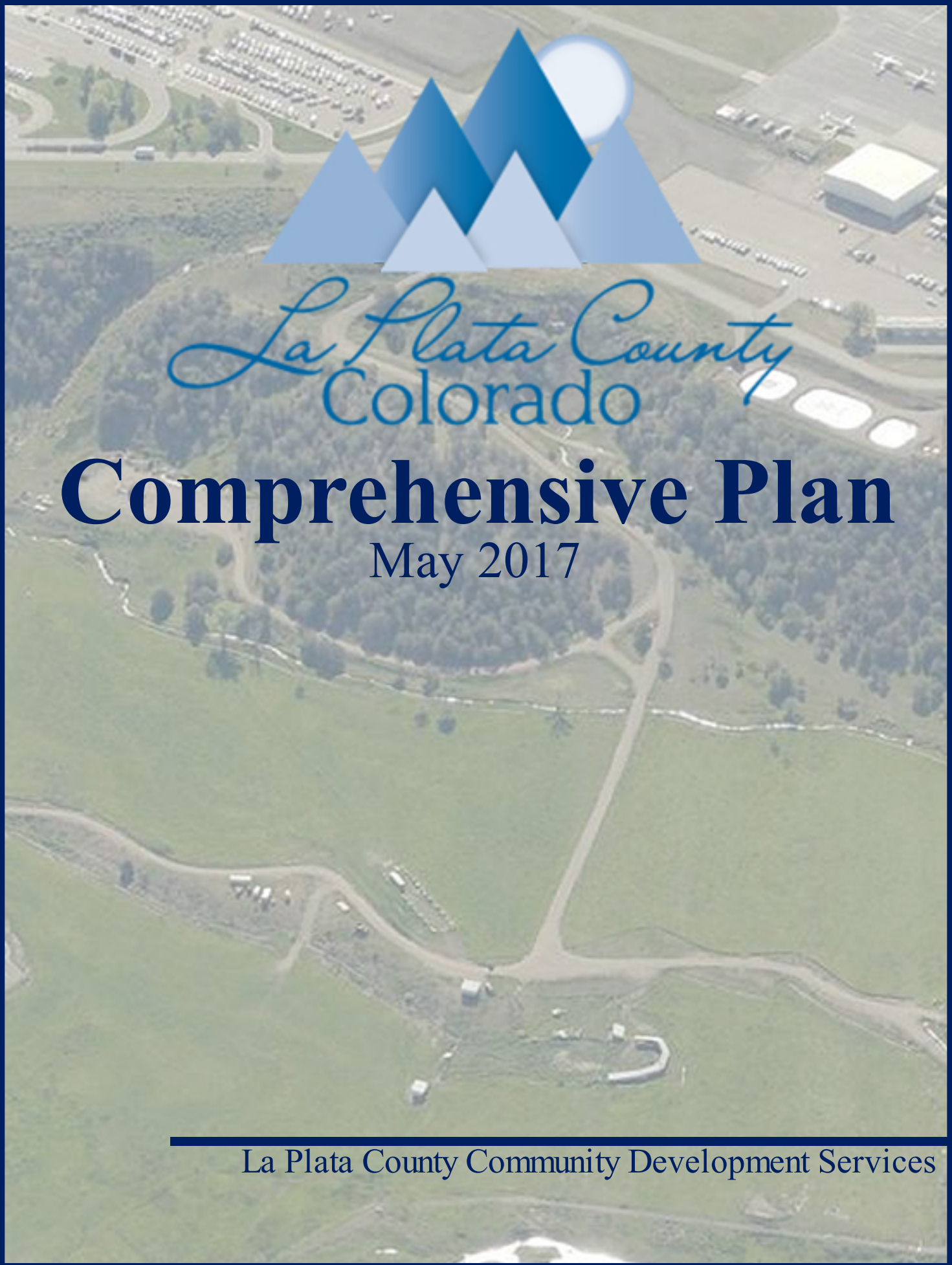

La Plata County Colorado

Comprehensive Plan

May 2017

La Plata County Community Development Services

COMPREHENSIVE PLAN

Planning Commission
May 2017

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LIST OF REFERENCES

- 2013 La Plata County Hazard Mitigation Plan
- 2015 Regional Housing Alliance Housing Demand Forecast
- 2030 TRIP, Transportation Integration Plan
- Animas Air Park Master Plan
- Colorado Water Plan, 2015
- Community Wildfire Protection Plan
- Implementation Table, 2001
- La Plata Trails Plan, 2000
- Pioneers, Prospectors and Trout 2010 (Volume 2)
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INTRODUCTION

OVERVIEW

Land use planning is intended to give residents, property owners and community leaders a means for creating a shared vision for the future development of their community. Authority for planning is granted to counties by the State of Colorado under Section 30-28-106 of the Colorado Revise Statutes. In part, the statute reads:

> ***"It is the duty of a county planning commission to make and adopt a master plan for the physical development of the unincorporated territory of the county."***

The La Plata County Comprehensive Plan is an advisory document which establishes a framework for planning in the County. Planning is not intended to be a static, one-time event, but an ongoing process that reflects changing conditions in the community. While the comprehensive plan establishes the framework, the ongoing planning process sets forth the specific actions to carry out the plan so the community can work together to achieve its desired future.

The Comprehensive Plan Is Advisory and Intended to Guide Planned Growth While Protecting the Environment And Enhancing the Lives of County Residents. The Comprehensive Plan Also Seeks to Recognize Diverse Perspectives on Land Use and Private Property Rights Expressed by County Residents.

The comprehensive plan establishes a number of goals, objectives and policies to guide planning in the coming years. The broader and more generalized Goals express the vision or aspiration of the County's residents, while the Objectives create a measurable means toward reaching the expressed Goals; and Policies identify how the County anticipates fulfilling the Objectives. A prioritized list of "action items", or tasks, in the plan provides an organized set of items for focused pursuit by the County (and are identified in association with the various elements, or chapters of the Plan).

This introduction includes a brief look back at several planning efforts in La Plata County over the past several decades. It provides an overview of the Plan's purpose, its structure and its layout. It documents the planning process used during the preparation of the Plan. It presents a brief overview of other government entities that influence the Plan. It recognizes that changes may occur to the land use regulatory process in Colorado which could affect the content and direction of the Plan in the coming years. Finally, it provides a detailed summary of our history and how the area has transitioned from its original inhabitants to the current residents.

PLAN BACKGROUND

In La Plata County, the process of planning has been underway for many years. Early iterations of the comprehensive planning process included a master plan prepared and adopted in 1984. It was replaced by a follow-up planning process undertaken in the late 1980s which resulted in the 1990

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adoption of the "La Plata County Comprehensive Land Use Plan: Element 1-Policy Plan". Both of these plans were based on the philosophy that land use regulation should be kept to a minimum except when the health, safety, and welfare of County residents was at stake. Since that time, there have been other exercises and long-range planning efforts by the County to reinforce its evolving vision of future growth.

The 1990 Plan was the precursor to what today is known as the "La Plata Land Use Code", the permitting system by which development is regulated in La Plata County. The primary emphasis of the land use code is to mitigate the impacts of the new development rather than having restrictive land use classifications. The intention was to establish standards for new development to ensure impacts to neighbors are mitigated while allowing flexibility in the use of one's land.

Goals *express the vision or aspiration*

Objectives *create a measurable means toward reaching the expressed Goals*

Policies *identify how the County anticipates fulfilling the Objectives*

Tasks *list specific action items to help achieve Polices & Objectives*

As the mid-1990s approached, however, a county-wide survey indicated that attitudes toward land use regulation in the unincorporated County were shifting. This new sentiment suggested that mitigating the impacts of development was only addressing part of the issue. It was felt that without some type of county-wide organization of what types of uses went where, providing essential services in the County would become more difficult and expensive as more development occurred. As a result, a new comprehensive planning process was undertaken. By 1997, the County had established 10 planning districts, eight of which established land use plans to guide growth by identifying preferred land uses types and densities within their districts. And by 2012, the County had added two additional district plans for a total of 12 planning districts with 11 plans. These Plans, therefore, are part of this Comprehensive Plan and are located within its appendix.

The district planning process identified a vision of what each of the districts should look like in the future. Goals and objectives were established; preferred land use types, locations, and densities were mapped; and district review groups were established to watch over implementation of each Plan. While each Plan has its own unique vision, goals and objectives, several prevailing themes tie them together. These include such things as retaining rural character, accommodating new growth, protecting the environment, respecting private property rights, and ensuring housing affordability.

PLAN PURPOSE AND STRUCTURE

While the district land use plans share common themes, there are a number of county-wide issues that are either inadequately addressed in the district plans or were not addressed during the district planning process at all. While the comprehensive plan is intended to incorporate and uphold the

intent of the district plans, it is also intended to provide further detail and guidance to the overall growth management system of La Plata County.

The Comprehensive Plan Consists of the Following Plan Sections & Elements:

- Introduction
- Growth Trends
- (1) Land Use Element
- (2) Infrastructure Element
- (3) Housing Element
- (4) Environmental Element
- (5) Agriculture Element
- (6) Airport Element
- (7) Public Safety Element
- (8) Extractive Resources & Renewable Energy Element
- (9) Recreation & Tourism Element
- (10) Historic Preservation Element
- Appendix

Elements 4 and 11 each summarize topics that have already been addressed through separate planning processes. The *La Plata County Transportation Plan* and the *La Plata County Trails Plan* were each adopted in 2000 and are housed within the Plan's Appendix. Element 3: Land Use, also incorporates by reference, the District Land Use Plans.

Each primary plan element (chapter) is organized with an overview and background of identified issues; goals, objectives and policies; general analysis; and key points

Within each plan element certain issues have been highlighted for recognition as highlighted facts or recommendations (Key Points). These key points help to clarify significant aspects of each element for the reader.

Action Items from the various objectives and policies are located in a categorized list associated with each element within the "Implementation" Section; and assist by recognizing specific actions that could be taken to implement the Plan. An Implementation Table is included as a matrix within the Appendix, and should be utilized to assist in the tracking and management of action items.

PLAN PREPARATION HISTORY

La Plata County's 2001 comprehensive planning process actually began in the mid-1990s with Phase I, the creation and adoption of the district land use plans. Phase II of this program was initiated in 1999 by identifying approaches for dealing with issues of county-wide concern, those that overlap the district plans and ultimately affect the cost of living and/or quality of life of all County residents.

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Over the course of the following two years, planning staff, in conjunction with a planning consultant, worked with the Planning Commission, the Board of County Commissioners, and the public to establish a set of working papers which helped to set the stage for the Plan's main elements. The working papers titled "*La Plata County Comprehensive Plan: Framing the Discussion*" were widely distributed during the fall of 2000. Nearly one-hundred written and oral public comments were collected during that period and modifications were made to reflect those comments.

The Comprehensive Plan Also Seeks to Recognize Diverse Perspectives on Land Use and Private Property Rights Expressed by County Residents.

From the background research, public input, and the guidance of the Planning Commission and Board of County Commissioners, a draft Plan was written and presented to the Planning Commission for review/discussion and process direction in early June 2001. Five additional work sessions were held with the Planning Commission and Board of County Commissions between June and August to finalize the draft Plan. The draft Plan was then distributed to local media outlets and widely publicized for public comment. The Planning Commission ultimately adopted the 2001 Plan in August of that year.

In 2009, La Plata County embarked on a long-range planning project to replace its adopted Comprehensive Plan, with the assistance of a consultant. That effort was extensive and well attended by the public, and included more than 120 public meetings and monthly meetings with a 21 member working group. The draft Plan was presented to the Planning Commission in April 2011 for their consideration and adoption. After nine months of public hearings, the Commission voted to terminate their review of the draft Plan in December 2011.

In 2014, the Board of County Commissioners met with the Planning Commission and expressed an interest in updating the adopted 2001 Comprehensive Plan. The Planning Commission shared that interest, and therefore began by directing staff to perform the necessary organization, that year, for an upcoming major project to update the existing Plan. Included with this established project are designated monthly public meetings during which the Planning Commission provided input and direction, reviewed work product, and accepted public comment. Each designated monthly meeting focused upon a subject of the existing Plan.

RELATIONSHIP TO OTHER PUBLIC ENTITIES, PLANS AND REGULATIONS

The Comprehensive Plan and its implementation tools are intended to be used in conjunction with a number of other public entities, and their plans and regulations. Following is an overview of a number of those public entities and their relationship to the updated 2001(2015) La Plata County Comprehensive Plan.

Local Municipalities:

INTRODUCTION

The City of Durango and the Towns of Bayfield and Ignacio all have adopted comprehensive plans which include, among other things, land use and transportation elements which overlap into lands regulated by La Plata County. The County also enters into a multitude of agreements with these entities regarding issues ranging from road maintenance and land use to revenue sharing.

Southern Utes and Ute Mountain Utes:

La Plata County includes approximately 208,835 acres of Southern Ute and Ute Mountain Ute Tribal lands and trust lands located in the southern portion of the County. Recognized as sovereign nations by the Federal government in the late 1800s, the regulatory function of La Plata County government does not apply to tribal lands. None-the-less, issues that transcend political boundaries require a degree of interaction and cooperation. This interaction has led to a number of formal and informal agreements between tribal and non-tribal interests.

Federal and State Land Management Agencies:

With approximately 41 percent of land in La Plata County controlled by Federal and State land management agencies (Forest Service, Bureau of Land Management, Bureau of Reclamation, Colorado Division of Wildlife, and the Colorado State Land Board) the coordination of activities and sharing of information is critical. Whether it be information of plans for controlled burns or plans for a new development proposed near interface lands, coordination will help to ensure that comprehensive planning policies and strategies are met.

Colorado Department of Transportation and Other State Agencies:

Activities of the Colorado Department of Transportation (CDOT) and other State agencies can have significant ramifications for the residents of La Plata County. Upgrades and expansion projects to state highways within the County will have a lasting effect on traffic and development patterns throughout the County. The coordination of County land use and transportation goals with those of CDOT will help to ensure consistency between the two entities' efforts.

Other State agencies include the Colorado Department of Public Health and Environment and the Department of Natural Resources. The Department of Natural Resources includes a number of divisions related to the Plan elements including the Geological Survey, Parks & Wildlife, Reclamation, Mining & Safety, the Oil & Gas Conservation Commission, Forestry, Water Resources, the Water Conservation Board, and the State Land Board.

THE CHANGING LANDSCAPE IN COLORADO

With significant population growth expected to continue in the coming decades, the debate over the effects of growth and its impact on residents' quality of life have risen to primary importance. This debate has led to a number of citizen and legislative efforts to change how land use is regulated in Colorado.

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This Plan has attempted to address the most common aspects of community development comprehensively. It has not, however, attempted to anticipate and incorporate all aspects of any potential constitutional or statutory changes that may occur in the coming years. As a result, this Plan may require significant modification in the coming years if major changes to the land use regulatory process in Colorado occur. Also, on a cyclical basis, the County should continue to maintain this Plan with current interests, issues and necessary adjustment for consistency with statutory mandates; as well as evolving, effective planning practice, in order to keep the Plan intact and in effective working order for the County.

HISTORY AND STORY OF PLACE[1]

Southwest Colorado has a rich and long standing cultural tradition. The remains of people attributed to Archaic (7500 B.C.-500B.C.), Basketmaker (500 B.C.-750 B.C.) and Pueblo periods have all been found here. The Utes have been in the area at least since the 1500s.

The region lured many explorers in search of gold, silver and other opportunities for wealth. In 1776, Fathers Dominguez and Escalante traveled through the area in search of a route from Santa Fe to the California missions. Much of their route later became the Old Spanish Trail, which was used between 1830 and 1840 by Santa Fe traders on their way to California. The area was part of Mexico until the Treaty of Guadalupe Hidalgo ended the Mexican War in 1848, and the United States claimed jurisdiction. The Colorado Territorial legislature created La Plata County in early 1874. Encompassing present day La Plata, San Juan, Montezuma, and Ouray Counties, this massive region soon proved unmanageable and was redrawn in 1876 to include the equivalent of modern day Montezuma and La Plata Counties. The county further reduced to its current size in 1889, when Montezuma became its own county.

Ownership Patterns-Living Legacies in the County:

In 1874 the Brunot Agreement between the Utes and the United States opened land to non-natives. Under the terms of the agreement, the Utes would receive annual payments of $25,000 in exchange for 3.5 million acres of their land, including all of present day La Plata County. Congress ratified the Agreement on April 29, 1874, and went about its usual course to establish a federal presence in the area through Indian agencies and military posts. The U. S. Government built the Los Pinos Indian Agency near present day Ignacio in 1877. The Fort Lewis military post moved from Pagosa Springs in 1880 and operated for ten years from a site on the La

[1] *Prepared by Jill Seyfarth, Cultural Resource Planning, Oct 2009*

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Plata River, about 11 miles south of present day Hesperus.

In 1891, Congress passed the Hunter Bill, which allowed the Utes to choose land that tribal members could individually own and to hold some lands in common. The Mouache and the Capote Ute Bands (now the Southern Ute Tribe) accepted these terms and tribal members selected allotments in 1896. The Weeminuche Band (now the Ute Mountain Ute Tribe) opted to continue to retain their lands in common. The available lands, located in a 15-mile wide band stretching across the southern one third of the county, became known as the 'Ute Strip'. Remaining unallotted lands were opened to homesteaders in May 1899 and created a small homesteading rush. Mormon settlers and others established town sites on the west side of the county. The towns of Kline, Redmesa and Marvel were thriving by 1916.

Unclaimed lands (about 200,000 acres) were returned to the Southern Ute Tribe in 1938. The mix of Ute Tribal, individual Ute and individual non-Ute ownership in the southern 1/3 of the county is the legacy of the Ute Strip. Federal actions related to Ute agreements created other lasting legacies. The 6,000-plus acre military reservation established for Fort Lewis is now owned by the State of Colorado. The old military fort was turned into an Indian School and then into a public school that evolved into a college that moved to Durango in 1956. Fort Lewis College is tuition-free to Native Americans, a stipulation of the transfer of the old military reservation from federal ownership to the State of Colorado. Ignacio was eventually founded near the Los Pinos Agency, and two large federal water projects (Vallecito Lake and the Animas-La Plata Project) have been developed to address irrigation issues and to meet historic Ute water claims.

Homesteaders and prospectors flocked to the region north of the Ute Strip. The first prospectors followed John Moss from California to the mouth of La Plata Canyon in 1873. Since they were there before the Brunot Agreement had been signed, Moss negotiated an agreement with Ute Chief Ignacio that allowed the miners to use a 36 square mile area in exchange for numerous blankets, livestock and gifts. The miners worked their way up La Plata Canyon with varying amounts of success over the years and leaving a series of privately owned claims within the canyon. A large gold strike in the 1930s brought one last flush of prosperity to the La Platas. The region never enjoyed access from a railroad and the small, isolated mining camps that had been established near the mines faded away.

The fertile valleys of the lower Animas and Pine Rivers attracted the county's very first farmers and ranchers. Other early claims were filed in modern day Hay Gulch and Thompson Park. Later homesteaders settled on the mesa tops and developed irrigation ditch systems to bring water to their lands. Frank Hall noted in his 1895 History of Colorado that within the first 30 days after the ratification of the Brunot Agreement "…every acre of available land in the (Animas) valley had

been located and staked off in ranch claims."

The northern, higher-elevation claims along the river drainages were mostly used as "summer range" for sheep and cattle. The northern one third of the county had few homestead claims, but was used for livestock and logging. Alarmed by the growing desecration of unregulated logging and grazing on public lands in the west, Congress passed the Forest Reserves Act in 1891. The act empowered the President to withdraw designated lands from the public domain. The withdrawn lands, called reserves, could then be managed to protect their natural resources, including timber and grasses. In 1905 President Theodore Roosevelt signed legislation to create the San Juan Forest Reserve (now the San Juan National Forest). The legislation placed more than 3.7 million acres in Southwest Colorado under federal conservation programs. About 41% of La Plata County is in federal ownership, much of which was the land located within the designated forest reserve.

Towns, Transport, and Industry:

Several early towns sprang up to serve the early settlers, including Hermosa (1876), Animas City (1876), Los Pinos Indian Agency (1877) and Pine River (1877/1878). Wagon roads connected the area from Tierra Amarilla, Del Norte (via Silverton) and Rico (via Rockwood). No one had even mentioned the word railroad in this very remote country.

The arrival of the Denver and Rio Grande Railroad (D&RG) in 1881 and its subsequent connection to Silverton in 1882 brought accelerated and intensive change by providing easy (for the times) transportation and freighting, as well as access to the outside world. The D&RG also invested capital and created the City of Durango. The D&RG was instrumental in establishing a smelter in Durango to process the ores from the mines, almost guarantying a prosperous community. When the Ute Strip opened for homesteading, farmers and land speculators filed for homesteads and carved new towns along the railroad including Tiffany, Allison, Oxford (first known as Grommet) and Falfa (formerly called Griffith). A second railroad, the Rio Grande Southern, arrived in 1890, providing connections to the mines around Rico and Telluride. In 1905, the Denver and Rio Grande added a Farmington branch connecting Durango to Farmington, New Mexico. By 1892, the railroad operations, coal mining, agriculture and the smelter were major county industries, followed by lumber and the precious metal mining in the La Plata Mountains. Tourism was a small but steady part of the economy. In the 1890's the D &RG advertised a four day 1,000-mile-loop rail excursion through scenic southwestern Colorado. An exhibit at the Columbian Exposition in Chicago in 1893 of the Mesa Verde's Ancestral Puebloan ruins drew new groups of sight seers as well.

The Depression of the 1930s devastated La Plata County, but was somewhat assuaged by the prolific New Deal programs and the federal support of operations on the county's extensive federal land holdings. One of the New Deal's greatest improvements in rural life came from the Rural Electrification Administration (REA). Under this program the La Plata Electric Association (LPEA) formed to build transmission lines to deliver electricity to the rural areas in the county.

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By 1939 LPEA had obtained REA loans and constructed 188 miles of line to serve 350 people. Most rural areas received electricity in the mid 1940s. Other federal involvement occurred during World War II when Durango was the home of a radioactive ore processing site that provided some of the uranium for the Manhattan Project; after the war Durango had a vanadium production plant that employed a large percentage of the local workforce.

A new industry brought growth and money into the county after World War II. The Southern Union Gas Company made a significant find in 1945 at the Barker Dome in northern New Mexico and southern La Plata County. The Stanolind Oil and Gas Company (Standard Oil of Indiana) soon followed with a major find on Southern Ute Lands with their "Ute Indian No. 1" well that had potential to produce 15 million cubic feet of gas per day. In 1956, sixteen major oil production firms had offices in La Plata County. Over 800 new homes were built in the county between 1955 and 1960. After five years of investigation and speculation and no new strikes, the oil companies sent their professionals elsewhere. While field operations continued, the influx of well paid administrative professionals was over by the mid 1960s. Another series of gas wells was initiated in the 1970s along with processing plants to remove liquids from the gas.

The gas field development contributed to an already developing road system in the county. The railroad had been the dominant form of transportation into the 1920s but the rising popularity of the automobile demanded better roads. By 1951, passenger traffic on the train was down to a trickle.


Credit: Kathy Myrick

The D&RG discontinued service to Alamosa in 1951, as did the Rio Grande Southern Railroad. The Colorado State Highway Department, now known as the Department of Transportation, initiated a series of expanded and realigned roads that have left a lasting legacy in La Plata County. Highways 160 and 140 were realigned in many places, bypassing small communities. Highway 550 through the Animas Valley was moved east from what is now known as County Road 203 and placed down the middle of the valley. Other social changes affected the county in the 1950s. A new community hospital district was formed, providing an alternative to Mercy Hospital which also expanded and remodeled in the 1950s. The community hospital district functioned until the late 1980s. After a very lengthy process, the state-mandated public schools consolidation was completed and all rural one-room school houses were closed in favor of larger regional elementary schools. Junior high and high schools were located in Ignacio, Bayfield and Durango. Government agencies employed a growing number of specialists.

Although the county lost its sole remaining rail freighter, it realized a gold mine in the form of visitors coming to ride the train. Part of a general rise in tourism after World War II, ridership

numbers on the Silverton train began to rebound. The train between Durango and Silverton survived because of a prevailing American sentimentality about the old west that was also a boon for the numerous "dude" ranches operating in the county in the 1950s. Tourism's strong foothold in the economy, bolstered after the completion of Vallecito Lake in 1941, expanded further with the opening of the Purgatory Ski Area in 1965. Year-round recreation and sightseeing anchor the local tourism industry, as it has for over 100 years. No longer attracted by the opportunities to live off the land, new pioneers came to mine La Plata County's recreational and scenic opportunities.

Starting in the 1960s, the surge from the cities to the suburbs took on its own character in La Plata County, where people with no interest in farming or ranching sought acreage in the country. Ranchers and farmers found themselves with a new opportunity to sell off parts of their land to these new settlers and long held land ownership patterns began to change.

This pattern since the 1960s of dividing agricultural lands into rural residential subdivisions provides a financial injection for the agricultural business, but is difficult to continue in the long term. Regardless, it is anticipated to continue for the foreseeable future. As a result of this conversion, we anticipate seeing a continued decline in traditional agriculture lands and an increase in dispersed residential properties. The continued population increase along with changes in land uses and ownership patterns present both an opportunity and a challenge for the community to address as we move through the 21st century.

GROWTH TRENDS

OVERVIEW

Population demographics are an ever changing factor in La Plata County. The consistent growth of the county has lead to significant changes in other areas as well. Growth trends are documented in this section of the Comprehensive Plan.

Population Change and Distribution

Significant changes have occurred in the County's population over the past several decades. *Table 1* and *Table 2*, and *Chart 2* outline this change. During the 1970 to 2010 period, the County's total population increased by approximately 178 percent (5.9% average annually), from 19,199 in 1970 to 53,446 in 2010. The growth in the unincorporated portions of the County has been particularly significant, increasing by over 9,000 during the 2000 to 2010 period.

