for complete renewal. In general, shallow aquifers recharge faster than deep aquifers (Marsh, 132). Although the Denver Basin is classified as a nontributary water source and theoretically not connected to the land surface, there is a recharge capability, albeit measured in centuries. Practically speaking, the aquifer is a closed system and a finite resource, which will ultimately be depleted. As water is gradually depleted, shallow wells will need to be drilled into deeper formations. Although water depletions are not currently problematic, they will likely become a concern within 50 to 100 years. Those on the edges of the Denver Basin will be the first to experience water supply problems.

Alluvium

Description

Within the boundaries of the Denver Basin is the alluvial Upper Black Squirrel Creek Basin, which covers an area of 350 square miles. The northern and eastern portions of the Planning Area are located within the basin. The alluvium supplies water for domestic, irrigation, and municipal uses. The Upper Black Squirrel Creek Groundwater Management District is based on the Upper Black Squirrel Creek Basin. The boundaries of the designated basin generally correspond to the natural limits of the surface water drainage basin with the exception of the southern boundary. The southern district boundary is the south line of Township 15 South even though the alluvial aquifer extends beyond that line. The Upper Black Squirrel Creek Groundwater Management District was formed under the guidelines of the Colorado Ground Water Management Act of 1965. The Act empowered management districts to regulate the spacing of wells in designated basins and to set limits on production rates to minimize the lowering of water tables (Colorado Division of Water Resources, 2003). District boundaries are depicted on Map 5.2.

Photo 5.1 - Slocum Road Floodplain

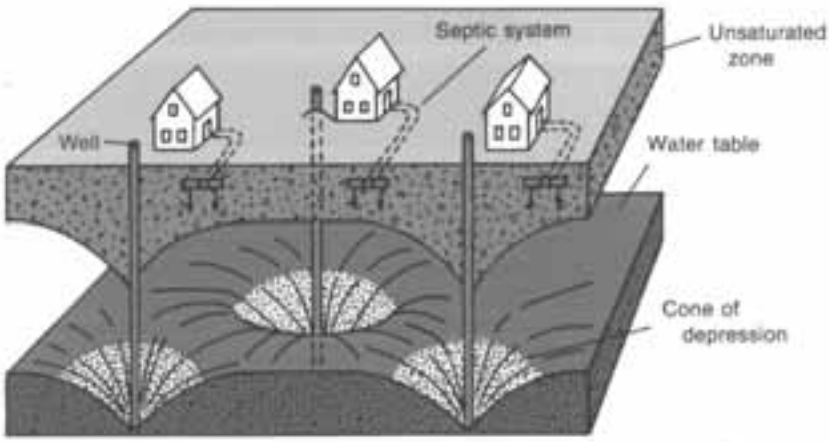
Supplies

Traditionally, most wells in the Basin have produced high yields ranging from about ten gallons per minute for stock wells to more than 1,000 gallons per minute for high-capacity irrigation wells. Alluvial wells supply most of the water for irrigation and domestic use, and since 1964, have provided water for export to the Colorado Springs area (Brendle, 1). Due to pumping within the Upper Black Squirrel Creek Basin, water levels in the alluvium declined as much 46 feet during a ten-year period from 1964-1974 in the Ellicott area (Livingston, 50). Present trends indicate a continued lowering of the alluvial water table. For its part, the Laramie-Fox Hills Aquifer of the Denver Basin has also experienced a 50-foot

Photo 5.2 - Central Pivot Irrigation

drop from 1991 to 2000 in the Ellicott area despite only a limited population increase (McElhaney, 2). Generally, there are two major reasons for the drop in water levels. First, heavy pumping in one location can lead to an uneven aquifer surface. Groundwater surfaces in these areas eventually take on a funnel shape. The funnel shape is known as a cone of depression. In an area with wells of varying depths, water supplies can be lost in shallow wells as the cone surface drops below shallow pumping depths. Areas with a large number of wells are the first to experience water level drops. The installation of large capacity wells for municipal, industrial, or crop irrigation purposes can also cause widespread cones of depression that affect nearby livestock or domestic wells.

Figure 5.2 Cone of Depression



Effect of concentrated housing on ground-water level.

Source: Waller, 18

Recharge

New developments in the Planning Area can significantly impact the recharge rates of water bearing formations, most notably alluvial aquifers. Streets, parking lots, large buildings, storm drains, and sewer lines reduce the amount of water available for local aquifer recharge. These impervious surfaces lead to high velocity, high volume runoff after storms events. Because of high runoff rates, water has less opportunity to recharge alluvial aquifers.

Seasonal variations also affect water levels in alluvial aquifers. During the winter, frozen ground prevents recharge. During the summer, water is lost to evaporation. Similarly, less water is available for recharge during droughts. Conversely, spring snowmelt and increased precipitation cause increases in recharge and a rise in water tables.

Aquifer recharge is essential to the maintenance of a viable ground water supply. Map 5.2 depicts aquifer recharge in the Planning Area. As alluvium is the most permeable aquifer, wells within alluvium yield the largest amounts of water and have the highest economic returns. Recharge to this formation is therefore of prime importance. Stream losses, irrigation, and domestic uses are the principal sources of aquifer recharge. Lesser amounts of recharge come from precipitation and the transfer of groundwater from one aquifer to another. As long as the water bearing formation is not fully saturated, it has the ability to accept recharge water percolating from surface water sources or overlapping formations. Without recharge, well pumping would more rapidly "mine" water from the groundwater reservoir with no replenishment.

5.3 WATER CONSERVATION AND REUSE

Recently approved subdivisions in the area have proposed various measures to conserve water supplies, largely through restrictive covenants. One possible measure is to limit the watering of lawns and gardens to certain days of the week and certain times of day. Such a practice helps minimize evaporation. Limiting the type and percentage of lawn coverage on a lot also precludes the use of large amounts of water. The encouragement or a requirement for the use of native plants and grasses would also limit the use of water. Native plants, once established, can survive on local rainfall with supplemental watering required only during extended droughts. Detention ponds are another means that, when properly designed, can filter contaminants, reduce runoff rates and volumes, and become community assets. Other conservation measures include using non-potable water for irrigation and fire fighting, thereby preserving potable water for domestic use. Such partially treated water can also be used for landscaping at golf courses, office complexes, fabrication plants, and other large users of water. The US Air Force Academy in northern Colorado Springs already uses partially treated water for its two golf courses and other irrigated areas throughout the Academy reservation. Wastewater that has undergone tertiary treatment can also be used to recharge both surface and alluvial water sources.

There have been several proposals to preserve the area water supply. The Upper Black Squirrel Creek Ground Water Management District issued a Statement of Policy in 2002 that stated:

> The District encourages the use of central (municipal) water and wastewater systems, as opposed to the use of individual wells and septic systems in any proposed subdivision consisting of three or more lots, in order to minimize the possibility of contamination of the alluvial aquifer and to protect the already over-appropriated ground water resources of the Upper Black Squirrel Creek designated ground water basin. (UBSCGWMD, Statement of Policy)

It should be noted that the District's policy is at odds with continued subdivision into 2½ or 5-acre residential lots that rely on individual wells.

Additionally, recent decisions by the State Engineer's office indicate that new developments with densities greater than one dwelling unit per five acres may not be approved unless an adequate off site water source is provided. Importation of alluvial water from east of the Planning Area is being considered to service satellite developments. Importation, however, carries with it serious ramifications. It precludes other areas and counties from using their water resources locally, limits agriculture, encourages urban intensities outside of municipal boundaries, and changes the hydrology of the basins where the water is both pumped and ultimately discharged.

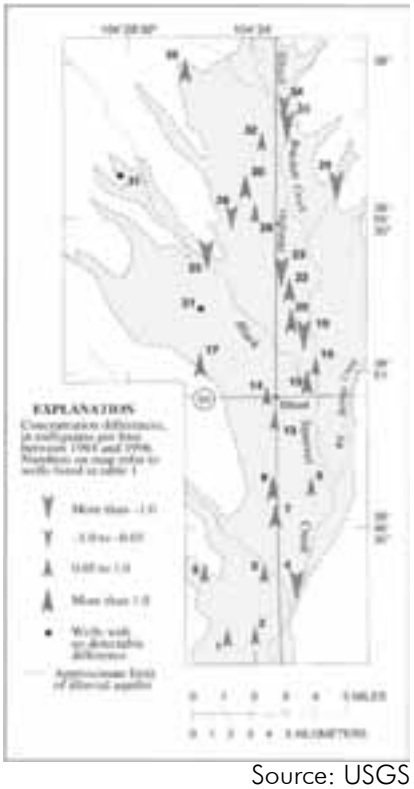
5.4 WATER QUALITY

While well permits are regulated by the State Engineer's Office, well water quality is not. Generally, the responsibility for protecting the water quality of domestic wells lies with the well owner. While the primary responsibility lies with the well owner, the State and County Health Departments may also be involved with well water quality, particularly for large municipal wells. Water districts usually draw water from various sources and regularly assess its quality. Individual well owners may be less aware of their water quality.

Bacterial contamination from septic tank effluent is the most common water quality problem in rural water supplies largely due to faulty or poorly maintained septic systems (Waller, 22). Older wells in shallow

aquifers are the most likely to be contaminated (Waskom, 1-2). Although several contamination sources are just outside of the Planning Area, such as sod farms with high fertilizer use, their presence could present a hazard to residents inside the Planning Area if wells that supply water to Planning Area residents draw waters near contamination sources.

Figure 5.3
Nitrate Concentrations



Source: USGS

Industrial uses, such as landfills and fabrication plants, could also contaminate wells. Monitoring is necessary to ensure that these uses conform with State and federal toxic discharge treatment processes.

Because of increased demand for ground water in the Upper Black Squirrel Creek Basin, the USGS, in conjunction with the Cherokee Metropolitan District, sampled wells in the basin in 1984 and 1996 to determine nitrate concentrations. Nitrate concentrations greater than 10 milligrams per liter (mg/l) can have long term detrimental health effects, particularly in infants. The most common sources of nitrate are septic leach field effluent, animal manure applied to croplands as fertilizer, chemical fertilizers, and manure in feedlots and dairies. The 24 wells sampled showed an increase from 6.0 to 8.6 mg/l between 1984 and 1996. More detailed analysis showed that nitrate concentrations for wells in the northern third of the basin did not change significantly between 1984 and 1996 but that nitrate concentrations in the southern two-thirds of the basin increased significantly.

Some possible explanations for the pronounced nitrate increase in the southern two-thirds of the Basin include:

- Changes in the volume of sewage or septic leach field effluent flowing into the alluvial aquifer
- Changes in agricultural practices, such as increases in the amount of chemical fertilizers or animal manure applied to agricultural lands
- Changes in rainfall along with an associated change in the amount of nitrate transported into the aquifer (Brendle, 1-2, 4)

Well Placement

Contamination can reach groundwater by leaching through the soil or flowing down the well bore. Well bores represent direct conduits for contamination into aquifers. Contamination that flows directly into a well bypasses the natural filtering action of the soil. Contaminated groundwater sources may then be impossible to clean.

Overall, wells should be placed on the highest ground possible, and perhaps more importantly, up-gradient from septic systems, feedlots, fuel tanks, and chemical storage and mixing areas. Key points to consider are that wells draw water from all directions and that groundwater may flow in a direction different than surface flows. As a minimum, wells should be at least 100 feet from leach fields and 250 feet from waste lagoons. Residents should also consider former agricultural practices. Applications of herbicides and fertilizers to former croplands may persist for decades, infiltrate aquifers, and contaminate future groundwater wells.

Abandoned Wells

Throughout the history of eastern Colorado, as homesteads were vacated and smaller farms consolidated, wells were often neglected or forgotten. Today, thousands of abandoned wells dot the landscape of eastern Colorado. Pipes sticking out of the ground, a depression at an old homesite, or an old pumphouse are all signs of abandoned wells. Abandoned wells present both groundwater and safety hazards. Due to the presence of small communities and homesteads in the Planning Area in the early 20th Century, the potential exists for a number of abandoned wells in the Planning Area.

The optimal solution for abandoned wells is to permanently seal them. Sealing a well restores the relationship of the aquifer to the surrounding material. To completely seal a well, all pumping equipment and debris are first cleared from the well. The well is then filled with sand, gravel, or another chemically inert material. Wells that penetrate more than one aquifer should include 20-foot plugs placed at the confining layer above each aquifer. The upper well casing is then filled with chemically inert materials, cut below the ground surface, and capped with a permanent, water-tight cover (Waskom, 5-6).

5.5 WASTEWATER

The Planning Area features a combination of on site Individual Sewage Disposal Systems (ISDSs), commonly referred to as septic systems, and centralized off site facilities. Within the Planning Area, with the exception of the Colorado Centre area and Schriever Air Force Base (AFB), almost all residents and employees rely on septic systems.

Septic Systems

With the growth of suburban neighborhoods after 1930, septic tanks and drainfields became widely used. Prior to that time outside of cities in the United States, people used pit-style privies. Today in the United States, as much as 25 percent of the population uses septic systems.

> The septic drainfield systems used for individual homes are dependent on the soil environment for safe disposal of human waste. The system … depends on the soil's capability to take in and filter wastewater at a certain rate. Not all soils can do this; therefore, it is critical to distinguish suitable from unsuitable soils as part of environmental assessment for residential planning in areas not served by municipal sewer systems … The system is designed to keep contaminated water out of contact with the surface environment and to filter chemical and biological contaminants from the water before they reach groundwater, streams, or lakes. The contaminants of greatest concern are biological agents (pathogens), such as bacteria in the coliform group, which are hazardous to human health, and nutrients like nitrogen and phosphorus that accelerate algae growth in aquatic systems. (Marsh, 112)

Critical to the operation of a septic system is the permeability of the soil, or the rate at which water is absorbed by the soil. The percolation rate is a measure of permeability. Soil texture, water content, and slope control the percolation rate. The ideal soil has a mixture of coarse soils, to transmit water, and fine particles, to act as a biochemical filter. In general, loams are the preferred soil for septic systems. Successful operation of a septic system requires regular maintenance, in particular the removal of sludge from the septic tank, the avoidance of overloading, and a lack of interference from high groundwater. Failure can result in the seepage of wastewater into surface soils and onto the ground. In extreme cases, human contact with these wastes could cause virulent diseases such as cholera. Inadequate or

malfunctioning systems may allow wastewater to enter the groundwater and contaminate wells, or to enter waterways, contaminating the aquatic environment. On average, the lifetime of a drainfield is from 15 to 25 years (Marsh, 115).

Most of the Planning Area features sandy soils with high percolation rates. The Soil Survey of El Paso County lists high percolation rates as a severe limitation to septic systems in most of the Planning Area. High percolation rates allow wastewater to leach into groundwater with little filtration, posing a serious health hazard. Such limitations are generally overcome successfully with proper construction. Residents with wells in these areas should have their wells tested periodically through a laboratory to ascertain whether contamination is present.

Centralized Systems

Photo by P. Parish

Photo 5.3 - Sunset Metropolitan District Wastewater Treatment Plant

Central wastewater systems are a means to take small, less effective wastewater treatment systems out of service. Despite their efficiencies and water quality advantages, central wastewater systems require large initial investments and significant customer bases to be cost-effective. As with central water systems, most nonresidential uses and residential lots of less than 2½ acres cannot be established in El Paso County without central wastewater systems.

Centralized wastewater plants are not without potential problems. Mechanical failures periodically occur despite the installation of warning systems. Optimally, all raw sewage would flow to treatment plants via gravity. Depending on the terrain, lift stations may be necessary to overcome hilly terrain. Failure of lift stations can cause raw sewage to back up into buildings.

An intermediary between a central treatment facility and an individual septic system is a "package" treatment plant. While small prefabricated package sewage treatment plants have been successfully implemented in other regions, none have been used in El Paso County. The facility siting and approval process can be time-consuming and costly. Like septic systems, package plants require monitoring and periodic maintenance.

Within the unincorporated areas of Colorado Centre, wastewater service is not a constraint to additional development, as the basic infrastructure is already available. In the short term, the nearby Widefield Water and Sanitation District facility has the capacity to serve substantial development in the area.

5.6 SERVICE PROVIDERS

Cherokee Metropolitan District

The Cherokee Metropolitan District is the dominant entity providing water and wastewater service within the original Planning Area. The Cherokee Metropolitan District was formed in 1992 from the consolidation of three separate special districts and now has responsibility for water, wastewater, parks, streetlights, and a golf course within its service area. For water service, Cherokee operates a 30 inch potable water line parallel to SH 94. One-half mile past Ellicott the 30 inch line connects with two smaller lines. The smaller lines

travel approximately eight miles north and eight miles south to wells in the northern and southern portions of the Upper Black Squirrel Creek Groundwater Management District, respectively. Cherokee currently has seven wells in each area. District water and wastewater lines have the same specifications as lines owned by the City of Colorado Springs. Cherokee generally places its lines in private easements. Cherokee avoids road rights-of-way due to potential roadway widenings and the presence of other utilities.

Cherokee operates and maintains a 30,000 gallons per day (GPD) wastewater treatment plant (WWTP) owned by the Sunset Metropolitan District, southeast of the Planning Area near the intersection of Drennan Road and Ellicott Highway. The plant is permitted for 1 million GPD. The plant serves the Ellicott Springs development and the Ellicott School District facilities.

Cherokee will manage an $800,000 upgrade to the Sunset plant. The expansion will increase the plant treatment capacity from 30,000 GPD to 250,000 GPD bringing the plant to one fourth of its permitted 1 million GPD capacity.

Cherokee also owns and operates a WWTP southwest of Peterson Road and US 24, west of the Planning Area. The plant serves the Cimarron Hills area and Schriever AFB.

Schriever Air Force Base

As stated earlier, the Cherokee Metropolitan District provides potable water to Schriever AFB. The Air Force awarded Cherokee the contract for potable water in 1985. Cherokee made its first water delivery in November 1988.

As for wastewater treatment, Schriever AFB originally used an on site WWTP. To meet growth requirements and improve water quality in the area, Schriever connected with the Peterson Road WWTP and terminated on base wastewater treatment in January 2003. The Schriever system now uses a sanitary sewage lift station in the southern portion of the base and a force main to convey all wastewater to the Peterson treatment facility. The force main travels north along Enoch, Irwin, and Curtis Roads to SH 94 and then west along the south side of SH 94 to the WWTP. Cherokee installed a 14-inch force main to Blaney and a 16-inch force main for the remainder of the route to the treatment plant. Cherokee will completely remove Schriever's on site plant. The lift station is projected to accommodate Schriever's growth through 2021.

Cherokee also constructed a gravity overflow pond on Schriever AFB. The overflow pond is lined with a synthetic membrane to prevent seepage into the underlying soil. The holding pond has a capacity of 392,000 gallons, the average daily flow projected for the year 2050. The pond provides approximately 40 hours of response time in the event of lift station mechanical failure, a problem with the sewage force main, or electrical failure. In addition to the emergency gravity overflow storage pond, the lift station is monitored electronically and includes a standby generator with an automatic transfer switch.

Prior to its connection to Schriever AFB, Cherokee's plant operated significantly below its maximum loading limits and could readily absorb wastewater flows from Schriever AFB. Table 5.1 shows the past, current, and future plant capacities. Hydraulic loading refers to the ability of the plant to handle the sewage flow. Organic loading refers to the ability of the plant to treat the solids.

Table 5.1 Wastewater Treatment Capacity at Cherokee Plant

Timeframe	Hydraulic Loading	Organic Loading
Prior to Schriever Connection	75%	55%
After Schriever Startup (January 2003)	80%	62%
Design Capacity (2021)	86%	70%

Source: Cherokee Metropolitan District

Cherokee has retained all return flow water rights from the treated wastewater. Retention of return flow water rights is part of Cherokee's larger effort to increase its water supplies.

Cherokee currently uses their wells in the Upper Black Squirrel Creek Basin to provide water for Cimarron Hills and Schriever AFB. After the wastewater is treated at their WWTP on Peterson Road, it is discharged into Sand Creek, west of the Planning Area. Cherokee would like the water taken from the Upper Black Squirrel alluvium to be returned to the same. Returning wastewater flows to the Upper Black Squirrel Creek Basin would create a closed perpetual water supply system and allow Cherokee to use its water to extinction. Such supplemental water resources would allow Cherokee to provide centralized water and wastewater services to additional areas.

To facilitate their plan, Cherokee plans to construct a new WWTP on a 40-acre parcel in the Chico Basin and pump the effluent into the Upper Black Squirrel Basin for recharge. Cherokee's wells are downstream of possible discharge points. Once the Chico Basin plant is operational, Cherokee will reverse the current wastewater flow and close the Peterson plant.

Cherokee's schedule for the new plant is as follows:

- Fall 2003 – site application through PPACG for the new WWTP
- March 2004 – design
- 2006 – new plant on line

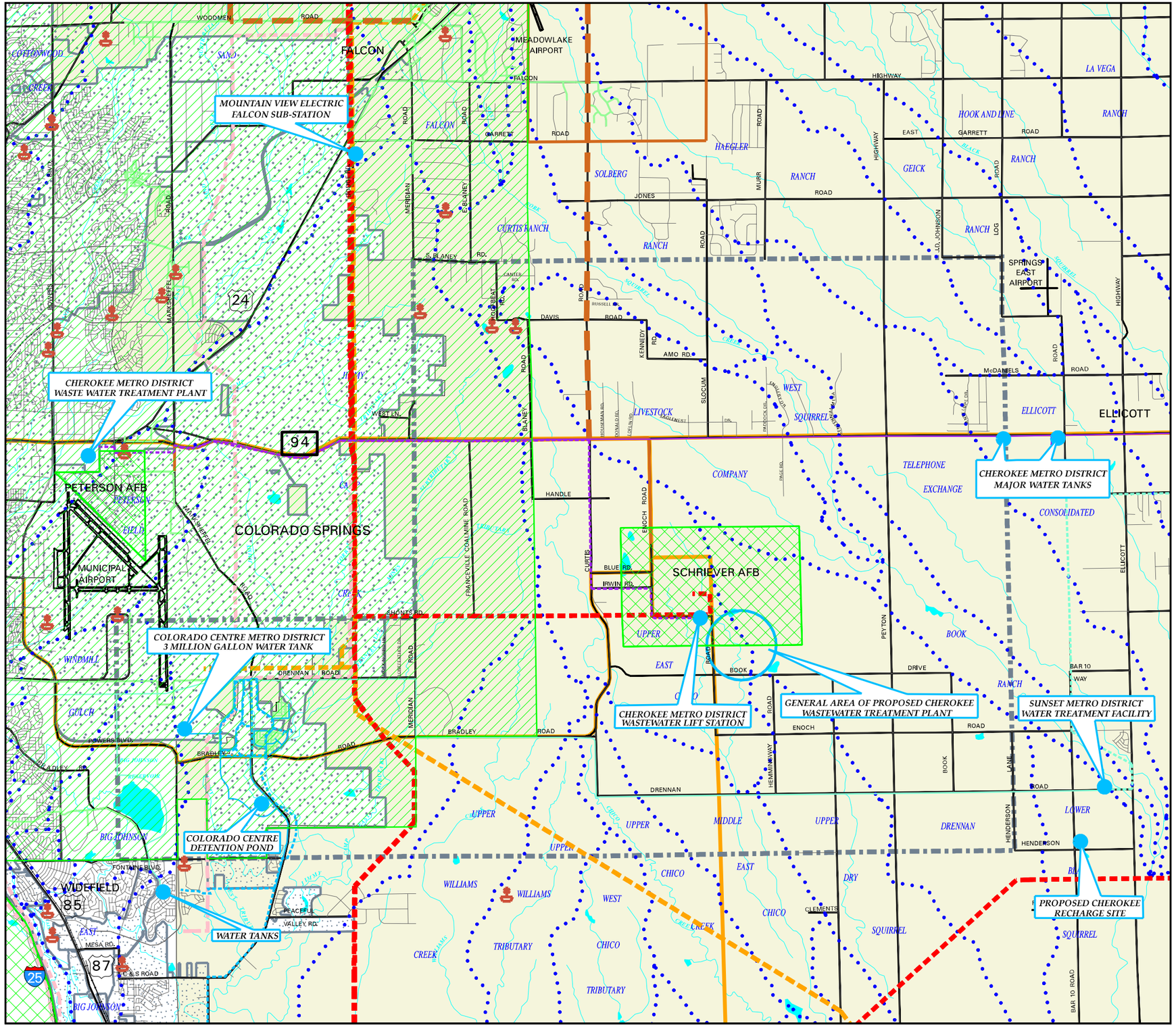
The new plant will also serve Meridian Ranch, Woodmen Hills, and other smaller developments. These developments would be contract users of the plant, not participants in the construction of the plant. Cherokee would own, operate, and maintain the WWTP. To connect the Falcon area developments to the Cherokee system, Cherokee is building a wastewater line from Falcon to the Schriever lift station.

Cherokee has already acquired a 70-acre parcel for effluent discharge. The parcel has 60 to 80 feet of sand for percolation and filtration. Because the sand would plug over time, Cherokee would eventually be required to scrape off the top and clean the sand.

Cherokee has undertaken a pilot project to assess the quality and the migration of the percolated water. They've trucked Colorado Springs effluent to the area and discharged it into the alluvium. They've also used raw water and a Bromide tracer. Map 5.3 (page 84) shows the general locations of the proposed plant and recharge areas.

Map 5.3
Utilities

Highway 94 Comprehensive Plan
El Paso County, Colorado



LEGEND

- Mountain View Electric Service Area
- CSU Gas Service Area
- City of Colorado Springs
- City of Fountain
- Military Installations
- Known Cell Towers
- Utilitiy Features
- CSU Electric Transmission Lines
- Mountain View Electric Transmission Lines
- CS Utilities Main Gas Lines
- People's Natural Gas Main Lines
- People's Natural Gas Main Feeders
- Colorado Centre Water Lines
- Colorado Centre Sewer Lines
- Cherokee Water Lines
- Cherokee Sewer Lines (Proposed)
- Area for Cherokee Wastewater Treatment Plant (Proposed)
- Pikes Peak Water Co Water Lines
- Pikes Peak Water Co Sewer Lines (Proposed)
- Fiberoptic Lines
- Valero Gas Line
- Drainage Basins
- Planning Boundary

SCALE IN MILES
0 1 2 3

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Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

Colorado Centre Metropolitan District

Photo 5.4 - Colorado Centre Metropolitan District

The Colorado Centre Metropolitan District is responsible for water and wastewater services to its District properties. Currently, the District provides services for 789 single-family equivalents (SFEs). Of the 789, 717 are single-family residential uses. The remainder are commercial or light-industrial uses. Ultimately, the District could provide services for nearly 2,500 SFEs. Future water plans call for a system to soften the water by lowering its mineral content. The current wastewater system is connected to the Fountain Sanitation District system near Ohio Avenue. Future plans call for the possible reactivation of the Lower Fountain Metropolitan Sewage Disposal District and the construction of a WWTP to be used by both the Colorado Centre Metropolitan and Fountain Sanitation Districts.

Regional Water and Wastewater Efforts

In the mid 1980s, El Paso County researched the formation of the County Operated Water and Wastewater System (COWWS). COWWS was an effort to bring some predictability to the provision of water and wastewater services in the unincorporated portions of the County. The impetus for the effort was the siting of Schriever AFB in central El Paso County. Although the COWWS effort is defunct, there is now some cooperation among regional water and wastewater providers, such as the Cherokee Metropolitan District and the Pikes Peak Water Company, with the potential for increased cooperation in the future. Such cooperation fulfills, at least in part, some of the objectives of the COWWS effort.