Table 1
Historic County Population Levels: 1970 - 2010

	1970		1980		1990		2000		2010	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Bayfield	320	1.7	724	2.6	1,090	3.4	1,549	3.5	2,333	4.4
Durango	10,333	53.8	11,649	42.1	12,439	38.5	13,922	31.7	16,887	31.6
Ignacio	613	3.2	667	2.4	720	2.2	669	1.5	697	1.3
Unincorporated *	7,933	41.3	14,607	52.8	18,035	55.9	27,801	63.3	33,529	62.7
Total	**19,199**	**100.0**	**27,647**	**100.0**	**32,284**	**100.0**	**43,941**	**100.0**	**53,446**	**100.0**

** Includes Tribal and non-Tribal*
Source: Colorado Department of Local Affairs and U.S. Census Bureau

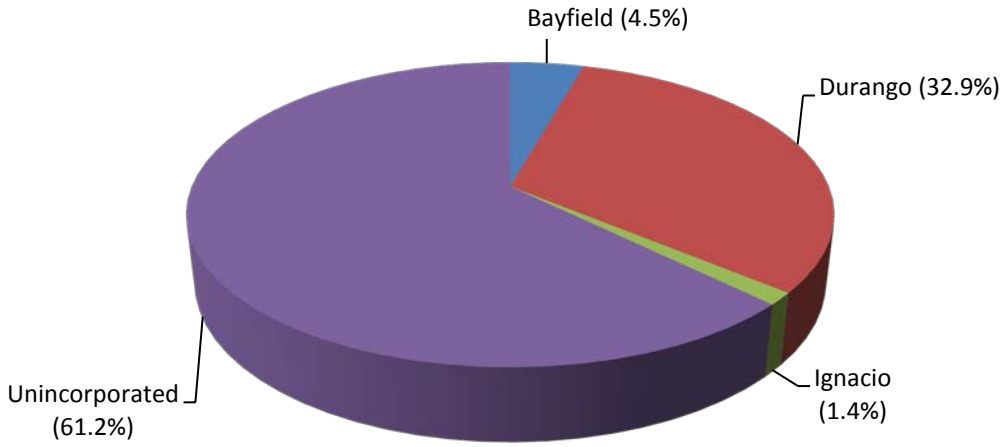
Table 2
Recent Population Levels: 2001 - 2010

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Percent of Total
Bayfield	1,624	1,635	1,652	1,639	1,678	1,824	1,962	2,025	2,087	2,333	4.4
Durango	14,636	14,970	14,967	15,366	15,623	15,888	16,019	16,420	16,627	16,887	31.6
Ignacio	839	841	833	820	810	799	790	786	797	697	1.3
Unincorporated *	28,004	28,533	28,806	29,080	29,681	30,323	30,897	31,402	32,135	33,529	62.7
La Plata County	**45,103**	**45,979**	**46,258**	**46,905**	**47,792**	**48,834**	**49,668**	**50,633**	**51,646**	**53,446**	**100.0**

**Includes Tribal and non-Tribal*
Source: Colorado Department of Local Affairs and U.S. Census Bureau

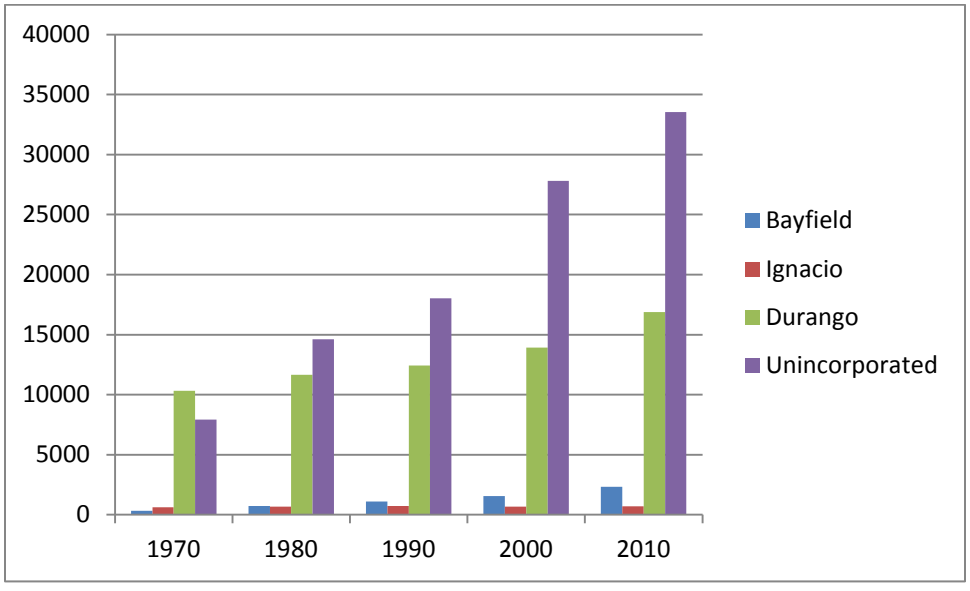
GROWTH TRENDS

Chart 1
Population Distribution: 2010



Source: Colorado Department of Local Affairs and U.S. Census Bureau

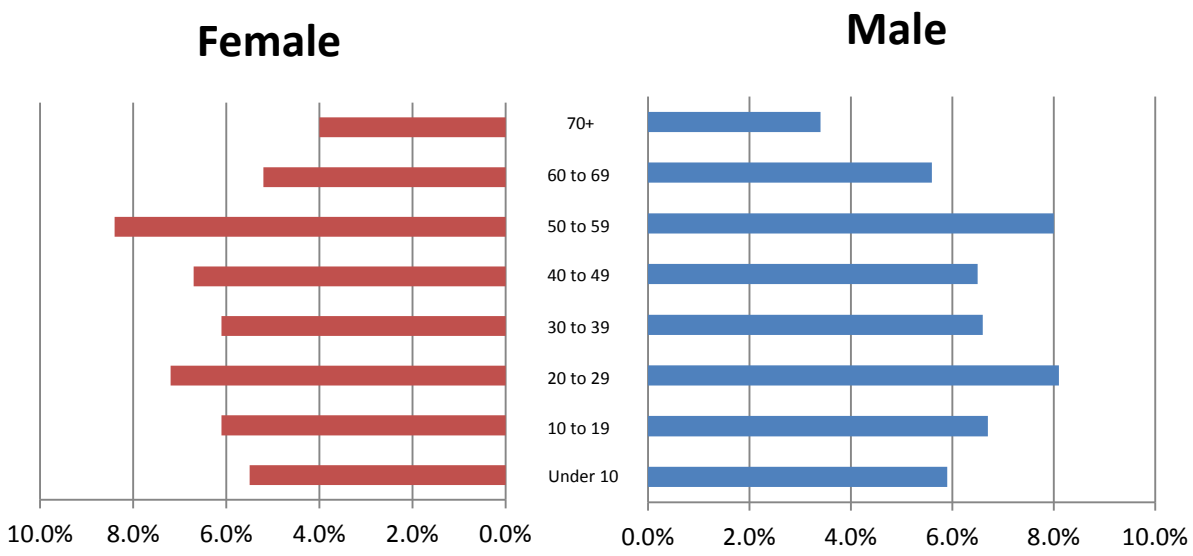
Chart 2
Historic Population Distribution: 1970 - 2010



Source: U.S. Census Bureau

GROWTH TRENDS

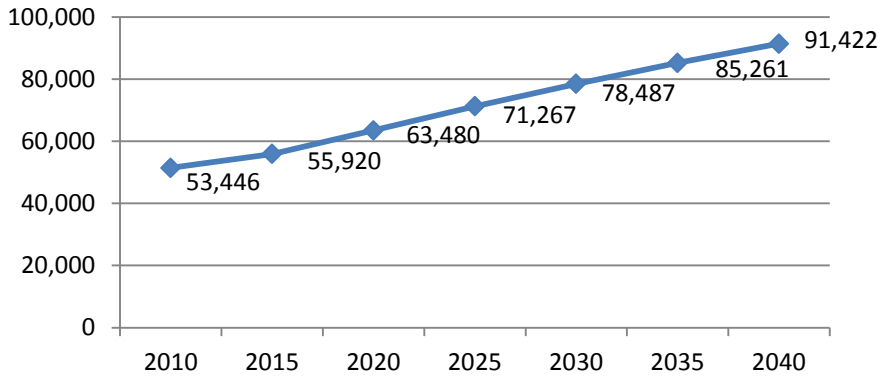
Chart 3
Gender and Age Profile of La Plata County Population



Source: U.S. Census Bureau

Chart 4 below reflects La Plata County's population forecast for 2010 to 2040. The County's total population is expected to grow from the surveyed Colorado Department of Local Affairs figure of 53,446 in 2010 to 91,422 by 2040, a 71% increase (expected average of 2.5% annually). By most accepted standards, growth rates of 2.5% or greater are considered high rates of growth.

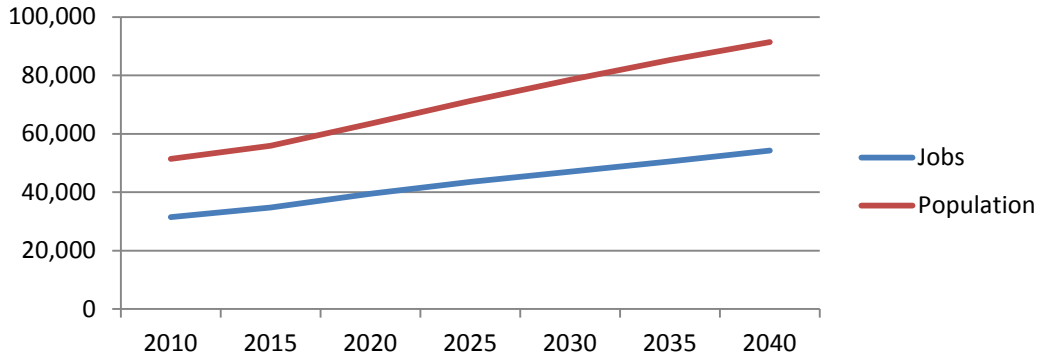
Chart 4
La Plata County Population Forecast: 2010 - 2040



Source: Colorado Department of Local Affairs

GROWTH TRENDS

Chart 5
La Plata County Population and Employment Forecast: 2010 - 2040

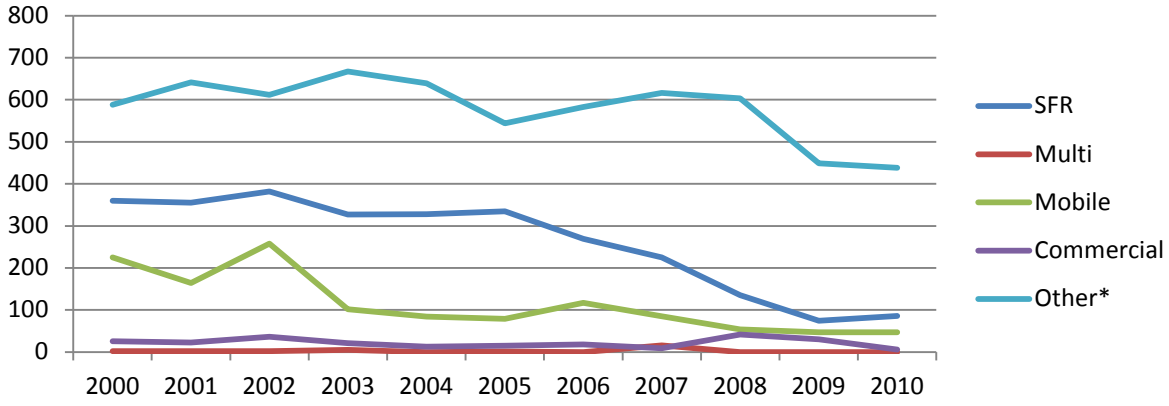


Source: Colorado Department of Local Affairs

Building Permits

Historically, the population of La Plata County was concentrated in and around Durango, with smaller concentrations in the Bayfield and Ignacio areas. In recent years, however, growth rates have fluctuated, potentially a reflection of the 2008 economic downturn that ultimately resulted in the nation's recession. During the 1990's the number of building permits issued annually in the County increased nearly 80 percent, from 673 in 1990 to 1,201 in 2000. Conversely, from 2000 to 2010, building permits issued annual decreased significantly by nearly 52%.

Chart 6
Building Permit Applications: 2000 - 2010



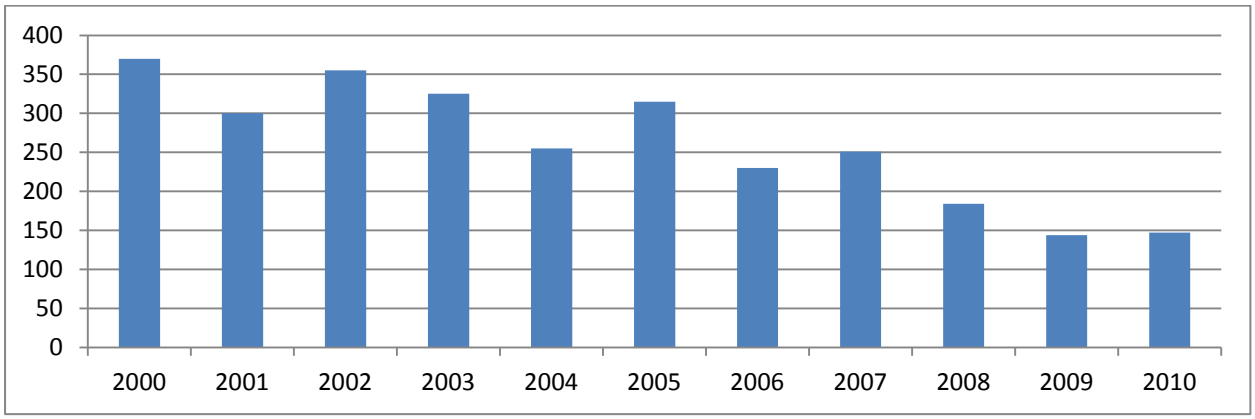
**Includes Remodels, Accessory Structures, and Additions*
Source: La Plata County Building Department

GROWTH TRENDS

Onsite Wastewater Treatment System

Linked to development is the construction of Onsite Wastewater Treatment Systems (OWTS). The majority of developments in the unincorporated County rely on OWTS. As shown in Chart 7, the number of septic permits issued annually has fluctuated during the past decade, but generally has followed suit with the decline in issued building permits.

Chart 7
OWTS Permits Issued: 2000 - 2010



Source: San Juan Basin Health Department

The Changing Economy

It has been estimated that as much as 60 percent of the County's economy is dependent upon the tourism industry. Table 3 and Chart 8 depict the number and percentage of jobs within the nine major employment sectors of the County. During the 1990s, the most significant job growth was experienced in the Wholesale and Retail Trade sector, the Services sector and the Construction sector. Recently, we have seen a significant increase in the Mining and Extractive Industries employment rates in addition to strong growth in the Financial sector.

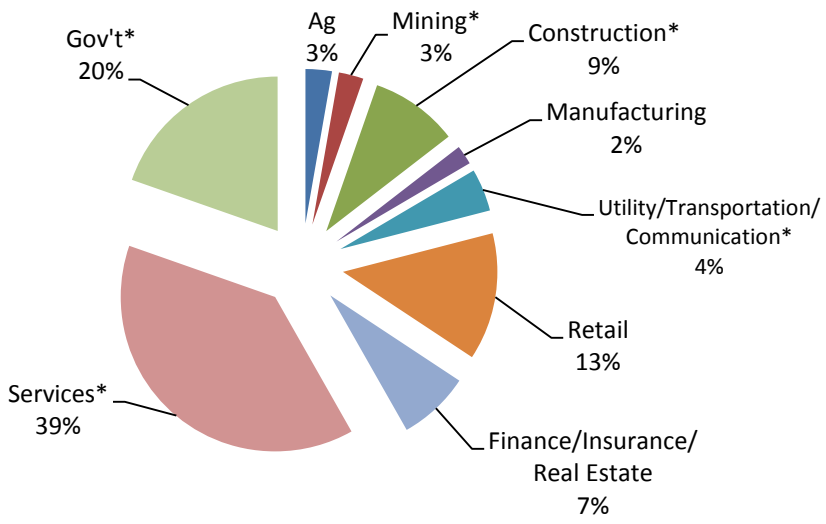
GROWTH TRENDS

Table 3
County Employment by Job Sector: 1980 - 2010

	1980		1990		2000		2010		Change 1980 - 2010	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent Change
Agriculture	948	6.5	1,104	5.9	1,311	4.4	839	2.7	-109	-11.5
Mining	104	0.8	263	1.4	315	1.1	788	2.6	684	657.7
Construction	1,101	7.5	1,677	8.9	3,186	10.7	2,796	9.2	1,695	154
Manufacturing	633	4.3	711	3.8	1,023	3.4	609	2.0	-24	-3.8
Transportation, Communications, and Public Utilities	626	4.3	700	3.7	969	3.2	1,354	4.4	728	116.3
Wholesale and Retail Trade	3,410	23.4	4,131	22.0	6,834	23	4,051	13.3	641	18.8
Finance, Insurance, and Real Estate	751	5.2	1,104	5.9	1,591	5.3	2,277	7.5	1,526	203.2
Services	4,583	31.4	5,890	31.3	10,653	35.8	11,745	38.6	7,162	156.3
Government	2,428	16.6	3,212	17.1	3,915	13.1	5,977	19.7	3,549	146.2
Total	**14,584**	**100.0**	**18,792**	**100.0**	**29,797**	**100.0**	**30,436**	**100.0**	**15,852**	---

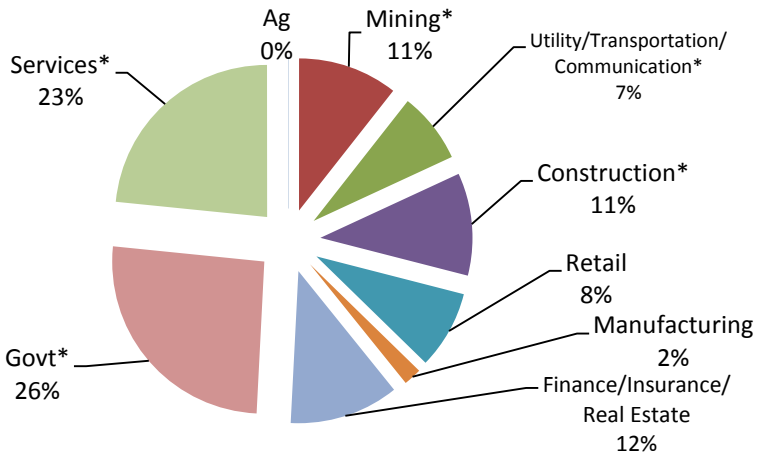
Source: Colorado Department of Local Affairs

Chart 8
Employment by Major Job Sector: 2010



Source: Colorado Department of Local Affairs
**Accounts for Oil and Gas*

Chart 9
Personal Income by Major Job Sector: 2010



Source: U.S Department of Commerce
** Accounts for Oil and Gas*

Property Valuation

During the 1990s tax revenues in the County increased dramatically, partly due to appreciating property values, and partly due to a significant growth in natural gas production. In 1990, taxable County properties had a total assessed value of $396,535,120 and by 1999 had increased to $1,163,142,350, a 193% increase over the decade. Relative to the economic downturn and affect on the housing market between 2007 - 2008, property values depreciated significantly but as of recent are appreciating at a slow, steady pace. *Table 4* depicts total assessed value and change in values during the 2000 to 2010 time period.

Table 4
County Assessed Property Value: 2000-2010

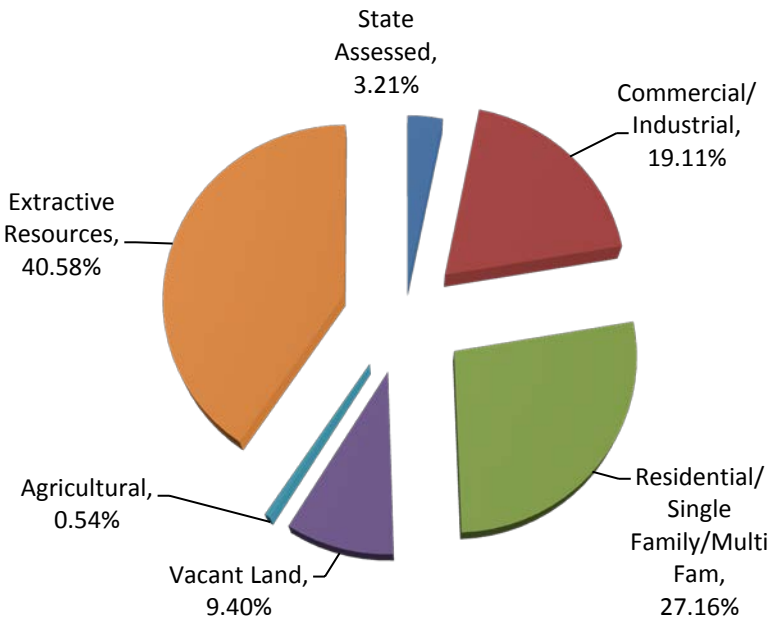
Year	Assessed Value	Percent Change From Previous Year
2000	$1,208,364,610	--
2001	$1,738,849,390	43.9
2002	$1,872,778,250	7.7
2003	$1,518,871,310	-18.9
2004	$2,130,538,680	40.2
2005	$2,487,795,340	16.7
2006	$3,003,202,240	20.8
2007	$2,876,454,210	-4.2
2008	$2,968,738,000	3.2
2009	$3,413,058,370	14.9
2010	$2,357,128,750	-30.9

Source: La Plata County Assessor's Office

GROWTH TRENDS

As mentioned, the Extractive Resource Industry has played a significant role in the La Plata County economy. As shown in Chart 10, this industry accounted for approximately 40 percent of the total County assessed value by property class in 2010.

Chart 10
County Assessed Value by Property Class: 2010



Source: La Plata County Assessor's Office

1 LAND USE

OVERVIEW

In the state of Colorado, local governments have been granted authority to guide land use planning through enabling legislation. As compared to other locations, both municipal and county governments have the authority to enact regulation drawing from numerous state laws to guide the management of lands within their jurisdictions.

The manner by which a county is granted authority depends upon their classification. Two distinct classifications which a county could be identified in this regard are *statutory* and *home-rule*.

Colorado is home to 64 counties; 60 of which are deemed *statutory*, four are termed *home-rule*. La Plata County, in particular is a statutory county, or a county that derives its powers directly from the State. In simpler terms, if the state has not authorized certain regulation within statutes, the local jurisdiction cannot act. Conversely, home-rule local governments have been granted land use authority via Colorado Revised Statute section §*30-11-501*. By way of adopting a charter, local zoning laws and ordinances can be enacted following their own procedures and standards.

Colorado Revised Statute (C.R.S.) Title 29, Article 20, Section 101 (§29-20-101) provides statutory counties with their granted jurisdictional authority, titled in short, the *Local Government Land Use Control Enabling Act of 1974.* Provided within that document, is the broad authority granted to those local jurisdictions to plan and regulate the use of land, ranging from preservation of areas with historical importance, correlation of growth relative to infrastructure, to regulation of development that may impose risk to wildlife.

Going on, as part of the County's land use planning process, C.R.S. §30-28-101 through §30-28-139 provides requirements by which the County must abide. This includes the appointment of a Planning Commission and adopting a Comprehensive or Master Plan. As stated directly, *"it is the duty of a county planning commission to make and adopt a master plan for the physical development of the unincorporated territory of the county." (§30-28-106).* This document, as adopted by the Planning Commission, is strictly advisory in nature; meaning this document should be used to guide development rather than as an instrument to control land use (not intended for direct regulation). Moreover, specific to the state of Colorado, a county's Comprehensive or Master Plan must include a component dedicated to the *recreation and tourism industries*, and how the local jurisdiction will provide for their associated uses.

As the population of the County grows, lands which were once predominately rural and dedicated to agricultural uses have seen shifts toward more dense and higher intensive uses. Guidance documents, such as this Plan, will identify changes and patterns, and promote effective growth management policies to be utilized and refined for years to come. The following sections will identify such policies, to include areas identified as growth hubs, adopted District Plans, locations dedicated to open space, and more.

1 LAND USE

Finally, this Element of the Plan focuses on the County's land use system and how it shapes the development pattern of the County; with particular consideration to the general health, safety and welfare of the place and its residents.

BACKGROUND

The impacts of unmanaged growth can create adverse and uncertain outcomes which the County cannot react to, nor respond to the needs of its residents, in an effective manner. Sprawl can occur in volumes which produce decreased levels of general service and threaten the quality of life which people seek when they move to the County. In order to balance the needs of the people and serve general health, safety and welfare demands, it is imperative that the County considerately develop a growth management system which accommodates economic vitality, inspiration for innovative development projects and businesses, preserve open, accessible areas to the natural environment for recreation, encourage higher levels of service to be maintained with expanding, concentrated infrastructure sources, as well as identify areas which could most effectively and economically serve the population's needs.

With declining gas production, taxing entities throughout the County are faced with the challenge of finding new sources of revenue to supplement associated revenues, in order to maintain level of service responsibilities. Therefore, managing growth provides reasonable expectations for levels of service, and opportunities for innovative economic development throughout the County, while recognizing the need to capitalize upon the Counties natural assets. New business development, as well as recreational opportunities should translate into any managed growth program for the County; as well as maintaining and expanding infrastructure in an affordable and responsive manner, to meet the needs of a growing La Plata County.

General levels of service could include:

- Construction, Function & Maintenance of Roadways/Roadway Network
- Sheriff/Jail/Search & Rescue, Emergency Preparedness
- Social Services
- Recreational Opportunities/Fairgrounds/Natural Environment Access
- Animal Control
- Accessible Resources such as Potable Water, Septic/Sewer, Electric Power, etc.

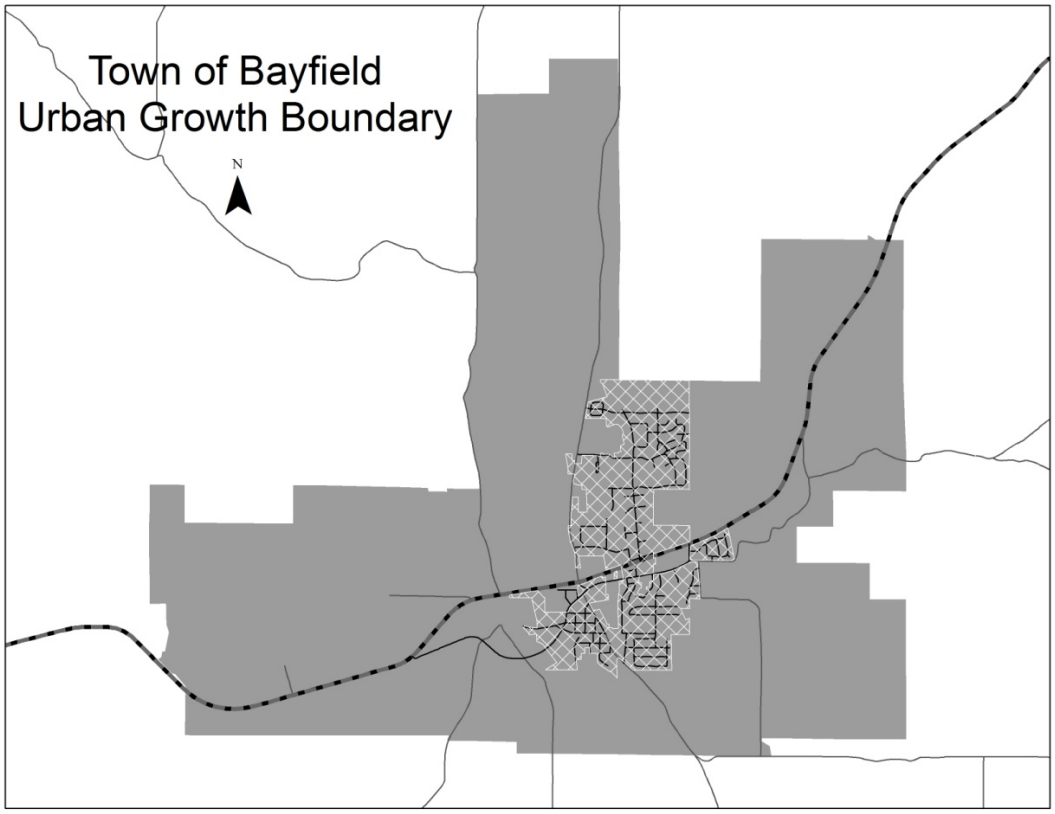
MANAGED GROWTH

Municipal Service Areas (3-Mile Plans)

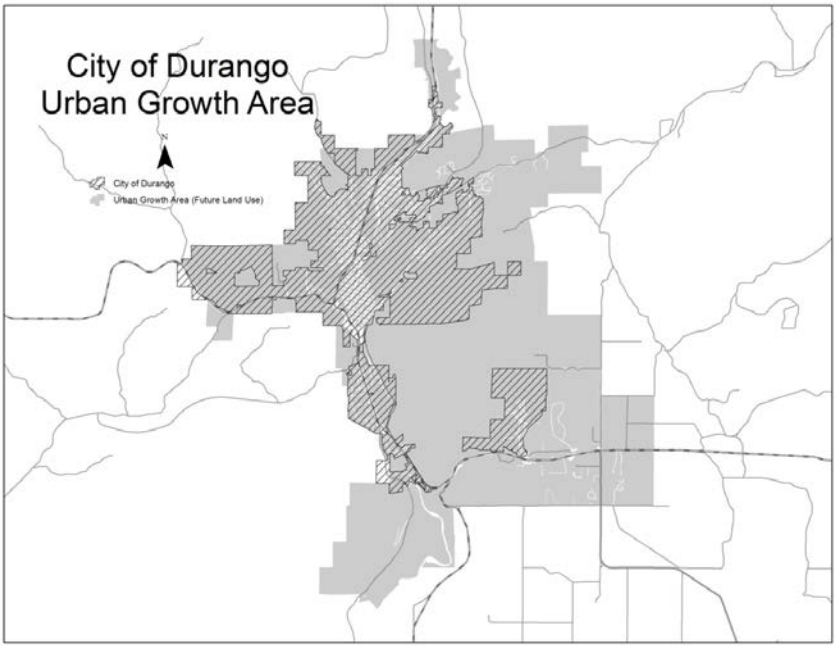
The state of Colorado provides that municipalities may actively plan annexable areas outside of their jurisdictional boundaries, future service areas, within three (3) miles. Therefore, maps identifying future potential annexation/service areas for the municipalities of Bayfield, Durango and Ignacio are identified below (Map 1-1 thru Map 1-3).