5.7 WATER QUALITY

The US Congress passed the federal Clean Water Act in 1972, requiring all development plans affecting water quality, such as wastewater plants, to conform with regional water quality plans. The PPACG is responsible for the regional plan, commonly referred to as the 208 Water Quality Management Plan. The 208 Plan is named after Section 208 of the Clean Water Act. The current 208 Plan was approved by the USEPA in 1999.

Within the PPACG, the Water Quality Management Committee (WQMC) answers to the PPACG Board of Directors regarding water quality issues. The Site Application Review Committee (SARC) is a subcommittee of the WQMC and reviews development proposals. Any amendments to development plans, new plant construction, or modifications of existing plants are reviewed by the SARC. The SARC uses 208 criteria to ensure consistency with 208 policies. The SARC also evaluates construction priorities within the PPACG planning area, and monitors non-point source water pollution. Non-point source water pollution is generated by agriculture, mining, roadway runoff, and, most notably, septic systems.

Generally, large wastewater treatment plants are well monitored within the County. Large plants have the advantages of economies of scale. These plants usually offer more cost-effective service, can more readily incorporate advanced technologies, and are more easily monitored. Conversely, septic systems are widely dispersed, many in number, and much more difficult to monitor. With the increase in population in the Highway 94 Planning Area and other portions of the County, non-point source water pollution will continue to be a concern, largely due to the proliferation of septic systems.

5.8 VALERO GASOLINE PIPELINE

Photo 5.5 - Valero Storage Tanks

The Valero gasoline pipeline, formerly known as the Diamond Shamrock pipeline, is an underground interstate pipeline, running the length of the County. A southern line runs from Dumas, Texas to the Valero storage facility east of the Colorado Springs Airport. A separate northern line runs from the facility north to Denver. The southern line was completed in 1993. The northern line was completed in 1996. The pipeline carries refined gas, diesel products, and jet fuel. The pipeline operates approximately 340 days per year. The amount of fuel carried in the line equates to the elimination of approximately 300 fuel trucks per day from area highways. Due to their strength, it is not possible to overpressurize the line. The greatest hazard to the pipeline is an external extrusion, such as a backhoe or an underground bore. Pipelines are buried 4½ feet below the ground surface. As with other utility lines, any significant earthmoving can easily place the lines at risk.

Photo 5.6 - Gasoline Pipeline

The entire pipeline is monitored from a central facility in Texas. Pipeline ruptures and the associated changes to pipeline pressure are electronically monitored. Monitoring allows the control center to divert or stop pipeline flows.

The storage facility east of the Colorado Springs Airport provides a link for the northern and southern portions of the line and allows the transfer of fuels to trucks. The eight storage tanks at the facility can store more than 10 million gallons of fuel. The facility operates 24 hours per day and generates approximately 100 truck trips to the facility each day. Unless delivering fuel to local gas stations, trucks generally follow Hazardous Materials routes, including Marksheffel Road, Woodmen Road, Powers Boulevard, Mesa Ridge Parkway, and IH 25.

5.9 GAS

Two companies provide natural gas service to portions of the Planning Area, Colorado Springs Utilities (CSU) and People's Natural Gas. Map 5.3 shows the main lines and service areas for the providers.

5.10 ELECTRICAL POWER

The Mountain View Electric Company presently supplies electricity for the unincorporated portions of the Planning Area. Mountain View Electric's service area covers more than 5,000 square miles and extends from Monument to the north, half the distance to Pueblo from southern Colorado Springs to the south, the Front Range to the west, and past Limon to the east. The Company is a consumer-owned utility and provides service to anyone who pays for connections. The company anticipates no problems serving the expanded needs of the area.

Ongoing utility considerations are development activity and access to existing lines. Mountain View Electric buries their lines 48 inches below the surface grade. Any significant grading for new developments can quickly reduce this required depth. New developments may also change drainage patterns leading to erosion around poles and lines. Optimally, developments are designed around the natural landforms and floodplains, thereby precluding most conflicts with utility lines.

One of the greatest utility concerns is roadway widenings. Mountain View Electric prefers to locate its lines in private rights-of-way. As a last resort the utility will locate lines in public rights-of-way. The company avoids public rights-of-way due to the likelihood that lines will ultimately be moved due to road widenings. Douglas County has an agreement with Mountain View Electric so that Douglas County pays whenever utility lines are moved due to roadway expansions. Mountain View Electric does not have a similar agreement with El Paso County. As a non-profit organization, Mountain View Electric can be significantly impacted by County actions. In the event that a road widening encroaches on a private easement containing electric lines, Mountain View Electric will approach landowners to negotiate new right-of-way (ROW) access. If unsuccessful, the utility will usually locate within the roadway ROW, an undesired outcome for the utility. Mountain View Electric also requires access for company trucks within utility easements. Level access may be problematic in narrow roadway corridors.

Corridors of concern are SH 94 and Curtis Road. Widening of either road to accommodate increasing local and Schriever AFB traffic will likely cause the relocation of utility lines.

A less obvious concern for the utility is raptor electrocution on power lines, particularly near Franceville Coalmine Road, Bradley Road, Ellicott Highway, and Crow's Roost.

5.11 TELEPHONE SERVICE

Photo 5.7 - El Paso County Telephone Company

Telephone service to most of the Planning Area is provided by the El Paso County Telephone Company (EPCT). The current service area extends west to Jimmy Camp Creek, east into Lincoln County, north to Judge Orr Road, and south to past Hanover Road. The service area covers 1,105 square miles. Company offices are at the intersection of SH 94 and Peyton Highway.

The company is classified as an Incumbent Local Exchange Carrier (ILEC) by the State Public Utilities Commission (PUC) and must serve anyone requesting service in their service area. Colorado has 26 ILECs. ILECs are regulated differently than Competitive Local Exchange Carriers, which serve only those areas they choose based on profitability. The El Paso County Telephone Company was formed in 1915 by a group of residents desiring service in eastern El Paso County. Around 1959, the service area for the El Paso County Telephone Company expanded to include the Rush and Edison communities in eastern and southern El Paso County, respectively. The service area has remained static since that time. Connection fees are determined by a formula developed by the State PUC.

All of the telephone lines are underground. Main trunk lines are buried 30 to 36 inches deep. For lines within County rights-of-way, lines must be at least 36 inches deep. Fiber optic lines, which are important

due to the amount of traffic they carry, are buried four to five feet deep to further protect the lines against inadvertent cuts.

Roadways present several challenges to EPCT. Roadway widenings may intrude into private easements containing telephone lines. Like Mountain View Electric, the Company prefers to locate their lines in private easements to avoid problems with road widenings. Most easements are 20 feet wide with some as narrow as 10 feet. Roadway agencies, such as the Colorado Department of Transportation (CDOT), do not necessarily coordinate with EPCT when widening roads. Acquiring new easements and moving lines unexpectedly then becomes a substantial financial burden for the Company. EPCT generally likes to plan major actions a year in advance. In some cases, EPCT becomes aware of projects only after lines are cut. CDOT's recent work at the SH 94 and Enoch Road intersection is an example of an unexpected project.

EPCT normally receives notice of a new development through the County's Subdivision Process. Sketch plans are noted with no immediate actions taken by EPCT. Only after development plans are finalized will the Company dedicate resources to line planning and installation.

As an ILEC, EPCT is required to provide service within 30 days of a customer's deposit. Depending on the type of development, 30 days may or may not be problematic. Optimally, a developer will coordinate with the Company concerning the number of lots to be created and the location of roads for a new development. EPCT will then provide a cost estimate to the developer for the installation of main phone lines in the development. After plans are finalized, roads are cut, and other utilities located, EPCT will dig their main lines. The developer then folds the cost of the main trunk lines into the lot prices. As sites are occupied, residents can easily hook into the main lines. Such a process ensures faster service for new residents and a high degree of predictability for EPCT.

Conversely, various scattered sites within the County are often divided into 40-acre tracts with no coordination with the Company or the County. Such a scenario avoids the subdivision process and the usual EPCT notification. For many of these previously undeveloped areas, phone lines were placed during 1971 and 1972 for ranches. The older lines may be unable to serve a high number of lots effectively and in many cases will not reach new developments. A new resident's request for service becomes the first notice to the Company that service is needed. Oftentimes, new trunk lines are needed for the area along with smaller lines to a residence. Such a scenario represents a major unanticipated expense for a new resident and intense short notice work for the Company.

5.12 TRANSMISSION TOWERS

As shown on Map 5.3, several overhead transmissions lines traverse the area, primarily through the Colorado Centre area. The western transmission line in Colorado Centre has enough capacity to serve a manufacturing plant, if one were to locate in the area. The Xcel Energy Company is also considering the expansion of an existing transmission line through eastern Colorado Springs.

Photo 5.8 - Transmission Towers

5.13 TELECOMMUNICATIONS TOWERS

Several cellular telecommunication towers are located near the western edge of the Planning Area, as depicted on Map 5.3.

Photo 5.9 - Telecommunications Tower

5.14 UTILITIES COMPOSITE

Table 5.2 presents a composite of various utility providers within or near the Planning Area.

Table 5.2 Utility Providers

Utility	Existing Service	Notes
WATER & WASTEWATER		
Cherokee Metropolitan District	Provides potable water and wastewater service to Schriever AFB	Owns wells in Upper Black Squirrel Creek alluvium
	Operates Sunset WWTP	Investigating WWTP south of Schriever
Pikes Peak Water Company	Does not directly provide water service	Owns two agricultural wells with 800 acre-feet capacity
		Owns Sunset WWTP
		Owns 2,000 acres in vicinity of the Ellicott Springs development
Colorado Centre Metropolitan District	Provides potable water and wastewater service	Plans system to reduce mineral content of potable water
		Will pursue a WWTP in conjunction w/ the Fountain Sanitation District
ELECTRIC		
Mountain View Electric	Supplies both Schriever AFB and Planning Area residents	Currently has a surplus of power
		Anticipates a 10% growth rate per year
		Maintains a substation along its southern transmission line for future expansion
		Schriever has its own substation
GAS		
Peoples Natural Gas	Supplies both Schriever AFB and some northern portions of the Planning Area	Capacity depends on supplier
		Can expand service
		$500 - $550 per customer hookup fee
Colorado Springs Utilities (CSU)	Provides service to Colorado Centre	CSU has ample gas supplies
		Line extensions are readily handled
TELEPHONE		
El Paso County Telephone	Provides service to most areas except Schriever AFB	Prices for hookups vary

Source: Respective service providers

Since 1985 numerous upgrades have occurred in the provision of water, electricity, gas, and telephone service within the Planning Area. Most of the upgraded facilities were a result of Schriever AFB. Cherokee Metropolitan District extended a 10-inch water service main to the Base, Peoples Natural Gas Company added 4 and 6-inch gas mains, and Mountain View Electric significantly upgraded electrical service.

5.15 COST OF COMMUNITY SERVICES

Prevailing wisdom asserts that development within unincorporated portions of the County will yield increasing tax revenues. While almost all types of development generate some revenues, the critical issue for the County is whether these revenues are sufficient to cover the public services demanded by the new development.

Studies in Colorado and across the nation found that residential uses do not generate sufficient revenues to cover the costs of services they demand, while farm, forest, open space, commercial, and industrial uses all generally produce revenues in excess of their costs. Overall, residential development not balanced by business growth and agricultural preservation measures will either increase property taxes or result in declining levels of public service.

Other study results found that:

- Rapid population growth decreases the level of service provided to existing residents. High growth rates, over five percent annually, see the highest levels of service deterioration.
- Low development densities are among the most costly to service. Costs also increase rapidly at high development densities of over 1,750 people per square mile, or 2.7 persons per acre.
- Contiguous development patterns require fewer service expenditures than fragmented development patterns.
- Economic growth is stimulated by quality of life factors such as environmental quality, scenic beauty, recreation opportunities, and social amenities (Haggerty, 2000).

While residents now have more choices of where to live, shop, and recreate, it comes at a cost. People find themselves driving more often and further for goods and services that in other locations were closer and more convenient.

These issues are relevant to the Planning Area. For vacant parcels, many government services are provided long before houses are complete and tax assessment status is converted to a residential classification. Road use and demand for local government services are often highest during the planning and construction phases. Such items as substandard infrastructure, if accepted by the County, or waivers to sidewalk and paving standards, if approved by the County, create significant future public expenditures.

Overall, increasing gross tax revenues through development without considering the associated costs or the type of development can result in net financial losses for the County. Additionally, fiscal benefits and the costs of growth are only one measure of the numerous effects of population growth and changing land use patterns. Other environmental and community values to be considered include schools, comfortable and safe communities, a diverse and healthy economy, recreational opportunities, and wildlife habitat. Successful communities develop strategies that consider the fiscal, economic, social, and environmental aspects of new growth.

Individual Costs

Like community costs, individual costs are another consideration for those who live or work in the Planning Area. While housing and land prices are generally lower than those of nearby cities, both household startup costs and daily living expenses can be higher. Additionally, a number of intangible factors

should be considered. Initial expenses when developing a new residence on raw land include electric, propane, septic, telephone, and well installations. Costs are highly variable and subject to a host of conditions, including distance to existing trunk lines and depth to groundwater. Startup costs can run from approximately $14,000 to $20,000 or even $30,000. Costs are especially great if residences are several miles from existing lines.

Given the distance from urban areas, residents typically commute twice as far as residents of Colorado Springs. Annual gasoline costs alone can easily amount to $4,000 for two vehicles, twice the amount paid by residents of Colorado Springs.

Other intangible factors relate primarily to the Planning Area's location and weather. Wind, snow, hail, tornadoes, and blowing dust are all prevalent in the area. The lack of community services can be significant for those unable to drive, such as children and the elderly.

Despite its sometimes inhospitable nature and costs, the Planning Area has some features not present in a city. Many residents listed these intangible factors as the reason they chose to live in the area. Although blowing dust can be bothersome during dry periods, residents do not contend with the pervasive brown haze over the City of Colorado Springs. The air quality in Colorado Springs will likely worsen as the City grows. PPACG predicts that carbon monoxide pollution will increase by 70 percent in the next 20 years in Colorado Springs.

Other intangible benefits of the Planning Area include enviable views of Pikes Peak, the Front Range, the Sangre de Cristo Range, and the Wet Mountains. Planning Area residents surveyed listed their view of the mountains and the open spaces as the most important features to be protected in the area. The Planning Area also affords people the opportunity to own a large parcel and raise animals. Additionally, the area gives people a quiet atmosphere and seclusion not present in an urban environment.

Photo 5.10 - Eagle Nest Drive

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Chapter 6 – Transportation

6.1 INTRODUCTION

Transportation touches many facets of life. In addition to access to work, schools, and services, transportation provides links to other neighborhoods, creates a venue for exercise, and can become a community space that facilitates interaction with neighbors. Transportation facilities also have negative impacts, such as noise, vibration, air pollution, water pollution, congestion, and a barrier effect, which can reduce residents' quality of life and lead to health problems. Overall, an effective transportation system facilitates access while minimizing these detrimental effects.

Advance planning is necessary to ensure adequate rights-of-way, a well connected and viable transportation system, land use efficiencies, avoidance of environmental damage, and properly phased projects. In combination, these factors help minimize public and private costs and result in a transportation system that adequately serves the needs of residents.

6.2 AIR TRAVEL

Although somewhat hidden, aviation is an important component of an effective transportation system and a major presence in El Paso County. The County features eight significant public or publicly-owned airfields and several private-use runways. The two airfields with the most direct influence on the Planning Area are the Colorado Springs Municipal Airport and the Springs East Airport. The Colorado Springs Airport supports commercial, general aviation, and military operations while the Springs East Airport provides general aviation services to smaller aircraft. Neither airport is wholly contained within the boundaries of the Planning Area. The eastern runway of the Colorado Springs Airport and some Airport property extend into the Planning Area. The Springs East Airport lies adjacent to the northeast corner of the Planning Area. For the purposes of the Highway 94 Plan, airports will be discussed from the perspective of land use. Discussion of these land use impacts is contained in Chapters 2 and 8.

Photo 6.1 - Springs East Airport

6.3 ROADWAY TYPES

El Paso County classifies roads according to the following:

Table 6.1 Roadway Types

Roadway Type	Description
Paved	A mixed bituminous surface or a bituminous penetration road on a flexible base
Low Grade Paved (Chip & Seal)	A bituminous surface course with or without a seal coat and with a total thickness of less than one inch
Gravel	A road whose surface consists of mixed soil, stabilized soil, gravel, or stone
Unimproved	A natural surface road maintained to permit bare passability for motor vehicles
Primitive	An unimproved road usable by conventional vehicles on which no maintenance is performed

Source: El Paso County Department of Transportation

Map 6.1 (page 95) depicts roadway surface types along with traffic volumes and accident locations. Low Grade Paved roads, commonly known as "chip and seal" roads, feature a gravel base with a thin layer of fine-grained gravel embedded with tar. Due to funding shortfalls, the low quality of chip and seal roads, and the inevitable breakdown of the surface, the County is now returning several chip and seal roads to gravel. The County also maintains approximately seven miles of unimproved and primitive roads. Local streets are maintained by the County if built to acceptable standards and properly dedicated during the subdivision process. The County does not maintain private roads.

Maintenance of the roadway network can be a challenge for the County Department of Transportation (DOT) based on a high number of lane miles along with wear and tear, particularly from trucks. Planning Area roadways accommodate a high number of trucks associated with gasoline, rubbish, potato, and manufactured home transport. The network also accommodates trucks related to aggregate extraction, construction, and propane deliveries. Given their combination of high weights and speeds, trucks exact a heavy toll on local roadways. Consideration of truck traffic is important to roadway classifications and designs.

6.4 FUNCTIONAL ROADWAY CLASSIFICATION

The purpose of planning a street system is to ensure access, mobility, and safety for all travel modes. A clear understanding of the functional relationships between various travel modes and street types is essential. Functional classification refers to the role of the roadway in the larger transportation system. The function of each street, along with topography and other existing features, determines its location, alignment, grade, width, and relationship with other streets.

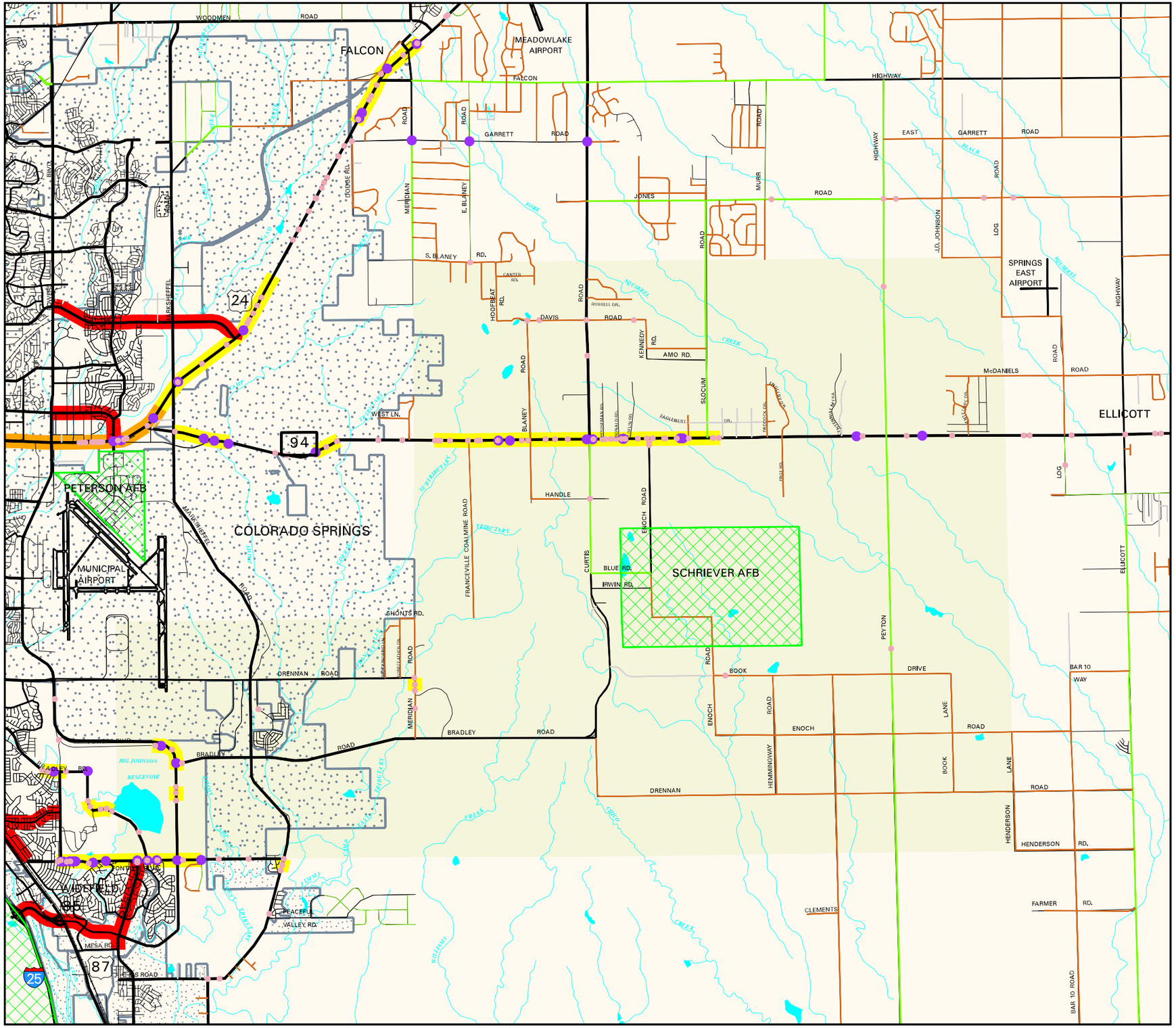
Currently both the class names and the associated rights-of-way are under revision in the Subdivision Criteria Manual. General classifications are as follows:

Freeways

Freeways are limited access highways intended to move high volumes of automobile traffic at relatively high speeds over long distances. They are direct links between major automobile traffic generators and have controlled access to maximize uninterrupted automobile traffic flow and automobile safety. Freeways connect the local area with cities outside the region. Theoretically, they are not intended to serve local traffic needs. Optimally, local traffic needs are met through a well-connected arterial system. IH 25 is the only freeway that serves El Paso County.

Arterials

Arterials are continuous routes intended to serve the high volume needs of both the local area and the region. Access is controlled by planning the locations of intersecting streets, left turn lanes, and signalization. Street function can be protected through ordinances regulating the number and location of median breaks and driveway cuts. Due to relatively high automobile speeds, protective measures are needed for cyclists and pedestrians along these routes.



Map 6.1
Roadways & Accident Counts

Highway 94 Comprehensive Plan
El Paso County, Colorado

LEGEND

ACCIDENT DENSITIES

- Major Roads With a High Accident Density (>50/Mile) (1997-1999)
- Major Roads With a High Accident Density (25-50/Mile) (1997-1999)
- Major Roads With a High Accident Density (10-25/Mile) (1997-1999)

ACCIDENTS OCCURING BETWEEN 1997-1999

- Sites of Accidents
- Sites of Multiple Accidents

Source: El Paso County Department of Transportation, 2000

ROAD SURFACES

- High Type Pavement (Arterials)
- High Type Pavement (Collectors)
- High Type Pavement (Local Roads)
- Low Grade Pavement (Arterials)
- Low Grade Pavement (Collectors)
- Low Grade Pavement (Local Roads)
- Gravel
- Graded & Drained
- Unimproved

- City of Colorado Springs
- City of Fountain
- Military Installations
- Planning Boundary

SCALE IN MILES

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Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

Collectors

Collectors provide access and movement within residential, commercial, and industrial areas. Operating speeds are slower than arterials and turning movements are expected. The County discourages the fronting of residences on collectors. Collectors should be designed for medium volume, low speed traffic with adequate facilities for bicycles and pedestrians.

Local Streets

Local streets provide access to relatively small areas. Streets should be designed for low volume, low speed traffic.

6.5 CURRENT ROADWAY NETWORK

Overall

The existing roadway system in the Planning Area is adequate for limited rural transportation needs, where road names, signage, network continuity, distances between uses, and road surfaces are acceptable for a low, stable population and agricultural uses. Because of substantial travel distances and the low density nature of development in most of the Planning Area, the current system emphasizes auto travel.

The transportation system is the County's single largest expenditure. The majority of funding is used to maintain existing facilities. Increasing population and employment have created a situation where available funding is unable to meet maintenance needs. Overall, funding shortfalls and a lag time in construction have resulted in a system that reflects historical uses rather than emerging trends.

County Maintained Roads

With the exception of SH 94, the County maintains all major roads. Several private roads have not been accepted by the County for maintenance. SH 94 is the major east/west transportation corridor in the Planning Area and connects metropolitan Colorado Springs with eastern El Paso County. Because the State has designated US 24 to the north as a primary highway, SH 94 is considered a secondary state highway. US 24 carries the majority of interstate traffic between Colorado Springs and IH 70 in Limon. Bradley Road provides east-west access to areas south of the Colorado Springs Airport.

By resolutions of the Board of County Commissioners in the late 1800s and early 1900s, which addressed different portions of the County, a 60-foot right-of-way (ROW) is reserved along all section lines. The exception is if a property was patented, or transferred to private ownership, prior to the resolutions. In such cases, the section lines cannot be encumbered without the use of another mechanism, such as a purchase or eminent domain. A 60-foot ROW is adequate for most roadways in the Planning Area. Most County gravel roads consist of a 30-foot roadway surface within a 60-foot ROW. The County reserves a 120-foot ROW for arterials.

Given the roadway resolutions early in the County's history, roads in the Planning Area generally follow section lines, but only Peyton Highway crosses the entire Planning Area along the same line. Most other roads are offset as they pass through the Area. Offsets and dead-ends may be desirable, however, to avoid sensitive areas, such as floodplains, habitat, or steep slopes. The avoidance of these features precludes

unnecessary drainage structures and excessive cut and fill operations. Provided that roadways connect in other locations, they can still facilitate access.

A variety of roadways provide regional access near Colorado Centre. Due to its size, the Colorado Springs Municipal Airport acts as a travel impediment to areas north and west of the Planning Area. Coupled with Jimmy Camp Creek and Big Johnson Reservoir, it limits through road connections. While acting to limit connections, these features also give the area an identity distinct from other parts of the County.

To facilitate the movement of high volumes of commuter traffic, the County plans to widen Woodmen Road to four lanes. Ultimately, the County plans to rebuild and widen Curtis Road as well.

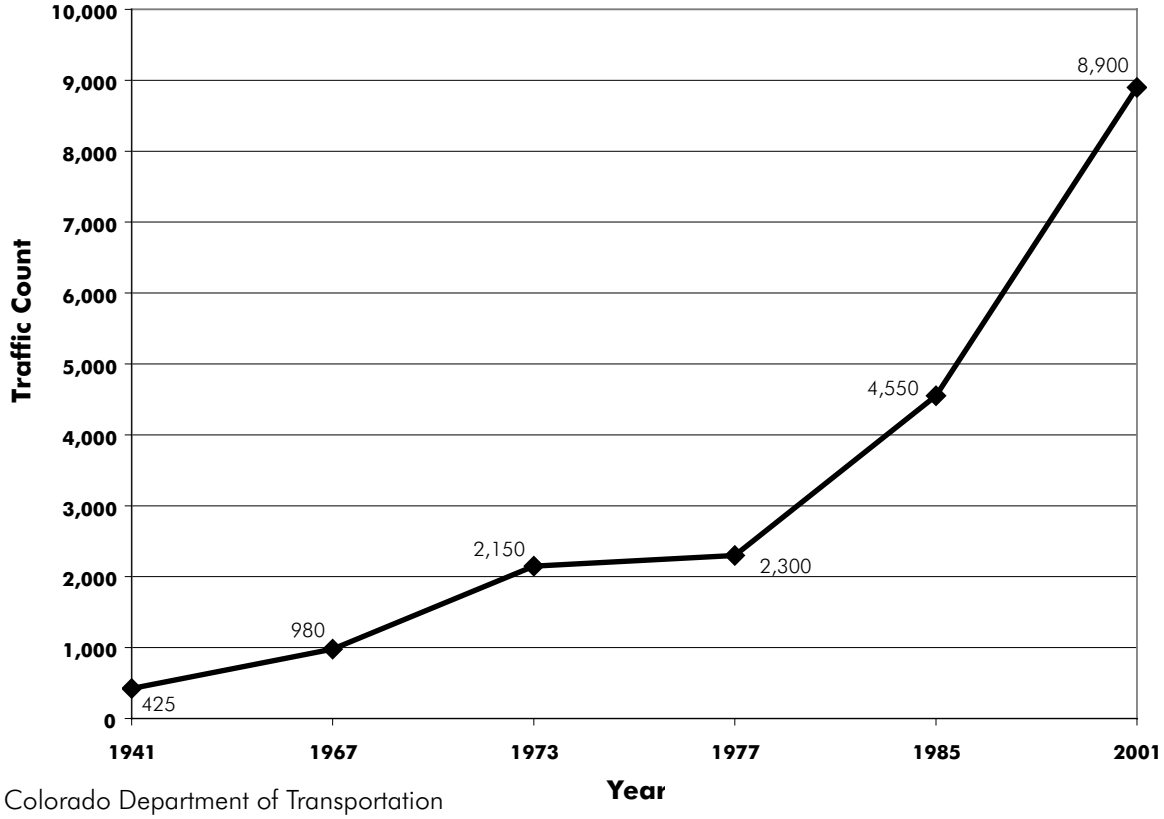
State Highway 94

Within the Planning Area, SH 94 is a two-lane paved roadway within a 100-foot ROW. Drainage structures, including the replacement of old timber bridges, were completed during the past few years, along with the construction of eight-foot shoulders. The Colorado Department of Transportation (CDOT) plans to obtain an additional 100 feet of ROW along the southern side of the roadway from its juncture with US 24 east to Slocum Road to allow future widening.

6.6 TRAFFIC COUNTS

Traffic counts have risen steadily in the Highway 94 corridor. Figure 6.1 shows traffic counts for SH 94 west of Corral Bluffs.

Figure 6.1 State Highway 94 Traffic Counts



Source: Colorado Department of Transportation

6.7 COMMUTERS

Schriever Air Force Base

Increases in traffic volumes and traffic conflicts are due to a number of factors. One of the most obvious is the increase in the number of personnel at Schriever Air Force Base (AFB). Base employment is approximately 4,500 and could grow as high as 10,000. With little nearby housing, Schriever personnel commute long distances each day. A Base survey, completed in 2000, found that 85 percent of employees live northwest of the Base. Roads most impacted by the commuters include Enoch Road, Curtis Road, Falcon Highway, and Woodmen Road. To better handle the traffic, El Paso County reconstructed the Enoch Road and Curtis Road intersections along SH 94 and the State widened the shoulders on SH 94. The Defense Access Road project, completed in 2000, also widened Bradley Road to southeast Colorado Springs and the Security-Widefield area.

In 2001, portions of Enoch Road and Blue Road were vacated by the County and transferred to the Air Force. Enoch is closed at the Base boundary to through traffic. The County extended Book Road west to Curtis Road prior to the closure of Enoch Road. Enoch Road is now the primary gate access. In the future, Schriever will construct entry gates on Irwin and Enoch Roads at the Base perimeter.

Anticipating high traffic counts, the original Environmental Impact Statement (EIS) for the Consolidated Space Operations Center, now Schriever AFB, advocated an aggressive ride-sharing program with a participation goal of 35 percent of Schriever employees, adequate commuter parking (Park and Ride) facilities, and preferred parking spaces for carpools and vanpools. Park and Ride facilities are detailed in the 2002 update to the PPACG Regional Park and Ride Study. Lastly, the Schriever EIS recognized the eventual need for a southern access route to the Base and the possibility of widening SH 94 to four lanes.

In response to these concerns, the federal government provided a grant to Schriever AFB in 1997 for City bus service from Colorado Springs. Although used extensively by Base personnel the service was discontinued after one year due to lack of continued federal funding. Base planners, working with the City of Colorado Springs, have once again reestablished bus service to the Base. Schriever AFB also has a Ride-Sharing program. El Paso County might also construct two Park and Ride facilities for Base personnel to help mitigate some congestion problems in the area. Like most traffic management strategies, these programs will not eliminate the congestion associated with a major employer like Schriever AFB, but may help flatten some of the greatest peak hour congestion effects.

Colorado Springs Municipal Airport

With the consolidation of military space operations at Peterson AFB and the expansion of the Colorado Springs Airport, the Airport will begin to exert a greater indirect influence on the Planning Area. No roads directly connect to the Airport from the Planning Area. Drennan Road west of the facility provides the only passenger access to the Airport. Peterson AFB traffic continues to use Peterson Road and US 24. Traffic seeking

Photo 6.2 - Airport Sign

routes around the Airport can use SH 94/US 24 to the north and Bradley Road/Powers Boulevard/Drennan Road to the south.

Residents

Schriever AFB is not, however, the only traffic generator in the area. Traffic volumes in the Planning Area have increased substantially during the past several years, independent of Base employment. It is assumed that much of the traffic, especially on SH 94, is composed of eastern County residents who travel to Colorado Springs to work and shop. Typically, as more residents move to the area, the city problems they hope to escape, such as congestion, come with them, and the features they seek, such as a rural character, are diminished. In the SH 94 corridor, high-speed commuters are mixed with buses, landfill trucks, fuel trucks, propane trucks, mobile home trucks, stranded motorists, and other local traffic. Development along SH 94 has the potential to generate more single-occupant vehicles, disrupt the functional integrity of the road and degrade the living environment of scattered residents. Other vehicles, such as school buses, will have to contend with increasing automobile traffic throughout their service areas.

Commercial activities in the burgeoning Falcon area and along the Woodmen Road corridor may influence nonwork trips in the Planning Area, particularly along Curtis Road.

Other Employment Centers

The Foreign Trade Zone in Colorado Centre houses several businesses, including the Colorado Gold Chips Company, a manufacturer of potato chips. The Colorado Gold Chips site generates approximately 20 truck trips a day. Most delivery trucks use IH 25, South Academy Boulevard, Drennan Road, Powers Boulevard, and Bradley Road. Trucks hauling potatoes from agricultural areas to the north and east use SH 83, SH 94, and Marksheffel Road. The Olympic Committee warehouse, located in the same area, employs approximately 250 people and utilizes many of the same roads.

Photo 6.3 - U.S. Olympic Committee Warehouse

Photo 6.4 - Waste Management Landfill

The Valero storage facility east of the Colorado Springs Airport provides a link for the northern and southern portions of the Valero underground gas pipeline and allows the transfer of fuels to trucks. The eight storage tanks at the facility can store more than 10 million gallons of fuel. The facility operates 24 hours per day and generates approximately 100 truck trips to the facility each day. Unless delivering fuel to local gas stations, trucks generally follow Hazardous Materials routes, including Marksheffel Road, Woodmen Road, Powers Boulevard, Mesa Ridge Parkway, and IH 25.

Although the Waste Management landfill employs only about 10 persons, it generates about 230 truck trips to and from the site from Monday through Friday and a lesser amount on Saturday. 90 percent of the truck traffic comes from Colorado Springs via SH 94. A number of smaller trucks arrive at the landfill from the east via SH 94 and from the north via Curtis Road. Waste Management personnel expect the

truck traffic to remain at current levels for the indefinite future due to the increasing use of waste transfer stations across the region. In 2007, after the current landfill is closed and operations shifted north to the landfill extension, landfill access will be from Blaney Road.

6.8 ACCIDENTS

The number of accidents on SH 94 is disproportionately higher than traffic counts. Most of the accidents are due to excessive speeds. In addition to excessive speeds, inattentive driving, alcohol, animals, and inclement weather contribute to accidents. With the recent expansion of SH 94 shoulders, motorists now have fewer visual cues to indicate that they are speeding.

Unlike SH 94, several roads in the Planning Area feature drainage ditches adjacent to travel lanes and little if any shoulder area. Stranded motorists have little choice but to remain on heavily traveled roads blocking other traffic. These conditions can lead to collisions. The area has a complicated mix of traffic types, speeds, and destinations. Due to such conditions, patrols have noticed an increase in tailgating, road rage, and accidents as traffic volumes climb.

6.9 NETWORK AND ROADWAY DESIGN

Hierarchy Considerations

While the hierarchy of streets is a generally successful device to meet the needs of a stable number of road users, the methodology breaks down as road design capacity is exceeded, resulting in congestion. One of the means to augment the hierarchy methodology is through connectivity standards. Connectivity basically requires limited block lengths and several route options. Limited route options generally cause traffic to overwhelm a facility as many cars converge on a particular point. An increased number of connections in the roadway system helps manage the congestion.

Because the hierarchy of streets looks only at automobile travel, special considerations are necessary for cyclists and pedestrians. Well developed sidewalk networks and traffic calming are important for these network users, especially within and between urban density developments.

Regional trails are another network consideration insofar as it may be appropriate in certain cases for trails and roadways to share rights-of-way. Separated grade crossings ensure safe travel for trail users. If considered early in the roadway planning process, trails can be integrated into the roadway design, thereby precluding costly and difficult retrofits.

General Roadway Considerations

Few physical facilities are as permanent as streets, and once buildings are erected on abutting properties, widening or moving roadways is likely to be difficult and expensive. Since approximately 25 percent of the developed area of the County is devoted to streets and their associated rights-of-way, roadway planning is a prime planning concern.

Roadways may also affect land use decisions for adjacent areas. The greatest automobile traffic volumes are created by trips from residential areas to places of employment and shopping, and by the transportation

of materials to and from commercial, industrial, and construction areas. Street system design and classification depend on the type of user and the volume, direction, and distance the expected traffic must travel. There is a need to preserve corridors for future conditions, including significant setbacks on larger capacity roads for future widenings, drainage ways, and utility corridors.

From the standpoint of both maintenance costs and circulation, the system should also be designed to an acceptable quality. Within developments, short block lengths, a minimum of dead-end roads, and adequate connections help create a flexible system with a minimum of congestion. It is also incumbent upon the County to have a regional roadway plan in place before development occurs. A plan helps property owners identify the County's intention to develop an arterial system and ensures future system connectivity. Arterials need not be constructed to full capacity if full capacity is not required for several years. Construction can be coordinated in accordance with an overall schedule of anticipated network needs and capacities. Optimally, required rights-of-way for individual projects are designated early in the development process, preferably with the preliminary plat phase of the subdivision process, maximize connectivity, and are built with an ultimate roadway plan in mind. Taken together, these network and design requirements provide an interconnected street network that facilitates safe, efficient, and pleasant driving, walking, and cycling.

Access

Major connecting roads cannot function adequately with too many access points. The number of access points is an important consideration in rural or fringe areas where design speeds are relatively high, allowing motorists to cover considerable distances at a constant speed.

A major County issue is access control on rural arterial corridors, including Peyton Highway and Drennan Road. Too many access points compromise the effectiveness of the roads to transport traffic over long distances and undermine agricultural uses. Too few access points and too wide a road encourage high speeds.

Emergency Response Considerations

Emergency responses are affected by the roadway network. Paramount among fire district concerns is access to each residence in a development. District response plans are evaluated by the Insurance Services Office (ISO) based on access and connectivity for an entire area, not merely individual developments. Connectivity between developments is therefore critical. Discontinuous street patterns, whether for arterials or neighborhood streets, also present problems for the Sheriff's office during emergency responses. Especially confusing are developments with only one access point. An accident or a fire at the development entrance could complicate a response. Optimally, each development would feature multiple access points, limit block lengths, and offer alternatives to nearby regional roadways.

Road conditions also impact the ability of fire fighters to reach the site of an emergency. Based on the problems associated with wind-deposited sands in the Planning Area and much of El Paso County, fire districts prefer paved roads. Unpaved roads are susceptible to wind and water erosion. During dry periods there is insufficient moisture to keep sandy soils compacted. During wet periods, sandy soils easily wash away. Grading along main commuter routes also leaves large ridges of dirt through intersections. When crossing these intersections, fire vehicles, which weigh between 40,000 and 60,000 pounds, effectively encounter "speed bumps," which can damage vehicles and equipment.

Given the lack of connectivity for area roads, any blockage of major thoroughfares can have far-reaching effects, for commuters as well as emergency personnel. Blocking any one roadway may cause the diversion of hundreds of vehicles, many of which may be unfamiliar with alternative routes. Emergency response times are substantially increased when weather conditions make key roadways such as SH 94 impassible.

Photo 6.5 - Ellicott Fire Station #2

School Considerations

In addition to the location of a development and the distance from the nearest school campus, standards within and between developments can impact a school district and the children they serve. Critical issues for school districts include connectivity within and between developments, sidewalks, and street standards. Connectivity requirements ensure access and circulation within and between developments by creating multiple and safe access points, short block lengths, minimal dead-end streets, and a well-connected system of sidewalks from residences to schools. Connections between developments ensure that children do not walk or cycle excessive distances to schools. Dead-end streets can be used, but only where topography or other natural features dictate their use. School districts generally use a 1½-mile radius for elementary schools before they will bus students and a 2½-mile radius for middle and high schools. Within these radii children in adjacent developments should have fairly direct routes to the nearest school. Connectivity is also important so that districts minimize bus travel times and bus operating costs.

School children have experienced problems after the County approved development waivers for sidewalks and street paving. Lack of sidewalks or a disconnected system of sidewalks force children into the streets during inclement weather where they compete with cars and trucks for clear pavement. While motor vehicle users are relatively protected within the confines of their vehicle, pedestrians and cyclists have no such protection. The Institute of Transportation Engineers (ITE) confirms these concerns. According to the ITE, pedestrian and bicycle injuries increase markedly in collisions with automobiles traveling above 20 miles per hour. Above 35 miles per hour, injuries usually endanger life or are fatal (ITE, 18). It is therefore imperative that road designs provide adequate and appropriate space for nonmotorized travelers, such as cyclists and pedestrians. If not constructed initially along with streets as part of the development approval, installation of sidewalks, crosswalks, and medians later become the responsibility of the County at significant cost and effort. Overall, children need well-connected and continuous sidewalk and crosswalk systems to walk or cycle to their schools.

Photo 6.6 - Ellicott Elementary School

Lack of street paving is another district concern. Lack of paving causes damage to buses, increased maintenance costs, and discomfort to passengers. Dirt roads also necessitate the use of isolated pick up points so that buses do not drive on rough dirt roads. Developments with a mix of paved and dirt roads later become liabilities for the County and lead to increased maintenance costs.

Traffic Impact Analysis

One of the analytical tools employed by transportation planners is a traffic impact analysis (TIA). TIAs gauge the increase in traffic generated by new developments. Development approval should be conditioned on compliance with reasonable measures by the developer to accommodate increases in traffic. Such requirements ensure that public health, safety, and welfare are protected and that the County is not burdened with developments having inadequate infrastructure. Conversely, TIAs ensure that developers pay only for those improvements attributable to their developments and that the County does not exact unfair concessions.

Transportation plans generally use travel demand models to estimate existing and future traffic volumes. While traffic modeling is a useful tool for planning future roadways, it is but one of several inputs and does not take the place of sound policy judgments. To be effective, models must be regularly updated to reflect development and land use changes.

One serious modeling limitation of TIAs is that models generally calculate future automobile movements but do not consider pedestrian or cyclist trips within localized areas. As such, modeling offers no indication of which traffic control devices will facilitate safe pedestrian and bicycle travel or enhance pedestrian and cyclist safety. Subsequently designing roadways without consideration for cyclists or pedestrians can lead to unsafe conditions for all users of a facility. Adequate attention must be paid to these design features, such as crosswalks, sidewalks, and bike lanes. The County anticipates designs sensitive to the needs of all users as roadways are developed.

Speeds

The Highway 94 survey had 170 write-in comments related to traffic. Several comments related to excessive speeds. Roads within the Planning Area are generally straight and continuous, giving drivers little motivation to drive within the posted speed limits.

Speed studies are commonly used to establish speed limits for regional roadways. Once a speed study is complete, traffic engineers calculate a speed limit using the "85th percentile." The 85th percentile is the speed at which 85 percent of drivers were driving at or below. The net effect is that driver behavior is the primary criteria when establishing the speed limit, rather than community considerations. Street design weighs heavily in automobile speeds. Given that design standards view mobility and uninterrupted flow as primary concerns, speed limits are generally high with many motorists traveling above the posted speed limits.

Although the State Highway Patrol and County Sheriff can affect speeds to some degree, other methods can be employed to keep motorists within posted speed limits. These include:

- Roadway designs and visual cues that preclude excessive automobile speeds and help ensure bicycle and pedestrian safety
- Landscaping, berms, or raised areas adjacent to roadways that visually narrow the driving environment and diffuse or buffer traffic noise
- Lane width limits of 12 feet to reduce speeds, construction costs, maintenance costs, storm runoff, and heat buildup

- Road designs that provide adequate and appropriate space for nonmotorized travelers including separate bike lanes for experienced cyclists
- Sidewalks separated from roadways by landscaped buffers
- Crosswalks that are designed to minimize pedestrian walking distances across roadways - Crosswalks can be clearly identified through paint markings, bricks, or textured concrete. Larger roadways can incorporate separated grade crossings, particularly near schools, and landscaped medians. Landscaped medians act as a refuge for pedestrians and cyclists when crossing wide streets.

Accommodation of Non-Motorized Travel

Public policy, circulation, and access are all considerations for roadway designs. Children and the elderly deserve special attention, especially within and between developments, due to their lack of automobile mobility. In many cases their automobile service is either unreliable or nonexistent.

6.10 FINANCING METHODS

County fiscal policies generally relate to historic conditions rather than emerging suburbanization in unincorporated areas. As such, the County now has a roadway funding shortfall. Available funding covers both maintenance and new construction.

Transportation-related requirements are generally one of the costlier aspects of development. Funding is in many ways dependent on the type of construction proposed. Although somewhat distinct, road financing is similar to drainage and other utility financing. The County uses the following to fund transportation related construction:

- Cost recovery measures
- Special studies
- Local improvement districts

It is the policy of the County that development projects bear the costs of the transportation impacts they create. Development projects typically require new road construction and the expansion of existing roads that serve the project. Minimum improvements within County rights-of-way are delineated in the Subdivision Regulations. The costs of scheduled construction and maintenance are borne by the County and paid out of the County Road and Bridge Fund.

El Paso County has the authority to create special districts and assessment districts to fund transportation projects in cases where it is prudent to coordinate and construct larger projects at one time rather than in a piecemeal fashion by individual developers. The County normally creates these districts by petition.

Special districts are quasi-governmental entities with the power to tax and issue general obligation bonds. They are operated by their own board of electors. A special district, which provides three or more types of improvements or services, such as water, sanitation, law enforcement, roads, and street lighting, is called a metropolitan district. In special districts, obligations may be paid through mill levies.

Assessment districts differ from special districts in that they have no board of electors or direct taxing and bond issuing authority. The County issues revenue bonds for the district, which are paid by a direct lump sum assessment to each property.

6.11 ENVIRONMENTAL FACTORS

Weather

Because of elevation differences between the Planning Area and Colorado Springs and the distance from the mountains, weather conditions in the Planning Area may differ dramatically from Colorado Springs. Weather in the Planning Area can feature snow, sleet, freezing temperatures, or tornadic activity while the metropolitan area is largely unaffected. The open landscape of the Planning Area makes it especially susceptible to high wind conditions. These winds can transform even minor snowstorms into blizzards, which make roadways impassable. Snows have few windbreaks and quickly cover portions of roadways. The undulating terrain can also mask hazardous conditions, such as glare ice and drifting snow, until a motorist is upon them. SH 94 closes due to snow conditions approximately three times each year. Closures may last several days. The usual closure location is Marksheffel Road.

Snow closures can be partially mitigated by snow fences, a project recently undertaken by the State. Easements were obtained and fences installed to a point well eastward of the Planning Area. Because of its lower elevation, Drennan Road is less susceptible to weather-related closures.

The Area also features wide and ill-defined floodplains prone to quick inundation. Rainfall can create floodwaters that quickly inundate roadways.

Fugitive Dust

Fugitive dust is an air pollution concern along the entire Front Range, particularly during droughts. The dust created by vehicles driving on unpaved roads is the primary culprit. Because of dust problems, Colorado Air Pollution Control Regulations I, Section III.D.2.(a) stipulate that the owner of an unpaved roadway which exceeds 165 vehicle trips per day must provide dust control measures. Dust control can include periodic treatment of the road surface or paving.

Air Quality

The Destination 2025 Plan is the regional long-range transportation plan for the PPACG Planning Area. Air quality is one component of the 2025 Plan. Roads proposed in the Plan must meet air quality conformity rules, as promulgated by the US Environmental Protection Agency (EPA).

> Conformity ensures that transportation plans, programs, and projects will not produce new air quality violations, worsen existing conditions, or delay timely attainment or maintenance of national ambient air quality standards. (PPACG, 159)

In October 1999, the EPA designated the Colorado Springs planning area as a maintenance area for carbon monoxide. Future carbon monoxide emissions from on-road mobile sources must be less than the carbon monoxide emissions budget established in the maintenance plan. An amendment to the plan in February 2001 raised the emissions budget for carbon monoxide pollution from 212 to 270 tons per day. Factoring in the proposed road network and the increase in motor vehicles, carbon monoxide pollution in the Colorado Springs area is expected to increase by 77 percent from 150 tons per day in 2000 to 266 tons per day in 2025. The projected pollution level of 266 tons is 4 tons per day less than the maximum allowable level of 270 tons per day.

Noise Abatement

The noise generated by large numbers of cars and trucks along major routes has significant land use impacts. It is inappropriate to locate certain uses, such as residential development and school buildings, in proximity to major roads. Noise mitigation measures include fences, vegetative stands, earthen berms, and special building insulation. The most effective method of noise abatement, besides distance, is a vegetated earth berm, which reflects noise upward. Because road noise is a linear rather than a point source, berms or other noise abatement structures must be long and continuous to be effective.

Stormwater

Roadways, by their nature, alter the landscape and create a barrier to rainwater infiltration. Roadways have a pronounced effect on surface water flows, discharge volumes and velocities, and aquifer recharge. The rules espoused in prudent line setbacks and streamside overlays apply to transportation facilities, just as other developments. In many cases, roadway alignments can be altered to minimize disruption to surface flows and water recharge and to protect water quality.

> As impervious surfaces, [roadways] generate huge amounts of stormwater containing a host of automobile contaminants – oil, paint, … organic compounds, and many other residues. Today the quantity of petroleum residue washed off streets, highways, parking lots, and industrial sites each year exceeds the total spillage from oil tankers and barges worldwide. (Marsh, 205)

6.12 ROADWAY PLANNING EFFORTS

County Project Priorities

The El Paso County DOT has prioritized a list of 29 future transportation projects throughout the County. Table 6.2 depicts the projects that impact the Planning Area.

Table 6.2 Future County Project Priorities

Priority Rank	Project Name	Project Description	Project Justification	Cost
8	Black Squirrel Creek Watershed Plan	Formulate recommendations for watershed facility needs	Funds County participation in multi-agency study	$125,000
19	Jimmy Camp Creek Drainage Basin Study	Formulate recommendations to manage development in basin	Basin is experiencing rapid growth and frequent flooding	$125,000
22	Curtis Road Reconstruction, south of SH 94	Develop design for intersection, condition, and alignment needs	Road serving Schriever AFB and eastern County residents is in poor condition	$900,000 (allocated)
23	Park & Ride Lot Development	Locate suitable lots in Woodmen Corridor and Schriever vicinity	Meets local match for funding to reduce heavy traffic congestion	$250,000

Source: El Paso County DOT

Destination 2025 Plan

The Destination 2025 Plan, developed by the PPACG, also lists funding priorities for projects throughout the County. The following projects impact the Planning Area.

Table 6.3 Destination 2025 Fiscally Constrained Projects

Project Name	Project Number	Cost (thousands)	Entity	Project Description	Funding Source
Banning-Lewis Parkway	500	$30,000	City of Colorado Springs	Construct new principal arterial, Woodmen Blvd to Fontaine Blvd	Private 2002-2007 TIP
Bradley Road Extension		$4,000	El Paso County	Extend Bradley as four-lane road from Grinnell St to Powers Blvd	Private/local
Curtis Road Corridor	134	$18,500	El Paso County	Upgrade to arterial (Irwin to Judge Orr), Widen to four lanes (SH 94 to Judge Orr)	Federal, DoD, private
Drennan Road	236	$20,000	El Paso County	Upgrade to arterial, widen to four lanes (Bradley Road to Ellicott Hwy)	Private/local
Fontaine Boulevard	243	$5,000	El Paso County	Widen Fontaine Blvd to four lanes from Grinnell St to Powers Blvd	Private/local
Grinnell Street	270	$1,000	El Paso County	Widen Grinnell St to four lanes, Bradley Rd to Powers Blvd	Private
Powers Boulevard	49	$115,000	CDOT	Freeway, IH 25 north to IH 25 south	Federal, DoD, CDOT, other, private
SH 94	187	$8,000	CDOT	Replace eight bridges, Colorado Springs to Ellicott	CDOT On-System Bridge
SH 94	524	$376	CDOT Region 2	Signals, passing lanes, other construction, Marksheffel Rd to Enoch Rd	2002-2007 TIP
Crews Gulch Trail Extension	142	$200	El Paso County	Construct four-mile trail, Big Johnson Reservoir to Fountain Creek Regional Park	Private/local
Powers Boulevard Trail	46	$1,550	City of Colorado Springs	New trail, Sand Creek Trail to Big Johnson Reservoir	Enhancement

Source: PPACG

Banning-Lewis Ranch – East West connections

Although planned roadways may change, the Banning-Lewis project features a number of east-west roadways that could ultimately connect with Planning Area roadways. The County Major Transportation Corridor Plan Update will incorporate Banning-Lewis Ranch roadways.

US 24

CDOT has completed a study of US 24 to Calhan, including surveying and aerial photography. CDOT plans to construct US 24 as a four lane facility to Falcon. They are awaiting funds to purchase the required ROW. At some undetermined date, US 24 would continue as a four-lane facility to Calhan and perhaps beyond.

Regional Cumulative Effects Analysis (RCEA)

Various entities in El Paso County are developing four separate transportation projects. These include:

- Woodmen Road – develop as an expressway from IH 25 to Falcon
- IH 25 – widen from Monument to Fountain
- Powers Boulevard – develop as an expressway from the Northgate Area to Fountain
- Drennan Road – widen from IH 25 to the Colorado Springs Airport

Most project impacts would be in Sub-Area 4. Because the combined effect of the four projects is recognized as greater than the sum of the individual project impacts, the Federal Highway Administration required a Regional Cumulative Effects Analysis (RCEA) for the projects. The RCEA analyzed effects to the greater region. The effort commenced in 2001 with the majority of the work accomplished in 2002. Typically, environmental assessments analyze quantifiable roadway effects in the immediate vicinity of a project. Items such as regional access, land use, connectivity, the local roadway network, impervious cover, heat island effects, property values, and multimodal considerations generally receive acknowledgement but no definitive analysis. Additionally, individual projects often do not state explicitly the assumptions that underlie their conclusions nor do they acknowledge the uncertainty in those conclusions. CDOT hopes to rectify some of these shortcomings through the RCEA, which is expected to be completed in late 2003. Map 6.2 (page 110) represents an initial effort by the three members of the RCEA Community Landscape Subcommittee to identify community concerns in a map format. The Subcommittee also developed a short report to accompany the map.