1 LAND USE

Map 1-1
Town of Bayfield Municipal Service Area (3-Mile Plan)

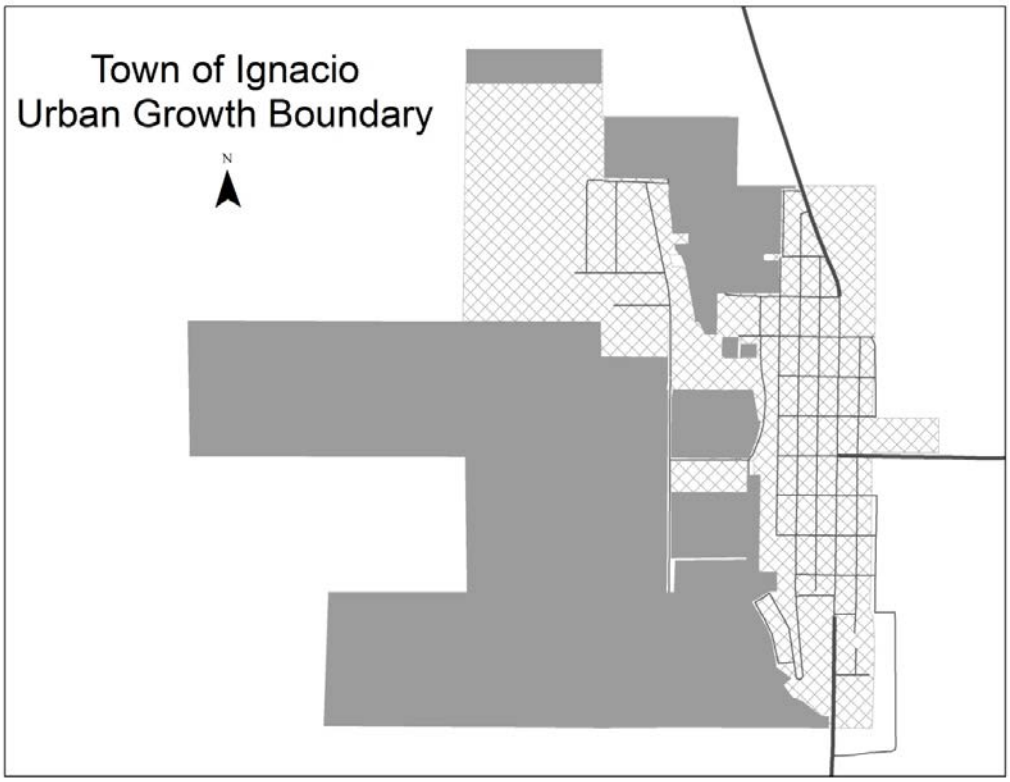


Map 1-2
City of Durango Municipal Service Area (3-Mile Plan)



1 LAND USE

Map 1-3
Town of Ignacio Municipal Service Area (3-Mile Plan)



In order to achieve higher potential for increased levels of service for future residents and businesses within these communities, the County should strive to accommodate the planned and managed growth of the municipalities, and coordinate more closely with their individual "3-Mile Plans". This intergovernmental effort can be an effective measure to encourage the realization of the individual municipal interests, and overall financial plan for the County to maintain a general level of service to the largest areas of potential future growth. This also provides for a mutually beneficial outcome for all local governments involved, in its basic form.

There are also two distinct Tribal Governments (Nations) which intersect within La Plata County, Colorado. These two sovereign nations are the Southern Ute Indian Tribe and the Ute Mountain Ute Indian Tribe. The boundaries of these are depicted within the map of La Plata County (Map 1-5).

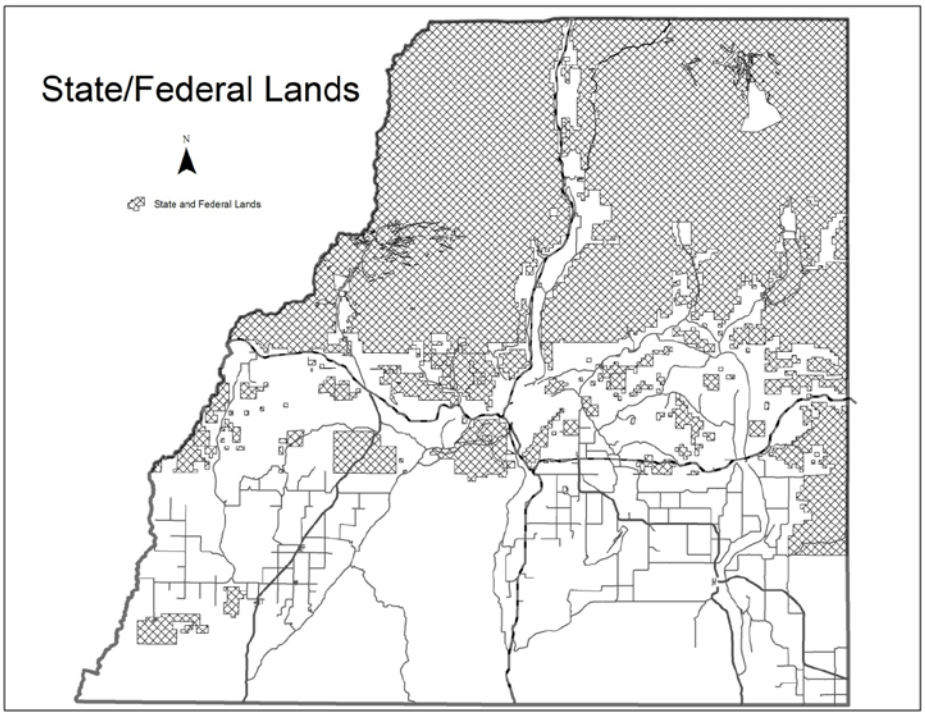
There are also larger areas of State and Federal lands within La Plata County, primarily dedicated to open space, recreation, and parks. The following Map 1-4, identifies these areas within the County.

Other Planned Service Areas

In areas of the County where central water and sewer services are available, these services are provided by entities such as local municipalities, metropolitan districts, private companies, homeowner associations, and, in some cases, Tribal governments. Existing Infrastructure Maps

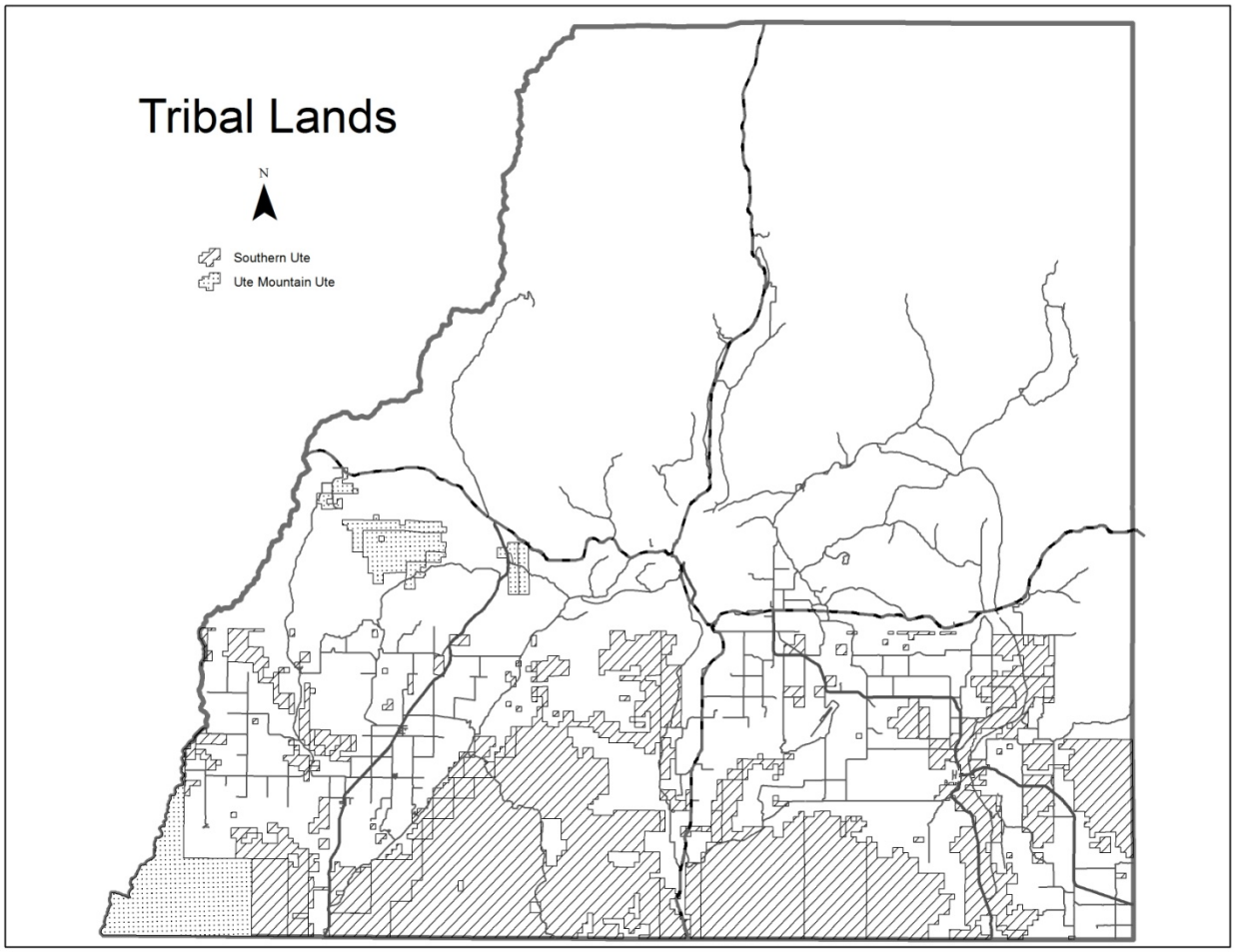
(appendix) identify major central services in the County. Several of these systems serve smaller developments or hub activity areas throughout the County.

Map 1-4
State and Federal Lands within La Plata County



There are several terms which identify various nodes of service activity in the County for different purposes. Those include Rural Activity Centers (RAC) which tend to provide general or neighborhood services for various rural locations; Urban Service Areas (USA) which entail an extension of municipal services into the unincorporated areas surrounding a given municipality; Crossroads Centers, which may only serve a smaller volume of activity for a highly discrete purpose (i.e. independent feed store located in a rural area only serving local agricultural goods for the types of farms in the area); and Recreational Service Areas (RSA), which generally serve several, or a particular, recreational activity, isolated from broader urban services. However, we use a broad term here to capture all of these as activity/growth hubs, recognizing that they all vary slightly but share a similar value to the County.

Map 1-5
Tribal Nations Transecting La Plata County



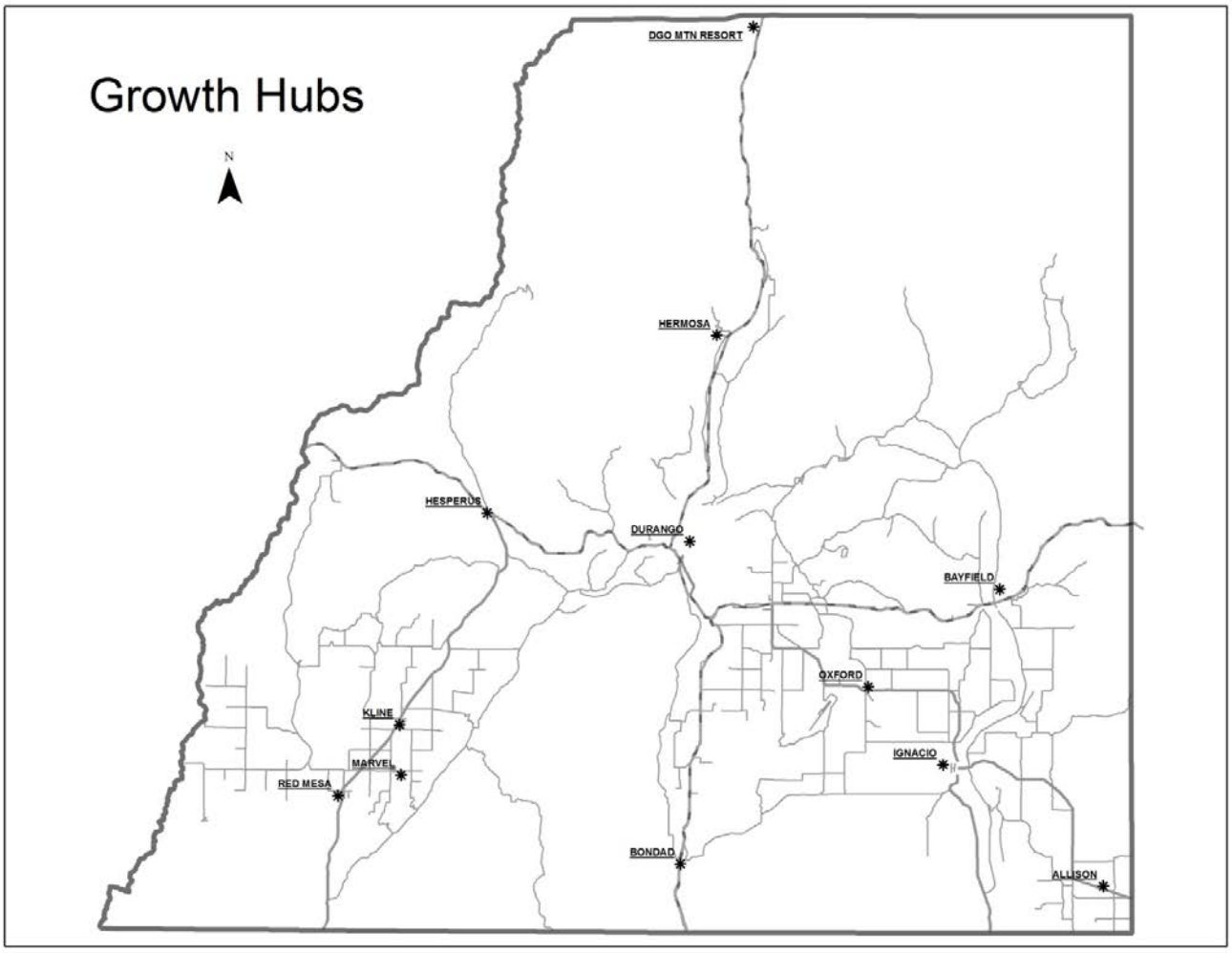
Activity / Growth Hubs

Where activity hubs exist throughout the County, there may be opportunities for further growth to occur in these areas. Being flexible and able to accommodate such growth is, therefore, important. The County has recognized opportunities for growth based upon availability, or the potential for available, expanded resources and infrastructure. Planning for future growth adequately and flexibly, should continue to be recognized by the Plan.

Map 1-5 illustrates the existing, known major activity/growth hubs within the County; however it is not all-encompassing and should be evaluated during a future effort of updating the County's adopted District Plan maps

1 LAND USE

Map 1-6
Activity/Growth Hubs La Plata County



District Land Use Plans

During the mid-1990s, the County created land use planning districts with associated district plans. These plans contain and identify hub activities and assigned land use classifications. These were originally prepared for seven districts; however today include a total of 13 identified planning areas/districts. The Animas Valley District had previously established a plan that was subsequently codified and incorporated in the adopted land use code (implementing document of the County's land use policy) making that district plan regulatory, rather than advisory. Each of the other district plans remain advisory in nature and should be revisited in order to update them, as well as coordinate with this Comprehensive Land Use Plan. Particular emphasis and character of each Plan varies somewhat, however with an underlying theme to reflect a desire to maintain unique qualities of each district as growth occurs.

1 LAND USE

Each plan was prepared with extensive input from the residents within the planning district areas. The preparation process spanned several years, during which time more than 100 district planning group meetings were held to solicit public involvement. These plans are integral to a refined and thoughtful land use classification system. Such system should include consideration, and correlation, of the comprehensive policies identified within this Plan, as well as the classifications designated within each of the area plans.

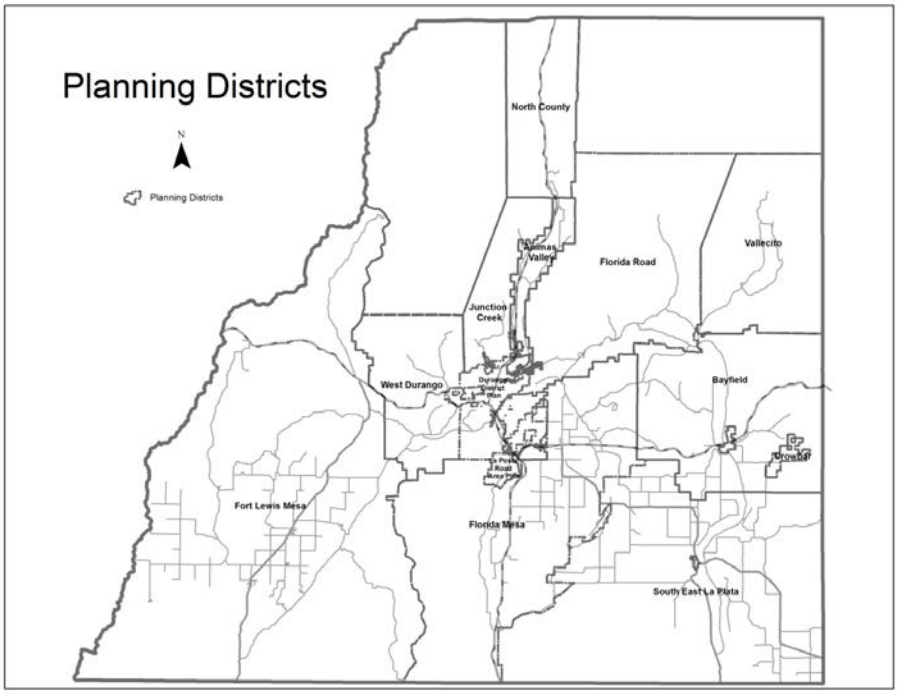
A land use classification system should include an inventory of all classifications defined, and then applied within each area plan (district map). This exercise should take place upon a complete update of this Plan, in order to ensure such consideration/correlation. Also, extending the public process of such updates should target participation from members of the planned district areas.

During the exercise, attention should also be made to identify appropriate hub activities within each district area, so that particular, unique attributes of the areas could be adequately planned with the area's needs and intentions captured.

This Plan, then, should be updated to reflect much of what is identified during the area plan exercise as well. Any planning tools or methods identified for use within the district area plans, should be clearly articulated, explained and identified within this Comprehensive Plan.

A map identifying the current district area plans within the County can be viewed below:

Map 1-7
La Plata County District Area Planned Areas



1 LAND USE

Land Use Code

The adopted Land Use Code is the primary means by which the comprehensive planning goals found throughout this document can be implemented via regulatory measures to be utilized in the County. How the Plan is intended to correlate with the implementing document(s), is by way of formal recommendation by professional staff and the appointed Planning Commission (and other recommending bodies to the BOCC). It is therefore important to establish sound policy relative to growth management in order to capture the recommended policy within considered implemented documents of the County.

As the Plan is amended from time to time, so should the Land Use Code and other such documents to maintain consistency with the Plan. Recommendations could be made, also regularly, to the appropriate decision-makers for considerations of consistency implementation.

Capital Expansion Fees

Colorado State Statutes authorize statutory Counties such as La Plata to collect certain, narrowly defined capital expansion fees (such as fees-in-lieu of school and park land dedication, or road impact fees). They are a one-time charge assessed on new development that is intended to ensure new development provides minimal contribution toward capital facilities it impacts.

Therefore, capital expansion fees must be specifically tied to impacts of development to public facilities, and used to provide or improve, facilities which benefit the development. In order to satisfy these parameters, a careful analysis of existing conditions and public facility needs, attributable to new development, must be undertaken. La Plata County currently uses capital expansion fees on a limited basis. School fees-in-lieu are regularly collected, as are road maintenance/improvement fees associated with development.

LAND USE GOALS

Goal 1.1: Develop and maintain a land-use planning system which encourages a high quality living environment with a mix of compatible land uses; and coordinates managed growth with other Plan Elements, promoting public health, safety and welfare.

Objective 1.1.A: To identify and recognize general planning practice which provides for consistent, fair administration/application, while identifying clear direction for private and public land use.

Policy 1.1.A1: The County should promote the use of a refined and considerate land use planning system (land use classification) in areas of the

County which are developed, or anticipated future developing areas. The existing District Plans should be reviewed and evaluated regularly in order to ensure that they address the County's goals, and correlated with fiscal responsibilities.

Policy 1.1.A2: The County should review, consider and evaluate various service areas for accommodating general population needs. Such areas should address both opportunities and needs of the County, relative to residents, business climate, the natural environment and general open areas for recreation. Activity/growth hubs will need to be reviewed and refined on a regular basis to ensure service needs and fiscal responsibilities of the County are balanced considerations.

Policy 1.1.A3: The County should create a uniform and consistent land use classification palate from which uniform and certain understanding of each classification can be communicated to the public, at large, via District Plans, and other planning tools.

Policy 1.1.A4: The County should review, consider and evaluate for use, various planning tools such as strategic performance measures for planned uses which match uses' demanded values; themed overlay boundaries; traditional zoned districting for consistent and compatible land use application (within classification system); and master planning, or planned development applications to coordinate elements of project development over longer time periods.

Policy 1.1.A5: The County should promote diversification of land uses to meet economic needs and the County's fiscal responsibilities, within the various forms of the County's natural environment; and create development application processes which are concise as well as consistent with implementing documents.

Objective 1.1.B: To coordinate intergovernmental practices which encourage higher, and enhance existing, level of service standards for residents; as well as can be maintained with a growing population.

Policy 1.1.B1: The County should coordinate with the municipalities of Bayfield, Durango and Ignacio in order to develop strategies for encouraging higher, more intense development within the municipal planning areas.

Policy 1.1.B2: The County should coordinate with the Southern Ute Indian Tribe, as well as the Ute Mountain Ute Indian Tribe in order to realize mutual goals with Tribal government planning efforts.

Policy 1.1.B3: When possible and appropriate, the County should assist the local municipalities during their planning efforts to achieve a higher level of service for residents within the County.

Policy 1.1.B4: The County should coordinate with special districts and local authorities in order to ensure that land use and infrastructure needs correlate with fiscally responsive and responsible development, which can be maintained over time; and accommodate level of service needs.

Policy 1.1.B5: The County should develop level of service (LOS) thresholds and standards for measuring performance of development elements. These should correlate infrastructure, land use as well as other service measures.

Objective 1.1.C: To coordinate recommendations for general land use classification and application with Goals, Objectives and Policies of this Plan, as well as appropriate physical conditions and characteristics of land; and economic viability and benefit to the County.

Policy 1.1.C1: The County should measure proposed land uses with other Element's Goals, Objectives and Policies for consistency and compatibility during considerations for land use application.

Policy 1.1.C2: The County should consider physical characteristics of the land, such as geo-hazard areas, soil conditions, topography and the availability of public facilities and services during considerations for land use application.

Policy 1.1.C3: The County should consider economic development and the County's fiscal responsibilities, as well as cost-benefit to the County, during considerations for land use application.

2 INFRASTRUCTURE

OVERVIEW

Infrastructure is the backbone of a strong economy. From roads and bridges, to sewer and internet connection, services must be provided to members of the community in varying capacities. For growing economies such as La Plata County, it is vital to consider and identify options for the future build-out of an area to best serve the community's needs. In order to make sound decisions for the continued development of infrastructure current and projected growth will be considered to arrive at viable solutions which meet those needs. Additionally, highlighting areas where existing services are already in place is paramount to a cost effective approach of ongoing facility maintenance.

From roads and bridges, to sewer and internet connection, services must be provided to members of the community in varying capacities.

Infrastructure may be broken into "sub-elements", of the developed landscape. For purposes of those directly relevant to the build-out of La Plata County, such sub-elements of this Element consist of Transportation, Water, Sewer, Utility and Telecommunications. Each sub-element is identified within this Element relative to its own unique impacts and needs (relative to La Plata County), while at the same time incorporating anticipated growth and development trends that will ultimately have an effect on the County, as a whole. Moreover, the goals, objectives, and policies as identified throughout each sub-element below establish mechanisms by which those needs can be addressed, and development can be guided. Additionally, these sub-elements may be refined the County formulates a more structured perspective regarding its goals for financially responsible growth.

BACKGROUND

Previously, the Comprehensive Plan only addressed Transportation infrastructure, and in August 1998 initiated a study to inform a long-range plan. The outcome of that study was to develop a coordinated strategy and Plan (2030 TRIP) for the management and improvement of the County's transportation system for the next 20 years and beyond. The Plan studied all public roads in the County and County Road network, while attempting to predict the need for future improvements and traffic management strategies based on roadway conditions, traffic volumes, and realistic growth projections.