County Major Transportation Corridors Plan Update

The current County Corridors Plan was completed in 1987. The Plan is basically a generalized and limited map of several corridors within the County. The County DOT is now updating the Plan. Unlike the 1987 Corridors Plan, the proposed Plan is far more inclusive. It will analyze land use and roadways throughout the entire County through 2030 with due consideration for transit, bicycle accommodation, trails, cultural resources, and natural resources. The Update would reconcile alternative visions for the County and assess the needs of both the County and the larger region. The Update will provide some predictability to County development. An update to the County Parks, Trails and Open Space Master Plan would dovetail with the Corridors Update.

Figure 6.2 - El Paso County Major Transportation Corridors Plan Logo

Other Regional Projects

Along with the projects previously mentioned in the RCEA, three other projects have the potential to impact the Planning Area, either directly or indirectly. These include the Ports to Plains Corridor, the Eastern Colorado Mobility Corridor, and the Front Range Toll Road.

Ports to Plains
The Ports to Plains project is a highway construction plan proposed by the Texas Department of Transportation (TxDOT). Through the project, TxDOT hopes to receive highway funding to construct an additional truck route to support the North American Free Trade Agreement (NAFTA). The route would generally follow US 287/US 40/IH 70 from Amarillo, Texas to Denver, Colorado. TxDOT is currently applying for more funding to continue the study.

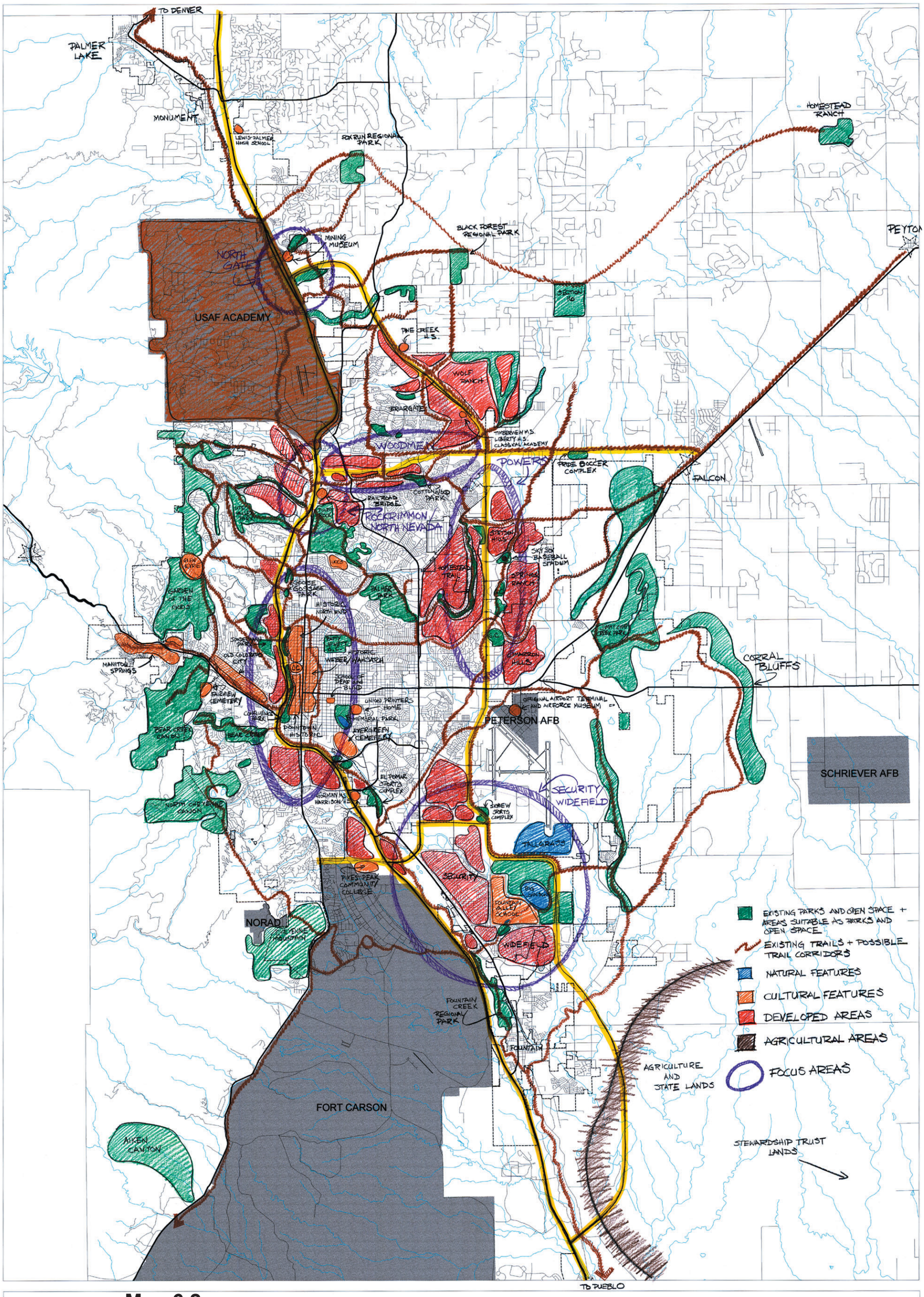
East Colorado Mobility Study (ECMS)
The East Colorado Mobility Corridor is conceived as a north-south roadway network to connect the far eastern portions of Colorado. A rail corridor is also being considered as part of the plan. Although the roadway is intended to serve the communities of eastern Colorado and not the Front Range, other regional roadways would connect it with Front Range communities. In El Paso County, US 24 would connect the corridor to the Colorado Springs metropolitan area. Although not identified as a support corridor, SH 94 would also connect the corridor to the Colorado Springs area. The ECMS corridor would dovetail with the Ports to Plains project.

Front Range Toll Road (Super Slab)
The Front Range Toll Road, also known as "Super Slab," is planned as a 196-mile new terrain freeway from Pueblo to Fort Collins. Of the regional projects, it would have the most direct impact on the Planning Area. Current plans call for a minimum ROW width of 660 feet. The total land required for right-of-way, interchanges, and plazas would be approximately 17,000 acres. In addition to a freeway, the right-of-way corridor would include freight rail and utilities. Within El Paso County, access points would be constructed at US 24 and SH 94.

The project development entity for the road is the private Front Range Toll Road Company (FRTRC), which incorporated in 1986. As provided by Colorado Statutes, the FRTRC filed with the Colorado Secretary of State for exclusive rights to build, own, and operate a toll road within a designated 12-mile wide corridor centered on Peyton Highway. Under the statute, the FRTRC is protected from competition and has the right to condemn private property through eminent domain in the event that purchase cannot be negotiated (Guthrie, 11).

Project Interrelationships

Because some of the aforementioned projects are still in the conceptual or early developmental stages, the impact of each is difficult to measure. Traffic studies for the various projects have not yet advanced greatly. The widening of IH 25 is the most advanced project. Despite a lack of analysis, the projects have interrelationships. The widening of IH 25 and the Front Range Toll Road are two of the most closely related projects. The Toll Road was planned as an alternative to the heavily traveled IH 25. The planned widening of IH 25 lessens some of the pressure to construct an alternative to IH 25. Consultants for the IH 25 project predict that the Toll Road would divert approximately 10 percent of IH 25 traffic. They also note, however, that such traffic relief on IH 25 could be quickly overwhelmed by both latent demand and induced demand. Latent demand recognizes that once a roadway experiences some congestion relief, those drivers who formerly avoided the facility will be drawn to it. Induced demand recognizes that increases in the size of a roadway will encourage additional uses, such as employment centers, commercial uses, or subdivisions, to site along the roadway.



Map 6.2
Regional Base Map
Colorado Springs and Vicinity

Print Date: September 2002

N

0 2 4 6 Miles

Runways
Highways
Roads
Water Features
City
Military

However, even if traffic relief along IH 25 is minimal, the Toll Road could pull a significant number of trucks off IH 25. Many of these trucks need access to Denver International Airport (DIA), a major air freight hub. Additionally, if designated as a Hazardous Materials Route, the Toll Road could provide a less congested and less populated route for hazardous materials. Another possibility is that freight rail would locate along the corridor. Compared with the rail line along the Front Range, the toll corridor features gently sloping terrain with slopes of 1½ percent or less (Guthrie, 4). Rail operators using the corridor could potentially save one-third of their current operating expenses (Bangs, 1A). Moving freight operations to the toll corridor could open the current tracks along Monument Creek to commuter rail, giving local residents ready access to other Front Range communities.

Toll Road Considerations

The Toll Road is currently planned with 12 interchanges along its 196-mile length. A minimum of interchanges would preserve the functional integrity of the roadway and give area residents easy automobile access to cities along its length. If access is not protected, the road would likely engender extensive highway-oriented development, as seen along IH 25, degrading any mobility benefits. Given easy access, IH 25 is used extensively by local commuters along most of its length, largely degrading its primary function as an interstate highway. The Toll Road Prefeasibility Report offers some indication of these development pressures. As stated in the Report, "[t]he corridor will greatly enhance the development potential for many thousands of acres that are currently not accessible" (Page-1, Guthrie).

The siting of the Toll Road would likely engender development in various locations. Given its initial selection as an interchange, the intersection of Peyton Highway and SH 94 is one of the most obvious. Traffic would increase along SH 94 west to Colorado Springs.

Just as the large footprint of IH 25 precludes local roadway options for those who wish to avoid the interstate, the Toll Road could become a barrier to local roadway options. The barrier effect could also impact agricultural lands. Although the Peyton Highway Corridor is fairly open through the Planning Area, other areas north and south of the Planning Area are more developed. The Peyton Highway Corridor is markedly different than when the toll project was first proposed in 1985. The following are corridor considerations:

- Peyton Highway currently serves as a rural collector. The toll road could compromise its function as part of a larger regional network. The proposed Curtis Road widening, along with other County plans, would help provide access in the area.
- Extensive residential development has occurred in the northern and southern portions of the County since the private toll road was first proposed in 1985. The Hanover area features a school directly across Peyton Highway from a new community park and running track. The existing ROW is 60 feet. A toll road along the existing ROW would divide the community and create a barrier for local children. A high-speed highway facility would not be compatible with the school.
- The toll road would divide the Chico Basin Ranch, part of the State's Stewardship Trust. The road would disrupt agricultural operations for both Stewardship Trust lands and private agricultural holdings. An extension of Peyton Highway currently runs into the ranch headquarters of the Chico Basin Ranch.
- The proposed roadway would cut through lands designated as High Priority Lands for Conservation in the County Parks, Trails and Open Space Plan and lands designated as Potential Conservation Areas in the County Natural Heritage Inventory.

Within northern Pueblo County, the High Speed Rail Test Track and the Pueblo Chemical Depot affect the siting of the toll road. Taken with El Paso County considerations, the uses in Pueblo County offer some insight into an appropriate location for the tollway. A road connecting with US 50 east of the Pueblo Chemical Depot could facilitate ready access and safe transport of hazardous materials.

While it cannot be said with certainty that the Peyton Highway corridor will be used as a high speed tollway, Peyton Highway remains an important regional road, particularly in the central portion of the County where extensive residential development has not yet occurred. In the interim, it will be a challenge to protect the integrity of the corridor in the face of near term demands for local access. As a regional road, it may be worthwhile to protect Peyton Highway for widening or as a rail corridor, even if the Toll Road is located elsewhere, such as the eastern County line.

6.13 MULTIMODAL CONCERNS

While automobile and truck facilities receive the lion's share of funding, aviation, mass transit, pedestrian, and bicycle facilities remain important components of an effective transportation system. Optimally, multimodal accommodations would be integrated into each transportation project. Retrofitting roadways to accommodate modes other than motor vehicles at a later date is costly.

Mass Transit

Rural transit in the County is effectively nonexistent. The Front Range Transit Plan, which theoretically covers State and federal funding for eastern El Paso County, is inadequate for the aging rural population. Rural mass transit is currently served by private concerns, such as churches and private service organizations.

The only other mass transit in the Planning Area is a bus service, which serves Schriever AFB. If a substantial amount of development takes place in or near the Planning Area, it would be appropriate to consider Colorado Springs Transit bus lines along SH 94 or along areas with a high concentration of people needing service. A privately operated subscription bus service is another possibility.

Rail

Currently, there is neither freight nor passenger rail service in the Planning Area.

Bicycle

Roadway shoulders are suitable venues for long distance cycling and can be incorporated into roadway designs. If the County decides to install rumble strips on its roadways, the strips can be designed to be compatible with cyclist safety. CDOT completed a study in May 2001 entitled "Bicycle-Friendly Rumble Strips," which provides guidance.

Trails

According to the attitudinal questionnaire distributed to area landowners in 1998, 81 percent indicated a desire for nature trail facilities. Another 17 percent indicated that private trails were already available to them. While no regional trail facilities exist within the Highway 94 Planning Area, plans call for a trail,

which would run south along Jimmy Camp Creek from the proposed park of the same name. Access to this regional trail can potentially be obtained by constructing local trails along the tributaries, which flow southwest toward the Creek.

More localized pedestrian and bicycle amenities would serve the recreational and exercise needs of residents and employees within the Planning Area and could connect with regional facilities. Another consideration is accommodation of equestrian users, whose needs may differ from those of pedestrians and cyclists.

6.14 RELATIONSHIP OF LAND USE AND TRANSPORTATION

Land use and transportation are inextricably linked. Transportation decisions have implications for land use, and land use patterns affect transportation plans. Transportation planning is an attempt to resolve these relationships and determine optimal transportation solutions. But while transportation planning is a critical tool, it is merely one of a package of government tools. It is essential that transportation plans work in concert with social, economic, environmental, and land development policies to support overall government policies and priorities.

The relationship between land use, transportation, and County policies is brought together by the actions of various agencies. Close cooperation and coordination is required among the County Planning, Transportation, and Parks Departments. Each department has a role in the orderly development of the County. Road specifications, sewer and utility connections, sidewalks, easements, landscaping, and park dedications are all considerations for new developments. Explicit requirements set forth in the Land Development Code offer the County and the community an opportunity to work with developers to tailor roadway plans to the needs of specific developments and integrate those plans with existing developments and roadways. Overall, public and political discussion during the development process offers some indication of County values. Analyses and discussions identify the expected costs and benefits along with those who benefit or bear some burden.

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Chapter 7 – Community Services

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7.2 Schools

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- Ellicott School District Number 22
  - Growth
  - 2001 Tornado
- Falcon School District Number 49
- Common School Issues
  - Growth
  - Funding
  - Capital Needs
  - Building Costs
  - Conclusion

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- Colorado Centre Metropolitan District
- Schriever Air Force Base Fire Department
- Colorado Springs Fire Department
- Security Fire Department
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7.1 INTRODUCTION

Community facilities and services are a major component of the Planning Area's physical and social fabric. Facilities, such as schools and fire stations, are major investments and offer some indication of community values.

With the exception of a former fire station in the Colorado Centre, now the office of the Colorado Centre Metropolitan District, there are no community buildings in the Planning Area. Because organizations and facilities outside the Planning Area meet civic needs, much of the community facilities discussion will focus on services provided by entities outside the Planning Area. In the future, development pressures in the Highway 94 Planning Area may place new demands on existing facilities and create the need for additional services. The chapter will discuss current facilities and service levels and future requirements. Facilities and services discussed pertain to schools, fire protection, law enforcement, code enforcement, libraries, and human services.

7.2 SCHOOLS

Schools are an indispensable part of the community. In addition to the traditional function of education, schools provide a safe and healthful place to play, provide a community identity, help meet the nutritional needs of children, and provide facilities for community activities.

Photo 7.1 - Ellicott Elementary School

In the early years of El Paso County, three people who lived close to one another were allowed under the law to form a school district by drawing boundaries and registering with the County Superintendent of Schools. In 1874, 14 school districts had been organized in El Paso County. That number later ballooned to 65 (Davant, 116). Now there are 15 districts completely contained within El Paso County and others which overlap County boundaries. Three school districts serve the Planning Area: Widefield School District Number 3 in the Colorado Centre area, Falcon School District Number 49 in the northwest corner, and Ellicott School District Number 22 for the remainder. The Fountain Valley School, located on the western edge of Sub-Area 4, is a private boarding and day school for grades 9 through 12. The Fountain Valley School features a 1,100-acre campus and 220 students from 22 states and 12 countries. The school is discussed in more detail in Chapter 2. Map 7.1 (page 116) depicts public school district boundaries along with the boundaries of the Fountain Valley School. While there are some issues common to each of the public school districts, each is unique in its circumstances and challenges. Table 7.1 compares enrollment figure for the three school districts in the Planning Area.

Table 7.1 School District Enrollment

District	Enrollment (October 2002)	Growth Rate (2001-2002)	Average Annual Growth Rate (1998-2002)
Ellicott (22)	946	-1.5%	4.5%
Falcon (49)	7,854	13.6%	11.5%
Widefield (3)	8,606	-0.7%	0.5%

Source: Colorado Department of Education

Widefield School District Number 3

The Widefield School District covers the western edge of the Planning Area and includes the Colorado Centre development and the Mustang Meadows Subdivision. The District features primarily residential development with some limited commercial and industrial operations. Unlike the Falcon School District, district-wide enrollment for the Widefield School District is fairly stable. Part of the reason for the stable enrollment is the tendency of residents to remain in the area after their school age children have grown and left home. The School District estimates that it needs the construction of approximately 200 new homes per year for enrollment to maintain stable. Even with stable enrollment, however, responding to shifting demographics is a challenge.

A unique aspect of the Widefield School District is its provision of community parks and civic facilities for the Security and Widefield areas. Because the areas are unincorporated with no municipal government to fulfill parks and civic needs, the School District has assumed some of those responsibilities. They now manage those resources and receive some State moneys for those purposes. Resources managed by the School District include a library, baseball and softball fields, a community center, park facilities, and a swimming pool.

Ellicott School District Number 22

Growth

Photo 7.2 - Ellicott Middle School

In contrast to the Widefield School District, the Ellicott School District is a relatively small district experiencing steady growth. Since 1994, the number of houses built in the district has risen steadily and, along with it, student enrollment.

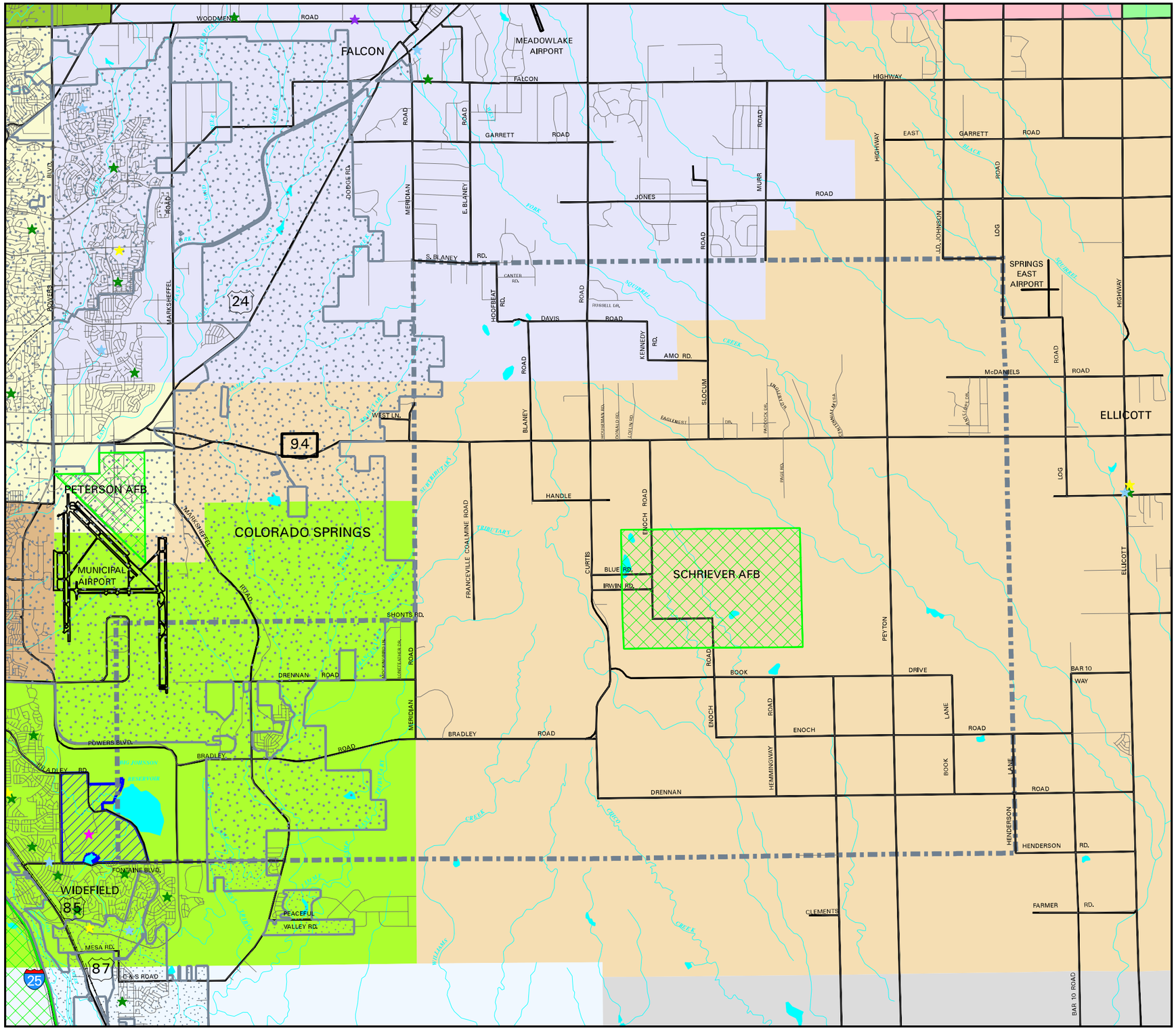
In November 1998 the District completed its Facility Master Plan to address facility needs for the years 1999-2004. District children are served by three primary facilities: an elementary school built in 2001, a middle school built in 1951, and a high school built in 1986. Capacities for the various buildings are shown in Table 7.2. The new Elementary School was financed through a 1999 $3.9 million bond issue. The current middle school is west of Ellicott Highway. It was formerly the elementary school, which housed preschool through grade 6. The current high school was formerly a secondary school, which housed grades 7 through 12.

District enrollment is projected to increase to approximately 1,200 by autumn of 2004, a 25 percent increase over present enrollment.

Photo 7.3 - Ellicott High School

Map 7.1
School Districts

Highway 94 Comprehensive Plan
El Paso County, Colorado



LEGEND

SCHOOL DISTRICTS

- Academy School District 20
- Calhan School District RJ1
- Colorado Springs School District 11
- Ellicott School District 22
- Falcon School District 49
- Fountain/Ft. Carson School District 8
- Hanover School District 28
- Harrison School District 2
- Peyton School District 23
- Widefield School District 3

SCHOOL LOCATIONS

- Elementary Schools
- Jr. High/Middle Schools
- High Schools
- School District Administration
- Fountain Valley School (Private)

- Fountain Valley School Boundary
- City of Colorado Springs
- City of Fountain
- Military Installations
- Planning Boundary

SCALE IN MILES

0 1 2 3

Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

Table 7.2 Ellicott Schools 2001 Enrollment

School	Enrollment (October 2002)	Permanent Building Capacity	Capacity Percentage
Elementary (K-4)	370	500	74%
Middle (5-8)	315	475	66%
High (9-12)	261	400	65%
Total	**946**	**1,375**	**69%**

Source: Colorado Department of Education, Ellicott School District

Along with the growth in the area has come a marked increase in traffic on area roads. District buses use SH 94 for many of their routes. East of Enoch Road, SH 94 remains largely rural and fairly safe. Between Corral Bluffs and Enoch Roach, SH 94 is considered dangerous by school officials.

The District recently constructed a sewer line and lift station to pump wastewater from the school facilities to the Sunset Village Wastewater Treatment Plant to the south allowing the District's wastewater treatment lagoon to be eliminated.

2001 Tornado

Photo by Emergency Management

Photo 7.4 - Tornado Damage to Ellicott High School

School construction activities were dealt a serious setback on Memorial Day, May 28, 2001, when a severe thunderstorm containing three tornadoes passed through the Ellicott area. One of the tornadoes, rated F2 with winds around 150 miles per hour, struck the high school, causing extensive damage. The high school lost the southwest portion of its corrugated metal roof. An airborne modular trailer along with several airborne dumpsters appear to have caused or helped cause catastrophic failure of the south, west, and north walls of the building. Almost all of the building, with the exception of the gymnasium and the southeast portion of the building, were completely rebuilt. Reconstruction of the damaged buildings took all of the District's $8 million insurance policy. The school used grant moneys to help pay for other property damage on the school grounds. Most of the District records are maintained on a central computer server off site and were not affected by the storm.

Despite the heavy damage caused by the tornado, the District convened classes as planned on September 4, 2001. Damage to the elementary and middle schools was less severe than the high school. The elementary school was repaired in time for the start of Fall 2001 classes. The reconstructed high school opened in January 2002. During Fall 2001, high school students were housed in modular classrooms.

Falcon School District Number 49

The Falcon School District continues to have one of the highest growth rates of all the 176 school districts in the State of Colorado. In terms of sheer numbers, the district gained 932 students from 2001 to 2002. Given that residential development pressures in the Falcon area are not expected to subside in the near future, Falcon can expect to experience the most severe facility pressures of any district in the State for many years. Already, Falcon voters have approved bond issues in 1995, 1998, and 2001. Another bond issue is programmed for 2004.