Overall findings of the Plan indicated that many roadway improvements would be required in coming years to safely accommodate existing and future traffic on County roads and State highways.

Since the costs of associated improvements were particularly high, the Plan prioritized recommended improvements and identified potential funding sources to assist with financing recommended projects. Any updates to such a discrete Plan will be made part of this Comprehensive Plan for La Plata County and will be located within the Appendix.

2 INFRASTRUCTURE

Water is a sub-element of the Infrastructure Element that demands significant attention. In 2014, the Board of County Commissioners appointed a Water Advisory Committee (WAC) to directly address questions regarding water resources and its future use, as well as County perspective, regarding water in La Plata County. The Committee is scheduled to sunset in the summer of 2015, when they will make recommendations to the Board of County Commissioners. Based on the outcome of the Board's discussion, relative to the particular questions asked, the Water sub-element of this Element should capture the Board's ultimate considerations, concerns and determinations. Presently, general inventory and objectives regarding water are captured.

Water usage is also a statewide concern being addressed by the Colorado Water Conservation Board (CWCB). The CWCB is in the process of drafting Colorado's Water Plan in order to provide strategies, policies, and actions to address projected future water needs. This is being accomplished through collaboration with basin roundtables, local governments, water providers and other stakeholders. Nine basin roundtables were established by House Bill 05-1177. These roundtables represent each of the state's eight major river basins and the Denver metropolitan area. The basin roundtables bring more than 300 citizens into water discussions across the state and include representatives with agricultural, industrial, domestic water supply, environmental and recreational interests. A draft of the Plan was released in December 2014, with a final version scheduled to be released in December 2015. The intent of the plan is to outline how various interests, pertaining to several basins in the State, can attain locally driven, collaborative solutions regarding water.

Sewer/Solid Waste is a sub-element of the Infrastructure Element that directly addresses sanitary sewer and wastewater treatment, storage and disposal, and solid waste disposal. Not necessarily in the technical sense as regulation would, however, in a general sense relative to capacity, future build-out of La Plata County, and via intergovernmental cooperation to reach and maintain associated, stated goals and objectives.

The General ***Utility*** sub-element includes several remaining forms of infrastructure important to the development and build-out of the County. These include utilities such as electric power, phone, cable, fiber-optics, etc. There are many factors which come into play when contemplating the potential for system build-out of the general utilities. By first understanding what level of service (LOS) for these exists within the County, a stronger understanding of where the "path of least resistance" for further build-out within the County exists. This sub-element is drafted with direct correlation to the other sub-element goals and objectives.

Finally, the ***Telecommunications*** sub-element is a unique form of infrastructure, specifically dealing with wireless technology (hard wire infrastructure is captured under the "General Utility Sub-Element); and which directly affects economic and residential development of La Plata County, as well as the physical landscape. As such, it is addressed as its own sub-element of infrastructure within this Element. Wireless communication technology development is providing unprecedented opportunities for La Plata County residents and businesses. Increased access to

remote information contributes towards a greater "quality of life" for residents and allows businesses more opportunity for increased efficiency. Adverse impacts to be considered regarding the physical landscape include environmental and visual effects, as well as electromagnetic pollution.

Nonetheless, technology continues to refine this form of infrastructure so that our knowledge of its impacts and capable potential to serve La Plata County must be regularly re-visited. Moreover, since Federal-level regulations for this industry change frequently, the County must stay apprised of the changes and adopt to ensure the Land Use Code is not in conflict with Federal regulations.

INFRASTRUCTURE GOALS

TRANSPORTATION

Goal 2.1: Plan a transportation system to accommodate existing and future motorized and non-motorized travel/circulation within La Plata County.

Objective 2.1.A: To identify and maintain the existing system of the County roadway network by mapping and articulating regularly needed improvements/maintenance.

Policy 2.1.A1: Develop and maintain an inventory of all existing County and non-county roadways, as well as understand existing and future capacity needs.

Objective 2.1.B: To accommodate multi-modal forms of transportation county-wide by coordinating intergovernmental efforts.

Policy 2.1.B1: Regularly coordinate efforts with Federal, State and municipal governments, as well as special districts, in order to effectively implement various components of uniform traffic circulation design whenever possible.

Policy 2.1.B2: Recognize, participate, and coordinate with efforts to establish future plans of both the La Plata-Durango and Animas Airports.

WATER

Goal 2.2: Coordinate with appropriate Federal, State, and local agencies to address current and future water sources, demand, and conservation strategies.

Objective 2.2.A: To identify and promote the maintenance of existing potable and agricultural water distribution systems, and to identify locations for the

development of future water distribution systems in a concurrent manner with associated needs and demands.

Policy 2.2.A1: Develop and maintain an inventory of all existing potable water distribution systems, as well as understand the existing and anticipated capacity of such facilities.

Policy 2.2.A2: Coordinate with State and local agencies to ensure proposed projects are consistent with minimum potable water system requirements and needs.

Policy 2.2.A3: Encourage and support the development of water infrastructure which is necessary for continued agricultural operations.

Objective 2.2.B: To provide incentives toward water conservation and appropriate water re-use when opportunities for such initiatives exist.

Policy 2.2.B1: Provide incentives for distinguished water conservation efforts, such as the use of grey-water within development projects, when opportunities for this type of water use exist.

SEWER / SOLID WASTE

Goal 2.3: Encourage and promote safe and efficient sanitary sewer and solid waste disposal systems which meet existing and projected demands, promotes and accommodates orderly growth and development, and protects the public health of the community.

Objective 2.3.A: To identify and promote the maintenance of existing sanitary sewer facilities, and encourage the responsible use of individual waste systems where such systems are the only alternative to sanitary sewer expansion and connection.

Policy 2.3.A1: Develop an inventory of all existing sanitary sewer facilities, as well as understand the existing and anticipated capacity of such facilities.

Policy 2.3.A2: Coordinate with State and other local agencies, such as Colorado Department of Public Health & Environment and San Juan Basin Health Department, to ensure proposed projects are consistent with minimum sewer and waste system requirements.

Policy 2.3.A3: Collaborate with State and other local agencies, such as Colorado Department of Public Health & Environment and San Juan Basin Health Department to consider appropriate locations for accommodating waste disposal and/or treatment.

Objective 2.3.B: To identify and promote the maintenance of existing solid waste facilities; and encourage the expansion and appropriate design of multi-functional refuse locations to adequately serve the County's demands/needs.

Policy 2.3.B1: Develop an inventory of all existing solid waste facilities, as well as understand the existing and anticipated capacity of such facilities.

Policy 2.3.B2: Coordinate with State and other local agencies, such as Colorado Department of Public Health & Environment and San Juan Basin Health. Department, to ensure proposed projects are consistent with minimum solid waste system requirements.

Policy 2.3.B3: Collaborate with State and other local agencies, such as Colorado Department of Public Health & Environment and San Juan Basin Health Department to consider appropriate locations for accommodating solid waste disposal and/or treatment (refuse) as well as encourage recycled solid waste accommodations.

UTILITY

Goal 2.4: Encourage and promote safe, efficient and effective transmission and distribution of general utility throughout the County based on existing and projected demand, and to provide the opportunity for introduction of a utility service to the County where such opportunities can accommodate safe and secure utility delivery.

Objective 2.4.A: To identify and promote the maintenance needs of existing utility facilities, and encourage safe and efficient delivery of utility services based on concurrent demands and known future needs for such services.

Policy 2.4.A1: Develop an inventory of all existing major utility facilities, as well as understand the existing and anticipated capacity of such facilities.

Policy 2.4.A2: Regularly coordinate with Federal, State and other local agencies, as well as utilities serving the County, in order to ensure proposed projects are consistent with minimum requirements for design and safe utility service delivery.

Policy 2.4.A3: Provide incentives to accommodate utility services for segments of the population lacking appropriate utility service, in bulk and based on "bulk needs" data, in order to ensure secure and quality utility resources for such population.

2 INFRASTRUCTURE

TELECOMMUNICATIONS

Goal 2.5: Encourage and promote safe, efficient and effective transmission and distribution of telecommunication services throughout the County based on existing and projected demand; and provide opportunity for introduction of such service to the County where opportunities can accommodate sufficient level of service delivery.

Objective 2.5.A: To identify and promote the maintenance of existing telecommunication facilities, and encourage a safe and effective level of service delivery based on existing demands and known future needs for such services.

Policy 2.5.A1: Develop an inventory of all existing telecommunication facilities, and understand the existing and anticipated level of service needed from such facilities.

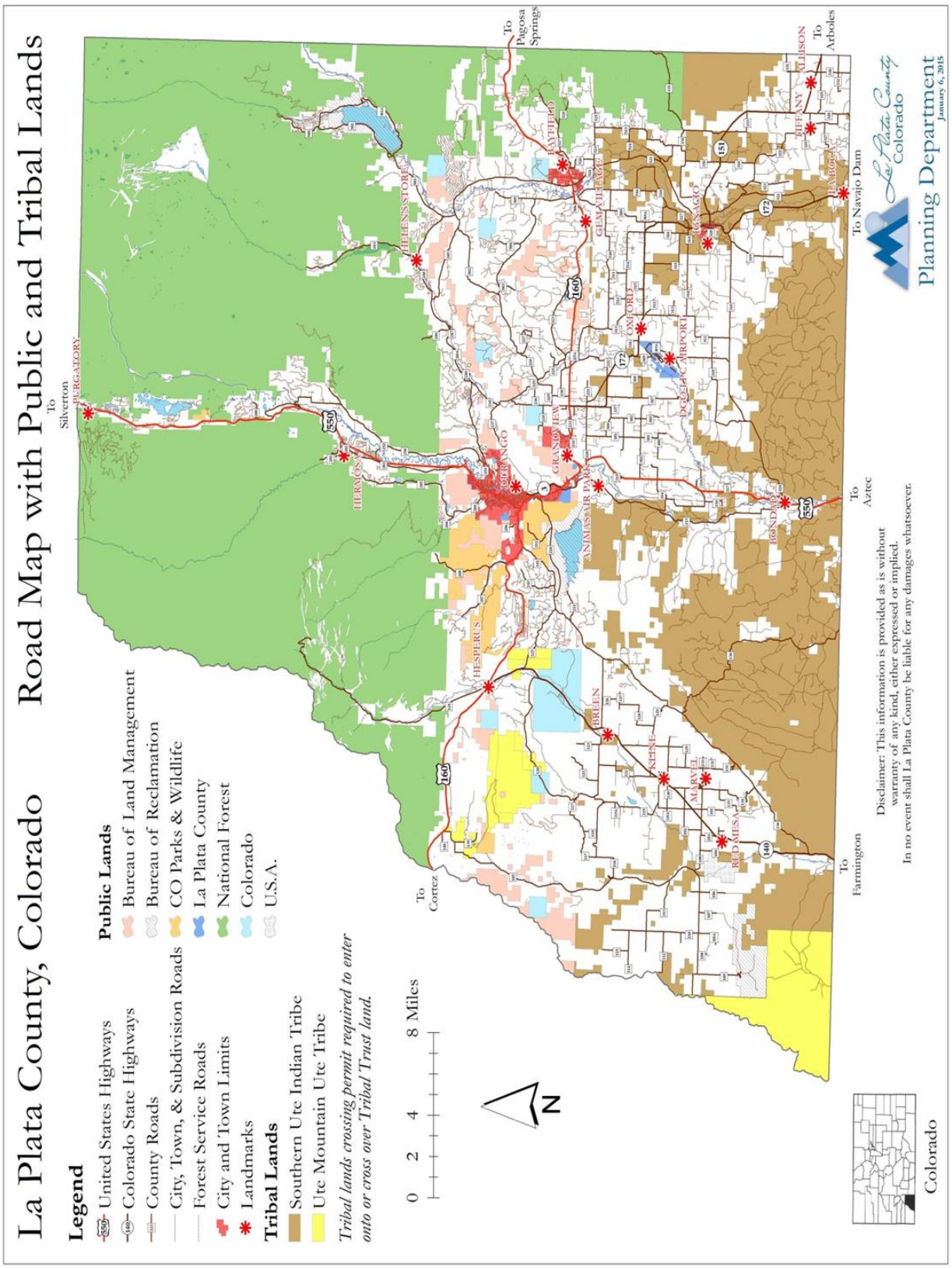
Policy 2.5.A2: Regularly coordinate with Federal and State agencies and, the telecommunications industry, to ensure proposed projects are consistent with the minimum requirements for design and safe utility service delivery.

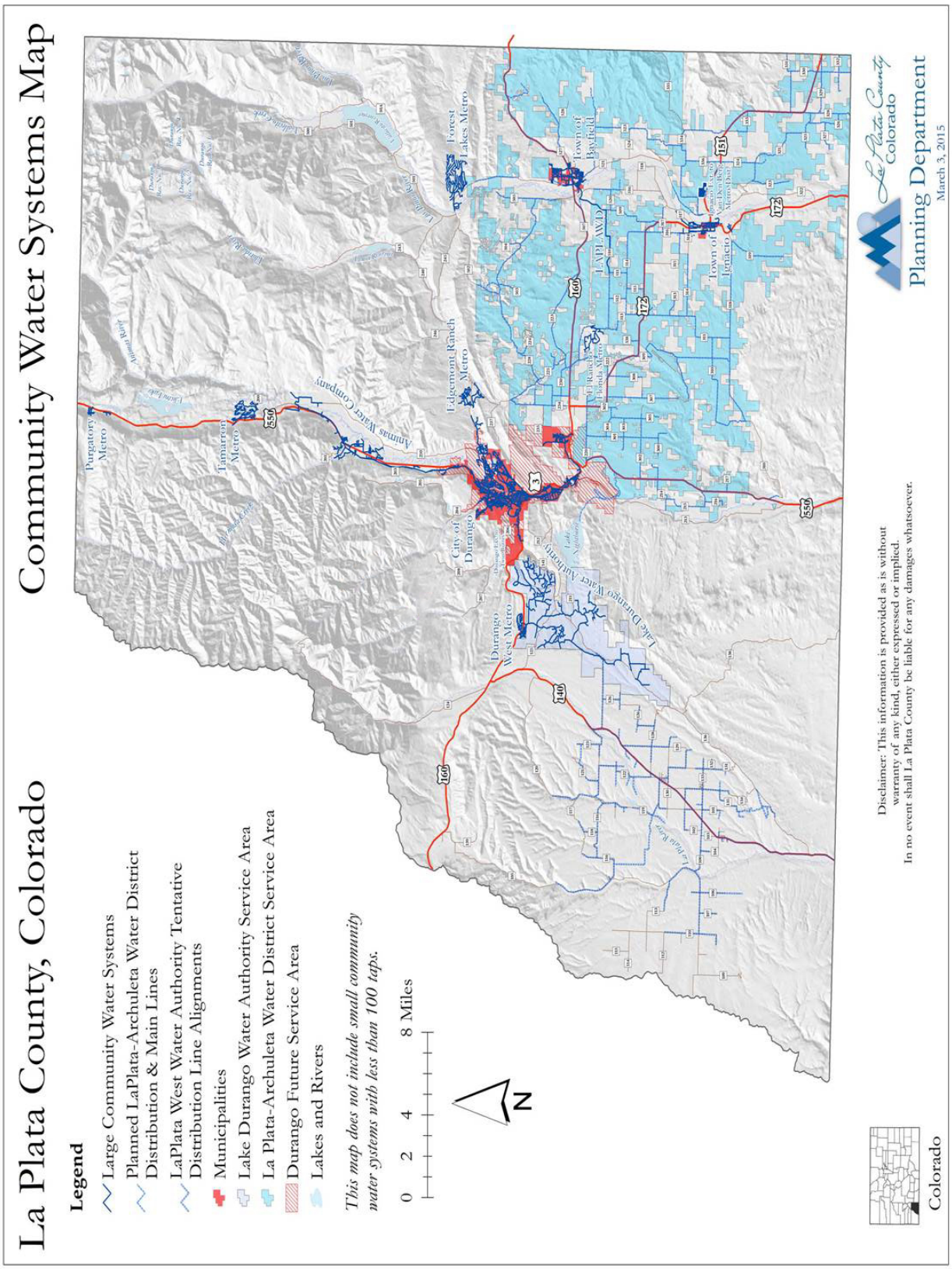
Policy 2.5.A3: Provide incentives to accommodate telecommunications service for segments of the population lacking appropriate levels of service. The incentives would be based on "propagation" and service area data, to provide for quality telecommunication service throughout the County.

Policy 2.5.A4: Explore funding and grant opportunities to invest in the County's telecommunication infrastructure.

Existing Infrastructure Maps:
1. Road Map with public & Tribal Lands, 2015
2. Community Water Systems Map, 2015
3. Drainage Sub-Basins, 2014
4. Sanitation Facilities, 2014
5. Vacant Parcels over 1 mile from Utility Gas Service, 2015
6. Utility Gas Service and Vacant Parcels, 2015
7. Telecommunications Facilities, 2015

2 INFRASTRUCTURE




La Plata County, Colorado
Community Water Systems Map
Legend
Large Community Water Systems
Planned LaPlata-Archuleta Water District Distribution & Main Lines
LaPlata West Water Authority Tentative Distribution Line Alignments
Municipalities
Lake Durango Water Authority Service Area
La Plata-Archuleta Water District Service Area
Durango Future Service Area
Lakes and Rivers
This map does not include small community water systems with less than 100 taps.
0 2 4 8 Miles
N
Purgatory Metro
Tamarron Metro
Animas Water Company
Edgemont Ranch Metro
City of Durango
Durango West Metro
Lake Durango Water Authority
Forest Lakes Metro
Town of Bayfield
LAPLAWD
Town of Ignacio
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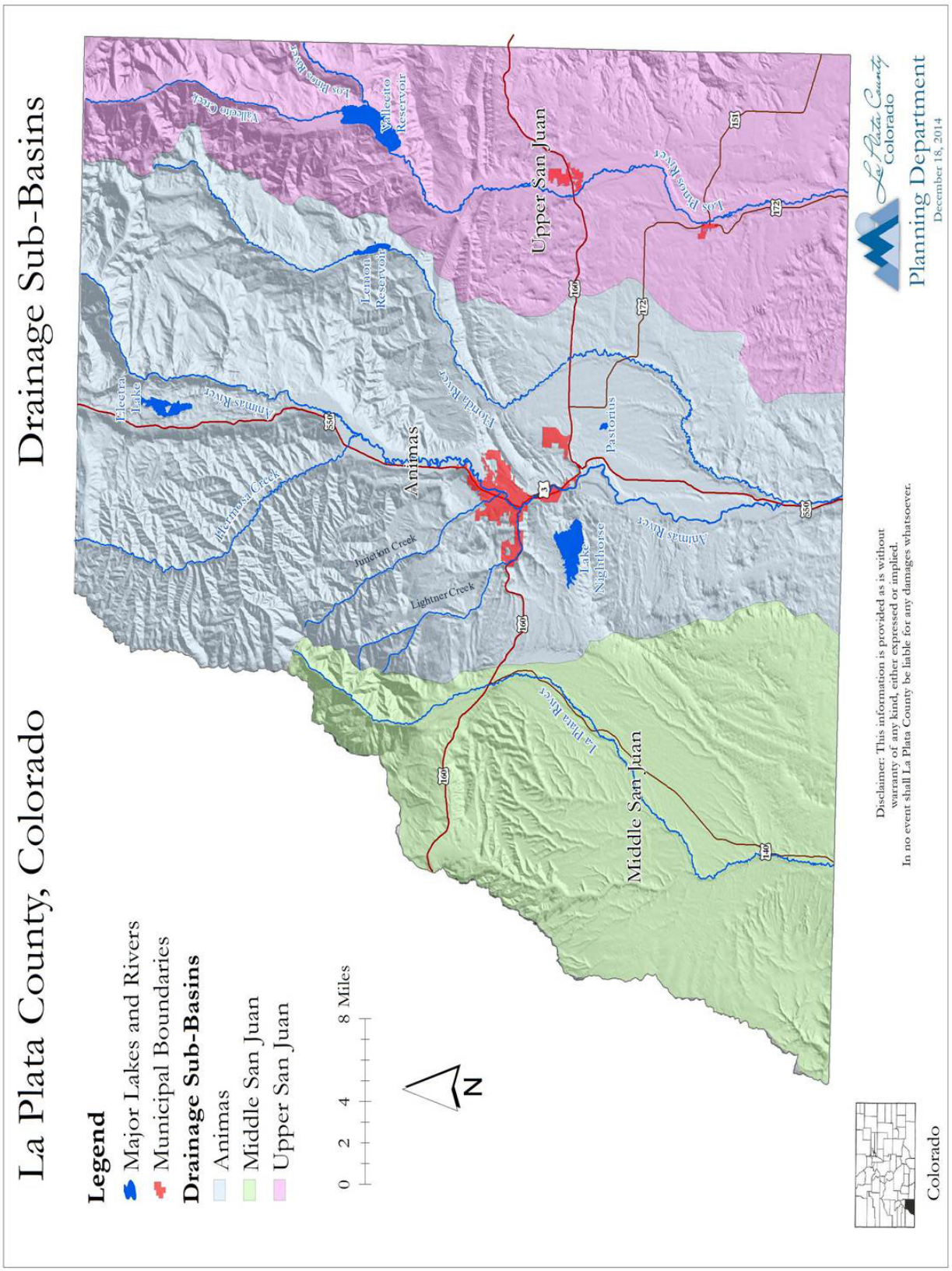
Colorado
La Plata County Colorado
Planning Department
March 3, 2015

2 INFRASTRUCTURE



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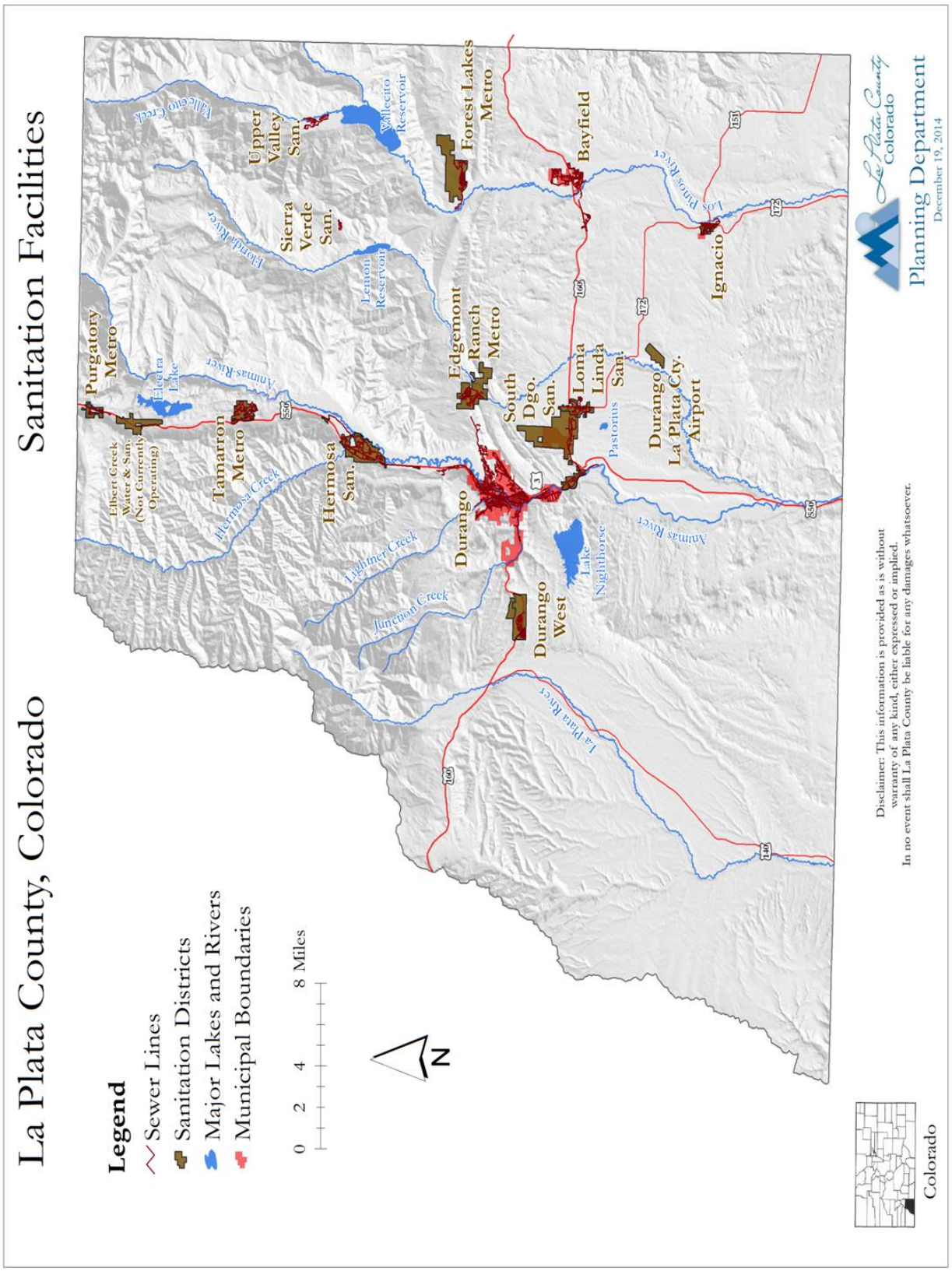
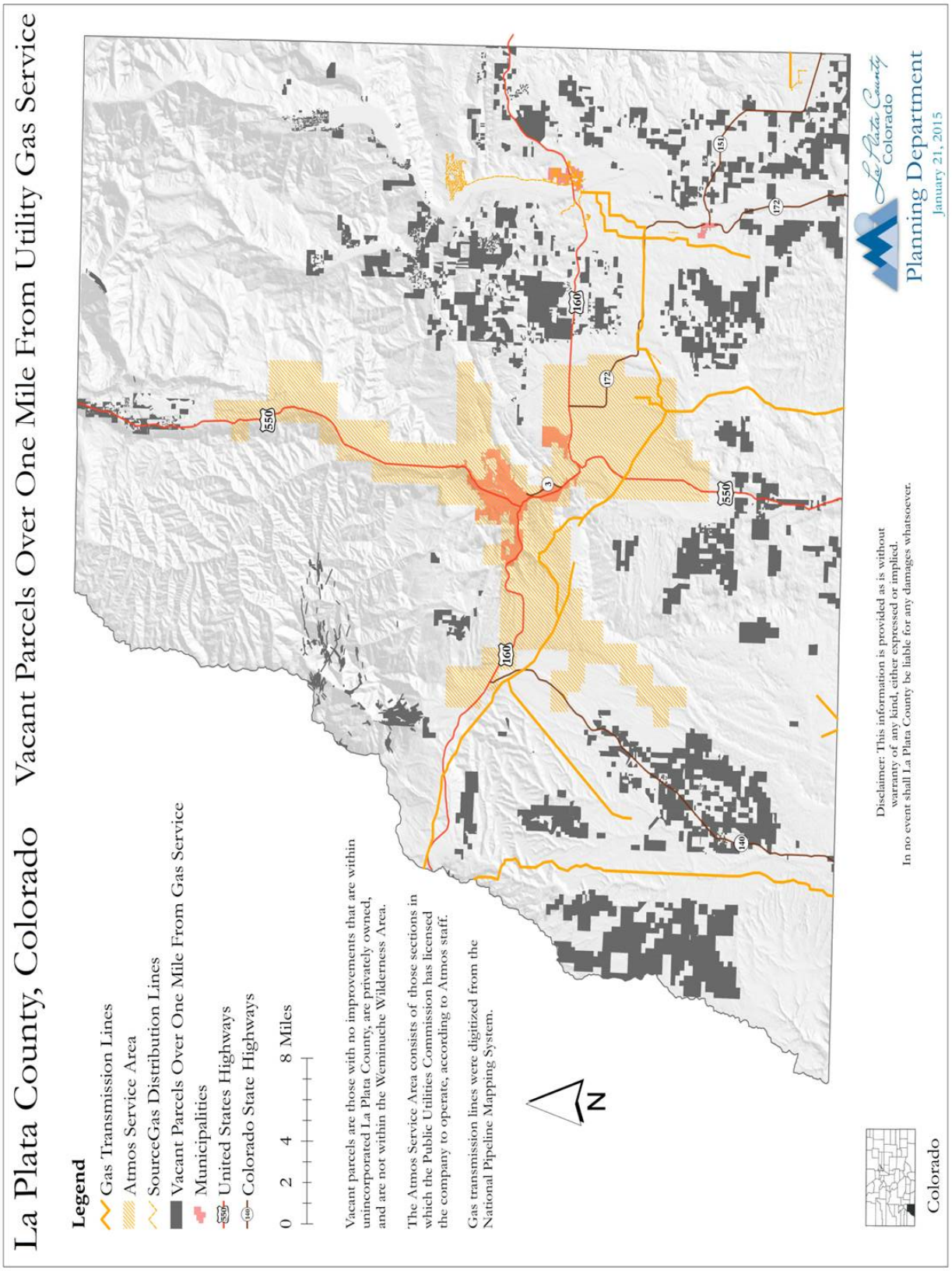
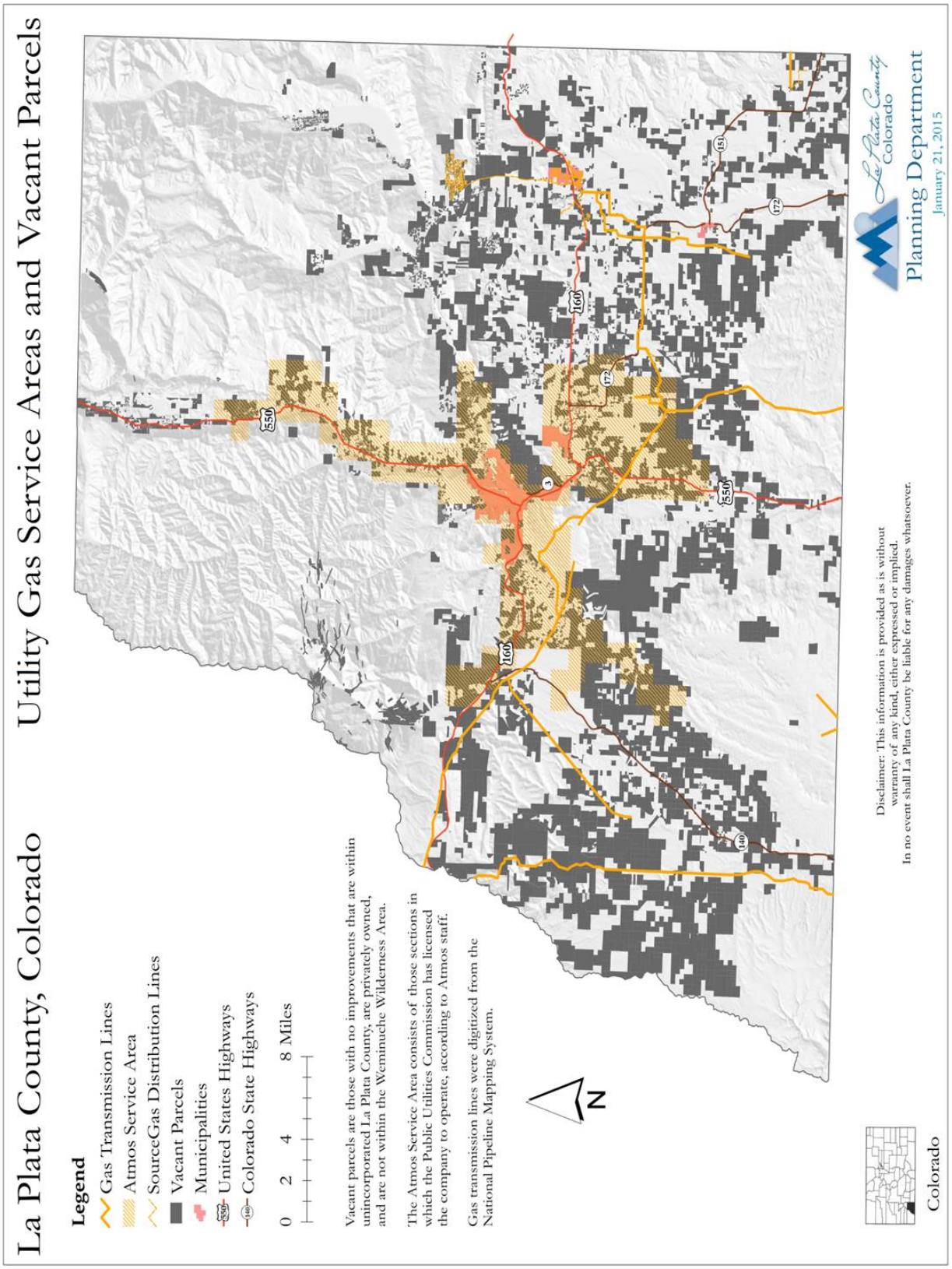