Common School Issues

Growth

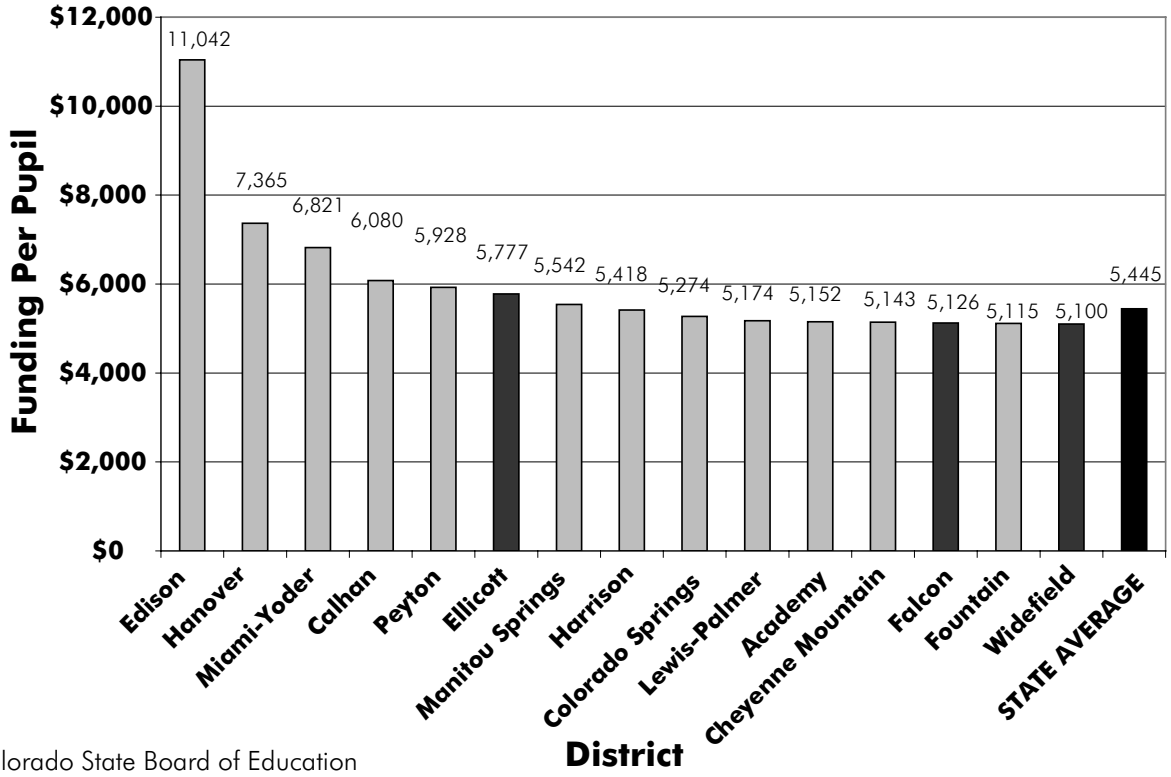
Growth continues to be an issue for the school districts in the Planning Area. The Ellicott District serves a relatively small but growing student population. The Falcon District is one of the fastest-growing school districts in the State and could one day be the largest school district in El Paso County. The Colorado Centre development continues to generate a significant number of students for the Widefield District. Although Widefield School District numbers are fairly steady, the prospects for development in the Colorado Centre area could translate into enrollment growth for the District. The area contains substantial areas of undeveloped lands, which could house both employment and residential centers. Because much of the undeveloped lands lie under the approach and departure corridors for the Colorado Springs Municipal Airport, the potential also exists for poorly sited residential developments. The Widefield School District has stated that it will not construct schools in such areas.

Funding

The Falcon School District, in particular, is struggling to accommodate increasing enrollment and faces facility shortfalls. Funding for new facilities comes from two basic sources. The first of these is formula-driven and determined by the State in accordance with the Public School Finance Act of 1994, as amended. These moneys primarily cover operational expenses, such as textbooks and salaries, and are calculated on a per-pupil basis. Funding is based on an annual October 1st pupil count. The formula provides a base amount of money per pupil along with additional moneys dependent on each district's cost-of-living, personnel costs, size, and percentage of at-risk students. Risk factors include such things as low-income status or frequent family moves.

For the school year 2001-2002, funding for Colorado's 176 districts varied from $4,831 to $10,875 per pupil with an average of $5,175 per pupil. Medium-sized districts generally receive the least funding per pupil. Table Figure 7.1 provides funding information for the 15 school districts completely contained within El Paso County. State funding for the Ellicott School District is slightly above average while funding for Falcon and Widefield is below average.

Figure 7.1 School District Funding in El Paso County
2001-2002 School Year



Source: Colorado State Board of Education

Because funding is based on an October 1st count, students enrolled after that point are not counted in the financing formula. Such a system has pronounced impacts on fast-growing districts. As students continue to enroll after October 1st, school districts must finance teacher salaries, classrooms, instructional aids, and transportation for the remainder of the school year without State assistance. The cycle is continued each year leading to chronic under-funding.

The State's allocation to each district represents one source of school funding. Other moneys are pooled from various sources including property taxes, vehicle registration taxes, income taxes, and sales taxes.

Facility Funding

While operational costs are largely handled through State funding, capital needs for fast-growing districts are problematic. In contrast to operational funding, facility funding is tied to district wealth.

When facing facility shortfalls, districts may take some moneys from the General Fund but these moneys are then unavailable for items such as teacher salaries and textbooks.

Traditional sources of facility funding emanate from property taxes within a district. General obligation debt is common and initially requires voter approval. While yearly bond elections can help rapidly growing districts meet facility shortfalls, facility problems are compounded if elections are unsuccessful or growth pressures continue over several years. Fast-growing districts generally operate at their debt limit.

Another vexing problem for districts in the Highway 94 Planning Area is the assessed valuation of district properties. In many districts the assessed valuation is inadequate to fund new facilities regardless of the success of bond elections. Assessed valuation is based on a percentage of a property's actual value.

Funding inadequacies are most pronounced for districts with residential and agricultural properties but few industrial or commercial properties. In the budget year 2000-2001, residential properties used an assessed valuation equal to 9.15 percent of actual value. In contrast, commercial properties are assessed at approximately 29 percent. Schools facing shortfalls may use mill levies to raise moneys. Each mill of tax is the same as one-tenth of one percent and is applied to the assessed valuation. For a residential property with an actual value of $100,000 and an assessed valuation of $9,150, each mill raises $9.15. The time a bond issue passes until a facility opens is approximately two years, a significant lag. There is also a lag in high-growth districts between the time residences are occupied and when those properties begin to generate property taxes, however meager.

Building Costs

Table 7.3 provides the approximate acreage requirements and construction costs for each type of school.

Table 7.3 Facility Requirements

Type of School	Acres Required	Construction Cost
Elementary	10	$5-7 million
Middle	20	$10 million
High	40-50	$15-20 million

Source: Ellicott and Falcon School Districts

School districts use modular buildings to overcome facility shortfalls caused by budget constraints. Modular buildings cost approximately $70,000 and have a useful life of about 10 to 15 years. They have the advantages of quick installation and can be moved as necessary. Disadvantages include lack of bathrooms, poor climate control, lack of connections to the main school, a less than optimal teaching environment, and the diversion of permanent facility moneys to temporary buildings.

Land dedications and impact fees raise other issues for school districts. In 1996 the Colorado Supreme Court ruled in the case Douglas County Commissioners v. Bainbridge, Incorporated that non-home-rule counties do not have the authority to impose impact fees for school purposes in excess of land dedication or fees-in-lieu of dedications imposed at the time of subdivision. Statutory cities, towns, and counties with home-rule authority do not face these restrictions.

As a non-home-rule county, El Paso County cannot charge impact fees on behalf of school districts. The County can, however, request land dedications or fees-in-lieu of land dedications from developers for school sites. Problems arise, however, in that lands dedicated usually lack services and are many times non-optimal for school sites. Once a piece of raw land is dedicated to a district, access, drainage, grading, utility extensions, parking lots, and all other infrastructure costs are borne by the school district. These costs are generally far greater than the cost of raw land. Existing school fees for each single-family unit are as follows for the three districts in the Highway 94 Planning Area:

Table 7.4 Subdivision School Fees

School District	Fee per Single Family Unit
Ellicott (22)	$185
Falcon (49)	$240
Widefield (3)	$207

Source: El Paso County Land Development Code

Two permanent solutions are available to help schools collect the money needed to provide facilities given the demand created by development. The first is a change to the State Constitution allowing non-home-rule counties to charge school impact fees. The second option is for El Paso County to become a home-rule-county. As a home-rule county, El Paso County could then choose to impose reasonable fees to cover the cost of school construction. Absent these changes, fast-growing school districts will continue to face significant challenges to meet the facility needs of district students.

In addition to the sheer number of students generated by new satellite developments, the siting of a development can profoundly impact a rural school district. Ellicott, for its part, has one main campus to serve the district. Proximity to the campus is important to minimize busing distances, operational costs, and maintenance costs. Scattered but intense subdivisions may generate a significant concentration of children but not enough to require a school. Such was the case for the Wildhorse development originally proposed for Franceville Coal Mine Road in 1998. The development would have generated a significant number of children for the District approximately 17 miles from the nearest school facility. The development would also lie near steep portions of SH 94. Slow-moving buses pulling onto SH 94 at Franceville Coal Mine Road would conflict with high-speed commuters on SH 94.

Conclusion

Because of challenges facing school districts, the most pressing being the provision of adequate facilities, districts will likely become more aggressive when dealing with developers, cities, and El Paso County to ensure that district concerns are realistically considered. In the near term, funding shortfalls are expected to continue. Districts hope for a mix of land uses within their districts and a more sustainable tax base for district funding.

7.3 FIRE PROTECTION

The Ellicott Fire Protection District serves most of the Planning Area. The Falcon Fire Protection District and the Colorado Springs Fire Department serve other sizeable portions of the Planning Area, while the Security Fire Department serves a small portion. Of particular significance near the western edge of the Planning Area is an area of 20 square miles not currently within the boundaries of any municipality or fire protection district. These areas are under County coverage, which effectively means that surrounding districts respond to the area on an available basis. Therefore, these areas have no legal structural fire protection.

Districts differ in the type of development they serve. Map 7.2 (page 123) shows fire district boundaries and the location of district stations. District response times, access to residences, and fire-fighting capabilities determine Insurance Services Office (ISO) ratings, which in turn determine the cost of fire insurance for residences and other establishments. The ISO calculates ratings for each district and assigns a rating to each, with one being the highest. Areas with no service are rated as a 10. Ellicott currently has a 9 rating, Falcon a 6, and Security a 5.

Table 7.5 Fire Protection Districts

District / Department	Paid Staff	Volunteer Staff	ISO	Calls in 2002	Pieces of Equipment	Existing Stations	Planned Stations
Ellicott	0	28	9	375[1]	10	3	1
Falcon	9[2]	35	6	805	15	3	3
Security	13	55	5	1,800[3]	8	3	1
Schriever AFB	31	N/A	N/A	12[4]	7	1	N/A

Source: Listed agencies
[1] Represents calls in 2000
[2] Includes 6 full-time and 3 part-time staff
[3] Approximate number
[4] Approximate number of off base responses

Ellicott Fire Protection District

Like the Falcon Fire Protection District, the Ellicott District is a Title 32 Special District as established under the Colorado Revised Statutes for a specific public purpose, in this case fire protection. The Ellicott District covers an area of 245 square miles. The main offices are at Station #1 at 23650 Highway 94. The District was formed in 1985 with an ISO rating of 9 built into its service plan. As a general rule, the District Service Plan calls for no more than one housing unit per acre for the general fire protection provisions of the plan to remain valid. A rating of 9 is a general rural standard and effectively means that if a fire occurs on a structure, that fire can be contained to that particular structure and not affect adjacent properties. At densities of greater than one housing unit per acre, other fire protection controls must be implemented, such as hydrants or enhanced on site water storage.

Photo 7.5 - Ellicott Fire Protection District - Station #2

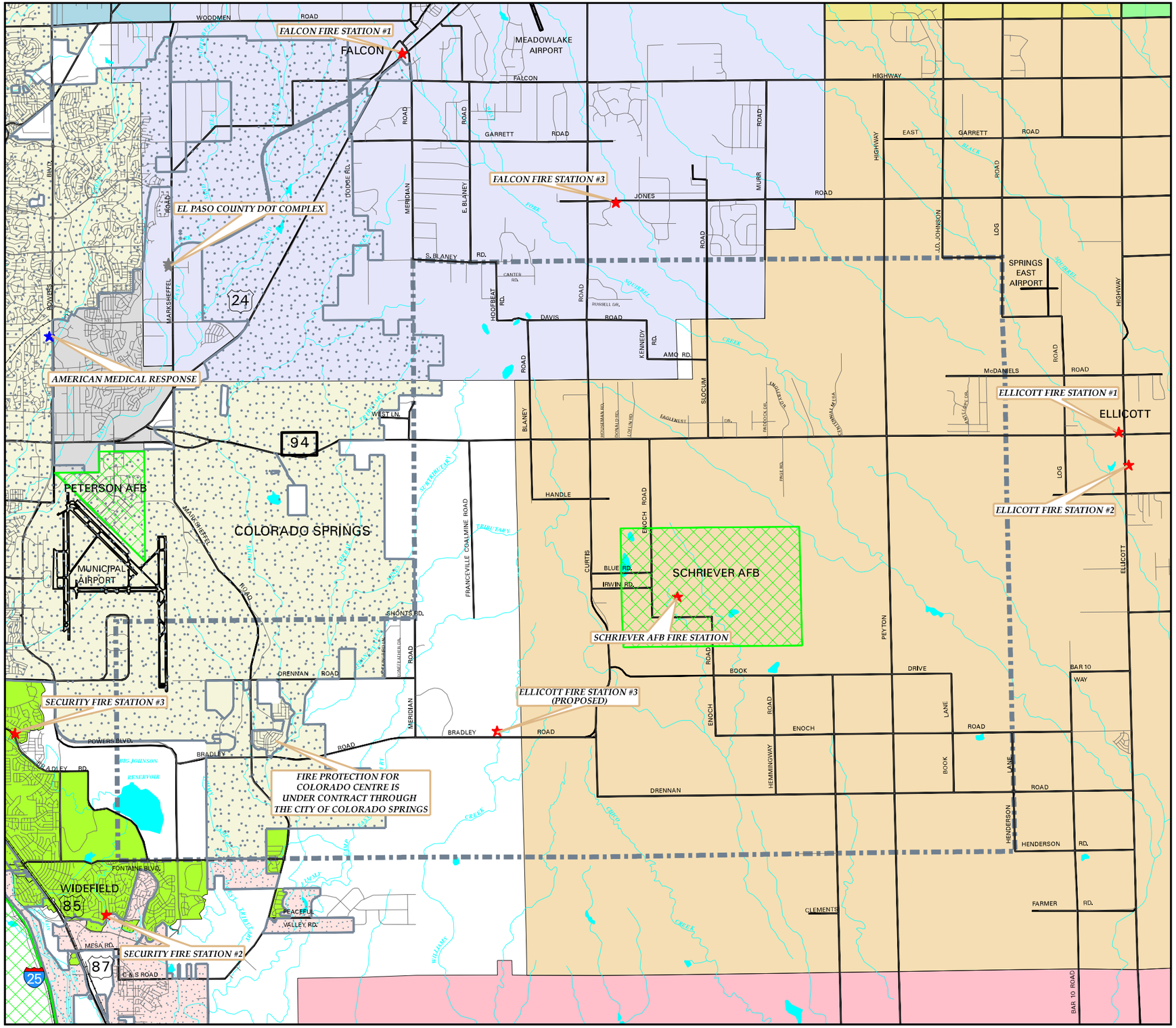
Despite an increase in the number of residences in the Ellicott area, insurance premiums have remained relatively stable. State insurance premiums will at some point become cost prohibitive for urban density subdivisions unless fire protection services, facilities, and staff are added. Based on information from the ISO and insurance carriers, the Fire District believes that insurance premiums will remain stable in low density subdivisions and undeveloped areas.

Given the extensive district area, response times can be 30 minutes or greater. A 30-minute response would ordinarily involve 15 minutes to assemble and 15 minutes to respond. Typically, two-thirds of the volunteer staff are unavailable during the day. Mutual aid agreements with other agencies help with shortfalls. Overall, a staff member is present at the main station during the day and someone is usually present at night. Most of the district responses occur in the evening and early morning hours. Although lengthy response times are possible, response times typically average close to eight minutes. Variables include the presence of staff in the station and the distance to the emergency. According to staff, many new residents do not consider the importance of emergency services until needed. They may also have expectations of urban service levels even for relatively minor injuries.

A group of landowners near the intersection of Drennan and Meridian Roads is currently pursuing annexation into the District. Such an annexation would be conditioned upon the construction of a station to District specifications.

Map 7.2
Emergency Services

Highway 94 Comprehensive Plan
El Paso County, Colorado



LEGEND

FIRE PROTECTION DISTRICTS
- Black Forest
- Calhan
- Cimarron Hills
- Ellicott
- Falcon
- Hanover
- Peyton
- Security

MUNICIPALITY FIRE DEPARTMENTS
- City of Colorado Springs
- City of Fountain

OTHER FIRE PROTECTION
- No Structural Fire Protection

EMERGENCY SERVICES
- Medical Services
- Transportation Services
- Fire Services
- City of Colorado Springs
- City of Fountain
- Military Installations
- Planning Boundary

SCALE IN MILES
0 1 2 3

Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

Falcon Fire Protection District

In contrast to the Ellicott Fire Protection District, the Falcon District is actively pursuing urban levels of service. Such a strategy is necessary given the explosive growth in the Falcon area, much at higher densities. Until 1998 the Falcon Fire Protection District had an ISO rating of 9. That year the District was reevaluated as a 6.

Within the next five years the District will build three new stations and expand Station #1. Much of the financing will come from a 2000 mill levy. Once the staff is hired and employment has stabilized, the District will request a reevaluation in the hopes of earning a 5 ISO rating. During the 1998 evaluation, the District came close to a 5 rating.

In 1997 the Board of County Commissioners approved the Uniform Fire Code. The Falcon Fire District adopted the code in 1999 and was one of the first in El Paso County to do so.

One of the most significant issues for the District is the lack of affordable housing in the area for volunteers and staff. Volunteers and staff are often unable to live in the area due to rising housing prices coupled with an almost complete lack of multi-family dwellings. Another option is to provide studio apartments at Station #1. Living quarters, along with additional training facilities, could help attract and retain volunteers and staff.

Schriever Air Force Base (AFB) traffic also impacts the Fire District. During morning and afternoon travel peaks, hundreds of cars drive through Falcon on their way to Schriever AFB. Fire vehicles must share the road with the Base commuter traffic when responding to emergencies. Roads most impacted include Woodmen Road, Meridian Road, Falcon Highway, Curtis Road, and Slocum Road. As Schriever employment grows, single-occupant vehicle traffic will become an ever-increasing concern.

To safely respond to emergencies in the midst of mounting commuter traffic, the District will put OPTICOM sensors on traffic signal poles along US 24 and transmitters on fire vehicles. When approaching an intersection, vehicle transmitters will send a signal to the sensors to preempt the traffic lights. All traffic signals will change to red allowing fire vehicles to safely enter the intersection with less likelihood of a collision. The District would ultimately like sensors placed on all traffic signals within their District. The Colorado Department of Transportation (CDOT), in conjunction with its work on US 24, will install the sensors at no cost to the Fire District. The District will buy the sensors.

Another District initiative is the electronic mapping of responses. The study will help determine problem areas and formulate preventative measures.

Colorado Centre Metropolitan District

Through a contract with the Colorado Springs Fire Department, the Colorado Centre Metropolitan District (CCMD) provides fire protection services to its members. As part of the agreement, the CCMD provided a fire engine.

Schriever Air Force Base Fire Department

The Schriever AFB Fire Department responds primarily to calls within the confines of Schriever AFB. The number of staff may rise in the future to 42. The Department's 8 pieces of fire fighting apparatus include 6 vehicles and 2 totable apparatus. All personnel are trained as EMTs.

Although primarily responsible for emergencies within Schriever AFB, the Department also responds to emergencies within a five-mile buffer around the Base. A central dispatch facility will activate the Department for an off base emergency when the Ellicott District is unable to respond in a timely manner. Most Department responses are for car accidents. The Department averages approximately two off base responses per month. Numbers are greatest during the winter when hazardous driving conditions contribute to an increased number of accidents.

The Department also participates in Fire Prevention Week activities in the local community and performs some civic functions during the Christmas season for the Ellicott School District.

Colorado Springs Fire Department

The Colorado Springs Fire Department provides fire protection for a large portion of Sub-Area 4 and the Colorado Centre area from Station #11 at 3810 Jet Wing Drive. The Colorado Springs City Council has set two basic response standards for the Fire Department:

1. One unit should be able to respond to an emergency within 8 minutes or less.
2. Three units should be able to respond to a structural fire within 12 minutes or less.

The Fire Department is expected to meet these goals 90 percent of the time. Due to the distances involved, these goals cannot be met for the Colorado Centre area, along with other portions of the Banning-Lewis Ranch property. Currently the density of the area does not warrant the construction of a fire station. The construction of a fire station represents a substantial financial outlay and a continuing obligation. Annual salary for a single station amounts to approximately $1 million.

If a manufacturing plant or some other intense use were to locate in the Colorado Centre area it might be necessary to train security personnel to perform some limited duties to meet immediate facility emergency response needs. Security personnel will be on duty 24 hours a day and could be trained in first aid and other limited emergency services to be performed prior to the arrival of Fire Department personnel. Such a scenario is not possible for residential developments given the absence of security personnel.

Overall, given the uncertainty regarding development in Colorado Centre and the Banning-Lewis property, decisions regarding fire station locations and capabilities are premature.

Security Fire Department

Two small areas within Sub-Area 4 are currently within the Security District. Security's nearest station is located at 7420 Metropolitan Street. Like other fire districts, Security is experiencing a marked increase in the number of calls each year. Revenues do not keep pace with increasing demand.

Peterson Air Force Base Fire Department

The Peterson AFB Fire Department is located on the flightline of the Colorado Springs Municipal Airport. They are responsible for crash, rescue, and medical response for the Airport and emergency calls for Peterson AFB. The department has mutual aid agreements with various entities including El Paso County and the City of Colorado Springs.

Common Fire Protection Issues

Because developments must be constructed within the framework of the fire district service plan, fire districts have some leverage in exacting fees from developers for new growth. If a development is of a substantial size, new facilities are necessary to avoid prohibitive fire insurance costs for residents.

Another district concern is financing new facilities, equipment, maintenance, and personnel. After housing is constructed and occupied, districts generally face an 18-month delay before receiving tax revenues from those properties while providing services. Because of the lag time in reimbursement, districts would like to see impact fees for all developments tied to the costs of providing services to those developments. Particularly for developments with lengthy build out schedules, fire districts provide infrastructure and personnel years before receiving any substantial revenues to compensate for the increase in services. Current impact fees cover only a small portion of required capital improvements. Other funding sources include mill levies and bond issues.

Problems may also arise when development standards are not enforced prior to building occupancy. Poor road construction, low water pressure, and inadequate water supplies can lead to a loss of life and property if not corrected. To ensure adequate infrastructure, building permits can be withheld until adequate infrastructure is built. The County can also use a developer's posted bond money to correct deficiencies. Adequate water storage is imperative for fighting fires in an area without central water services. Both large and small developments can utilize on site water storage. Optimally, developments of any significant size should have a central water system along with fire hydrants.

In addition to emergency response, fire districts take part in fire prevention and outreach programs, perform courtesy calls, and sponsor community activities. They are actively involved with local schools, set up booths at community functions, hold open houses for residents, hold pancake breakfasts, and make their facilities available for civic groups. Staff perform courtesy calls for the elderly or impaired and perform preventative functions, such as house inspections or changing batteries in smoke alarms.

As more residents move to the Planning Area and its environs from the metropolitan core the responsibilities of the fire districts will increase. Residents may not realize that the further they move from the city the more risk and liability they assume for themselves and their families. While fire districts generally provide the first response for medical emergencies, paramedical, ambulatory, and hospital services are located significant distances from the Planning Area. Those needing such services can expect substantial delays to travel to those facilities.

7.4 AMBULATORY SERVICES

While fire districts and fire departments provide EMT service as first responders to an emergency, ambulatory services for the Planning Area are provided by American Medical Response (AMR), which operates out of a facility at 2370 North Powers Boulevard in Colorado Springs. AMR has agreements with El Paso County, the City of Colorado Springs, and other municipalities to provide ambulatory services throughout most of the County, both incorporated and unincorporated. Although AMR operates out of a single facility they service a wide area using a practice known as "dynamic posting." Dynamic posting is a method where, similar to a sheriff patrol, an ambulance stages out of a certain area during a certain period. AMR is bound by response times specified in contracts with the entities they serve. The Highway 94 Planning Area has contracted response times of 25, 35, and 45 minutes depending on the area. Response times are greatest to the east. AMR does not have a significant number of responses in the Planning Area. Locating the site of an emergency response is generally not a problem. Ambulances contain an onboard Global Positioning System (GPS) transmitter, which relays the position of the ambulance to central dispatchers. Dispatchers can monitor the progress of ambulances and guide drivers to an emergency, if necessary.

Patients are generally transported to the hospital of their choice, either Memorial Hospital at 1400 East Boulder Street or Penrose Hospital at 2215 North Cascade Avenue in Colorado Springs. Comfort is a critical issue when transporting a patient to a hospital. Unless a condition is life threatening, ambulances do not generally drive at a high rate of speed or use sirens en route to a hospital. High speeds on gravel roads within the Planning Area might affect patient comfort and exacerbate medical emergencies.

Flight for Life helicopter service is also available for the Planning Area and linked to the Penrose Hospital. Helicopters, although flexible in responding to the site of an emergency, require an open area for landing on a lot or within a subdivision. Overhead lines create life-threatening hazards for helicopters. Helicopters also require an individual on the ground who is serving in an official capacity, such as a sheriff patrol officer or a fire fighter, so that the helicopter can land.

7.5 LAW ENFORCEMENT

El Paso County Sheriff's Office

The El Paso County Sheriff's Office (SO) is responsible for most law enforcement activities in the Planning Area. Responsibilities include responding to calls for service, investigating crimes, and traffic enforcement. The Colorado State Patrol has the responsibility for traffic enforcement along SH 94 and for responding to and investigating all traffic accidents in the unincorporated portions of the Planning Area, regardless of whether they occur on State Highways. Most law enforcement within the Schriever AFB property is handled by Base security forces, but occasionally the SO will enter the facility to either investigate a crime or to respond to an incident involving civilian employees.

Sheriff patrols that serve the Planning Area originate from the main SO facilities in downtown Colorado Springs. The SO also maintains a small office in the County Department of Transportation (DOT) complex at 3460 North Marksheffel Road, which is used occasionally as a satellite facility. With the exception of the residential development in Colorado Centre, the Planning Area lies within Patrol District 4. District 4 generally encompasses all areas of the County east of Meridian Road and an extension of Meridian Road.

Generally one or two deputies are assigned to District 4. Colorado Centre is in the Widefield Patrol District. Occasionally, a special traffic unit is deployed to the Planning Area to target areas with traffic enforcement problems.

To provide law enforcement coverage 24 hours per day, 7 days a week, the SO uses a benchmark of 1 officer for every 1,000 people in the unincorporated County. The SO currently has approximately 1 officer per 2,000 people. In the past few years the SO has noticed a marked increase in time spent responding to calls in the Planning Area. Overall, personnel levels have not kept pace with the County population increase. Greater population leads to increases in crimes. As densities increase, conflicts are more likely and the complexity of the calls increases. Calls for service cover a broad range of issues and include property line disputes, domestic violence, problems with animals, and other crimes, including assaults, homicides, burglary, and criminal mischief.

Property line disputes may arise because of uncertainty determining lot lines for large parcels. For widely dispersed housing, domestic violence is more likely to erupt in certain individuals due to lack of people within hearing distance. Isolation and lack of civic contact can compound the problem. Problems with animals arise with both pets and livestock. The area has no leash laws so dogs and cats can freely roam the area. Pets, however, are not allowed to wander onto a neighbor's property and worry (harass, chase, or bite) livestock, other pets, or people. When pets wander onto adjoining property and worry the occupants, homeowners have the right to protect themselves and their animals. Open range laws also allow cattle and other livestock to roam over areas without fences. If residents want to keep animals off their properties they must fence the animals out. For new residents accustomed to an urban environment, such conflicts are unsettling.

An increase in the number of people in the area also brings with it increased numbers of other crimes, such as assaults and burglaries. Adolescents are involved with a number of crimes, particularly those not actively involved with extracurricular activities or ranching. Ranching, for its part, emphasized a commonality despite widely dispersed settlement patterns.