2 INFRASTRUCTURE




La Plata County, Colorado
Utility Gas Service Areas and Vacant Parcels
Legend
Gas Transmission Lines
Atmos Service Area
SourceGas Distribution Lines
Vacant Parcels
Municipalities
United States Highways
Colorado State Highways
0 2 4 8 Miles
Vacant parcels are those with no improvements that are within unincorporated La Plata County, are privately owned, and are not within the Weminuche Wilderness Area.
The Atmos Service Area consists of those sections in which the Public Utilities Commission has licensed the company to operate, according to Atmos staff.
Gas transmission lines were digitized from the National Pipeline Mapping System.
N
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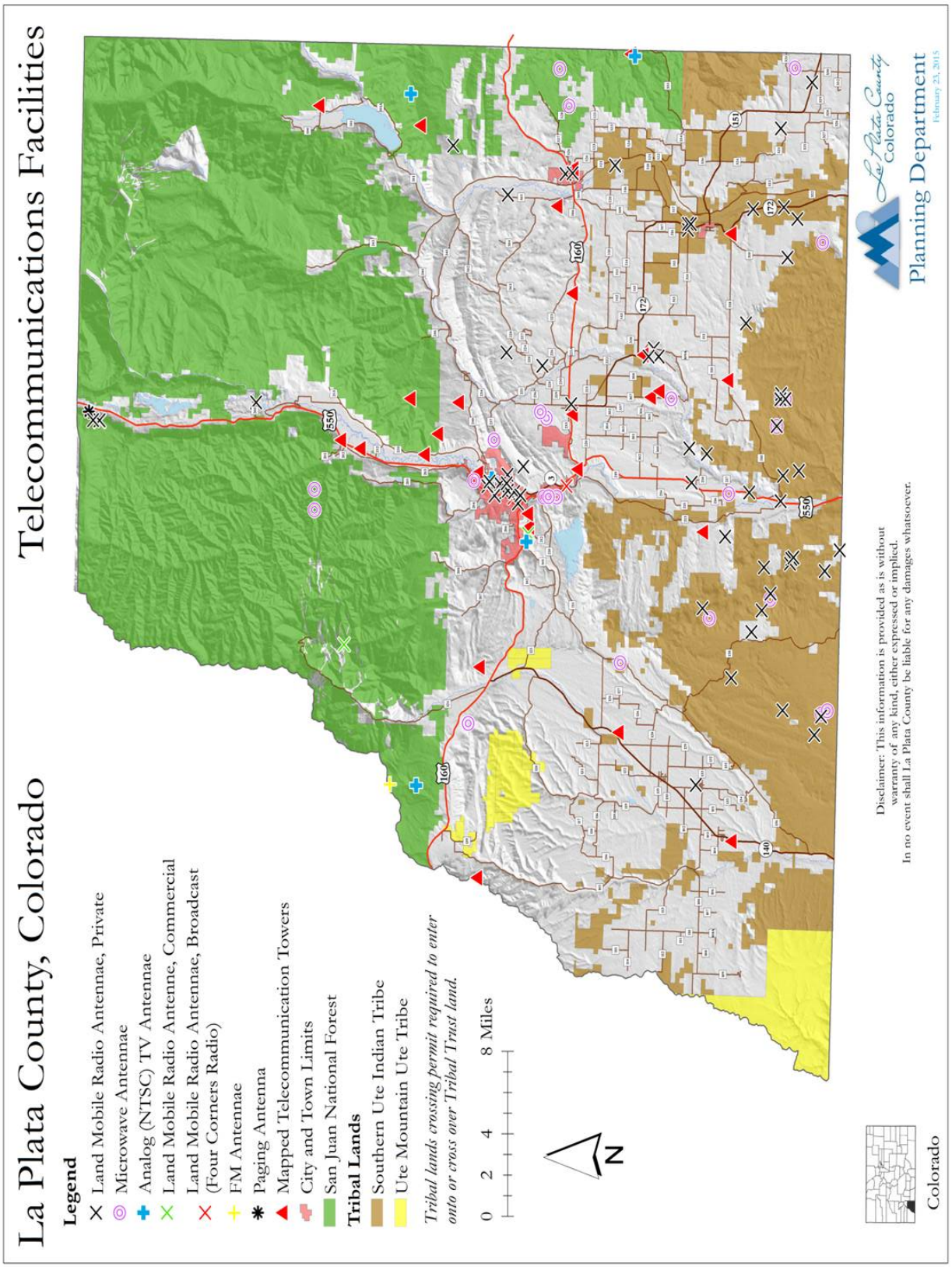
Colorado
La Plata County Colorado
Planning Department
January 21, 2015


La Plata County, Colorado
Telecommunications Facilities
Legend
Land Mobile Radio Antennae, Private
Microwave Antennae
Analog (NTSC) TV Antennae
Land Mobile Radio Antenne, Commercial
Land Mobile Radio Antennae, Broadcast
(Four Corners Radio)
FM Antennae
Paging Antenna
Mapped Telecommunication Towers
City and Town Limits
San Juan National Forest
Tribal Lands
Southern Ute Indian Tribe
Ute Mountain Ute Tribe
Tribal lands crossing permit required to enter onto or cross over Tribal Trust land.
0 2 4 8 Miles
N
Colorado
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La Plata County Colorado
Planning Department
February 23, 2015

3 HOUSING

OVERVIEW

The Housing Element of the Plan addresses housing affordability which La Plata County government considers a significant issue to be addressed. It identifies recent housing trends, overviews several aspects of affordability, housing stock inventory, past and ongoing efforts to address affordable housing, distribution of housing throughout the County, and future needs for La Plata County's growth goals and associated economic benefits. The Element establishes goals, objectives and policies, while presenting recommendations to help ensure a full range of housing options are available to County residents based upon the County's projected needs now and into the future.

For decades, the cost of housing in La Plata County has increased more rapidly than family incomes, creating a growing demand for modestly priced homes. As documented in the housing demand forecast analysis prepared in June of 2015 by the Regional Housing Alliance of La Plata County (RHA)[1], 46% of renters and 31% of homeowners in La Plata County cannot afford their current housing payment.

It should be noted that the distribution of new housing in the unincorporated County is largely a function of the district land use plans and individual property owner interests to subdivide. Additionally, market demand and developer interests play a role in the locational selection for new housing.

Key Point
For purposes of this Element, "affordable" shall be defined as "Housing for which the occupant is paying no more than 30% of his or her income for gross housing costs, including utilities."
Source: HUD

BACKGROUND

Since 2001, the median home price increased 63% in La Plata County and 73% in the City of Durango. However, the median family income in La Plata County has only increased 48%. As rising costs force families to spend more on rent or mortgage payments, less money is available to pay for other expenses such as groceries, transportation, medical care, and insurance[2], as well as other disposable income. The spending of discretionary funds helps support businesses which provide employment, and results in the retention and expansion of local commercial opportunities. This directly correlates to establishing a healthier economy for La Plata County, as both new industry and development require adequate housing stock for its employment base. New industry and development diversifies the revenue streams for a stronger economic base within the County.

Furthermore, to obtain affordable housing many people have little choice but to commute long distances to their workplaces. These longer commutes increase individual transportation costs, add to traffic congestion, facility demands and air pollution within the County; and can diminish time spent at work and with families. This is a simple fact of time efficiency. Assuming that the real cost to commute will incrementally increase over the next twenty years; this will likely drive more demand for housing that is close to employment and services. Also, impacted by such

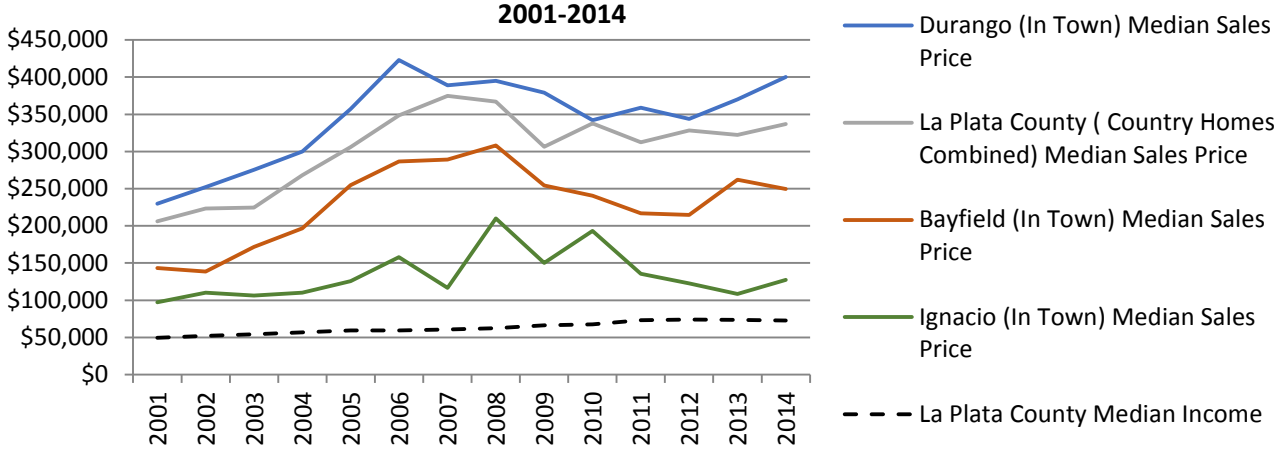
[1] La Plata County Housing Demand Forecast – RHA, 2015
[2] La Plata County Housing Demand Forecast – RHA, 2015

commutes is the cost and demand placed on dispersed infrastructure, which is an inefficiency of expense to the County at-large.

There is a difference between *housing demands* and *housing needs*. *Housing demand* is what households demonstrate they are willing to purchase within the market place. *Housing need* is based on what a household is financially able to pay for housing. Households that cannot find affordable housing are either homeless, living in overcrowded/substandard situations, commuting from further distances to access employment, or are paying more for housing than one can afford. The Federal standard is that a household should not spend more than 30% of its gross income on a housing payment. A household which does spend more than 30% of its gross income on a housing payment, therefore, demonstrates a *housing need*. [3]

A look at median home prices in the County illustrates the significance of an affordability issue. Depicted below in Chart 3-1, over the past thirty years, median household income has not kept

Chart 3-1. Median Family Income and Median Residential Sales Price 2001-2014



pace with the price of housing in La Plata County.

The number of households which cannot afford its housing payment has increased since 2000. Housing is affordable when a household is paying 30% or less of its gross income on a housing payment. The number of La Plata County homeowners falling into the category of not being able to afford a housing payment has increased from 23% in 2000 to 31% in 2013. The number of renter households which cannot afford its housing payment in La Plata County has increased from 42% in 2000 to 46% in 2013.[4]

Renters have also experienced similar conditions relative to the availability of affordable units. Further, more than 50% of the available jobs in the County (year 2010 data) were identified within lower-paying service and retail/wholesale sectors. Average annual wages within these sectors consistently fell well below the threshold for affordability to rent an average two-bedroom or three-bedroom unit.

[3] La Plata County Housing Demand Forecast – RHA, 2015
[4] Source: HUD, Durango Area Association of Realtors, 2001 and 2014. La Plata County Housing Demand Forecast –RHA, 2015

3 HOUSING

One result of the higher housing costs in the Durango (county seat with more advanced infrastructure services) area is that it has contributed toward residents moving to outlying, less-developed areas of the unincorporated county, where land costs tend to be lower. Of the "resident" Durango (city) workforce, 60% do not live within the municipality.[5] Therefore, moving further from employment and general services has been an evident trend for establishing affordable housing. Frequently, housing stock in this scenario tends toward the use of mobile or modular home units, which are also served by individual wells and septic systems. The Colorado legislature has provided encouragement to counties to encourage mobile homes through C.R.S. §38-12-201.3. Although more affordable, this does not improve the general housing stock within the County, nor make the most efficient use of central systems to serve the County's general population base. The economic impact to the County adversely increases without more efficient development patterns utilizing higher density population established upon existing infrastructure capacities designed to serve higher densities with water, sewer and transportation systems.

> ***Key Point***
> *It costs an average of $440 more per month in travel expenses to work in Durango and live in Forest Lakes vs. Three Springs.*

Outwardly, this appears to provide for a reasonable, lower-cost solution, but there are secondary costs, some being non-financial, associated with this approach. Ownership and maintenance of one or more automobiles is one such cost, which can be significant; [6]as is the installation and maintenance of onsite sewer and water systems. Environmental factors impacted by imposing on-site waste systems at a high volume to serve new development, includes the need for additional treatment and landfill areas (deposit areas), when such additional service and areas are not adequately available. This also adds costs to the property owners with such systems. Non-financial costs to consider include increased travel times and, in most cases, slower public safety response times. There are other costs associated with the maintenance of larger rural tracts of land, such as weed control, wildfire mitigation, and maintenance of extensive gravel driveways. Without taking these into account, unforeseen budgetary implications for owners become prevalent, further cutting into potential discretionary income to support commerce and industry within the County.

Table 3-1. Distribution of Dwelling Units by Structure Type, 2015

Single-Family Rural	*7,180*	*29%*
Single-Family Urban	*7,490*	*30%*
Duplex	*540*	*2%*
Townhome	*1,440*	*6%*
Multi-Family/Condo	*4,460*	*18%*
Manufactured/Modular	*4,080*	*16%*
	25,190	

Source: La Plata County Assessor, 2015

The cost of land is a significant factor in housing affordability, as well as a number of other variables. Interest rates and the cost of construction (labor and materials) are aspects of the affordability equation which are difficult to control. A modest rise in long term interest rates can add thousands of dollars per year to the cost of housing. This often can mean the difference between mortgage loan qualification and denial. Construction costs also tend to fluctuate based

[5] U.S. Census Bureau on the Map, 2011
[6] La Plata County Housing Demand Forecast –RHA, 2015

on changes in the market, sometimes resulting in significant cost increases in a relatively short period of time. According to local development sources, hard construction costs in Durango are 15-30% higher than in City of Denver.[7]

In addition to land costs and hard construction costs, as mentioned, infrastructure development improvements are another significant expense. When development occurs within rural areas of the county, the developer and ultimately home owner are responsible for funding all necessary infrastructure improvements. If all other factors were equal, higher-density development likely leads directly to minimizing housing costs.

Key Point
By developing at higher-densities, less land is needed per unit, and the cost of roads and other infrastructure development is typically less.

A significant requirement for higher-density development is the location and use of centralized infrastructure (such as water, sewer, road and public safety services). A number of areas in the unincorporated County are already served by, or will likely be served by, central water and/or central sewer in the future. Typically, extension of these services is borne by the developer and is ultimately incorporated into a home's purchase price.

Developing at higher densities in areas, or clustering housing development patterns, along with centralized infrastructure provides a number of benefits, which include, but are not limited to:

1) More efficient, economic provision of utilities, public safety, road maintenance, and other services.
2) Easier access to schools, businesses, and in some cases, public transit.
3) The protection of agricultural uses resulting from the reduction of low-density development spreading into the countryside.

PAST AND ONGOING EFFORTS

There is a wide array of approaches for addressing housing affordability. The primary approaches fall into two broad categories: incentive-based and regulatory-based. Incentive-based strategies provide benefits such as density bonuses and tax benefits, coordinated infrastructure improvements, leveraging state and federal resources, which attempt making affordable housing feasible. Regulatory strategies generally require a recognition and commitment toward affordable housing as a condition of a development approval. Regulatory strategies include revisions to the land use system which provides developers and property owners with the opportunity to create affordable units within projects. An example is the County's recent amendment to the land use code that simplified the requirements and process to construct accessory dwelling units. Other initiatives may include housing or infrastructure improvement development built by the local government, nonprofits or housing authorities, or the subsidization of rents or mortgage down payments via an assortment of different public and/or private non-profit programs.

At the local level, multiple efforts are underway to provide housing opportunities through partnerships between local governments and private development. Nonprofit housing

[7] La Plata County Housing Demand Forecast –RHA, 2015

organizations also play an important role in providing affordable housing. The following organizations are key to efforts in La Plata County:

Regional Housing Alliance (RHA) of La Plata County, created through a 2004 inter-governmental agreement between the County, Town of Ignacio and City of Durango, builds resources and capacity to create affordable housing opportunities in the community. As a local governmental partnership, the Regional Housing Alliance developed housing policy, identifies priorities, and allocates resources to provide La Plata County workforce and residents with affordable housing opportunities and to ensure the county remains diverse and economically strong. Specifically, the RHA administers inclusionary housing efforts on behalf of the local jurisdictions and provides housing policy advisement.

La Plata Homes Fund (LPHF) builds diverse and resilient communities by developing affordable housing and empowering residents with the financial resources and educational tools to achieve homeownership. LPHF provides a comprehensive Homebuyer Assistance Program what includes homebuyer education, pre-purchase consoling, and mortgage assistance. Additionally, LPHF develops both affordable rental and homeownership housing.

Housing Solutions of the Southwest provides housing and energy assistance services to very low to moderate income families, individuals, elderly residents and special needs populations in five (5) southwest Colorado counties. Specific services include weatherization, homeowner rehabilitation and replacement, home repair loans, rental assistance, housing development, transitional housing and self-sufficiency programs, emergency homeless prevention, housing counseling, down payment assistance, first time homebuyer training, and HUD foreclosure opportunities.

Habitat for Humanity secures land and builds or renovates homes, employing the "sweat equity" labor of the homeowners and using tax-deductible donations of money and materials to lower development costs. The houses are sold at no profit to partner families (who have incomes that are 30-50% of median income), and no-interest mortgages are issued over a fixed period of up to 20 years.

Southwest Center for Independence administers Section 8 Housing Choice Vouchers for persons with disabilities. The Center generally has about 75 of these vouchers to administer.

Volunteers of America (VOA) owns and manages 55 units of a senior housing development. Part of a national, nonprofit, faith-based organization, the local VOA also manages the Southwest Safe House and the Community Shelter.

Colorado Division of Veterans Affairs provides benefit assistance to military Veterans. This resource offers guidance to help Vets through the home lending process, providing solutions for at-risk and homeless Veterans, in addition to obtaining housing assistance funds for those who qualify.

Funding Partners for Housing Solutions is a nonprofit Community Development Financial Institution (CDFI) certified by the U.S. Treasury. As a CDFI, Funding Partners creates access to

capital and credit for low income families and individuals in underserved markets throughout Colorado. Currently, Funding Partners manages mortgage programs for the Regional Housing Alliance.

2015 Housing Demand Analysis

A *2015 Regional Housing Alliance Housing Demand Forecast* report analyzed local affordability issues and concluded, among other things, that there is a growing affordability chasm in La Plata County, and if supported by local land use regulation and policies, demand will likely shift in the direction of more compact and multi-family housing products (see list of references). This report identified economic and demographic trends affecting housing type demand. For example, individuals over the age of 80 will be the fastest growing age group, growing 237% (3900 persons) by 2035 and these Baby Boomers have a strong desire to age in place. The report identifies a need to annually create between 560-790 units to keep pace with the economic growth projections. Developing workable solutions to the County's affordable housing problems will require innovative solutions and cooperation among local and state governments, and private developers.

> ***Key Point***
> *The magnitude and range of affordable housing needs are such that no single entity is likely to be able to address them all.*

HOUSING GOALS

Goal 3.1: Support efforts to provide housing which is accessible, safe, energy efficient, and affordable for all County residents.

Objective 3.1.A: To encourage and enable the private sector to provide an adequate housing supply, at a high quality, which meets the growing number of changing needs of La Plata County residents.

Policy 3.1.A1: Explore opportunities for an expedited development review process and alternative development standards for housing which includes a defined percentage of affordable or workforce units, especially within the joint planning areas surrounding the County's municipalities.

Policy 3.1.A2: Review existing regulations and development processes to determine how modifications could remove barriers to the provision of affordable housing production; while identifying appropriate tools.

Policy 3.1.A3: Maintain a variety of housing unit types to accommodate diverse household incomes and ownership preferences (e.g. accessory

dwellings).

Objective 3.1.B: To promote compact housing development near existing central infrastructure/services which can most adequately support affordable housing development.

Policy 3.1.B1: Encourage the development or redevelopment of higher density housing near employment, services, and infrastructure.

Policy 3.1.B2: Encourage the integration of affordable housing within market rate developments.

Policy 3.1.B3: Evaluate each district plan to determine whether an affordable housing density bonus and/or other tools can be incorporated.

Policy 3.1.B4: Coordinate the extension of infrastructure with land use planning to encourage the development of compact and affordable housing along with the efficient and cost-effective delivery of County services.

Policy 3.1.B5: Seek alternative, innovative tools to implement effective housing solutions for the County's overall economic benefit.

Policy 3.1.B6: Support the creation of Urban Renewal Areas, Downtown Development Authorities, and other financial mechanisms focused on reinvesting in areas where development already exists.

Objective 3.1.C: Preserve or provide for the replacement of existing affordable housing units, including mobile home parks.

Policy 3.1.C1: Encourage the preservation of existing housing units whenever feasible, especially structures which provide affordable housing.

Policy 3.1.C2: Explore property tax and/or other relief mechanisms for elderly and low-income households facing rising tax cost burdens.

Policy 3.1.C3: Coordinate with the Regional Housing Alliance (RHA) and other non-profit entities to identify and create appropriate tools and leverage outside resources to provide safe and affordable housing for all residents, especially those with special needs, seniors, and persons experiencing homelessness.

Policy 3.1.C4: Conduct an inventory and identify County-owned parcels which could be utilized for the provision of affordable housing, especially those near existing infrastructure.

Policy 3.1.C5: Maximize housing resources in the County by providing assistance with application and administration for state and federal housing funds.

Policy 3.1C6: Explore enacting recommendations of the General Assembly Declaration 38-12-201.3 relative to mobile homes and mobile home parks.

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4 ENVIRONMENTAL RESOURCES

OVERVIEW

The Environmental Resources Element focuses on the environmental quality and unique natural resources of the County. These include the water, air, vegetation, fish and wildlife, soil, and other features of our geographic setting. The purpose of this Element is to provide a guide for the management of these natural resources which are some of La Plata County's most valuable assets. Ensuring their preservation and appropriate use is important to both the natural beauty and economy of La Plata County. Public health relies on maintaining the integrity of essential resources such as water, air and soil. As growth continues, the need for management of the County's natural resources is sure to increase.

BACKGROUND

Environmental quality and unique natural features are what define the character of La Plata County; it's what has attracted people to this area for hundreds of years. That is why ensuring the continued viability and health of the natural environment is important. Be it clean air, water quality and quantity, the sparsely developed open lands and ridgelines, or the abundant wildlife, each plays an integral role in the overall composition of the community.

> ***Key Point***
> *Ensuring the preservation of environmental resources is important for the integrity of La Plata County as well as its economic growth.*

The County encompasses 1,692 square miles. From the high alpine peaks and rugged wilderness in the north, to the lush river bottoms and pinon juniper woodlands in the heart of the County, to the farmlands and desert arroyos in the south, the County's landscape defines the County itself. This diversity brings both opportunities and constraints into the land use decision-making process. For example, the mountains and forests bring opportunities for year-round recreation and resort development, but also the constraints of topography, geologic hazards, wildfire and other elements of the natural environment.

The management of natural resources includes not only protection, preservation and restoration but also appropriate use and development. In addition, there is a need to manage the potential impacts of natural hazards on development. Management decisions should maintain a balance between development and conservation interests.

As noted in the *Introduction*, approximately 41% of La Plata County land is in public ownership. However, the public lands are largely concentrated in the northern third of the County, generally removed from areas where most development occurs, such as the Florida Mesa. In addition, around 18% is tribally owned in the southern portion of the County (predominantly Southern Ute Indian Tribe; and small portion of the County exists with the Ute Mountain Ute Indian Tribe). La Plata County has taken on a variety of roles in the management of natural resources including

intergovernmental coordination, emergency management, monitoring, education, regulation, holding conservation easements and water rights, and through property ownership.

GROUND WATER

Groundwater can be found in several different geologic sources in La Plata County, not all of which are reliable or have useable water. Alluvial aquifers exist in the County along river valleys. These aquifers usually have good water quality and sustained yield because of the regular recharge from the river. Due to their proximity to the ground surface, these aquifers are susceptible to contaminants from surface sources. The alluvial aquifers at the headwaters of the Animas and La Plata Rivers often contain high concentrations of heavy metals and tend to be acidic.

In the south central portion of La Plata County, terrace deposits on the Florida Mesa make up the Florida Mesa aquifer. Recharge to this aquifer is primarily from irrigation water used on farms and ranches in the area. This aquifer typically has good water quality and yield. However, as more water wells are drilled and fewer farms are irrigated, ground water levels in the Florida Mesa aquifer are likely to decline[1].

Bedrock aquifers are present in porous or fractured sandstone beds of several geologic formations in the San Juan Basin, located across the southern portion of the County. The Animas, Nacimiento, and San Jose formations are present at shallow depths and are the most common bedrock aquifers drilled. The yield and quality of water removed from bedrock aquifers can vary widely. Because recharge into bedrock aquifers is usually very slow, the viability of these aquifers will suffer from overuse.

Water quality in bedrock aquifers is dependent on the geologic formation in which a well is drilled. In some areas, water quality is very good, while in others the water has high levels of total dissolved solids and frequently high levels of iron and manganese. A selenium belt exists from around Oxford over to Sunnyside. There are elevated levels of fluoride east of Bayfield. Some water wells have naturally occurring methane, particularly near the outcrop of the Fruitland Formation. Deeper aquifers in the San Juan Basin, including the Fruitland-Pictured Cliffs, Mesaverde, Dakota, and Morrison formations, are associated with the presence of shale and coal and are more likely to contain water of poor quality. Bedrock aquifers can also be found in the Paradox Basin in the northwest part of the County.

In northern La Plata County, crystalline fractured aquifers in granite and volcanic rocks are more common. While these types of rocks have little or no pore spaces, groundwater is accumulated and transported in interconnected fractures within the rock. Wells will yield water if they are drilled into a network of fractures.

[1] Robson, S.G. and Winfield G. Wright, Ground-Water Resources of the Florida Mesa Area, La Plata County, Colorado, U.S. Geological Survey Water-Resources Investigations Report 95-4190, 1995.

4 ENVIRONMENTAL RESOURCES

Groundwater Quality:

There is potential for several human activities to impact the groundwater quality in the County. Fertilizers and pesticides applied to crops may eventually infiltrate into the soil and become present in groundwater. Landfills and underground storage tanks have the potential to leak into the surrounding soils and groundwater. There is one active landfill in the County, the Bondad Landfill. Coal mines and gravel mines have the potential to expose conduits to groundwater. Uncemented, incomplete or cracked oil and gas well bores create a potential path to contaminate groundwater aquifers as well.

The presence of coliforms or E. coli bacteria in well water can indicate the water may have been contaminated by fecal matter, either from surface water contact with human or animal wastes or improperly constructed on-site wastewater treatment systems. Properly designed, installed and operated on-site systems can be effective in reducing the public health risks associated with wastewaters; however, contamination of drinking waters and surface waters due to onsite systems does occur and well water should be tested and treated before use.

The following State agencies have been designated to oversee these activities and minimize impacts to groundwater:

Colorado Department of Agriculture is the lead agency under the Chemicals and Groundwater Protection Program for the reduction of agricultural chemicals' negative impacts on groundwater and the environment.

Colorado Department of Public Health and Environment (CDPHE) Hazardous Materials and Waste Management Division is responsible for regulating solid waste management, treatment and disposal facilities, and hazardous waste generation, storage, transportation, treatment and disposal.

Colorado Department of Labor and Employment Division of Oil and Public Safety regulates the assessment and remediation of petroleum releases from underground storage tanks.

Division of Reclamation, Mining and Safety implements the state's groundwater quality standards in permitted mining activities.

Colorado Oil and Gas Conservation Commission is an implementing agency for groundwater quality standards for groundwater protection.

San Juan Basin Public Health (**SJBPH**) is the regulatory authority for onsite wastewater treatment system permitting.

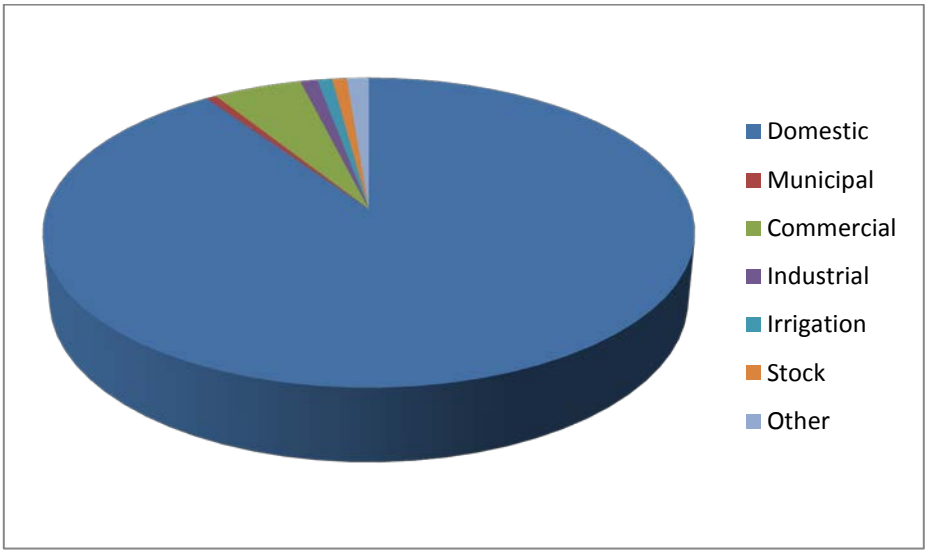
Ground Water Uses:

Groundwater is developed in the County through water wells as a source of municipal and domestic

water supply, irrigation and stock water, and water for industrial uses. The relative number of wells in the County by use is shown in Chart 4-1. There are approximately 8,800 permitted water wells that have been constructed in the County. In addition, roughly 1,950 well permits have been issued for oil and gas wells developing from the Fruitland Formation[2]. The location of these wells is shown on Map 4-1 (including oil and gas wells).

The Colorado Division of Water Resources (DWR) is responsible for issuing well permits for the development of groundwater in the state. The DWR also oversees the administration of all surface and ground water rights. Areas where water rights have been over-appropriated have been designated as water critical by the DWR. The water critical areas in the County are shown on Map 4-1.

Chart 4-1
Number of constructed wells in La Plata County by use.



Source: Colorado Division of Water Resources, Well Application Permit Data, August 2016
**Data does not include oil and gas wells.*

Surface Water:

There are approximately 794 miles of perennial streams in the County[3]. The main river drainages run from north to south and are the La Plata River, Animas River, Florida River, and Los Pinos, or Pine River. All four drainages eventually flow into the San Juan River in New Mexico and then to the Colorado River. These drainages comprise the La Plata, Animas, and Los Pinos sub-basins, which are part of the larger San Juan River Basin. The Florida River and Hermosa Creek are part of the Animas sub-basin. These sub-basins are within Division 7 of the Colorado Division of Water Resources, as depicted in Map 4-2.

[2] Colorado Division of Water Resources, Well Application Permit Data, August 2016
[3] U.S. Geological Survey National Hydrography Dataset

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The mountain headwaters in the north receive the majority of the annual precipitation, mainly in the form of snow, and are a critical source of discharge for rivers. Lower elevation lands in the south receive much less precipitation and generally tend to have fewer and larger perennial rivers and more intermittent or ephemeral water bodies. The early season run-off from snow melt is typically stored in reservoirs so it is available for use later in the year when precipitation is not as reliable. The Florida River is dammed at Lemon Reservoir and the Los Pinos River is dammed at Vallecito Reservoir. The major reservoirs in the County and their normal storage capacity are listed in Table 4-1.

Table 4-1
Reservoirs in La Plata County with normal storage greater than 1,000 acre-feet

Reservoir	Normal Storage (acre-feet)
Vallecito Reservoir	129,700
Lake Nighthorse	121,070
Lemon Reservoir	40,100
Electra Lake	23,385
Long Hollow Reservoir	5,309
Red Mesa Ward Reservoir	1,100
Lake Durango	1,023

Source: Division of Water Resources Jurisdictional Dams, August 2016

Periodic drought in the County has had a profound effect on water availability. As surface water flows are reduced, reservoirs have been unable to maintain their storage capacities. With less water available, irrigation flows and the number of acres being irrigated are reduced. The water table lowers, reducing flows from springs and seeps and causing many water wells to run dry. After the 2002 drought, the number of water rights filings greatly increased. Large and small proposals for new water development projects have also increased, in part, as a result of long-term drought.

> ***Key Point***
> *Overall, water supply is available in the County, but getting sufficient infrastructure and water distribution is expensive and will be a key challenge to future development.*

Through the Land Use Code, La Plata County requires that new development occurs only if a viable supply of water is available for that development. State statute also requires developers to demonstrate that they have an adequate water supply to serve their proposed development (C.R.S. 29-20-301 et seq.). In 2007, the County Commissioners adopted regulations requiring the development of subdivisions greater than five lots to conduct studies showing that proposed water withdrawals will not exceed groundwater recharge, excluding recharge from irrigation. County regulations also require compliance with DWR regulations for water rights and well permits. Overall, water supply is available in the County, but getting sufficient infrastructure and water distribution is expensive and will be a key challenge to future development.

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Surface Water Quality:

Generally, La Plata County has very good water quality in its rivers and streams. The Hermosa Creek watershed, as well as the upper reaches of the Florida and Los Pinos watersheds that are located within the Weminuche Wilderness, have been designated as Outstanding Waters by the CDPHE. An outstanding waters designation offers the highest level of water quality protection available under the Clean Water Act and Colorado regulations. This designation is designed to prevent any degradation from existing conditions. The Hermosa Creek Watershed Protection Act was approved in December 2014 to protect the Hermosa Creek area. The legislation created both the Hermosa Creek Special Management Area and the adjacent 37,236 acre Hermosa Creek Wilderness on U.S. Forest Service lands.

In the few water bodies having water quality problems, mercury, heavy metals, and sediment are common pollutants. Table 4-2 summarizes the water bodies within the County that are recognized by the State of Colorado as not meeting the state's water quality standards for their designated and existing uses. These waters are on the 2016 CDPHE list of Impaired Waters pursuant to the Clean Water Act Section 303 (d).

Table 4-2
CDPHE 303(d) Impaired Waters in La Plata County

WBID	Segment	Clean Water Act Section 303(d) Impairment
COSJAF05a	Mainstem of the Animas River, including wetlands, from Bakers Bridge to the Southern Ute Indian Reservation boundary	Manganese
COSJLP01	Mainstem of the La Plata River, from the source to the Hay Gulch diversion south of Hesperus	Silver
COSJLP03c	Cherry Creek, including all tributaries and wetlands, from the source to the boundary of the Southern Ute Indian Reservation boundary	Iron
COSJPN03	Vallecito Reservoir	Aquatic Life Use (Mercury in Fish Tissue)

Source: CDPHE Water Quality Control Commission, Colorado's Section 303(d) List of Impaired Waters and Monitoring and Evaluation List, 2016

The main issue in local reservoirs is mercury resulting from atmospheric deposition. Several reservoirs, including Vallecito, have fish consumption advisories because of concentrated mercury levels.

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The headwaters of the upper Animas River and La Plata River drainages are heavily mineralized areas that have been historically mined for metals. Many of the old mines have been abandoned and closures were incomplete or inadequate. Drainage from these mines has impacted surface water quality through an increase in the amount of heavy metals and acidity reaching surface waters. The majority of abandoned mines in the Animas River sub-basin are located in San Juan County.

In August 2015, 3 million gallons of mine waste water was unexpectedly released from the abandoned Gold King Mine in San Juan County into the Animas River drainage. The release was the result of a breach in a collapsed mine adit by an Environmental Protection Agency (EPA) team working to investigate water releases from the mine and assessing the feasibility of further mine remediation. The contaminated water traveled for a week down the Animas River.[4] Members of the community were impacted by the associated river closure that stopped municipal water intake, diversions, and commercial and recreational uses. This event made the local community acutely aware of the impacts that abandoned mine drainage can have on the environment and residents in the area. Since the majority of abandoned mines contributing to the mine drainage in La Plata County are outside of its borders and jurisdictional authority, it is important for the County to coordinate with the relevant federal, state, and local authorities to address the causes of the drainage.

Sediments can be carried to surface waterways by stormwater runoff from roads; oil and gas infrastructure, including roads, well pads and pipelines; general construction activities; and urban development areas if adequate controls are not in place. Sedimentation occurs naturally in the County as a result of the local geology. The Mancos shale and sandstone and clay formations in the area contain unconsolidated surface materials that are easily eroded.

Ground-disturbing activities can aggravate the sedimentation occurring in the County by exposing disturbed surfaces to wind and precipitation events that carry surface soils, and potentially other chemicals that may be present, to area waterways. Where development or road densities are high, impacts to surface water from sedimentation are more likely. Construction activities also alter flow regimes across landscapes, which can result in new erosion channels. An increase in permanent impervious surface area in urban areas can result in reduced infiltration, greater surface flow velocities, and an increase in erosion downstream. The impacts of sedimentation from construction activities and development can be mitigated through the use of best management practices (BMPs) that decrease the amount of exposed soils or direct and slow stormwater flows.

Seepage from poorly built wastewater lagoons may contaminate surface water with disease causing pathogens found in fecal matter. In January 2003, the SJBPH stopped issuing permits for new wastewater ponds or lagoons. Existing lagoons must meet certain SJBPH requirements and cannot

[4] EPA, One Year After the Gold King Mine Incident, A Retrospective of EPA's Efforts To Restore and Protect Impacted Communities, August 2016

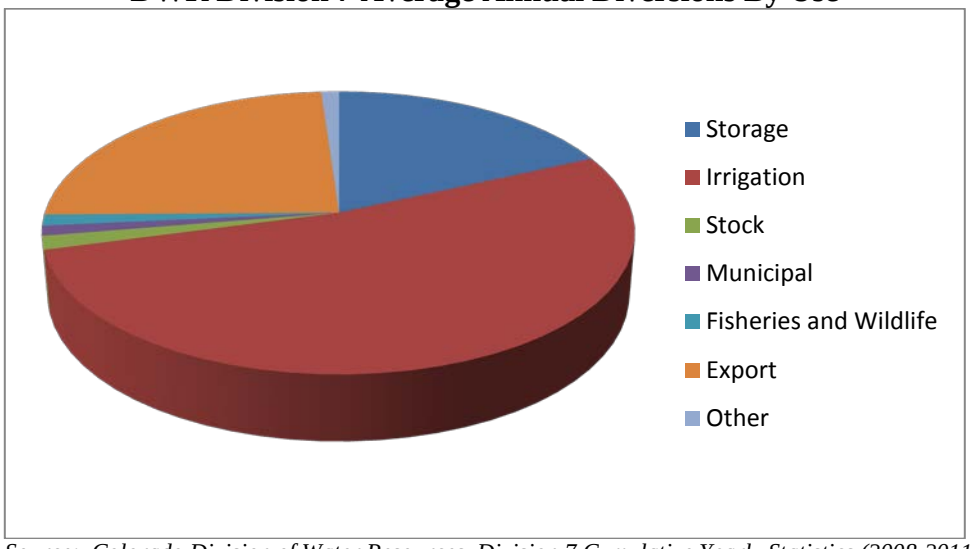
discharge to surface waters.[5]

Surface Water Uses:

Surface water in the County is used primarily for agriculture, but it also provides a source of water for municipalities, domestic uses, recreation, and power generation. It provides habitat for wildlife and contributes to the scenic values of the County as well. The average annual surface water diversions for DWR Division 7 is shown by use in Chart 4-2. As the population in the County grows and urbanization continues to evolve, the number of irrigated acres in the County is expected to decrease. Likewise, the demand for municipal and domestic water sources is expected to increase, as further discussed in *Element 2, Infrastructure*.

The County maintains conditional water rights on the Animas River that can be obtained by qualifying applicants to be put to beneficial use upstream of Durango's water park. The water rights were obtained as part of the settlement of the City of Durango's Recreational In-Stream Diversion water right. Water court decree 06CW99 established La Plata County Water Right No. 1, La Plata County Water Right No. 2, and La Plata County Water Right No. 3 for a total of 9 cfs. The Animas Service Area water right decreed 20 cfs from the Animas River and tributaries to La Plata County and the Southwestern Water Conservation District (SWCD) jointly by the water court decree 06CW127.

Chart 4-2
DWR Division 7 Average Annual Diversions By Use



Source: Colorado Division of Water Resources, Division 7 Cumulative Yearly Statistics (2008-2011)
**Data includes the Dolores, San Juan and San Miguel River Basins. Data does not include diversions for power generation since they are a non-consumptive use.*

A portion of the surface water in the County is obligated to other downstream basins or states

[5] San Juan Basin Public Health On-Site Wastewater System Regulations, 2011

through compacts. The Colorado River Compact of 1922 allocates 7.5 million acre-feet annually to upper basin states and lower basin states in the Colorado River system. Under the Upper Colorado River Compact of 1984 between Colorado, New Mexico, Utah, Arizona, and Wyoming, Colorado has been allocated 51.75% of the upper basin Colorado River Compact water. The La Plata River Compact ensures that New Mexico receives its share of the Colorado River Compact Water. Historically, Colorado has not always been able to satisfy the compact requirements, so the Long Hollow Reservoir was built in 2014 to store water from the La Plata River and to help Colorado meet its contractual obligation to New Mexico.

The Animas-La Plata project was constructed to deliver water to the Ute Mountain Ute Tribe, the Southern Ute Indian Tribe, the Navajo Nation, the San Juan Water Commission in New Mexico, the La Plata Conservancy District, and the State of Colorado. The project involved the construction of Lake Nighthorse, an off-river reservoir in Ridges Basin, to store water pumped from the Animas River.

Regulation:

The following entities regulate or manage water resources in the County:

DWR Office of the State Engineer oversees the administration of all surface water rights and interstate compacts, records flow and diversion data, and regulates dam safety in Colorado.

CDPHE Colorado Water Quality Control Commission and Water Quality Control Division have statutory authority for protecting the quality of waters of the state, both surface water and groundwater. The Water Quality Control Division implements the federal Clean Water Act, including the National Pollutant Discharge Elimination System, and Safe Drinking Water Act in Colorado.

Southern Ute Indian Tribe Department of Natural Resources Water Resources Division provides for the management, conservation, and use of the surface and groundwater resources on the Southern Ute Indian Reservation.

Southern Ute Indian Tribe Environmental Programs Division Water Quality Program, part of the Justice and Regulatory Department, conducts water quality monitoring and encourages the use of BMPs to protect the quality of surface waters on the Southern Ute Indian Reservation.

Colorado Water Conservation Board (CWCB), part of the state Department of Natural Resources, it was created to help conserve, develop, protect and manage Colorado's water for present and future generations through programs such as surface and groundwater studies, water basin collaboration, water project management, financing, and state water policy recommendations. As discussed in *Element 2 – Infrastructure*, the CWCB approved Colorado's Water Plan (appendix), the first statewide water plan in Colorado.

4 ENVIRONMENTAL RESOURCES

Southwestern Water Conservation District (SWCD) was created by the State of Colorado as a special district under C.R.S. Title 37 to protect, conserve, use and develop the water resources of the Southwestern basin for the welfare of the District, and to safeguard for Colorado all waters of the basin to which the state is entitled.

La Plata Water Conservancy District (LPWCD) is a special district under Title 37 with the mandate to provide for the conservation and development of the waters of the La Plata River and its tributaries. One of the purposes of the LPWCD was to build the Long Hollow Reservoir.

Animas-La Plata Water Conservancy District (ALPWCD) is a Title 37 special district formed to acquire and appropriate waters of the Animas and La Plata rivers and their tributaries as well as other sources of water supply. The ALPWCD diverts, stores, transports, conserves and stabilizes their water supplies for beneficial use within the District.

La Plata West Water Authority (LPWWA) was formed by the ALPWCD and the LPWCD. The purpose of the LPWWA is to design, construct and operate a rural distribution water system. Currently, the LPWWA is working to create a system that would transport water from Lake Nighthorse to rural users in the southwestern part of the County.

Florida Water Conservancy District (FWCD) operates Lemon Dam and Reservoir and supplies Florida Project water to the Florida Mesa for irrigation, municipal uses and augmentation.

Pine River Irrigation District (PRID) is tasked with the operation of Vallecito Reservoir to provide supplemental irrigation water to 45,000 acres of land and water for domestic users.

Floodplains:

La Plata County participates in the National Flood Insurance Program (NFIP) so county residents can qualify for flood insurance underwritten by the Federal Emergency Management Agency (FEMA). Floodplain maps showing the 100 year floodplain have been developed by the County to assist local property owners, insurance agencies and financial institutions in determining flood hazard zones. These maps are also used to administer the floodplain management regulations within the adopted La Plata County Land Use Code, assuring compliance with the National Flood Insurance Program. Generally, severe floods in the County are caused by rainfall. Flood potential also exists from the rapid melting of heavy snow cover in the late spring.

Encroachment upon floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. The Animas River Valley north of Durango is wide, gently sloping, and

shallow. The ability of the river channel in the valley to carry flood waters is relatively small and the floodplain is relatively large, encompassing a large amount of private property. Past floods in this area have disrupted highway and railroad traffic and communication services; drowned livestock; and damaged and destroyed agricultural lands, roads, bridges, buildings, the sewage disposal plant, and the State fish hatchery. Several persons have drowned, and many others were injured. The potential flooding hazard from the Florida and Los Pinos rivers is minimized by the controlled discharges from Vallecito and Lemon reservoirs.[6]

Wetland and Riparian Areas:

Wetlands and riparian areas are important environmental resources that help protect water quality, store floodwaters, and enhance biodiversity. The Survey of Critical Wetlands and Riparian Areas in La Plata County prepared by the Colorado Natural Heritage Program in 2004 identified at least 32 major wetland/riparian plant communities in the County. The majority of these occur along river drainages and creeks where the soils are frequently inundated with water and water flows are minimal enough to allow hydrophytic vegetation to grow.

Key Point
Wetlands and riparian areas are important environmental resources that help protect water quality, store floodwaters, and enhance biodiversity.

The occurrence of wetlands has been impacted by the alteration of historic flows in the Animas, Florida, and Los Pinos rivers in order to develop irrigation and municipal water supplies. Dams, reservoirs, and diversions result in floodplains that are not inundated as frequently during spring runoff. As a result, new wetlands are not being created within floodplains and aquatic habitat has been reduced. The increase of irrigated agriculture in La Plata County has also inadvertently created many new wetlands that are dependent on the controlled water source.[7] Urban development, livestock grazing, and floodplain gravel mining can all impact riparian areas through the removal of vegetation and degradation of water quality. The use of BMPs can help to protect these areas.

Section 404 of the Clean Water Act regulates the discharge of dredged, excavated, and/or fill materials in wetlands, streams, rivers, and other U.S. waters. The U.S. Army Corps of Engineers (USACE) is the federal agency authorized to issue Section 404 permits. A permit issued by the USACE is required before placing fill in a wetland and before dredging, ditching, or channelizing a wetland. Any applicant for a Section 404 permit is also required to obtain a Section 401 water quality certification from the CDPHE Water Quality Control Division.

[6] Federal Emergency Management Agency, Flood Insurance Study, La Plata County Colorado and Incorporated Areas, August 2010
[7] Colorado Natural Heritage Program, Survey of Critical Wetlands and Riparian Areas in La Plata County, May 2004

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AIR QUALITY

High quality, clean air in La Plata County is essential to the health of the community and the local economy. Due to the nature of air being a shared resource across jurisdictional boundaries, management of air quality can be a particularly challenging task. Many government entities have overlapping responsibility for managing air quality in the Four Corners Region, including four states, four Indian tribes, the U.S. Forest Service, the Bureau of Land Management, the National Park Service, and multiple counties and local municipalities.

The EPA Region 8, CDPHE Air Pollution Control Division, and the Southern Ute Indian Tribe (SUIT)/State of Colorado Environmental Commission are the key regulatory agencies for air quality in the County. The federal Clean Air Act provides the principal framework for national, state, and local efforts to protect air quality. Under the Clean Air Act, the EPA's Office of Air Quality Planning and Standards is responsible for setting standards, also known as national ambient air quality standards (NAAQS), for pollutants which are considered harmful to people and the environment.