Although the Planning Area has a significant number of calls, sheriff response times have remained somewhat lengthy. If patrols are in the downtown Colorado Springs offices, response times can be upwards of 40 minutes. Response times for patrols already in distant parts of a patrol district may be greater than normal. Residents should realize that scattered subdivisions can not be guaranteed a fast response even with relatively high internal development densities.

A stated earlier, the Planning Area is generally devoid of major community facilities, with the exception of the nearby Ellicott schools. SO personnel see such large facilities as community resources for emergencies and disasters. Large facilities, strategically placed, can serve the community during emergencies as command centers, staging areas, housing for disaster victims, temporary medical facilities, or evacuation centers. Large facilities can house people during and following emergencies including tornadoes, blizzards, floods, or chemical spills.

As with school and fire districts, roadways are an important consideration for sheriff responses.

Schriever Air Force Base - 50th Security Police Squadron

The 50th Security Police Squadron at Schriever AFB is concerned primarily with law enforcement and security within the confines of Schriever AFB. If requested, Security Police will also respond with the Base Fire Department to emergencies off base. Base law enforcement involves such activities as traffic control, vehicle registration, theft, and assaults. Base security involves the protection of high priority resources and Base personnel, along with the prevention of intelligence gathering, espionage, incursion, and terrorism.

While Base law enforcement is generally confined to the Base, Base security is affected by and affects development surrounding the Base. One of the most visible security measures is high security fencing surrounding Base facilities. The current fence does not, however, represent the Base perimeter. On the western side of the Base, the Base boundary extends approximately 1/2 mile beyond the current fencing. Previously, Enoch Road traversed the Base but was closed to through traffic in 2001. The future construction of a fence at the Base perimeter will allow Security Police to closely monitor Base areas and any suspicious activities.

Development of the adjacent parcels has an impact on the ability of Base security forces to accomplish their job. In general, security forces would prefer low density development immediately adjacent to the Base.

Any development near the Base will be affected by light pollution from security lighting. Air Force regulations dictate the amount of illumination required for various security situations on Air Force installations. While the illumination is necessary from a security perspective, it illuminates the night sky for all areas surrounding the Base, particularly on nights with low overcast cloud cover. While illumination levels are mandated by regulation, the possibility exists for cut-off fixtures, which help prevent some light from being directing upward into the sky, thereby minimizing the impact of light pollution on surrounding land uses.

7.6 CODE ENFORCEMENT

Code Enforcement within the Planning Area is the responsibility of a code enforcement officer from the El Paso County Planning Department. Code Enforcement is tasked with enforcement of the County Land Development Code, Weed Ordinance, and Rubbish Ordinance. The goal of Code Enforcement is to protect the health, safety, and welfare of El Paso County citizens. Generally Code Enforcement officers respond to complaints from residents and businesses regarding adjacent properties.

Photo 7.6 - Inoperable Vehicles

The Planning Area has experienced few major problems. As the Planning Area population grows, complaints will likely increase. Complaints usually pertain to rubbish, unlicensed or inoperable vehicles, and other unsightly or incompatible uses. When presented with information concerning the County Land Development Code and rules regarding land use, land owners usually correct any code violations in a timely manner. Many violations are due to a lack of information and easily corrected once a problem is articulated to the landowner. A file is created for each violation so that compliance with the Code can be verified at a later date, at which time the file is closed. When a landowner refuses to correct a violation, Code Enforcement officers will continue to issue a number of letters to the owner. If unsuccessful the

matter can be referred to the County Attorney's office for legal action. For habitual offenders or problems requiring immediate action, Code Enforcement officers may ask the BoCC for funding to eliminate the violation. The County will later attempt to recoup cleanup costs.

The Planning Area features several large scale nonconforming uses as well. These include junkyards and auto salvage yards. Nonconforming uses are lawful uses existing on the effective date of a regulation and continuing since that time in nonconformance with the regulation. Due to hardships caused by the immediate discontinuance of nonconforming uses, County regulations contain provisions for the continuance of those uses in perpetuity. The presence of nonconforming uses can, however, endanger the benefits derived from a comprehensive zoning plan and thwart any efforts toward redevelopment.

One of the areas cited by Code Enforcement officers as problematic is informing residents of County regulations. Currently Code Enforcement officers disseminate information through verbal communication and letters as the need arises. In the future, officers would like to expand information dissemination to residents through the County website, newspaper columns, and neighborhood flyers. Through such efforts, officers hope to preclude some future conflicts.

While Code Enforcement officers enforce County regulations they do not enforce covenants. Covenants are a civil matter and enforcement of covenants is the responsibility of the appropriate association or a private individual.

7.7 EMERGENCY SERVICES

Emergency services within the County are the responsibility of the Emergency Services Division within the County Sheriff's Office. The Emergency Services Division includes Emergency Management, the Fire Marshall, the Hazardous Materials Team, the Radio Amateur Civil Emergency Service, Search and Rescue, and the Wildland Fire Team. Together, these agencies respond to a broad range of emergencies including wildfires, tornadoes, snowstorms, floods, and chemical spills. As El Paso County grows and more industries move into the County, the threat of hazards will increase.

The Emergency Services Division rated the risk to life and property from various natural phenomena and manmade developments. According to the Division, the highest risk within the County comes from the following:

- Flooding and other water related events[1]
- Hazardous material accident - both stationary and transportation related[2]
- Terrorist targets (military bases)
- Floodplains
- Chemical storage facilities
- Reservoirs and dams[3]

[1] All creeks and streams in El Paso County are subject to exceeding their banks with sustained heavy rains. Matters could be complicated by dam failure. Within the Planning Area, flood discharges from rain events are considered moderate to extreme. Discharges range from 50 to 100 cubic feet per second per square mile.

[2] A growing aerospace and electronics base in El Paso County increases the threat of in place hazardous materials, as well as transportation accidents. IH 25, rail lines, and an active airport further increase the hazardous materials risk.

[3] El Paso County has 11 dams situated above populated areas that are considered a high hazard.

Many of the emergencies are related to natural weather phenomena and the geography of the area. Flooding and tornadoes are two regular occurrences. Portions of the Planning Area feature floodplains in excess of ½-mile wide. These floodplains are subject to quick inundation during regional or localized storms. The Black Squirrel Creek and its associated tributaries are particularly prone to flooding. Since the first Highway 94 Plan was written in 1985, major flood damage occurred along the creek in 1995 and 1999. Prior to that time, floods in 1921, 1935, and 1965 caused more than $2 million in property damage. El Paso County has a major flood every five to six years. In the past, as flooding destroyed culverts and bridges, the County replaced these facilities with larger culverts and bridges, only to see these larger facilities destroyed by the next flood. The Federal Emergency Management Agency (FEMA) helps the County fund replacement facilities. FEMA will usually reimburse the County for 25 to 50 percent of the replacement cost for a facility. FEMA will only reimburse the County for larger facilities if the County previously identified a need for larger facilities and codified its intent to enlarge those facilities.

Of the 65 counties in Colorado, El Paso County had the fifth highest number of tornadoes during the last 50 years. Tornado activity occurs primarily from June through August. Tornado activity is somewhat weakened by the foothills and mountains in the western third of the County but tends to redevelop and intensify in the eastern third. The Memorial Day tornado in Ellicott on May 28, 2001 is the most recent example of typical weather events in or near the Planning Area.

The Planning Area geography also favors other thunderstorm effects, such as hail. Thunderstorms can produce large amounts of lightening spawning grassland wildfires in the area. Unusually wet Spring weather can promote grassland growth, which in autumn, translates into an increased fuel load for grassland fires. Grassland fires in or near the Planning Area have ranged from 20 to 3,000 acres. The Heritage Fire of February 1996, which started in the Peaceful Valley Lake Estates south of Sub-Area 4, traveled northeast and burned more than 3,000 acres.

Most people receive severe weather warnings through weather radios. The National Oceanic and Atmospheric Administration (NOAA) broadcasts daily weather conditions, forecasts, and advisories on these radios. Radios also have an audible alert capability.

Another Emergency Services initiative is Project Impact. For the years 2001 through 2003 El Paso County effort will participate in "Project Impact: Building Disaster Resistant Communities," a program sponsored by FEMA. The program recognizes that a disaster resistant community is able to recover from a natural disaster with less loss of property and less cost for repairs. FEMA's damage reduction approach is based on three main principles:

- Preventative actions must be decided at the local level.
- Private sector participation is vital.
- Long term efforts and investments in preventative measures are essential.

As the Project Impact principles indicate, the key to preventing loss of life and property in the Planning Area is education and preparation. Many disasters can be avoided or mitigated with adequate safeguards and development sensitive to natural forces.

7.8 LIBRARY SERVICES

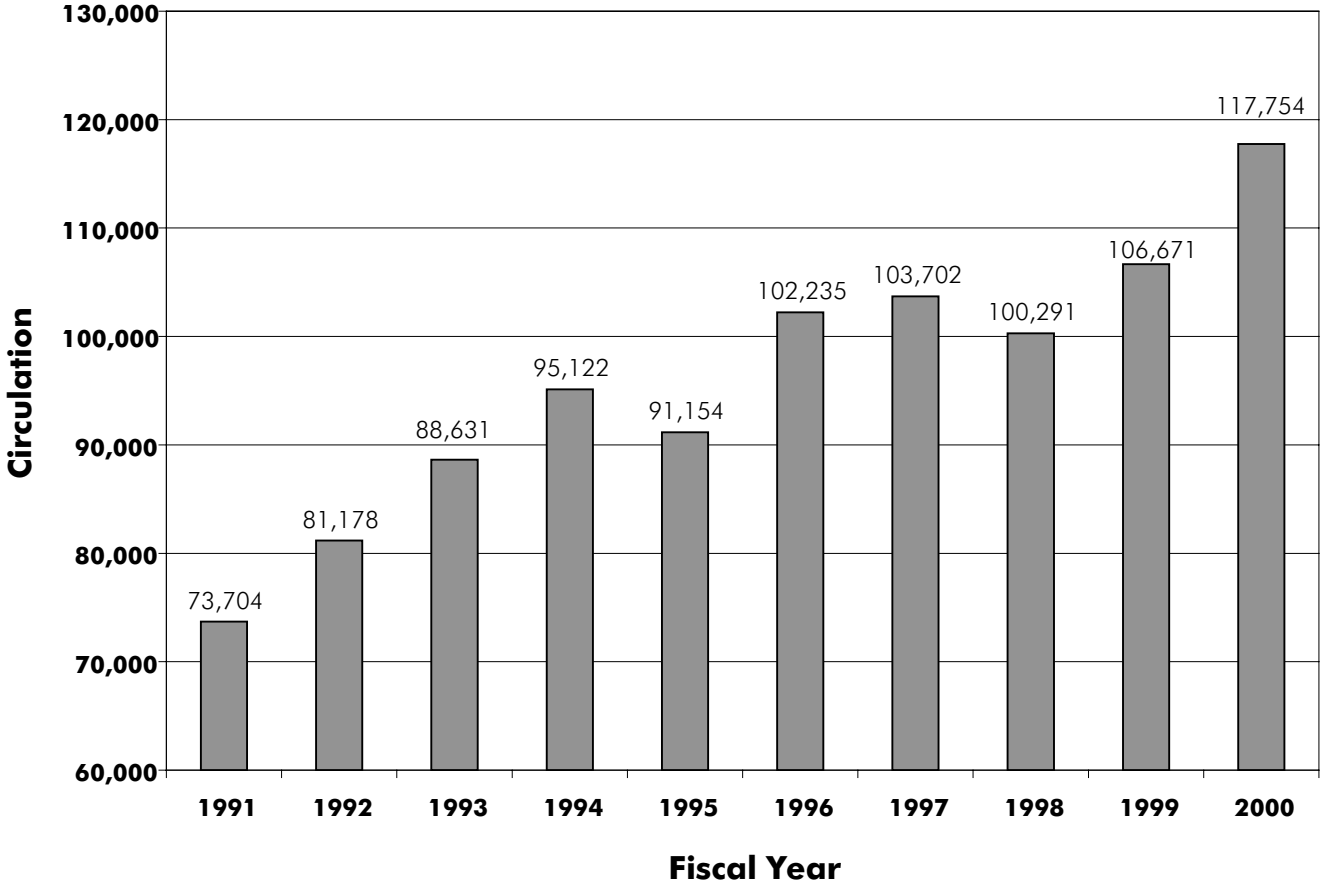
The Pikes Peak Library District (PPLD) serves most of the County, with the exception of Manitou Springs and the Widefield School District. Bookmobiles provide library services to many Planning Area residents. Currently, the PPLD operates two bookmobiles. The City bookmobile primarily serves senior citizens in Colorado Springs. The County bookmobile primarily serves students. County bookmobile services include:

- Falcon - two stops, one in morning and one in afternoon
- Ellicott – stops once a week, 9:30 a.m. to 2:30 p.m. with a 45-minute break for lunch; bookmobile parks at the school
- Edison School – stops once a week, parks at the school, many adult patrons

The County bookmobile is 32 feet long with about 192 square feet of floor space. It can carry up to 5,000 items. Approximately 75 percent of the total bookmobile circulation is done on the County unit. Bookmobile service areas feature a book drop for PPLD patrons: one in Calhan and one in Ellicott. Patrons also have a longer check-out period. Bookmobiles operate out of the Penrose Public Library in downtown Colorado Springs.

The number of items circulated through the bookmobiles has risen steadily through the years. Figure 7.2 shows circulation from 1991 to 2000 for the two bookmobiles.

Figure 7.2 Bookmobile Circulation



Source: Pikes Peak Library District Long Range Facilities Plan

In 2000, the PPLD began work on a Long Range Facilities Plan. Many residents of central El Paso County took part in focus group sessions in Falcon, Calhan, and Ellicott. Their inputs helped the PPLD formulate a strategy to serve residents of the eastern plains. The report was released in December 2001. The Plan makes a number of recommendations regarding existing and planned facilities. Of particular note to Planning Area residents are the following Plan recommendations:

- East Area Regional Library – a new regional facility to serve the residents of far eastern Colorado Springs. It would replace the current Ruth Holley Branch Library
- Falcon Area Community Library – a new community library to serve residents of Falcon
- Bookmobile – the PPLD Plan recommends a second bookmobile unit to serve County residents with a configuration that can meet the needs of young children

7.9 HEALTH SERVICES

The Planning Area does not feature any centralized health care or human services. Generally residents must travel to Colorado Springs for those services. Calhan provides some senior services, such as a senior housing and some home-care. A small population of Spanish-speaking families also resides in eastern El Paso County and works on various ranches. Their access to health care is more limited due to income, language barriers, and distance to health facilities.

The Planning Area also features some instances of zoological diseases, such as bubonic plague, monitored by the County Environmental Health office. Bubonic plague became a concern in July 2001 when it was discovered among the prairie dog colonies in the Colorado Centre.

7.10 POSTAL SERVICE

The Planning Area encompasses 8 separate zip codes served by widely spaced post offices. The prospects for new facilities in the Planning Area are remote at best. Due to financial losses during Fiscal Year 2001 the Postal Service initiated a freeze on new construction. The freeze continued through Fiscal Year 2002, which started October 2001. Currently the Postal Service's Colorado/Wyoming District has nearly 40 projects on hold. During that time the Postal Service will fund only those projects essential to operations.

7.11 CONCLUSION

Overall, community services and facilities are visible and integral parts of the communities they serve. The myriad functions of service providers satisfy numerous community needs, such as education, recreation, and emergency response. Given the growth challenges in the area, their services will be even more important in the future.

Chapter 8 – Future Land Use Plan

8.1 Introduction

8.2 Overall Land Use Scenario

8.3 Sub-Area Scenarios

- Sub-Area 1, Corral Bluffs
- Sub-Area 2, North Central
- Sub-Area 3, Ellicott Cooperative Area
- Sub-Area 4, Colorado Centre
- Sub-Area 5, South Central
- Sub-Area 6, Schriever

8.4 Goals, Objectives, Policies, and Implementation Strategies

- Vision
- Goals, Objectives, Policies, and Strategies
  - Growth
  - Land Use
  - Residential Development
  - Commercial Development
  - Light Industrial Development
  - Heavy Industrial Development
  - Agriculture
  - Transportation
  - Public Facilities and Services
  - Central Water and Wastewater
  - Law Enforcement
  - Fire Protection
  - Education
  - Parks, Trails, and Open Space
  - Visual Character and the Human Environment
  - Historic, Cultural, Archeological, and Paleontological Resources
  - Geology
  - Mineral Resources
  - Water Management
  - Air Quality
  - Soil Erosion
  - Flora and Fauna
  - Community Resources Inventory
  - Government
  - Nuisances and Regulatory Violations

8.5 Major Themes and Implementation Measures

- Land Use
- Junkyards
- Transportation
- Airports
- Lighting

8.1 INTRODUCTION

The Future Land Use Plan is the operative element of the Highway 94 Comprehensive Plan Update and should be used as a framework to review proposed development plans and County-initiated projects. The Land Use Plan contains both text and map elements. The Plan begins with a description of the overall Land Use Scenario for the Planning Area. This scenario is supported by more specific sub-area elements. These are intended to address the unique natural and cultural characteristics of each sub-area. The next section includes topic-specific goals, objectives, policies, and implementation strategies that correspond to many of the subject headings discussed in Chapters 2 through 7 of the Plan. The final Plan element expands upon identified implementation measures.

8.2 OVERALL LAND USE SCENARIO

As depicted on the Concept Map, Map 8.1 (page 136), the Update to the Highway 94 Comprehensive Plan recognizes the potential for a variety of land uses within the Planning Area and defines appropriate locations for each. These uses are designed to be consistent with the mission of Schriever Air Force Base (AFB). Another Plan tenet is that the rural character be enhanced with consideration for both natural and cultural features. Overall, the intent is to develop a community character distinct from the surrounding areas. The Plan draws its character from both emerging trends and a collective community vision.

The present character of the Planning Area is predominantly agricultural with a slowly developing trend toward low density residential developments serving the Colorado Springs metropolitan area. With continued residential growth and the expansion of Schriever AFB, the emerging trend in the northern and western portions of the Planning Area is away from agricultural lands and toward increased residential use along with some commercial use.

8.3 SUB-AREA SCENARIOS

The Planning Area contains six (6) separate sub-areas. The use of sub-areas allows a detailed evaluation of distinct land use characteristics, site-specific planning issues, development opportunities, and development constraints. Each sub-area has specific land use recommendations. Individual scenarios are intended to be consistent with the overall Planning Area policies. Sub-area boundaries are depicted on the Concept Map, Map 8.1.

In all cases where 35-acre densities are recommended, use of a rural cluster option would be supported if it becomes available as part of the Land Development Code. Similarly, in cases where five-acre densities are recommended, consideration should be given to rural residential clustering, so long as these maintain an overall gross average of five acres per dwelling unit and the overall development plan clearly advances the concept of an Open Space Subdivision as articulated in this Plan.

Sub-Area 1 – Corral Bluffs

Description

Photo 8.1 - Aztec Raceway

Sub-Area 1 generally includes the Corral Bluffs formation and lands to its west. The Bluffs form a dramatic backdrop for the Sub-Area. Sub-Area 1 can be seen as a gateway to eastern El Paso County. While the Bluffs are a significant land use influence, the former Franceville Coal Mine, although less obvious, is equally important. The former mine contains areas of subsidence and strip-mined areas prone to flooding. Junkyards are another obvious land use influence. SH 94 cuts through the Bluffs and carries a significant amount of high-speed traffic. North of SH 94, the graded surface of the Waste Management Landfill is a stark contrast to the gullied Bluffs. Once the landfill is closed, operations will shift to the adjacent extension site, to the north of the current landfill, with access from Blaney Road. To the south of SH 94, along Franceville Coal Mine Road, lies the Izaak Walton Gun Club. Currently, the Gun Club faces no significant encroachment issues.

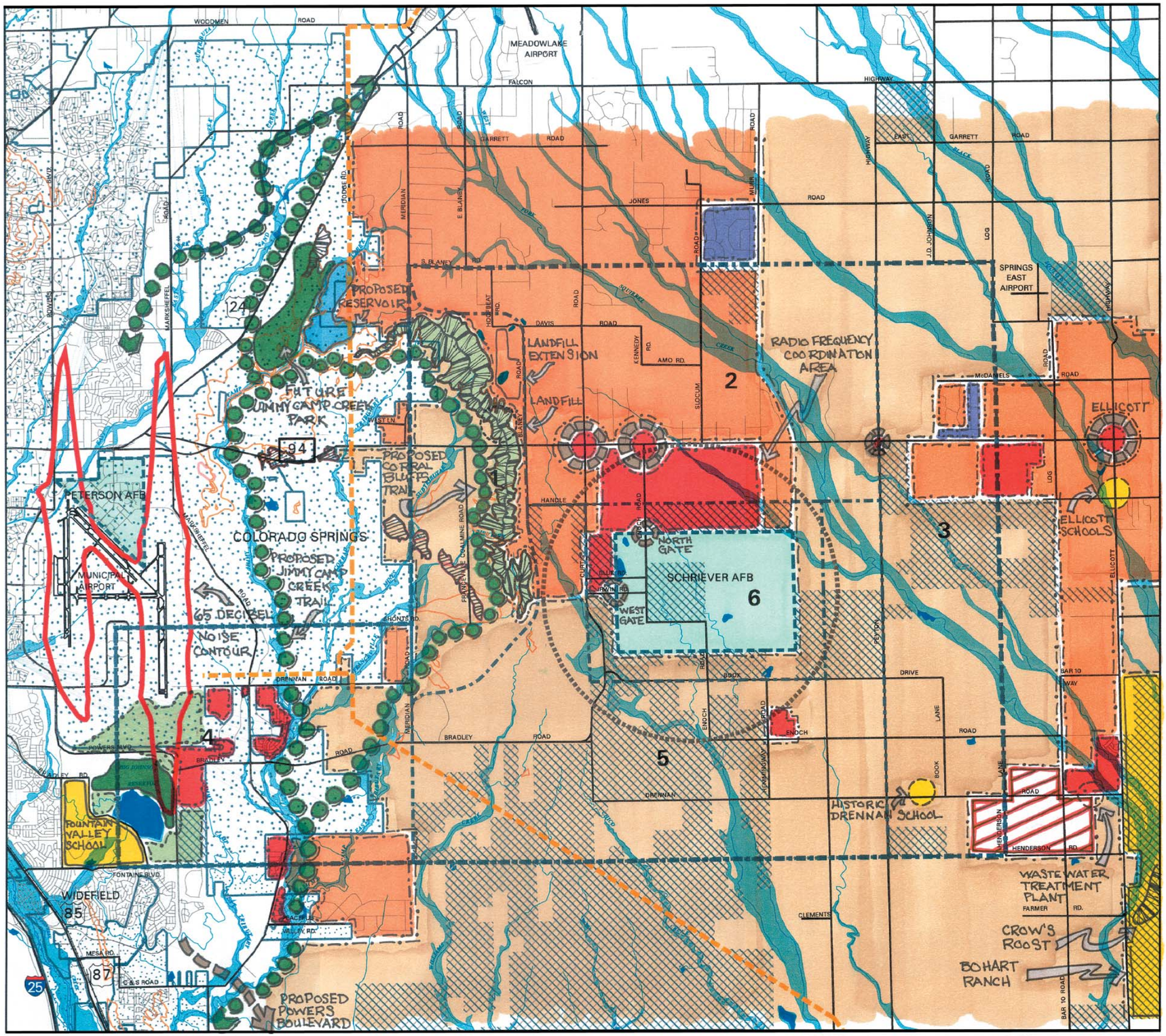
Photo 8.2 - Izaak Walton Rifle Range

Recommendations

Given its highly visible and distinctive nature, the Plan recognizes a desire to transform the area into a memorable gateway for the Planning Area. Accomplishing such a vision for Sub-Area 1 is perhaps the most challenging of any sub-area. Currently, the Sub-Area contains a mix of residential, commercial, and industrial uses. The challenge is to respect the current uses while moving toward the community vision. Junkyards operations cannot be effectively screened in the Sub-Area. Voluntarily moving the operations to other less-visible locations and transitioning the current operations to recycling operations, which can be largely contained within buildings, represent two options. In regards to ammortization, the State legislature passed a law in 2003 preventing local governments from amortizing legal nonconforming uses, such as junkyards (Colorado Senate Bill 03-251). If the legislation were to change and allow amortization, the County should develop an amortization plan for the nonconforming junkyards.

Photo 8.3 - Rubble in Floodplain South of SH94

Along with the junkyards, tires and rubble should be cleaned from the area landscape and its floodplains. The Izaak Walton Gun Club should be recognized as a difficult to locate business. Any approved land uses should preclude encroachment problems for the Gun Club.



Map 8.1
Concept Map

Highway 94 Comprehensive Plan
El Paso County, Colorado

LEGEND

SUB-AREA NAME

1 Corral Bluffs
2 North Central
3 Ellicott Cooperative Area
4 Colorado Centre
5 South Central
6 Schriever

Steep Slope Areas
Undermined and Strip Mined Areas
Floodplains
State Lands
City of Colorado Springs
City of Fountain
Sub-Area Boundaries
Planning Boundary
ACTIVITY NODE
CULTURAL FEATURE
INITIATED SKETCH PLAN
URBAN and ZONED URBAN
2½-ACRE PARCELS
5-ACRE PARCELS
35-ACRE PARCELS
PARKS and OPEN SPACE
CANDIDATE OPEN SPACE
PROPOSED TRAIL

SCALE IN MILES
0 1 2 3

Prepared by: El Paso County Planning Department
Print Date: December 10, 2003

Within the Sub-Area, one area of Planned Industrial (PID) remains from the Aerospace Center Sketch Plan that was approved in the 1980s. Most of the other approvals associated with that plan have lapsed and the original 3,800-acre property has reverted to a variety of owners. To ensure compatibility between uses and the attainment of the community vision, lot sizes south of SH 94 and west of Franceville Coal Mine Road should be limited to 35 acres. North of SH 94, five-acre lot sizes for areas adjacent to the existing rural residential developments should be considered.

Because Meridian Road is being considered for extension north of SH 94 and is recognized as a major arterial, new developments should be cognizant of access limitations and the possible widening of Meridian Road. The Major Transportation Corridor Plan Update will assess the need, extent, and location for Meridian and other arterials. Proposed developments should be integrated into the regional roadway system, feature multiple access points, and minimize distances to school facilities.

Uses along SH 94 should develop with close attention to access and traffic control. The Colorado Department of Transportation should be consulted for all projects impacting traffic along SH 94.

Geologic factors, including steep slopes, impact the area. The visual and environmental sensitivity of the Bluffs should be considered in the design and approval of any development plans. Plans should incorporate clustering to draw value from the most important visual, geologic, and wildlife features while respecting recommended land use densities. In an effort to preserve the open nature of the Bluffs and the lands to the west of the Bluffs, residential densities may be increased to 2½-acres per dwelling unit east of Corral Bluffs provided that densities are reduced for other portions of the development within the steep and moderate slopes of Corral Bluffs, areas west of the Bluffs, and areas with significant historical resources. Developments should accommodate the possibility of a future trail and trailhead at the foot of the Bluffs to connect with the Jimmy Camp Creek Park and Reservoir.

Sub-Area 2 – North Central

Description

Most of Sub-Area 2 features five-acre rural residential parcels. Larger parcels are associated primarily with the eastern portion of the Sub-Area.

Major tributaries of Upper Black Squirrel Creek run from northwest to southeast and influence the generally open upland topography of the Sub-Area. These stream corridors have wide floodplains. Views from the area are generally to the southeast, and in some cases, extend for long distances.

Photo 8.4 - Paddock Road Residence

Included in the Sub-Area is the Ververs Ranch. It includes the Nova Tech property, a sketch plan planned and zoned for urban density uses in the 1980s but not yet developed. Although other urban density projects were proposed within the Planning Area, most project zonings were either not approved or reverted to their former rural classifications. With the exception of the rural residential subdivisions, most of the Sub-Area remains in large land ownerships.

The area features a number of major roadway corridors including SH 94, Curtis Road, Enoch Road, and Peyton Highway. SH 94 carries large volumes of traffic with numerous turning movements. Curtis Road

also carries high volumes of traffic and connects with Schriever's proposed western gate. Enoch proceeds south from SH 94 and connects with Schriever's proposed northern gate. In the northwest corner of the Planning Area, the County has preserved right-of-way to connect Blaney Road with Meridian Road. Due to the nature of these roadways, land use compatibility issues of note include traffic speeds, traffic noise, light intrusion, air quality, and limited access points.

The amount of bedrock groundwater underlying the Sub-Area is sufficient to serve rural residential development. However, the expense of drilling to suitable aquifers or getting augmentation plans approved may impede the development of smaller subdivisions served by individual wells. No central water service is currently available although the possibility exists for future central services through either the Cherokee or Sunset Metropolitan Districts.

Upper Black Squirrel Creek tributaries may present impediments to completing an integrated internal road network. The nearest schools are five to ten miles distant. It is unlikely that closer facilities will be available for many years. SH 94 provides a direct connection for bus transportation.

Recommendations

Photo 8.5 - Dragon Man's Entrance

Because of its proximity to Schriever AFB, access to major roadways, and limited rural residential development, Sub-Area 2 is recommended as an initial focal point for urban density development in the Planning Area. Recommended uses cover a broad spectrum and include commercial, light industrial, heavy industrial, multi-family, rural residential, and agricultural uses. In general, urban uses are designated between SH 94 and the northern boundary of Schriever AFB. Five-acre densities are recommended north of SH 94 and west of a Murr Road extension. Overall, the eastern portion of the Sub-Area is designated for 35-acre densities and agricultural uses. Heavy industrial uses should be considered adjacent to the landfill and landfill extension. Because of the variety of uses and densities recommended in the Sub-Area, adequate compatibility between uses is paramount. Developments should transition densities through the use of clustering, screening, and spacing.

Any urban uses will require central water and wastewater services. High visibility commercial uses should be clustered in designated nodes and should not extend linearly along major transportation corridors, such as SH 94. Small urban nodes that include residential and commercial uses are envisioned for Enoch and Curtis Roads at SH 94. A rural commercial node is envisioned at Peyton Highway and SH 94 with limited commercial uses to serve the local populace. For these commercial uses, signage should be shared where possible.

Photo 8.6 - Magi's Grocery

New developments should be designed to minimize the number of required access points onto major roadways. Direct access onto SH 94 should be limited to preserve its functional integrity. Peyton Highway should also be protected as a County transportation corridor. Subdivisions should generally be approved in a manner that accommodates the construction of County Roads along section lines. Subdivisions should

be designed to allow connections to adjoining properties. Flagstem lots should be avoided if their use limits the potential for re-subdivisions or development of other properties in the vicinity. Ultimately, Blaney Road should be connected to Meridian Road for traffic circulation. Already, 210 feet of right of way exists near the northern end of Blaney Road that may ultimately connect with Meridian Road.

In the northern portions of the Sub-Area, residential development should be accommodated in a manner that allows reasonable preservation of the area's rural character. Ensuring connectivity between subdivisions, eliminating light pollution, clustering buildings, and retaining significant views can help preserve that character. Areas that should be considered as open space include areas of high habitat value, stream corridors, floodplains, and viewsheds. The West Fork of the Upper Black Squirrel Creek should be respected for its flood management qualities.

Sub-Area 3 – Ellicott Cooperative Area

Description

Sub-Area 3 includes the lands east of Peyton Highway and overlaps with the 1989 Ellicott Valley Planning Area. With the exception of some proposed rural residential subdivisions near SH 94, the Sub-Area remains primarily in large land ownerships and is used primarily for grazing. A major tributary of Upper Black Squirrel Creek bisects the area with a wide floodplain. Subdivision continues in the Ellicott area, with an associated influence on Sub-Area 3. Additionally, the Sunset Village Sketch Plan was approved near the southern portion of the Sub-Area and some limited development activity has occurred. The historic Drennan School also lies in the southern portion of the Sub-Area along Drennan Road.

Recommendations

35-Acre lots are recommended for most of the Sub-Area with the exception of five-acre lots in the vicinity of Ellicott and SH 94.

As Sunset Village grows, the developer should pave Drennan Road to mitigate off site development impacts. Any paving and road expansion should be sensitive to the historic Drennan School. El Paso County should assist local citizens in listing the property on the National Register of Historic Places and the Colorado State Register of Historic Properties.

The integrity of ranching operations should be protected by maintaining access to leased parcels. As the Sub-Area is developed, the West Fork of Upper Black Squirrel Creek should be integrated into these developments for floodplain management.

Sub-Area 4 – Colorado Centre

Description

Most of Sub-Area 4 lies within the city limits of Colorado Springs. Partly because of the influence of Airport noise contours, the area features commercial, office, and light industrial zoning in both City and County areas. Urban residential uses in the unincorporated County areas include the Colorado Centre and Morning Sun Subdivisions. Mustang Meadows is a nearby rural residential area.

The Colorado Springs Airport and its associated noise contours cover a significant portion of the Sub-Area. Jimmy Camp Creek runs through the area in a north-south direction. The Creek is depicted as a potential regional trail corridor and is identified, along with much of the Sub-Area, as potentially important

wildlife habitat. Along the western edge of the Sub-Area lies the historic Fountain Valley School featuring an open landscape with school buildings clustered in the center of the property. Nearby is the Big Johnson Open Space, which was purchased by the City of Colorado Springs through the Trails and Open Space (TOPS) Program. A tallgrass prairie remnant exists on the Airport property and is being considered as habitat and as a compatible use for the eastern runway. Transmission towers run through the Sub-Area. An area of Mobile Home Park zoning lies along Drennan Road near the transmission towers and a floodplain. The Waterview Sketch Plan and the Cottonwood Grove development lie in the Sub-Area.

Photo 8.7 - New Dormitory at Fountain Valley School

Because of the location of the Airport and the Big Johnson Reservoir, major road access points from the west are limited to Bradley Road and Fontaine Boulevard. Bradley Road functions as the main east-west transportation artery through the area. The Major Transportation Corridors Plan (1987) depicts both Meridian Road and Marksheffel Boulevard as future north-south expressways. Local street connections are limited throughout Sub-Area 4, especially to the south and east.

Photo 8.8 - Original Dormitory at Fountain Valley School

Sub-Area 4 is unique compared with the other sub-areas due to its relationship with the cities of Colorado Springs and Fountain, because urban density development is underway, and because much of the Area is within or adjacent to areas with established urban services.

Recommendations

An overriding concern in the Sub-Area is compatibility with City industrial and residential areas. Urban uses are recommended for County enclaves surrounded by the City of Colorado Springs. Enclaves should be built to City standards and ultimately annexed into the City of Colorado Springs. Within unincorporated areas in the southern portion of the Sub-Area, five-acre densities are recommended. 35-Acre densities are recommended east of Jimmy Camp Creek. Once City properties are developed, five-acre densities should be accommodated east of Jimmy Camp Creek. Given its inhospitable site, the Mobile Home Park zoning on Drennan Road should be changed to 35-acre Agricultural zoning. Trail corridors should be constructed to link Corral Bluffs and Jimmy Camp Creek.

Photo 8.9 - Colorado Centre Foreign Trade Business Park

Photo 8.10 - Area Zoned for Mobile Home Park

Sub-Area 5 – South Central

Description

Photo 8.11 - Windmill

Sub-Area 5 forms much of the southern boundary of the Planning Area. The majority of the Sub-Area remains in large ownerships, with some division of property into parcels of 10 to 40 acres. Almost all of the property is currently used for grazing. The Cordova Ranch is located in Sub-Area 5. Approximately one-third of the Sub-Area is State-owned. Bradley Road is the dominant constructed feature of the area and provides a link to Colorado Springs. Drennan Road links Ellicott Highway with Bradley Road. The Cherokee Metropolitan District intends to build a WWTP south of Schriever AFB in the Chico Basin.

Recommendations

As in Sub-Area 3, if the Sunset Village Sketch Plan were to build out to a significant degree, the developer would need to pave Drennan Road to accommodate the increased off site traffic impacts. Roadway designs should be sensitive to the State Lands and the historic Drennan School.

Photo 8.12 - Cordova Ranch

Some heavy industrial uses should be accommodated north of Bradley Road and east of Meridian Road adjacent to the current junkyard. All heavy industrial uses should be screened from public rights-of-way. Five-acre residential densities should be accommodated near Curtis and Handle Roads. Densities can be increased to 2½ acres per dwelling unit if additional open spaces are preserved. Only 50 percent of identified floodplain, steep slope, and other hazardous areas should count toward open space calculations. In terms of emergency services, a fire station near Bradley Road should be constructed to expand the fire coverage of the Ellicott Fire District.

Sub-Area 6 – Schriever

Description

The Schriever Sub-Area includes Schriever AFB and the surrounding ½-mile strip. Like most military installations, Schriever AFB is a largely self-contained operation. The Base has negotiated several height easements around the Base to protect their radar "look angles." The Base is a major employment center with approximately 4,500 employees. Employment could grow steadily to 6,000, or possibly 10,000, depending on federal funding. Base personnel use Curtis Road and SH 94 as major commuting routes.

Photo 8.13 - Schriever AFB

Recommendations

Unlike other military installations, Schriever AFB has no aircraft operations, except perhaps for an occasional helicopter flight. Schriever's focus is space operations. To ensure the continued viability of these operations, the Highway 94 Update calls for a three-mile Radio Frequency (RF) Coordination Area centered on the Base antennas. In the RF Coordination Area, property owners should ensure that radio frequency emissions from cellular towers, microwave towers, ham operators, welding operations, radio stations, and other uses do not interfere with Schriever AFB operations. Uses that emit radio frequency signals within a three-mile radius of Schriever AFB should be coordinated with the Schriever AFB Frequency Manager and the Base Planner.

While much of Schriever AFB is currently undeveloped, the Base Master Plan envisions new facilities near its perimeter. The Highway 94 Plan envisions possible urban and rural residential uses north and west of the Base. Continued agricultural uses are recommended south and east of the Base. Overall, with the exception of RF emissions, these uses do not greatly impact Base operations. Conversely, the Base may have a pronounced impact on surrounding uses particularly because of light intrusion and high traffic volumes. Within the Sub-Area, new developments should contain adequate disclosures for prospective buyers concerning traffic, light, noise, dust, and other effects.

Because of its size and security status, the Base presents somewhat of an impediment to local transportation access. Although Enoch Road is closed to through traffic at the southern Base boundary, Book Road extends to Curtis Road, providing local access. Curtis Road and Bradley Road should continue to provide regional transportation access but limited access to individual parcels. New developments should recognize the future reconstruction and expansion of Curtis Road north of Irwin Road.

8.4 GOALS, OBJECTIVES, POLICIES, AND IMPLEMENTATION STRATEGIES

The following goals, objectives, and policies are recommended to accomplish the intent and purpose of the Highway 94 Plan. They are derived from an analysis of the Planning Area, questionnaire responses, discussion of key planning issues by the Citizen's Advisory Committee, and public comment. Major emphasis is placed on these statements, as they constitute a fundamental Plan element.

For clarification, the following definitions apply:

- Vision - an image of what the Highway 94 Area should strive to become in the future
- Goal - a generalized end state desired by the public at large
- Objective - a category within a larger goal to which subject-specific policies are applied
- Policy - a course of action that leads toward goal achievement and is in direct response to area problems, opportunities, and needs
- Implementation Strategy - a specific activity that a public agency pursues to fulfill a policy

The goals, objectives, policies, and strategies should not be mistaken for the El Paso County Land Development Code, which contains zoning and subdivision regulations. While zoning and subdivision regulations control the use and division of land, the goals, objectives, policies, and strategies are a declaration of what the public desires in the future. These provide decision-makers a yardstick for planning and coordinating physical development activities.

When used administratively, this section of the Plan should be viewed holistically. In other words, inconsistency with a single policy is less important than consistency with the basic spirit and intent of the policies. Although the policies are not rigid requirements for approval of development applications, consistency helps determine project acceptability. Applicants should indicate how proposed developments are consistent with such policies, particularly during zone change or sketch plan submittals. If a project is inconsistent with certain policies, the burden of proof is with the applicant to demonstrate overall Plan consistency.

Vision

The Highway 94 Area is an asset to the County, providing a variety of land uses targeted toward the needs of local residents and property owners. Commercial and industrial uses are accommodated in identified locations and served by central services. Land uses are planned and implemented in ways that are consistent with the mission of Schriever AFB. Growth occurs both in response to market forces and in an orderly, sustainable, and predictable manner. The overall rural character of the area is enhanced, including significant natural and cultural features.

Goals, Objectives, Policies, and Strategies

Growth

Goal 1. Guide growth in a manner that respects the emerging needs of the community and enhances the existing rural character

Objective 1.1. Focus new growth in nodes or general character areas to minimize the cost of providing utilities and public services, to preclude environmental degradation, and to preserve agricultural, scenic, historic, and natural resources

Policy 1.1.1. Maintain adequate geographic separation between activity nodes through open spaces or low densities to maintain a community identity and to enhance the long term viability of developments
Policy 1.1.2. Use low densities or open spaces to provide an identity separate and distinct from the City of Colorado Springs

Land Use

Goal 2. Achieve a desirable and efficient use of the land while enhancing the physical environment through functional and compatible land use configurations

Objective 2.1. Develop with due recognition of the unique site characteristics of each sub-area

Policy 2.1.1. Consider physical site characteristics for all development proposals, with particular attention to mineral deposits, moderate and steep slopes, mining subsidence, debris fans, drainage ways, floodplains, and soils
Policy 2.1.2. Assess soils based on permeability, erodability, flooding frequency, and high water tables
Policy 2.1.3. Respect the integrity of existing landforms, minimize cut and fill operations, and avoid moderate and steep slopes
Policy 2.1.4. Use complimentary building arrangements and shared parking
Policy 2.1.5. Screen parking from public rights-of-way

Objective 2.2. Ensure that the nature and intensity of proposed developments are consistent with the Land Use Map and Sub-Area scenarios

Policy 2.2.1. New developments should demonstrate compatibility with surrounding land uses in terms of general use, connectivity, building heights, scale, overall densities, dust, and noise and feature gradual transitions in densities and/or appropriate buffers
Policy 2.2.2. Accommodate a compatible mix of industrial, office, commercial, residential, open space, and recreational land uses
Policy 2.2.3. Locate high density uses in defined activity nodes
Policy 2.2.4. Discourage minor subdivisions of five-acre residential properties in commercial, industrial, and agricultural character areas, as depicted on the Land Use Map
Policy 2.2.5. Site commercial uses within one-quarter (¼) mile of designated commercial nodes and orient these nodes toward the local populace. Allow urban residential densities within one-half (½) mile of defined nodes. Allow two-and-a-half (2½) acre residential densities out to one (1) mile from urban density nodes. Allow an exception to the policy at the intersection of SH 94 and Peyton Highway, which is intended as a rural commercial node surrounded by 35-acre agricultural zoning
Policy 2.2.6. Allow increases in lot densities provided that overall lot densities meet recommended densities on the Concept Map. Only 50 percent of steep slopes, floodplains, subsidence areas, strip-mined areas, and other unbuildable areas should be counted in density calculations

Objective 2.3. Ensure that zonings and Sketch Plans are compatible with the Land Use Map

Policy 2.3.1. In coordination with property owners, residents, and the Citizens' Advisory Committee, develop an updated zoning plan for the Highway 94 Area and submit it to the Board of County Commissioners for review and approval
Policy 2.3.2. Encourage lands surrounding sketch plan projects or municipal areas to remain in 35-acre zoning until substantial build out of those sketch plans or municipal areas
Policy 2.3.3. Evaluate existing sketch plans for their compatibility with the Highway 94 Update
Policy 2.3.4. Encourage revised sketch plans, which are consistent with the Highway 94 Update

Implementation Strategy 2.3a. Process a County-initiated rezoning from the RR-3 (Rural Residential) District to the A-35 (Agricultural) District for those properties recommended for 35-acre zoning on the Land Use Map

Objective 2.4. Consider the availability and cost of community services, such as schools, fire protection, emergency response, and law enforcement, for proposed developments

Policy 2.4.1. Ensure that public facilities and services are effectively installed, operated, and maintained and that the proposed development will not require costly future public outlays, create undue hardship for existing residents, or exacerbate service shortfalls
Policy 2.4.2. Ensure that developments address the provision of roads, drainage ways, schools, fire protection, law enforcement, code enforcement, libraries, human services, recreation, and emergency medical services
Policy 2.4.3. Consider a County Cost of Community Services study to define the public costs associated with residential, industrial, commercial, and agricultural land uses

Objective 2.5. Encourage Open Space Subdivisions as a means to conserve open land, including those areas containing unique and sensitive features, to maintain property values, and to protect the area's most significant natural, historic, and cultural resources

Policy 2.5.1. Site buildings to avoid or complement significant natural, historic, or cultural features
Policy 2.5.2. Develop open space subdivision regulations to provide greater design flexibility and efficiency in siting services and infrastructure, including reductions in the length of roads, utility runs, and the amount of paving required for residential development

Objective 2.6. Support the operational and security requirements of Schriever AFB

Policy 2.6.1. Ensure that radio frequency emissions from cellular towers, microwave towers, ham operators, welding operations, radio stations, and other uses do not interfere with Schriever AFB operations
Policy 2.6.2. Coordinate uses that emit radio frequency signals within a three-mile radius of Schriever AFB antennas with the Schriever AFB Frequency Manager and Base Planner as depicted on the Concept Map
Policy 2.6.3. Encourage uses serving the needs of Schriever AFB and its populace to locate within the designated nodes north of the Base.

Objective 2.7. Achieve land use compatibility near airports

Policy 2.7.1. Provide guidance to applicants concerning airport compatibility

Implementation Strategy 2.7a. Develop airport overlays, which consider the following factors:
- Areas where heights of objects are restricted
- Areas with the greatest potential for aircraft accidents
- Areas of airport-related noise
- Areas of regular or frequent overflight, including approaches, departures, and traffic patterns

Implementation Strategy 2.7b. Update regulations for land uses within the designated overlays

Objective 2.8. Achieve land use compatibility for hard-to-locate businesses

Policy 2.8.1. Locate mini-storage warehouses, recreation vehicle storage, trailer storage, and boat storage only where they can be screened from public rights-of-way
Policy 2.8.2. Ensure that proposed developments are compatible with existing firing range operations
Policy 2.8.3. Develop a plan to locate junkyards, salvage yards, and auto recycling where they can be screened from public rights-of-way

Implementation Strategy 2.8a. Consider the creation of an "Auto Recycling" zone as a means to eliminate or clean junkyards in areas that cannot be effectively screened due to topography or other site considerations
Implementation Strategy 2.8b. Encourage the State legislature to pass legislation allowing amortization of legal nonconforming uses. If passed, devise an amortization plan for nonconforming junkyards
Implementation Strategy 2.8c. Facilitate the relocation of junkyards along SH 94 to other locations
Implementation Strategy 2.8d. Perform regular enforcement to ensure compliance with junkyard regulations

Policy 2.8.4. Regulate motocross facilities to ensure compatibility with adjacent areas and to ensure conformity with the Highway 94 Update

Objective 2.9. Achieve land use compatibility for cellular and transmission towers within the Planning Area

Policy 2.9.1. Preserve the authority of local governments over decisions regarding the placement, construction, and modification of personal wireless service facilities, per the Federal Telecommunications Act of 1996, Section 704(a)
Policy 2.9.2. Avoid the siting of cellular towers along prominent ridges, most especially Corral Bluffs both north and south of SH 94
Policy 2.9.3. Avoid the siting of cellular towers along SH 94 west of the Corral Bluffs formation, as the area is a significant visual entry and exit point for the Planning Area and the City of Colorado Springs
Policy 2.9.4. Site electrical transmission towers using a public input process with due regard for natural and cultural features

Implementation Strategy 2.9a. Encourage antennae collocation on existing towers through regulatory incentives
Implementation Strategy 2.9b. Coordinate tower locations with the Federal Aviation Administration and local airports
Implementation Strategy 2.9c. Working with cellular companies, map all cellular towers in the County

Residential Development

Goal 3. Ensure that residential development is appropriate for the Planning Area

Objective 3.1. Protect residential properties through subdivision designs that are consistent with the natural landscape and natural processes
Objective 3.2. Create gradual transitions between rural and urban uses through means such as varying densities and lot sizes, buffering, and reduced building scales
Objective 3.3. Accommodate multi-family developments within designated urban density nodes

Commercial Development

Goal 4. Ensure commercial development is appropriate for the Planning Area

Objective 4.1. Develop a Rural Commercial Zone for small scale commercial uses in areas without reasonable access to central water and sewer
Objective 4.2. Accommodate service and commercial developments within the Planning Area, which are oriented to local residents and employees, provide support services to Schriever AFB, or generally meet a demonstrated need
Objective 4.3. Encourage commercial developments to locate in the nodes identified in the Land Use Map
Objective 4.4. Regulate design features to encourage low profile advertising signs, indigenous landscaping, shared parking facilities, shared access points, and sensitive façade treatment

Light Industrial Development

Goal 5. Ensure that any proposed light industrial development is appropriate for the Planning Area

Objective 5.1. Accommodate light industrial uses within the Planning Area as described in the sub-area scenarios
Objective 5.2. Ensure that light industrial developments complement the natural environment and exhibit a campus-like atmosphere, with shared parking, access, and amenities

Heavy Industrial Development

Goal 6. Ensure that any proposed heavy industrial development is appropriate for the Planning Area

Objective 6.1. Accommodate heavy industrial uses within the Planning Area, such as batch plants and contractor equipment yards, which are compatible with surrounding uses and serve a demonstrated regional need

Objective 6.2. Ensure that heavy industrial development is adequately separated from residential uses
Objective 6.3. Site heavy industrial uses where they can be screened from public rights-of-way using natural terrain and are served by adequate roadways, such as the Defense Access Road and Blaney Road
Objective 6.4. Generally restrict heavy industrial uses to areas described in the sub-area scenarios
Objective 6.5. Evaluate heavy industrial uses based on traffic impacts, air quality impacts, noise, blowing materials, light pollution, access, the adequacy of the surrounding roads for heavy truck traffic, and available infrastructure

Agriculture

Goal 7. Enhance agricultural operations within the Planning Area

Objective 7.1. Respect the agricultural character of designated portions of the Planning Area, particularly those areas near large collections of State lands used for grazing
Objective 7.2. Ensure that new developments do not adversely affect agricultural operations and that urban density projects are well removed from agricultural focus areas, including Stewardship Trust lands and other large collections of State lands.

Implementation Strategy 7.1a. Encourage the State Land Board to consolidate State holdings
Implementation Strategy 7.1b. Investigate the feasibility of a County Transfer of Development Rights System

Transportation

Goal 8. Develop a well-integrated multi-modal transportation system

Objective 8.1. Plan an efficient regional transportation network with consideration for community and natural features

Policy 8.1.1. Protect the functional integrity of identified major corridors by carefully selecting access points and carefully designing those that are allowed
Policy 8.1.2. Coordinate road widenings with utility providers, including Mountain View Electric, El Paso County Telephone, and Cherokee Metropolitan District
Policy 8.1.3. Contact utility providers before any site preparation
Policy 8.1.4. Facilitate car-pooling, shuttle buses, and light rail service, especially in association with Schriever AFB
Policy 8.1.5. Accommodate safe and efficient pedestrian and bicycle movement throughout the Planning Area, as appropriate
Policy 8.1.6. Analyze the impact of the transportation network on natural and cultural resources
Policy 8.1.7. Minimize or preclude adverse impacts from transportation projects, including noise, air pollution, safety, and light spillover concerns
Policy 8.1.8. Use alternative design standards for scenic roads or where environmental consequences are great
Policy 8.1.9. Avoid disruption to significant State and community resources
Policy 8.1.10. Consider the roadside use of native plants, such as grasses and wildflowers, as a means of roadway beautification and maintenance reduction

Implementation Strategy 8.1a. Recognize Curtis Road and SH 94 as major commuting routes for Schriever AFB employees and County residents
Implementation Strategy 8.1b. Designate a location for a public park and ride facility north of Schriever AFB as part of the County Major Transportation Corridors Plan Update

Implementation Strategy 8.1c. Seek Department of Defense funding to assist with the reconstruction and widening of Curtis Road

Implementation Strategy 8.1d. Recognize the uncertainty regarding the status of the private Front Range Toll Road. Amend the Highway 94 Plan in the event that the Toll Road moves forward and adopt definitive County policies concerning the road at that time

Objective 8.2. Develop efficient subdivision networks

Policy 8.2.1. Ensure multiple access points for subdivisions, schools, and other activity nodes in a manner that promotes connectivity and protects the functional integrity of major corridors

Policy 8.2.2. Design subdivisions to allow future roadway connections and access to adjacent properties as a means to ensure adequate circulation throughout the Planning Area and to preclude the creation of future access problems for adjacent properties. Use waivers for roadway connections to adjacent properties sparingly and only in those cases where topography or other site characteristics preclude connections.