The EPA is also responsible for ensuring that these air quality standards are met through national standards and strategies to control pollutant emissions. The CDPHE Air Pollution Control Division and Air Quality Control Commission are the primary authorities for air quality in the State. The Air Pollution Control Division develops air quality attainment and maintenance plans to keep Colorado in compliance with NAAQS, issues permits for stationary sources, provides technical assistance on indoor air pollutants, manages emission testing programs, and collects and analyzes ambient air data. The Air Quality Control Commission develops air pollution control policy, regulates pollution sources, and conducts hearings involving violations of the state's air pollution laws.

All lands located within the exterior boundaries of the Southern Ute Indian Reservation are under the jurisdiction of the Reservation Air Program established by an intergovernmental agreement between the SUIT and the State of Colorado. The Air Quality Program of the Tribe administers the Reservation Air Program while the Colorado Environmental Commission serves as the policy making and administrative review authority for the Reservation Air Program. The EPA administers the minor source program under the Clean Air Act on the Southern Ute Indian Reservation and the minor source and Title V programs on the Ute Mountain Ute Indian Reservation.

In November 2005, the states of Colorado and New Mexico officially convened the Four Corners Air Quality Task Force (4CAQTF) to address air quality issues in the Four Corners region and consider options for mitigation of air pollution. The task force includes private citizens, representatives from public interest groups, universities, industry, and federal, state, tribal and local governments. The Four Corners Air Quality Task Force Report of Mitigation Options was finalized in November 2007, although the group is still active.

On a larger scale, the Western Colorado Regional Air Quality Collaboration (WCRAQC) was

created in January of 2012. The WCRAQC is a voluntary program for communities that are at-risk for air quality problems west of the Continental Divide. They have fostered projects to address air quality issues such as fine particulate matter ($PM_{2.5}$), windblown dust, wood smoke, industrial pollution and odors, and rely on collaboration between state and local jurisdictions. La Plata County is a member of the WCRAQC.

The NAAQS established by the EPA for criteria air pollutants, include standards for carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than or equal to 10 microns in size (PM_{10}), particulate matter less than or equal to 2.5 microns in size ($PM_{2.5}$), ozone (O_3), and lead (Pb). The EPA classifies all locations in the United States as attainment, nonattainment, or maintenance areas with respect to NAAQS. These classifications are determined by comparing actual monitored air pollutant concentrations to their applicable federal standards.

There are several air quality monitoring sites operating in the County. Two are operated by the SUIT Air Quality Program and are located north of Ignacio and off of Highway 550 north of Bondad. The U.S. Forest Service operates a monitor at the Shamrock Mine northeast of Bayfield. A PM10 monitor is located at River City Hall in Durango. There are also monitoring sites for criteria pollutants at Mesa Verde National Park and Navajo Lake, Bloomfield, and the San Juan Generating Station in New Mexico that contribute to the overall air quality assessment of the region. Ambient air measurements obtained from the data at these monitoring stations show that existing air quality in southwestern Colorado and northwestern New Mexico is generally good. The ambient concentrations for the criteria air pollutants and the NAAQS are shown in Table 4-3. The values in the table were conservatively chosen from the monitoring station with the highest concentrations.

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Table 4-3
Criteria Air Pollutant Measured Ambient Concentration for Southwestern Colorado and Northwestern New Mexico

Criteria Air Pollutant	Averaging Interval	NAAQS (µg/m³)	Measured Ambient Concentrations (µg/m³)	Monitoring Station
NO_2	Annual	100	17	La Plata, CO
SO_2	3-Hour	1300*	69	Farmington, NM
SO_2	24-Hour	365	21	Farmington, NM
SO_2	Annual	80	5.3	Farmington, NM
CO	1-Hour	40,000	2330	Ignacio, CO
CO	8-Hour	10,000	1864	Ignacio, CO
PM_{10}	24-Hour	150	64	La Plata, CO
PM_{10}	Annual	50	21	La Plata, CO
$PM_{2.5}$	24-Hour	35	22.5	Mesa Verde NP, CO
$PM_{2.5}$	Annual	15	6.9	Farmington, NM
O_3	1-Hour	--	154	Mesa Verde NP, CO
O_3	8-Hour	140**	142	Mesa Verde NP, CO

Source: Air Quality Analysis Technical Support Document for San Juan Public Lands Center Land Management Plan and Environmental Impact Statement, October 2010
**The State of Colorado has also established a 3-hour SO_2 ambient air quality standards of 700 µg/m³.*
***The NAAQS for 8-hour ozone was changed from 150 µg/m³ to 140 µg/m³ in October 2015.*
µg/m³ – micrograms per cubic meter

Areas of the Four Corners region, including La Plata County, are at risk of being designated as nonattainment areas. If an area has been designated nonattainment, CDPHE and/or the SUIT Air Quality Program would be required to draft a plan known as a state implementation plan (SIP) that outlines the measures the state will take in order to improve the air quality in the nonattainment area. Once a nonattainment area meets the standards, EPA will designate the area as a maintenance area.

Key Point
Areas of the Four Corners region, including La Plata County, are at risk of being designated as nonattainment areas.

EPA's national and regional rules to reduce emissions of pollutants that form ground level ozone help state and local governments meet the EPA's national air quality standards. Actions include vehicle and transportation standards, regional haze and visibility rules, and regular reviews of the NAAQS. State plans make sure power plants, factories, and other pollution sources meet clean-up goals by working through the air pollution permitting process that applies to industrial facilities. Working with the EPA, a state or local authority would also implement programs to further reduce emissions of pollutant precursors from sources such as cars, fuels, and consumer/commercial products and activities.

Ozone is a concern because of its effects on people and the environment, and it is the main ingredient in smog. Ozone is not directly emitted, but is formed when oxides of nitrogen (NO_X) and volatile organic compounds (VOCs) react in the presence of sunlight.

Volatile Organic Compounds:

In addition to their role in the formation of ground level ozone, VOCs also play a role in the formation of secondary organic aerosols, which are found in airborne particulate matter, and some individual VOCs are known to be harmful to human health. The majority of VOC emissions in La Plata County are from biogenic sources such as trees. Industrial processes, which include oil and gas production and mining, are the second largest contributor.[8] VOCs can be released from oil and gas wells during completion operations, as well as, from hydrocarbon liquid storage tanks or glycol dehydrators at well sites and compressor facilities. In order to reduce the amount of VOCs released, emissions from tank or glycol dehydrators are often flared or combusted.[9]

The CDPHE Air Quality Control Commission adopted oil and gas emissions control measures in February 2014. The CDPHE rules require oil and gas companies to install technology that captures 95 percent of emissions of VOCs from storage tanks, glycol dehydrators, and venting wells. COGCC regulations also require green completions when feasible. Operators must employ sand traps, surge vessels, separators and tanks as soon as practicable during flowback and cleanout operations to safely maximize resource recovery and minimize releases to the environment.

Nitrogen Oxides:

In addition to contributing to the formation of ground level ozone, fine particle pollution, and acid rain, nitrogen oxides are linked with a number of adverse effects on the respiratory system. Nitrogen dioxide is naturally occurring, but human activities such as agriculture, fossil fuel combustion, industrial processes and wastewater management increase its presence in the atmosphere. The main source of nitrogen oxides in the County is industrial processes.[10] Potential sources of NO_X from oil and gas development in the County include drilling and workover rigs, completion equipment, onsite compression engines, and combustion turbines. [11] Mobile sources, including on road vehicles and non-road equipment, are the second highest contributor of nitrogen

[8] EPA National Emissions Inventory, 2011

[9] Harris, Colin G. and Bradley Purcell, Bryan Cave LLP, Air Quality Regulation of Oil and Gas Development: Hydraulic Fracturing Leads to Evolving and New State and Federal Standards, and Increased Efforts to Ban Development at the Local Level, January 2015

[10] EPA National Emissions Inventory, 2011

[11] Harris, Colin G. and Bradley Purcell, Bryan Cave LLP, Air Quality Regulation of Oil and Gas Development: Hydraulic Fracturing Leads to Evolving and New State and Federal Standards, and Increased Efforts to Ban Development at the Local Level, January 2015

oxides in the County.[12]

There are also two coal fired power plants in northwest New Mexico that are outside of the County, but are a source of nitrogen oxide emissions. The Four Corners Power Plant has been identified as the largest single source of nitrogen oxides in the U.S.[13] Both plants are currently working under the guidance of the EPA to reduce emissions by installing emission-reduction technology and retire older units.

The State of Colorado has adopted regulations to help minimize the nitrogen oxide emissions from the oil and gas industry. The COGCC and CDPHE require oil and gas facilities to use low- or no-bleed pneumatic devices when replacing or repairing existing pneumatic devices or installing new pneumatic devices. The CDPHE Air Pollution Control Division also has regulations addressing emissions from engines used in oil and gas development.

Particulate Matter:

Particulate matter is a mixture of solid particles and liquid droplets found in the air. These particles come in many sizes and shapes and can be made up of hundreds of different chemicals. Some are emitted directly from a source, such as construction sites, unpaved roads, fields, smokestacks or fires. Most particles form in the atmosphere as a result of complex reactions of chemicals such as sulfur dioxide and nitrogen oxides, which are pollutants emitted from power plants, industries and automobiles. The microscopic solids or liquid droplets in particulate matter are so small that they can be inhaled and cause serious health problems. Fine particles ($PM_{2.5}$) are the main cause of reduced visibility or haze.

Although the County and surrounding areas are in attainment for particulate matter, short term exposure to high levels of particulate matter from a temporary source such as dust on a windy day or a forest fire can have adverse health impacts. The main source of particulate matter in La Plata County is dust. Agriculture and industrial processes are the second highest contributors of PM_{10} in the County. The second highest sources of $PM_{2.5}$ came from industrial processes and fuel combustion.[14]

In order to mitigate dust impacts from dirt roads, the County has established a program to use Magnesium Chloride, a dust inhibitor and bonding agent on gravel County roads experiencing high volumes of traffic. The practice has proven to be an effective agent for holding the roadbed in place and limiting dust.

[12] EPA National Emissions Inventory, 2011
[13] Four Corners Air Quality Task Force Report of Mitigation Options, November 2007
[14] EPA National Emissions Inventory, 2011

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Methane:

Methane is a colorless and odorless gas. It is very efficient at trapping heat in the atmosphere and, similar to carbon dioxide, it contributes to global warming. There are not health effects associated with methane, although it is combustible and can pose an explosion hazard in confined spaces.

In October 2014, a joint study by National Aeronautics and Space Administration (NASA) and the University of Michigan reported that a small region near the Four Corners area had the highest concentration of methane over background levels of any part of the U.S. In response to the identified hot spot, scientists from NASA's Jet Propulsion Laboratory and Caltech, the National Oceanic and Atmospheric Administration (NOAA), and the University of Michigan conducted a study in northwestern New Mexico and southwestern Colorado to identify and measure more than 250 individual sources of methane. The study was published in August 2016. Observed sources included gas processing facilities, storage tanks, pipeline leaks, and well pads, as well as a coal mine venting shaft.

Methane is released from coal bed methane production facilities during well completion activities as well as from the venting of gases directly to the atmosphere. Leaking pipelines, wellheads, or storage tanks are other potential sources.[15] Regulations adopted by the CDPHE Air Pollution Control Division require operators to perform leak detection at wells and along pipelines, as well as, install technology that captures 95 percent of emissions of both VOCs and methane from storage tanks, glycol dehydrators, and venting wells. Several operators in La Plata County perform annual flights using infrared cameras to identify methane leaks. The COGCC and BLM have also made efforts to address methane emissions. The COGCC requires the use of green completion technology when practicable to minimize emissions during completion activities. The BLM and COGCC have required bradenhead testing on all gas wells in the San Juan Basin since January 1991 to identify leaking well casings and remediate leaks.

The 2016 NASA study estimates that the identified sources account for approximately half of the methane identified by the satellite hot spot.[16] Other sources of methane in the area potentially include the power plants in northwestern New Mexico and the outcrop of the San Juan Basin in La Plata County where the Fruitland Formation has been exposed and methane seeps occur naturally. Fugitive methane emissions at the outcrop have been well documented and have historically caused explosion hazards, surface and water well contamination, and areas of distressed vegetation.[17]

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[15] Harris, Colin G. and Bradley Purcell, Bryan Cave LLP, Air Quality Regulation of Oil and Gas Development: Hydraulic Fracturing Leads to Evolving and New State and Federal Standards, and Increased Efforts to Ban Development at the Local Level, January 2015

[16] Frankenberg et al., Airborne Methane Remote Measurements Reveal Heavy-Tail Flux Distribution in Four Corners Region, August 2016

[17] Finch, Steven T. Jr., Groundwater Issues Related to Coal-Bed Methane Production Northern San Juan Basin, New Mexico and Colorado, September 1996

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OPEN LANDS, OPEN SPACE AND VISUAL RESOURCES

The scenic beauty of the County plays a significant role in shaping the local economy and quality of life for local residents. The many "faces" of the County are reflected in its scenery and views. Residents, business owners and visitors place high value on maintaining this scenic character that contributes to community pride and well-being.

The preservation or protection of visual resources, open lands and open space has been accomplished through several mechanisms within the County. The La Plata County Land Use Code requires developments of differing intensity levels to be buffered through the use of open space, vegetation or fences. The code also requires developments to revegetate disturbed land. Oil and gas development has specific visual mitigation requirements. The La Plata County district land use plans have criteria when determining development density to incentivize the protection of visual resources. These criteria promote clustering development and protecting open spaces and riparian and wildlife habitats.

Open Lands and Open Space:

Open lands serve a variety of uses including:

- Agriculture
- Wildlife habitat
- Visual buffering around and between developments and communities
- Protection of view corridors along county roads and state highways
- Preservation of floodplain, wetlands and other unique natural areas
- Recreational uses such as hiking, horseback and bicycle riding
- Buffering of noise, dust, and lighting glare between adjacent land uses

Open lands may be publicly or privately owned, preserved as open space or used for development. It is important to acknowledge that regardless of the ownership or development status of open lands, it is how these lands are managed that determines their character. Public lands can include wilderness areas, recreational uses, range land, mineral development and other uses depending on specific management plans, designations and the policies and regulations of the overseeing agency.

Private open lands are subject to the management decisions of the owner and the potential to develop the property. Private open lands may be temporary pending on the timing of future development or permanently preserved such as through a conservation easement. A private property owner's decision to create dedicated open space can serve a variety of purposes, including the preservation of sensitive or unique habitat; preservation of wildlife habitat; protecting agricultural land from development; buffering of noise, dust, and lighting glare between adjacent land uses; providing land for recreational uses; as well as, the mitigation of impacts to visual resources as discussed above. As indicated by the visual mitigation measures required by the

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County code and the policies of the district plans, the County's land use system encourages the preservation of open space as part of the development process.

Open space can be protected through the use of a conservation or agricultural easement, the donation or selling of land to a conservancy, the exchange of land with a public agency, or the dedication of open space on a subdivision plat or site plan. There are several land trusts in the County that work directly with landowners to establish easements and monitor the land for compliance with the easement. Active land trusts in the County include the La Plata Open Space Conservancy, the Trust for Public Lands, and the Colorado Cattlemen's Association.

> ***Key Point***
> *County's land use system encourages the preservation of open space as part of the development process.*

Preserving undeveloped lands to help maintain the rural character of the County is not just a nostalgic wish to avoid change. There is a direct relationship to the health of the County's economy and the quality of life of its residents. For example, two major sectors of the economy – tourism and the influx of retirees – are strongly linked to the County's scenic and rural qualities. The County's continuing ability to attract and retain visitors, residents, and businesses will depend on maintaining the values and characteristics that brought them here in the first place.

Visual Resources:

As stated earlier, the scenic beauty of the County plays a significant role in shaping the local economy and quality of life for local residents. However, as the County grows, the potential exists for development to degrade and diminish many of the view corridors in the County.

Of particular importance are the State and U.S. highway corridors passing through the County. The land use code establishes these corridors as "view corridors" that should be treated uniquely by preserving their aesthetic values. The San Juan Skyway, which includes Hwy 550 North and 160 West, has already received significant attention relative to protecting visual resources. Conversely, Hwy 172 and Hwy 160 East between Grandview and Gem Village have not received nearly as much attention. It should, however, be of particular importance and should be considered a priority corridor for visual resource protection. Hwy 160 serves as the only major east-west arterial through the County and is also located in an area that has significant commercial development potential. New development along this corridor should include significant setbacks and/or vegetative cover to ensure the integrity of the view corridor.

The high visibility of prominent natural features such as river corridors, lakes and reservoirs, hilltops, ridgelines and mountains make them a valuable visual resource. Historic elements also have value as a visual resource, including the Durango and Silverton Narrow Gauge Railroad.

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Impacts to visual resources may occur as a result of the placement of structures that obscure views of prominent natural features or that do not complement the architectural character of the landscape, the development of open areas, unscreened outside storage areas, the removal of vegetation or lack of revegetation in disturbed areas, excessive or large signage, glaring lights, or visible industrial equipment.

Protection of visual resources is addressed in a variety of existing studies and plans. Following is a brief summary of these protection measures.

District Land Use Plans: The district plans contain a variety of incentives to protect visual resources. All seven district plans make use of the public benefit criteria process which provides density incentives for residential developments that are compatible with the goals of each plan. Much of the focus of the public benefit criteria process is oriented toward development that is visually unobtrusive to the surrounding environment.

La Plata Land Use Code: The Code contains several references to the protection of visual resources and development within the Corridor District. Protections, however, are primarily among the Code's encouraged standards and lack specificity. Most notable are the omission and inadequacy of grading and excavation standards; comprehensive signage standards; and requirements for landscaping and buffering along view corridors from public roads.

San Juan Skyway Scenic Byway: The San Juan Skyway, a scenic byway, encompasses a 232-mile loop connecting Durango, Silverton, Ouray, Telluride, Dolores, Cortez and Mancos which has been identified as having important scenic, natural, recreational, wildlife, and/or historic landscape values. As a result of its importance, the San Juan Skyway has been the subject of many past and ongoing planning and conservation efforts. Most recently the San Juan Public Lands Office (USFS) and Montezuma Land Conservancy released the report *Our Treasured San Juan Skyway Turns 25 – Ideas & Opportunities for the Future* in December of 2014.

Tracks Across Borders Scenic and Historic Byway: Colorado's newest scenic byway travels along the historic narrow-gauge portion of the Denver & Rio Grande Railroad from Durango to Chama, New Mexico, and connects two of the state's existing narrow-gauge routes: the Durango & Silverton Narrow Gauge Railroad and the Cumbres & Toltec Scenic Railroad. This byway travels along two states and offers access to scenic countryside, dramatic mountain scenery, Native American cultures, layers of history, and varied communities of the present day. Implementation is underway and is guided by the Colorado Department of Transportation's December 2014 Conceptual Plan for the Byway.

City of Durango Parks, Open Space, Trails and Recreation Master Plan: This plan was adopted by the City of Durango in 2010. The plan identifies a number of key areas that should be preserved for their unique characteristics. A number of these areas are located outside Durango city

limits in the unincorporated County.

Flora and Fauna:

La Plata County straddles two ecological regions. The southern half of the County is located on the Colorado Plateau, a warmer, drier region at lower elevations characterized by sage plains, arid plateaus, and mesas. The Colorado Rocky Mountains, encompassing the northern portion of the County, is characterized by high peaks and meadows with higher elevations, cooler temperatures, steeper slopes, and greater moisture. At elevations above 9,000 feet, the alpine and sub-alpine climatic zones support alpine meadows and spruce-fir forests. In the upper montane climatic zone, located roughly between 7,500 feet and 9,000 feet in elevation, mixed conifer forests, Douglas fir forests, and Aspen forests dominate. The ecologic systems found in the lower montane climatic zone below 7,500 feet include ponderosa pine forests, Gambel oak shrubland, pinyon-juniper woodlands, and shrub-grass-forb rangeland. Pinyon-juniper woodlands are the most common vegetation type in the County, covering approximately one third of the land in the County. Ponderosa pine forest and woodlands, agricultural lands, and spruce-fir forest are also common and each cover 10 to 20 percent of the County.[18]

The variety of ecosystems and vegetation types in the County provide home to a diverse number of native species. Colorado Parks and Wildlife (CPW) manages all of Colorado's wildlife as well as state parks and state wildlife areas. Regulations are established by the Colorado Parks and Wildlife Commission. There are four state wildlife areas within the County managed by CPW. They are the Perins Peak, Bodo, Pastorius Reservoir, and Haviland Lake state wildlife areas. These areas are state-owned lands that offer wildlife-related recreation to the public. CPW also manages the fish hatchery located in Durango on the Animas River. The Durango hatchery stocks approximately 150,000 catchable rainbows and 1.3 million subcatchable fish each year in the southwest corner of Colorado.[19] The CPW program is supported by revenue from hunting and fishing licenses.

Game species are of particular economic value to the State and County. Colorado state residents and out of state visitors come to La Plata County for big and small game hunting and fishing and contribute to the local economy through secondary expenditures such as sporting equipment, hotels, and food. A report completed by BBC Research & Consulting for the CPW estimates that in 2007, hunting and fishing accounted for 277 jobs in La Plata County, $25,170,000 in direct expenditures, and $43,340,000 in total expenditures. Approximately 36 percent of the total expenditures were from out of state visitors. Although the study is 9 years old, the number of hunters that visit the County is still comparable.

The species that have been listed at the federal or state level as threatened or endangered are shown

[18] Colorado Natural Heritage Program, Assessment of Critical Biological Resources La Plata County, Colorado, May 2004

[19] Colorado Parks and Wildlife website, http://cpw.state.co.us/learn/Pages/Hatcheries.aspx

in Table 4-4. The Endangered Species Act (ESA) protects endangered and threatened species and their habitats by prohibiting the "take" of listed animals and the interstate or international trade in listed plants and animals, including their parts and products. The U.S. Fish and Wildlife Service (USFWS) is the federal agency that administers the ESA.

The protection afforded species under the ESA applies to private lands as well as government lands. Listed plants are not protected from take on private lands, although it is illegal to collect or maliciously harm them on federal land. In addition, Section 7 of the ESA requires that other federal agencies "consult" with the USFWS to ensure that their actions are not likely to jeopardize the continued existence of a listed species or adversely modify its habitat. Thus, activities that occur on private lands that are funded, authorized, or conducted by a federal agency require consultation with the USFWS if there is the potential for a taking of a listed species.

The State of Colorado also has listed threatened and endangered species of particular management concern. Under state regulations, nongame species, including listed federal or state threatened or endangered wildlife, are protected and their harassment, taking, or possession is prohibited.

Table 4-4
Federal and State Threatened and Endangered Species for La Plata County

Group	Species	Status	Habitat
Birds	Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE, SE	Willow-riparian patches of at least 30 × 30 × 5 feet tall and at least 0.25 acre or larger. Critical habitat designated along Pine River.
	Mexican spotted owl (*Strix occidentalis lucida*)	FT, ST	Mixed conifer or ponderosa pine/mixed conifer located in steep rock-walled canyons.
	Yellow Billed Cuckoo (*Coccyzus americanus*)	FT	Woodlands, thickets, orchards, streamside groves.
	Burrowing Owl (*Athene cuniculalria*)	ST	Dry, open areas with short grasses and no trees.
Mammals	New Mexico meadow jumping mouse (*Zapus hudsonius luteus*)	FE	Vegetation near ponds and streams. Critical habitat designated along Florida River.
	Canada lynx (*Lynx canadensis*)	FT, SE	Primarily inhabits high-elevation spruce-fir forests; also cool-moist mixed conifer, high-elevation aspen mixed with spruce or cool-moist mixed conifer, and willow riparian adjacent to the above habitats. Closely associated with snowshoe hare as a primary prey item.

	North American wolverine (*Gulo gulo*)	SE	Primarily inhabits high-elevation spruce-fir forests; also cool-moist mixed conifer, high-elevation aspen mixed with spruce or cool-moist mixed conifer, and willow riparian adjacent to the above habitats.
	River Otter (*Lontra Canadensis*)	ST	Riparian habitat
Insects	Uncompahgre fritillary butterfly (*Boloria acrocnema*)	FE	Alpine habitat above 12,500 feet with a snow willow component. Sites are generally found on north, northeast, and east aspects and represent the coolest microclimates in high alpine cirques.
Plants	Knowlton's cactus (*Pediocactus knowltonii*)	FE	Rolling, gravelly hills in pinyon-juniper/sagebrush communities at about 6,200 to 6,300 feet elevation. Strongly associated with pea- to cobble-sized gravels (tertiary alluvial deposits of the San Jose Formation) covering a majority of the soil, black sagebrush, and occurrence of reindeer lichen.

Source: USFWS, CPW
FE = Federally Endangered, FT = Federally Threatened, SE = State Endangered, ST = State Threatened

Critical habitat has been designated in La Plata County for the Southwestern willow flycatcher and New Mexico meadow jumping mouse. Federal agencies are required to consult with the USFWS on actions they carry out, fund, or authorize to ensure that their actions will not destroy or adversely modify critical habitat. The critical habitat for these species is shown on Map 4-3.

Two federally listed endangered fish species, the Colorado pikeminnow (*Ptychocheilus lucius*), and razorback sucker (*Xyrauchen texanus*), are found downstream of the County in the San Juan River. Although these species are not found within the County, activities in the County that affect downstream flows could impact these species.

Birds are protected under the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act. These acts prohibit the taking of all bird species listed under the acts or their parts (feathers, eggs, nests, etc.). These laws do apply to federal and other government agencies as well as private land owners. The total number of species protected by the MBTA is over 1,000. The Bald and Golden Eagle Protection Act provides protection for bald eagles and golden eagles specifically. Both bald eagles and golden eagles are known to occur in La Plata County and CPW has recorded several historical and active nesting and roosting sites for these species. Bald eagles are typically found along riparian corridors or near lakes. Golden eagles prefer open or semi-open habitats and they typically avoid developed areas.

Human Wildlife Interaction:

The interaction between humans and wildlife can pose risks to both the humans and wildlife. Bears

or raccoons can cause property damage while rummaging for food in developed areas. Certain species have the potential to carry diseases that can affect humans. Bats are potential carriers of rabies and the feces of mice can spread Hantavirus. Roaming coyotes or mountain lions pose a potential threat to pets or livestock.

Human development can impact wildlife as well. Residential development is an increasing threat to wildlife, especially in rural areas where real estate costs are somewhat attainable. Development creates a number of stresses, including habitat loss and fragmentation, introduction of nonnative species, and domestic animals that may harass wildlife. Roads are associated with a wide variety of impacts to natural communities, including invasion by non-native species, fragmentation of habitats, and road mortality from collisions. Roads can also be a conduit for predators or a barrier to mobility. High-risk areas for wildlife collisions identified by the Colorado Department of Transportation include Highway 160 from Durango to Pagosa Springs and Durango to Mancos and Highway 550 north of Durango.[20]

Key Point
By recognizing and preserving high quality wildlife habitat in the County, conflicts between humans and wildlife can be reduced.

As La Plata County's wildlife/urban interface increases so do the cost and potential for wildlife conflicts. Careful land use planning can reduce the impacts of development on wildlife and the impacts of wildlife on humans. Map 4-3 shows areas in the County that have been identified as high quality habitats for wildlife. Conservation of these areas and minimizing urban sprawl into these areas would help to minimize human-wildlife conflicts as populations and development continue to increase in the County.