Policy 8.2.3. Use dead-end roads only when necessary due to topographic features or unusually shaped properties

Policy 8.2.4. Ensure that roadway networks support efficient school bus service, mail service, and acceptable emergency response times

Policy 8.2.5. Design roads to keep traffic within the posted speed limits

Policy 8.2.6. Create a safe walking environment within urban density subdivisions with well defined crosswalks and sidewalks buffered from roadways

Policy 8.2.7. Create a system to equitably assess on site and off site development impacts and ensure that adequate developer cost recovery measures are in place

Public Facilities and Services

Goal 9. Promote the efficient, timely, and economical provision of public facilities and services in a manner which best sustains a safe, healthful, and enjoyable environment respectful of the community context

Objective 9.1. Ensure that new developments adequately address the provision of public services, including schools, roads, drainage ways, emergency services, and fire coverage

Objective 9.2. Encourage the consolidation of utility corridors

Objective 9.3. Encourage the underground installation of utility lines when economically and technically feasible

Objective 9.4. Encourage the compatibility of major public utilities with affected land uses

Objective 9.5. Locate, screen, or buffer major public facilities to mitigate adverse impacts

Central Water and Wastewater

Goal 10. Ensure the viability of proposed central water and wastewater services

Objective 10.1. Encourage the consolidation of regional water and sanitation systems over the proliferation of small, individual systems

Objective 10.2. Promote line extension and tap-in policies for special districts and public service companies that discourage linear or strip development along water and sewer lines

Law Enforcement

Goal 11. Provide or promote the efficient provision of law enforcement concurrent with population growth

Policy 11.1.1. Evaluate the need for a Sheriff's Office substation or staging area in eastern El Paso County as future growth and development warrant

Implementation Strategy 11.1a. Designate a staging area and facility within the central portion of the Planning Area for law enforcement

Policy 11.1.2. Encourage developments and facilities within large commercial or industrial centers to provide private security services to supplement County law enforcement

Fire Protection

Goal 12. Promote the efficient provision of fire protection concurrent with population growth

Policy 12.1.1. Coordinate with fire departments, fire districts, Schriever AFB, and developers to ensure that regional fire protection services are upgraded to accommodate new growth and that on site design features, such as fire hydrants, cisterns, and emergency access routes, are adequate

Policy 12.1.2. Encourage adjacent fire districts to incorporate areas with no fire coverage into their districts

Education

Goal 13. Facilitate the adequate provision of Kindergarten through Grade 12 educational facilities

Objective 13.1. Promote a prominent role for schools in the community

Policy 13.1.1. Encourage area school districts to develop educational facilities that promote joint utilization, such as recreation, open space, adult education, senior citizen programs, and community events

Implementation Strategy 13.1a. Work with developers and school districts during the development review process to provide educational facilities that adequately meet student needs, including the reservation of adequate and viable school sites

Implementation Strategy 13.1b. Encourage developers to voluntarily bear some school costs by improving educational programs and facilities as a means to add value to their developments

Implementation Strategy 13.1c. Facilitate coordination between school districts, the State Land Board, and managers of Stewardship Trust lands to develop educational facilities and programs within appropriate Stewardship Trust areas

Parks, Trails, and Open Space

Goal 14. Provide or facilitate a well connected system of parks, trails, and open spaces

Objective 14.1. Consider strategies to incorporate open space resources into development

Objective 14.2. Coordinate efforts to conserve open space with efforts to preserve cultural landscapes, historic sites, and agricultural uses

Policy 14.1.1. Plan open space and recreational areas in conjunction with school sites, when appropriate
Policy 14.1.2. Maintain private open spaces through associations or special districts
Policy 14.1.3. Identify trails early in the development process
Policy 14.1.4. Identify key drainages in the Planning Area suitable for open space and trails
Policy 14.1.5. Select trail corridors to connect and highlight community assets, both cultural and natural
Policy 14.1.6. Respect the integrity of Corral Bluffs as a significant open space and scenic viewshed
Policy 14.1.7. Consider the purchase of Corral Bluffs as open space
Policy 14.1.8. Consider trail corridors along Jimmy Camp Creek and Corral Bluffs

Implementation Strategy 14.1a. Integrate Plan recommendations into the County Parks, Trails, and Open Space Master Plan

Visual Character and the Human Environment

Goal 15. Retain and enhance the visual character and human environment of the Planning Area

Objective 15.1. Ensure that developments respect the rural character of the area and prime visual features, including the Front Range, Corral Bluffs, and unique rock outcroppings, through thoughtful siting and design techniques

Policy 15.1.1. Ensure that advertising signs are compatible with the surrounding environment, have low profiles, and are shared, when possible
Policy 15.1.2. Strictly enforce sign regulations within the Planning Area, particularly off premises signs along SH 94
Policy 15.1.3. Promote the use of native plants for roadway beautification
Policy 15.1.4. Protect the integrity of the Corral Bluffs formation, both north and south of SH 94
Policy 15.1.5. Ensure that antennas, power lines, and structures do not intrude into the Corral Bluffs ridgeline
Policy 15.1.6. Establish lighting design criteria to help maintain the rural character of the area

Implementation Strategy 15.1a. Consider the purchase of open space easements or other conservation measures for the Corral Bluffs formation
Implementation Strategy 15.1b. Refine and adopt lighting policies as part of the Land Development Code that incorporate the following concepts:
- Lighting levels should be appropriate to the task
- Lighting levels should be reasonably uniform to avoid overly bright or dark areas
- Lamps should make objects appear as close to a natural color as possible and provide high energy efficiency
- Fixtures should eliminate glare and light spillover onto adjacent properties or into the sky, primarily through the use of shielded fixtures and reflectors
- Fixture mounting heights should be as low as possible

Historic, Cultural, Archaeological, and Paleontological Resources

Goal 16. Protect and preserve significant historic, cultural, archaeological, and paleontological resources within the Planning Area

Policy 16.1.1. Notify the State Historic Preservation Office as part of the development review process in areas where potentially important historic, archaeological, or paleontological sites and structures could be negatively impacted by new development.
Policy 16.1.2. Coordinate with the State Historic Preservation Office to determine whether a survey of a proposed development is necessary, or what mitigation techniques would be appropriate
Policy 16.1.3. Encourage developments in identified areas with scientifically important archeological or paleontological resources to preserve these areas as open space and provide access for research activities

Policy 16.1.4. Research, document, and protect significant historic, cultural, archeological, and paleontological resources and landscapes within the County, including the Drennan School, Fountain Valley School, Burial Rock rock formation, Crows' Roost rock formation, Bohart Ranch, Chico Basin Ranch, and Frost Ranch
Policy 16.1.5. Publicize and distribute information concerning significant historic, cultural, archeological, and paleontological resources and landscapes within the County, including the Drennan School, Fountain Valley School, Burial Rock rock formation, Crows' Roost rock formation, Bohart Ranch, Chico Basin Ranch, and Frost Ranch
Policy 16.1.6. Curb vandalism of historic, cultural, archeological, and paleontological sites through identification of unprotected resources and the development of strategies to protect remote sites

Geology

Goal 17. Recognize and respect geologic conditions

Policy 17.1.1. Encourage only low-intensity land uses, such as agriculture and open space, in areas with Class 4, 5, 6, and 7 Environmental Hazards as identified in the County's 1977 Charles Robinson Geologic Constraints maps, unless identified hazards can be effectively mitigated
Policy 17.1.2. Require detailed site investigations and mitigation by a professional geologist for land use proposals in Class 3 constraint areas
Policy 17.1.3. Restrict development or mitigate adverse effects in areas characterized by steep slopes, geologic hazards, drainage ways, and flood plains

Mineral Resources

Goal 18. Ensure sensitivity to the community context during the extraction of mineral deposits

Policy 18.1.1. Ensure consistency of mineral extraction operations with the County Master Plan for the Extraction of Commercial Mineral Deposits to provide both resource and environmental preservation

Water Management

Goal 19. Effectively manage waterways

Objective 19.1. Effectively manage flood events

Policy 19.1.1. Preclude damage to life and property by strict adherence to El Paso County floodplain regulations
Policy 19.1.2. Ensure that structures or property are not inappropriately sited in floodplains to preclude damage to downstream properties and downstream drainage structures
Policy 19.1.3. Preserve floodway functions through the retention of natural floodway features
Policy 19.1.4. Respect the potential for catastrophic floods in or near floodplains and meander belts through the use of prudent line setbacks, streamside overlays, and comprehensive drainage basin planning approaches

Implementation Strategy 19.1a. Investigate properties where floodplains have been altered by dumping rubble along floodplain embankments
Implementation Strategy 19.1b. Ensure that property owners retrieve tires and other debris washed downstream and off their properties
Implementation Strategy 19.1c. Coordinate with the Regional Floodplain Engineer to ensure that permits or map revisions are obtained, as applicable, prior to any floodplain modifications

Objective 19.2. Maintain healthy waterways

Policy 19.2.1. Protect the integrity of existing waterways and minimize their disruption

Policy 19.2.2. Keep off site drainage to historic flows
Policy 19.2.3. Ensure drainage is addressed for all changes in land use in accordance with existing County regulations and adopted Drainage Basin Plans
Policy 19.2.4. Ensure that the Army Corps of Engineers is advised of all modifications to Area wetlands and that modifications to identified wetlands use the Section 404 permitting process of the Clean Water Act as a means to control erosion and sedimentation
Policy 19.2.5. Coordinate County prudent line setbacks with the Streamside Overlay for the City of Colorado Springs
Policy 19.2.6. Ensure developments within the unincorporated portions of El Paso County complement and respect the Streamside Overlay for the City of Colorado Springs
Policy 19.2.7. Encourage developments to utilize adjacent streams as amenities, preserve streamside character, and help advance greater stream area functionality
Policy 19.2.8. Utilize low water crossings, also known as "Texas crossings," for areas with low populations as a means to minimize costs and manage catastrophic flow rates, which would otherwise destroy drainage structures

Implementation Strategy 19.2a. Use National Wetlands Inventory Maps to produce a County wetlands map

Objective 19.3. Maintain adequate water supplies and aquifer recharge

Policy 19.3.1. Ensure water is pumped from and ultimately discharged into the same Planning Area sub-basin to protect current water users
Policy 19.3.2. Follow best management practices to maximize aquifer recharge, including the use of greenway corridors, the maintenance of drainage ways in their natural state, and the avoidance of large amounts of impervious cover for recharge areas as depicted on Map 5.2
Policy 19.3.3. Ensure developments incorporate water conservation techniques such as xeric landscaping and the reuse of non-potable water and treated wastewater for irrigation and fire fighting

Objective 19.4. Maintain high water quality

Policy 19.4.1. Locate shallow wells, solid waste disposal sites, septic tanks, and sewage treatment plants away from floodplains
Policy 19.4.2. Integrate water quality findings into the Pikes Peak Area Council of Government's Areawide Water Quality Management Plan
Policy 19.4.3. Monitor water sources to ensure safe drinking water
Policy 19.4.4. Ensure individual sewage disposal systems take into account local soil conditions and are properly designed and installed

Implementation Strategy 19.4a. Implement stormwater quality policies, procedures, and best management practices as delineated in applicable regulations

Air Quality

Goal 20. Maintain high air quality

Policy 20.1.1. Ensure that new developments minimize impacts to air quality
Policy 20.1.2. Ensure that fugitive dust is controlled

Soil Erosion

Goal 21. Recognize the utility of vegetation to control soil erosion sediments

Policy 21.1.1. Retain natural vegetation on site to the greatest degree possible
Policy 21.1.2. Revegetate disturbed areas immediately following construction with appropriate native species
Policy 21.1.3. Establish temporary stabilization measures on disturbed sites to minimize wind and water erosion
Policy 21.1.4. Encourage livestock and horse owners to use supplemental feed for parcels of less than 35 acres

Flora and Fauna

Goal 22. Promote a healthy diversity of flora and fauna in the Planning Area

Policy 22.1.1. Promote the preservation of significant wildlife species and habitat areas as identified by the Colorado Division of Wildlife and the County Natural Heritage Inventory
Policy 22.1.1. Encourage the preservation of water bodies and food chains critical to species preservation

Community Resources Inventory

Goal 23. Maintain an updated inventory of community resources

Policy 23.1.1. Utilize the following when creating or assessing development proposals:

- Fire coverage
- School facilities
- Sheriff substations
- Parks, trails, and open spaces, as delineated in the County Parks, Trails, and Open Space Master Plan
- Wetlands, drainage ways, and floodplains
- Moderate and steep slopes
- Soils information, including permeability, erodability, flooding frequency, and high water tables
- Groundwater resources and their recharge areas
- Significant forested areas
- Productive ranchland
- Significant wildlife habitats
- Historic, cultural, archeological, and paleontological features
- Scenic viewsheds from public roads
- Significant rock outcroppings and landscape features
- Stewardship Trust Lands
- State Lands, with consideration of both surface and subsurface rights
- Natural Heritage Inventory flora and fauna
- Nature Conservancy Focus Areas

Implementation Strategy 23.1a. Using the County Geographic Information System, create a Future Land Use Map that considers the needs of the Planning, Transportation, Environmental Services, and Health Departments, municipalities, community groups, and developers.

Government

Goal 24. Increase governmental cooperation to avoid duplication of services and coordinate planning efforts

Policy 24.1.1. Work with other governmental units, special districts, public service companies, and other agencies involved in the Planning Area to ensure the coordination of efforts and the implementation of adopted local and regional plans
Policy 24.1.2. Explore the use of intergovernmental agreements

Nuisances and Regulatory Violations

Goal 25. Resolve nuisances and regulatory violations in the Planning Area

Policy 25.1.1. Dedicate the enforcement resources necessary to rectify nuisances and violations, with particular attention to rubbish, weeds, noise, dust, and illegal land uses

Implementation Strategy 25.1a. Perform regular enforcement inspections in the Planning Area

8.5 MAJOR THEMES AND IMPLEMENTATION MEASURES

Land Use

To ensure the attainment of community goals, the Highway 94 Planning Area should be rezoned commensurate with the Concept Map. In areas featuring potential commercial uses, 35-acre agricultural zoning should be used as a holding zone until specific plans are developed.

Additionally, a Future Land Use Map should be created using the County Geographic Information System to better plan roads, drainage projects, habitat plans, population projections, schools, and park facilities.

Junkyards

The County should update the Land Development Code to address junkyards, auto recycling, and outside storage.

Transportation

The Highway 94 Comprehensive Plan Update should be used as an input for the Major Transportation Corridor Plan Update. The Highway 94 Plan should be used to help determine general road alignments and identify compatibility concerns.

Airports

Of the eight airfields in El Paso County, two are land use influences for the Highway 94 Planning Area: the Colorado Springs Municipal Airport and the Springs East Airport. In conjunction with the Update to the Land Development Code, the County should devise updated overlays and regulations for land uses impacted by airport operations.

Lighting

Largely as a means to preserve the rural character of the Planning Area and ensure compatibility between uses, the County should incorporate new lighting standards into the Land Development Code Update.

Appendix A – 1998 Survey Results

APPENDIX A - 1998 SURVEY RESULTS

	Area A		Area B		Non-Resident		Total	
	Count	%	Count	%	Count	%	Count	%
1. Do you reside:								
In Area A? (Original Planning Area)	127	40%						
In Area B? (Colorado Centre)			157	49%				
Non-Resident					37	12%		
Total							**321**	**100%**
2. Do you work:								
In Area A?	37	29%	11	7%	2	6%	50	16%
In Area B?	9	7%	13	8%	1	3%	23	7%
3. How many acres do you own?								
Less than 1 acre	2	2%	134	86%	3	8%	139	44%
One to 5 acres	43	35%	19	12%	9	25%	71	23%
5 to 35 acres	49	40%	1	1%	12	33%	62	20%
35 to 160 acres	18	15%	1	1%	8	22%	27	9%
160 to 640 acres	7	6%	0	0%	1	3%	8	3%
More than 640 acres	5	4%	0	0%	3	8%	8	3%
	124		**155**		**36**		**315**	
4. Which of the following reasons best describe why you purchased property in the area?								
To live on the property	103	62%	133	81%	7	15%	243	64%
To ranch or farm the property	26	16%	3	2%	3	6%	32	8%
To own a business	9	5%	0	0%	2	4%	11	3%
As an investment	11	7%	10	6%	22	46%	43	11%
To develop the property in the future	3	2%	2	1%	13	27%	18	5%
Other (please specify)	15	9%	16	10%	1	2%	32	8%
	167		**164**		**48**		**379**	
5. What do you like most about the area?								
Location	51	27%	72	30%	19	39%	142	30%
Rural character	96	51%	104	44%	15	31%	215	45%
Friends and neighbors	20	11%	31	13%	1	2%	52	11%
Stable or appreciating land values	18	10%	20	8%	11	22%	49	10%
Other (please specify)	4	2%	10	4%	3	6%	17	4%
	189		**237**		**49**		**475**	
6. The study area is served by three school districts: Widefield, Ellicott, and Falcon School Districts. Student enrollments in some of these districts has grown significantly over the past ten years. Based on this information, what rate of growth would you like to see in the area?								
Slow growth	78	61%	71	46%	10	28%	159	50%
Moderate growth	41	32%	73	47%	15	42%	129	41%
Rapid growth	3	2%	6	4%	10	28%	19	6%
Other (please specify)	6	5%	4	3%	1	3%	11	3%
	128		**154**		**36**		**318**	

	Area A		Area B		Non-Resident		Total	
	Count	%	Count	%	Count	%	Count	%
7. What should be the minimum single-family residential lot size in the area?								
Less than 1/4 acre	0	0%	15	10%	5	14%	20	6%
1/4 to 1/2 acre	1	1%	70	47%	8	23%	79	25%
1/2 to 1 acre	7	6%	35	23%	4	11%	46	15%
1 to 2 1/2 acres	6	5%	9	6%	4	11%	19	6%
2 1/2 to 5 acres	57	46%	13	9%	10	29%	80	26%
More than 5 acres	54	43%	8	5%	4	11%	66	21%
	125		**150**		**35**		**310**	
8. Is there a need for other types of housing such as:								
Mobile home parks								
Yes	12	11%	1	1%	9	29%	22	8%
No	99	89%	145	99%	22	71%	266	92%
	111		**146**		**31**		**288**	
Manufactured housing								
Yes	44	41%	24	16%	15	56%	83	30%
No	64	59%	122	84%	12	44%	198	70%
	108		**146**		**27**		**281**	
Multi-family housing								
Yes	15	14%	16	11%	17	59%	48	17%
No	94	86%	135	89%	12	41%	241	83%
	109		**151**		**29**		**289**	
Other (please specify)								
Yes	5	10%	2	2%	1	11%	8	6%
No	45	90%	82	98%	8	89%	135	94%
	50		**84**		**9**		**143**	
9. Do you think there should be services and/or businesses in the area?								
Yes	74	58%	114	75%	26	76%	214	68%
No	53	42%	39	25%	8	24%	100	32%
	127		**153**		**34**		**314**	
If "Yes," what type of services/businesses would you like to see?								
10. What types of businesses would you <u>not</u> like to see in the area?								
11. Do you think there should be industrial/ manufacturing uses in the area?								
Yes	24	20%	24	16%	18	55%	66	22%
No	97	80%	127	84%	15	45%	239	78%
	121		**151**		**33**		**305**	
If "Yes," what types of industrial/manufacturing uses?								

	Area A		Area B		Non-Resident		Total	
	Count	%	Count	%	Count	%	Count	%
12. What types of industrial/manufacturing would you not like to see developed in the area?								
13. The current population of this area has been estimated to be approximately 2,000. In you opinion, what should be the desirable range of population in the area by the year 2010?								
Less than 2,000	26	21%	17	11%	1	3%	44	14%
2,000 to 4,000	65	53%	72	48%	8	26%	145	48%
4,000 to 6,000	19	15%	40	26%	9	29%	68	22%
6,000 to 8,000	7	6%	13	9%	4	13%	24	8%
8,000 to 10,000	0	0%	5	3%	4	13%	9	3%
10,000 or more	6	5%	4	3%	5	16%	15	5%
	123		**151**		**31**		**305**	
14. What kind of community would you like the Highway 94 Study Area to be by the year 2010?								
Rural	88	54%	67	34%	7	17%	162	41%
Agricultural	35	21%	24	12%	5	12%	64	16%
Urban	1	1%	6	3%	5	12%	12	3%
Commuter or suburban	8	5%	34	17%	9	22%	51	13%
Mixture of the above	29	18%	64	33%	15	37%	108	27%
Other (please specify)	2	1%	1	1%	0	0%	3	1%
	163		**196**		**41**		**400**	
15. Are there historical, cultural, or visual features in the area which should be protected?								
Yes	65	60%	75	56%	10	37%	150	56%
No	38	35%	47	35%	11	41%	96	36%
Don't know	5	5%	12	9%	6	22%	23	9%
	108		**134**		**27**		**269**	
If "Yes," please specify								
16. What are the three most important environmental issues that are important to you? (check three)								
Maintain surface water quality	31	7%	31	6%	5	5%	67	6%
Maintain ground water quality	108	25%	101	20%	26	25%	235	23%
Preserve unique geologic features	15	3%	19	4%	5	5%	39	4%
Preserve the grassland prairie	40	9%	33	7%	8	8%	81	8%
Protect the floodplain areas	16	4%	20	4%	5	5%	41	4%
Protect sensitive plant & animal species	12	3%	17	3%	2	2%	31	3%
Protect plant & animal habitat areas	30	7%	45	9%	6	6%	81	8%
Preserve agricultural areas	29	7%	18	4%	5	5%	52	5%
Maintain ranching/grazing areas	58	13%	36	7%	9	9%	103	10%
Maintain air quality	48	11%	85	17%	20	19%	153	15%
Freedom from noise impacts	51	12%	88	18%	12	12%	151	15%
	438		**493**		**103**		**1,034**	

	Area A		Area B		Non-Resident		Total	
	Count	%	Count	%	Count	%	Count	%
17. What types of recreation opportunities are there in the area?								
Hiking								
Available	42	69%	63	59%	13	57%	118	62%
Would Like	18	30%	41	39%	10	43%	69	36%
Don't want	1	2%	2	2%	0	0%	3	2%
	61		**106**		**23**		**190**	
Biking (non-motorized)								
Available	45	66%	91	72%	11	48%	147	68%
Would Like	22	32%	33	26%	12	52%	67	31%
Don't want	1	1%	2	2%	0	0%	3	1%
	68		**126**		**23**		**217**	
Biking (motorized)								
Available	44	85%	53	83%	9	100%	106	85%
Would Like	7	13%	5	8%	0	0%	12	10%
Don't want	1	2%	6	9%	0	0%	7	6%
	52		**64**		**9**		**125**	
Horseback riding								
Available	74	79%	79	74%	18	64%	171	75%
Would Like	19	20%	27	25%	10	36%	56	24%
Don't want	1	1%	1	1%	0	0%	2	1%
	94		**107**		**28**		**229**	
Hunting								
Available	42	81%	20	54%	12	80%	74	71%
Would Like	9	17%	13	35%	3	20%	25	24%
Don't want	1	2%	4	11%	0	0%	5	5%
	52		**37**		**15**		**104**	
Fishing								
Available	8	18%	9	20%	5	45%	22	22%
Would Like	35	80%	32	73%	6	55%	73	74%
Don't want	1	2%	3	7%	0	0%	4	4%
	44		**44**		**11**		**99**	
Bird watching								
Available	37	76%	53	72%	13	68%	103	73%
Would Like	11	22%	19	26%	6	32%	36	25%
Don't want	1	2%	2	3%	0	0%	3	2%
	49		**74**		**19**		**142**	
Nature trails								
Available	7	19%	13	14%	5	28%	25	17%
Would Like	28	78%	78	84%	13	72%	119	81%
Don't want	1	3%	2	2%	0	0%	3	2%
	36		**93**		**18**		**147**	

	Area A		Area B		Non-Resident		Total	
	Count	%	Count	%	Count	%	Count	%
Golfing								
Available	3	12%	47	63%	1	8%	51	45%
Would Like	20	80%	24	32%	12	92%	56	50%
Don't want	2	8%	4	5%	0	0%	6	5%
	25		**75**		**13**		**113**	
Shooting/target range								
Available	60	91%	3	9%	9	90%	72	65%
Would Like	5	8%	26	74%	1	10%	32	29%
Don't want	1	2%	6	17%	0	0%	7	6%
	66		**35**		**10**		**111**	
Cross-country skiing								
Available	12	71%	6	23%	2	29%	20	40%
Would Like	4	24%	18	69%	5	71%	27	54%
Don't want	1	6%	2	8%	0	0%	3	6%
	17		**26**		**7**		**50**	
Camping								
Available	8	32%	3	10%	2	25%	13	21%
Would Like	16	64%	23	79%	6	75%	45	73%
Don't want	1	4%	3	10%	0	0%	4	6%
	25		**29**		**8**		**62**	
Sports fields								
Available	8	30%	2	3%	0	0%	10	10%
Would Like	18	67%	63	94%	8	100%	89	87%
Don't want	1	4%	2	3%	0	0%	3	3%
	27		**67**		**8**		**102**	
Any others?	**1**		**12**		**1**		**14**	
18. Would you like to see public water and sewer available in the area?								
Yes	52	44%	126	88%	26	81%	204	70%
No	66	56%	17	12%	6	19%	89	30%
	118		**143**		**32**		**293**	
If "No," why not?								
19. Do you feel there will be a shortage of water in the area?								
Yes	73	63%	52	39%	14	45%	139	49%
No	42	37%	83	61%	17	55%	142	51%
	115		**135**		**31**		**281**	
If "Yes," how do you know?								
20. Do you believe there are adequate services for the following?								
Fire protection								
Yes	62	51%	42	29%	13	57%	117	40%
No	60	49%	103	71%	10	43%	173	60%
	122		**145**		**23**		**290**	

	Area A		Area B		Non-Resident		Total	
	Count	%	Count	%	Count	%	Count	%
Police protection								
Yes	68	58%	69	48%	15	60%	152	53%
No	50	42%	76	52%	10	40%	136	47%
	118		**145**		**25**		**288**	
Roads								
Yes	62	50%	101	72%	13	52%	176	61%
No	62	50%	39	28%	12	48%	113	39%
	124		**140**		**25**		**289**	
Schools								
Yes	86	77%	81	58%	17	94%	184	68%
No	26	23%	58	42%	1	6%	85	32%
	112		**139**		**18**		**269**	
Emergency services								
Yes	64	56%	48	35%	8	38%	120	44%
No	51	44%	91	65%	13	62%	155	56%
	115		**139**		**21**		**275**	
Parks and trails								
Yes	34	35%	23	17%	9	45%	66	26%
No	64	65%	116	83%	11	55%	191	74%
	98		**139**		**20**		**257**	
If "No," what existing services need improvement?								
What other services are needed in this area?								
21. Based on the questions asked in this survey, what would you consider to be the three most important issues to consider in this plan? Please be specific.								
22. Do you have any general comments about the area or the survey?								

Appendix B – Adopting Resolution

AMENDMENT TO THE COUNTY PLAN (Approved)

Commissioner Miller moved that the following Resolution be adopted:

BEFORE THE PLANNING COMMISSION

OF THE COUNTY OF EL PASO

STATE OF COLORADO

RESOLUTION NO. MP-03-002

WHEREAS, the Highway 94 Citizens' Advisory Committee and the El Paso County Planning Department request approval of an amendment to the Master Plan by adoption of the 2003 Highway 94 Comprehensive Plan, within the designated areas of the unincorporated area of El Paso County; and

WHEREAS, public hearings were held by this Commission on May 20, 2003, and July 15, 2003; 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 be approved for the following described unincorporated area of El Paso County:

One hundred twenty (120) square miles comprised of a one hundred (100) square mile area roughly centered on Schriever Air Force Base and a twenty (20) square mile area roughly centered on the Colorado Centre development.

BE IT FURTHER RESOLVED that the following conditions and notation shall be placed upon this approval:

CONDITIONS

1. CRS 30-28-109 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 in the County. The Planning Commission's action to amend the Master Plan shall not be considered final until the applicant submits a minimum of ten (10) complete sets of the final documents to the Planning Department and such documents are certified by the Chairman of the Planning Commission and distributed as required by law.

2. Upon adoption by the El Paso County Planning Commission, the effect of this document is to supercede the 1985 Highway 94 Comprehensive Plan. All other duly adopted elements of the Master Plan will remain in force until action is taken to specifically delete or update them.

NOTATION

1. In the approval of this document it is understood that minor editorial and formatting changes will be made in conjunction with the final publication process. These modifications will or may include pagination, correction of typographical errors, insertion of photographs, insertion of references, and updates or corrections of factual information. In no case will substantive changes be made to the text and especially the policies and Sub-Area scenarios without reconsideration by the Planning Commission.

The motion included the Planning Commission's recommendation to reflect the area east of the boundary for this Plan as presented on the map displayed at the meeting. It also specifically included an unchanged (50 percent) credit for open space.

Commissioner Mason seconded the adoption of the foregoing Resolution. The roll having been called, the vote was as follows:

Commissioner Mason	aye
Commissioner Miller	aye
Commissioner Brown	aye
Commissioner Schrader	aye
Commissioner Sery	aye
Commissioner Amthor	aye
Commissioner Brewer	aye
Commissioner Dickman	aye
Commissioner Salute	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.

Mr. Salute commended the staff and volunteers who have been working on this Update for five years.

DATED: July 15, 2003