The Living with Wildlife Advisory Board (LWAB) was created to reduce conflicts between wildlife and the residents of La Plata County. The LWAB consists of qualified volunteers who serve in an advisory role for the La Plata County Commissioners on methods of preventing and resolving wildlife conflicts.

Invasive Species:

Invasive species are plants, animals, or insects that are not native to Colorado and have harmful negative effects on the economy and environment. They are introduced accidentally or intentionally outside of their native range. Non-native plants threaten biodiversity since they can outcompete native species and essentially dominate a previously natural area. This can generate secondary effects on animals that depend on native plant species for forage, cover, or propagation. Invasive plant species establish as a result of ground disturbance and the presence of a seed source.

[20] Colorado Parks and Wildlife website, http://cpw.state.co.us/learn/Pages/AvoidWildlifeCollisions.aspx

Seeds may be introduced and spread in many ways, including by people, wildlife, vehicles, wind, water, and fire.

Since 1990, the Colorado State Department of Agriculture has protected the state's natural resources by enforcing regulations controlling noxious weeds. More recent revisions to the Colorado Noxious Weed Act have given County and City governments the authority to implement management programs aimed at noxious weeds. The Colorado Department of Agriculture lists certain plants as noxious and sets the legal framework for enforcement. The Colorado Department of Agriculture provides resource help to the jurisdictions that have chosen to require management of these species.

La Plata County has an aggressive weed management program for the control and/or eradication of noxious weeds. The Undesirable Plant and Rodent Advisory Commission developed the La Plata County Weed Management and Enforcement Plan to describe management methodologies and priorities. Chapter 58 of the County Land Use Code details the administration and enforcement of invasive species policies in the County. The La Plata County Weed Office administers the management plan, maintains the priority weed list, and is responsible for enforcement actions. Management efforts by the County include controlling noxious weeds on county roads and County properties, educating the general public, and working with private landowners for weed identification and the creation of weed management plans. The Weed Office also maps and tracks the location of noxious weed populations in the County.

Under the Land Use Code, it is the responsibility of all landowners and land managers to manage and prevent the spread of noxious weeds if the plants are likely to be ecologically destructive or aesthetically or materially damaging to neighboring lands. If a listed noxious weed is not being controlled on a property, the Weed Office will give notice to the landowner to address the area of concern. If the landowner does not comply, the weed office can conduct control measures and collect the cost from the landowner.

The County also coordinates with the U.S. Forest Service, Bureau of Land Management, and Southern Ute Indian Tribe for the integrated management of undesirable plants within respective territorial jurisdictions. Invasive species move across jurisdictional boundaries and property lines; therefore, effective management requires coordination with local, state, tribal, and federal agencies, as well as with interested organizations and individuals.

Fire:

Historic wildfire suppression and the associated accumulation of fuels have led to higher intensity wildfires and large losses of property and wildlife habitat. Wildfire risk to humans and structures is greatly increased by the intermixing of homes and natural habitat in the wildland urban interface. Drought, extensive forested lands, and the decline of trees from beetles and disease keep the risk of

wildfire high in the County.

There are a number of entities involved in fire prevention and firefighting in La Plata County. The County Sheriff under State Statute is the fire warden and is responsible for all wildland fire on unincorporated non-federal land within the County except where fire protection districts have assumed that responsibility on private land within their districts. The Sheriff and County maintain agreements with the districts for fire suppression on State land and private land outside the districts. Each municipality maintains agreements with the districts for fire service in the incorporated areas. The State supports response on private and State land during larger events. On tribal lands, the Bureau of Indian Affairs Southern Ute Agency and Ute Mountain Agency provides wildland fire protection. The U.S. Forest Service Columbine Ranger District and Bureau of Land Management Tres Rios Field Office cover fires on federal lands in the County.

The La Plata County Annual Operating Plan sets forth standard agreed upon procedures and responsibilities to implement cooperative fire management in wildland areas within La Plata County. The plan is established annually by La Plata County, the Colorado Division of Fire Prevention and Control, the U.S. Forest Service, the Bureau of Land Management, the Bureau of Indian Affairs Southern Ute Agency, the Bureau of Indian Affairs Ute Mountain Agency, and the four fire protection districts.

In 2006, La Plata County created the Community Wildfire Protection Plan (CWPP) in collaboration with federal, state, and local governmental agencies and firefighting entities to identify community resources and detail goals, strategies, and recommendations for reduction of wildfire damage. The CWPP includes a fire risk zones map that shows the relative wildfire risk in populated areas of the County. The map is used to assess risk, identify future fuel reduction projects on Federal lands and for land use decisions. See list of references for the CWPP.

Various federal laws, state statutes, cooperative agreements, memorandums of understanding, contracts and other plans further establish and define the relationships, authorities and responsibilities necessary to suppress and pay for fires in our community.

In 2003, the Firewise Council of Southwest Colorado was launched. Active members include federal and state land management and fire-fighting entities, real estate interests, home owners associations, citizens, and other community stakeholders. The council has become the County's key central networking mechanism around wildfire education, policy, and mitigation projects.

SOILS AND GEOLOGIC RESOURCES

Geohazard areas occur throughout La Plata County where the human environment intersects with natural phenomena. Many people choose to locate in La Plata County due to its scenic beauty despite the development challenges that geohazards impose. Because prohibiting development in

hazardous areas is infeasible, it is the responsibility of the local government to promote responsible and safe development in these areas.

When developing property, soil type should be considered. Some soil limitations include high shrink-swell potential, which may limit on-site sewage capability. Shrink-swell potential is a geologic hazard that is dangerous to structures because the ground shifts, cracking structures and foundations. Frequent flooding, seepage, and high water table also pose development constraints which require extensive engineering designs.

Geologic rock units, otherwise known as formations, are significant resources throughout the county. Sediments of all geologic ages have been exposed by the forces of erosion and periodic mountain uplift. Many formations contain paleontological resources such as plants, invertebrates, and vertebrates, dominantly Jurassic and Cretaceous in age. Paleozoic and Tertiary aged rocks may contain unrecognized paleontological resources. Coal-bearing formations, such as the Fruitland and the Menefee formations, can also be found within the county. Formations can also pose hazards on development. The Fruitland Formation has the potential for methane seepage into water wells, vegetation die off, and underground coal fires.

Many of the hazard areas in La Plata County have been mapped. The hazard area mapping currently adopted by La Plata County provides a preliminary hazard assessment for further investigation. It does not have the capacity to define precise hazard areas at the site level. Where the adopted mapping indicates that a hazard or constraint area exists on a site under consideration for development, the applicant is responsible for providing sufficient information, such as a geotechnical report, as part of a development application to locate and classify the extent of the hazard on the property and to demonstrate that the potential natural disturbance for that area has been successfully avoided or mitigated. La Plata County's district plans and land use code steer new development away from geologic hazards by requiring site-specific geologic studies and slope surveys and promulgating standards to avoid these areas.

ENVIRONMENTAL RESOURCES GOALS

Goal 4.1: To maintain or improve the quality of La Plata County's environmental resources including flora and fauna, water, air, visual resources, open lands and open space while accommodating growth and development.

Objective 4.1.A: To develop responsible methods, techniques and tools relative to the environmental resource of water in La Plata County, while recognizing the need for adequate water to support growth.

Policy 4.1.A1: Publicly support and participate in the development of rural water systems to provide County residents with a consistent and safe source

of domestic water.

Policy 4.1.A2: To minimize the impacts of sedimentation, adequate storm water management techniques should be incorporated within all development projects.

Policy 4.1.A3: Develop strategies to reduce encroachments upon floodplains, which reduce flood-carrying capacity, increase flood heights and velocities, and increase flood hazards in areas beyond the encroachments.

Policy 4.1.A4: Strive to minimize non-point source pollution of surface water from existing developments and agricultural operations.

Objective 4.1.B: To develop responsible methods, techniques and tools relative to the environmental resource of air in La Plata County.

Policy 4.1.B1: Partnerships should be established and/or strengthened which help maintain air quality in La Plata County.

Policy 4.1.B2: Continue support for, and participation in, the Four Corners Air Quality Task Force and Western Colorado Regional Air Quality Collaboration.

Policy 4.1.B3: Support efforts to reduce airborne particulates and surface water contamination, and promote alternative modes of transportation.

Objective 4.1.C: To encourage the creation of open space and promote development that identifies and accommodates natural resources, which can help to maintain visual resources important to La Plata County's quality of life and economy.

Policy 4.1.C1: Provide technical assistance to organizations and/or entities attempting to establish visual resource protection or open space acquisition programs.

Policy 4.1.C2: Revise and refine the County's visual corridor map.

Policy 4.1.C3: Create design guidelines for development proposed within visual corridors which address the unique aspects of the different areas of the County.

Policy 4.1.C4: In order to accommodate the growth occurring and anticipated to occur along highways and major county roads, develop guidelines which encourage appropriate development and create attractive visual corridors.

Policy 4.1.C5: Evaluate and consider flexible road development standards

emphasizing the minimization of grading, cutting and filling, and avoiding steep slopes.

Objective 4.1.D: To develop and maintain responsible methods, techniques and tools relative to development and the County's environmental resources, recognizing the need to maintain sustainable populations of desired flora and fauna for recreational hunting, fishing, and wildlife viewing opportunities and the economic benefits that stem from these activities.

Policy 4.1.D1: Initiate discussions with Colorado Parks and Wildlife to develop a "best development practices" guide to integrate new development with wildlife considerations.

Policy 4.1.D2: Coordinate with Colorado Parks and Wildlife to identify strategies to reduce development impacts on high quality wildlife habitat.

Policy 4.1.D3: Continue to support the County's weed management program for the control and/or eradication of noxious weeds.

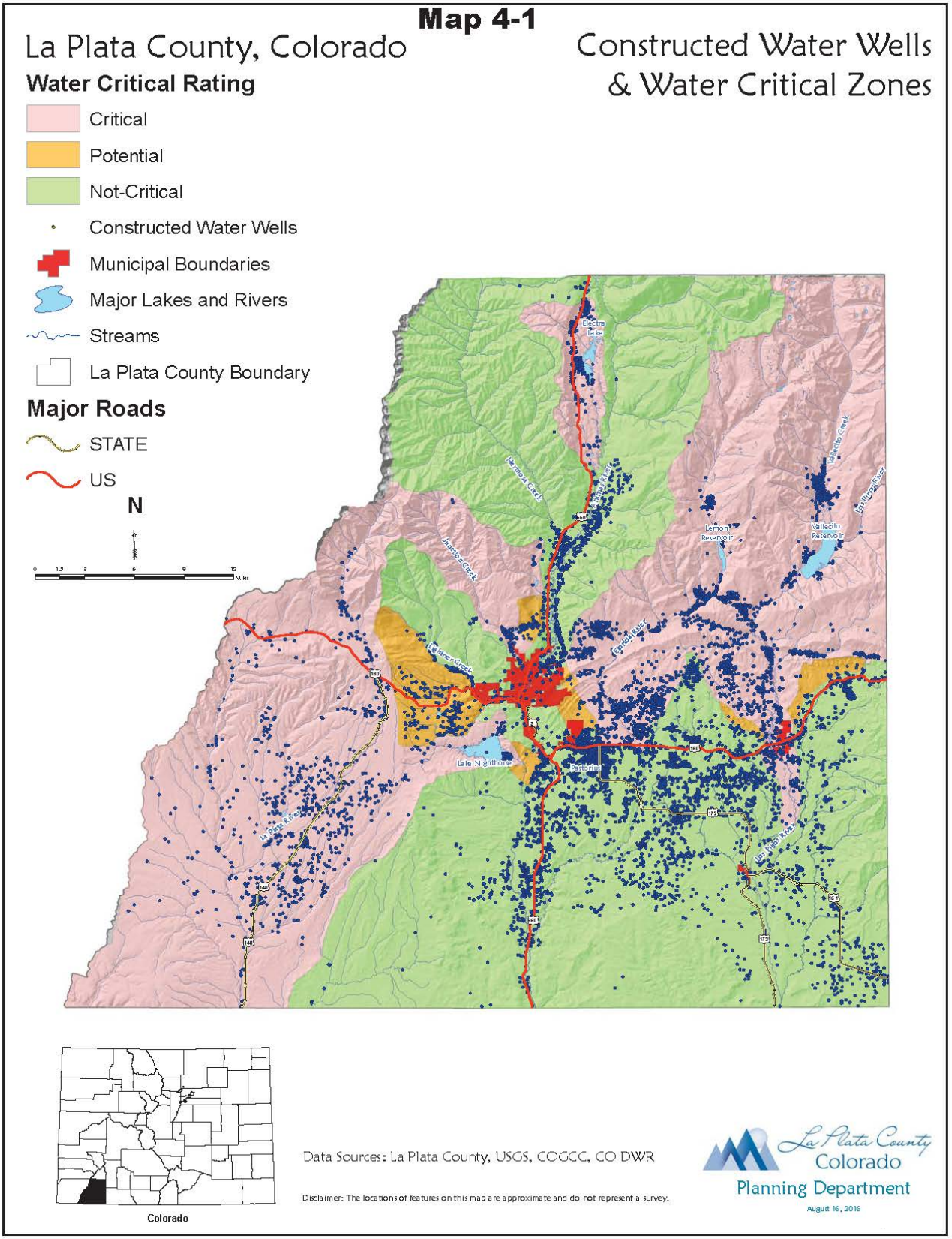
Policy 4.1.D4: Promote the reduction of wildfire hazard through education, the support of the efforts of other agencies and organizations, and the evaluation of current methods used by the County for wildfire mitigation.

Objective 4.1.E: To provide guidance for responsible and safe development in geohazard areas.

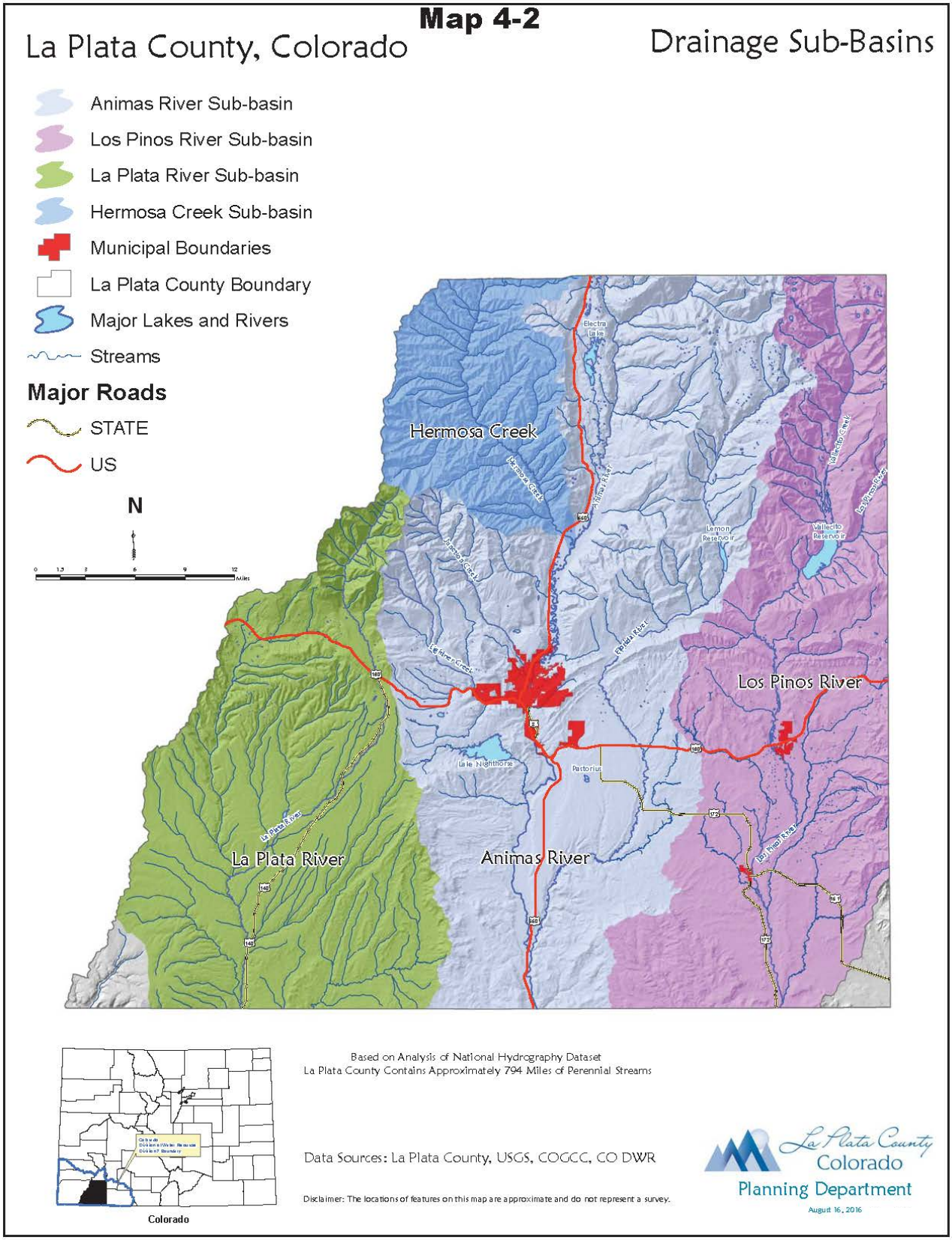
Policy 4.1.D3: Evaluate the effectiveness of current methods used by the County for geohazard mitigation; and identify viable alternatives for effective mitigation.

Existing Environmental Resources Maps:
4.1 Constructed Water Wells & Water Critical Zones
4.2 Drainage Sub-Basins
4.3 Wildlife Habitat

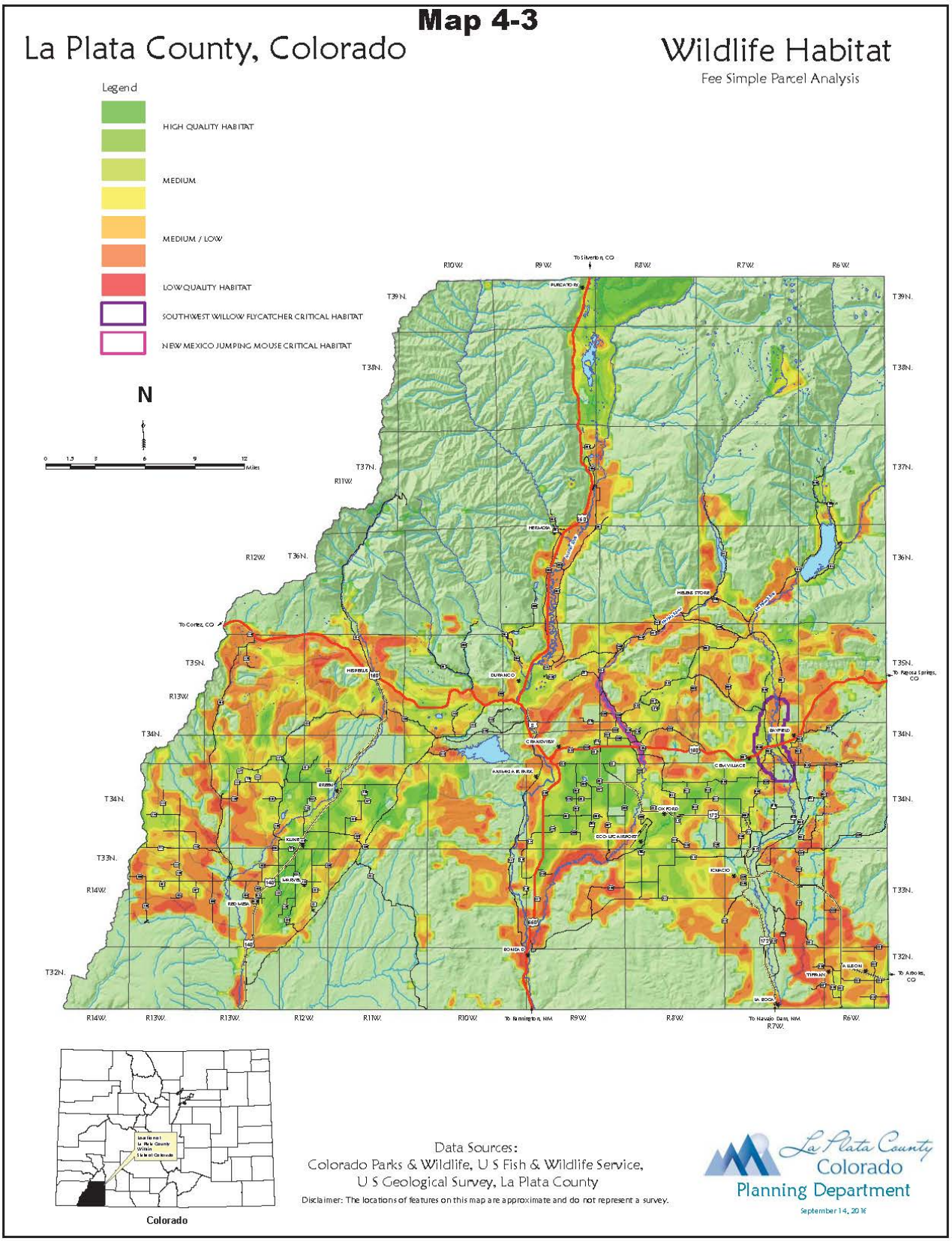
4 ENVIRONMENTAL RESOURCES



4 ENVIRONMENTAL RESOURCES



4 ENVIRONMENTAL RESOURCES



5 AGRICULTURE

OVERVIEW

Historically, agriculture has been the predominant land use in the rural parts of La Plata County, it has defined the area's character. Agriculture plays such an important role in the county and the state that the State Legislature has adopted a "Right to Farm" statute which protects agricultural operations from nuisance claims (C.R.S. § 35-3.5-102).

Over the past several decades, however, declining agriculture commodity prices coupled with increasing land values (predominantly resulting from an in-migration of new residents) has made selling agricultural land for residential development a profitable enterprise. This leads toward a transition to more dense rural residential uses from, otherwise, historic agricultural uses. While this phenomenon is not unique to La Plata County, it has been recognized by many area residents who believe that the preservation of agriculture in La Plata County is essential to maintaining the working landscape of the County.

The intent of this plan element is to support and strengthen agricultural uses within the County.

The Agriculture Element of the Plan describes La Plata County's role to support and strengthen agricultural uses and ensure they remain a prominent part of the community. It is intended to outline current and proposed land development processes, as well as other tools that agricultural land producers can use to increase agriculturally based income from their land while at the same time continuing agricultural operations.

BACKGROUND

In 2010, there were approximately 271,413 acres of land taxed agriculturally in the County. Despite this large amount of land, agriculture is a small component of the County's economy. As of 2010, agricultural products and services accounted for 2.7% of jobs in the County. Table 7-1, and Chart 7-1 both depict agricultural receipts and net realized income for the County from 2005-2010. This data shows net income from agriculture as a loss for the identified period. Additionally, Chart 7-2 depicts a breakout of County Assessed property types, and Chart 7-3 further identifies those various types agriculturally assessed properties.

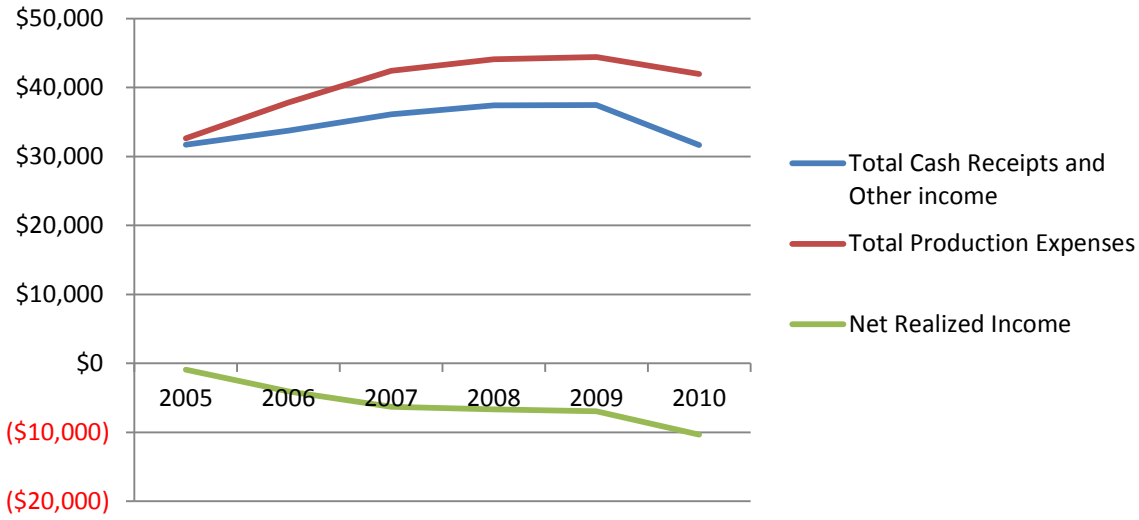
Table 5-1
La Plata County Agricultural Income: 2005 - 2010

	2005	2006	2007	2008	2009	2010
Total Cash Receipts and Other	$31,717	$33,747	$36,113	$37,388	$37,462	$31,654
Total Production Expenses	$32,648	$37,801	$42,394	$44,068	$44,419	$41,974
Net Realized Income	($931)	$4,054)	($6,281)	$6,680)	$6,957)	($10,320)

Source: Bureau of Economic Analysis

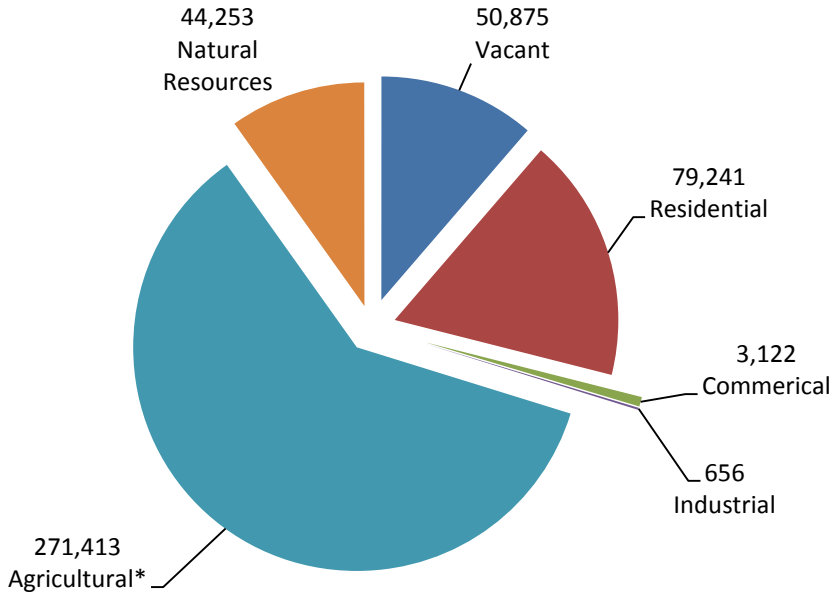
5 AGRICULTURE

Chart 5-1
La Plata County Agricultural Income: 2005 - 2010



Source: Bureau of Economic Analysis

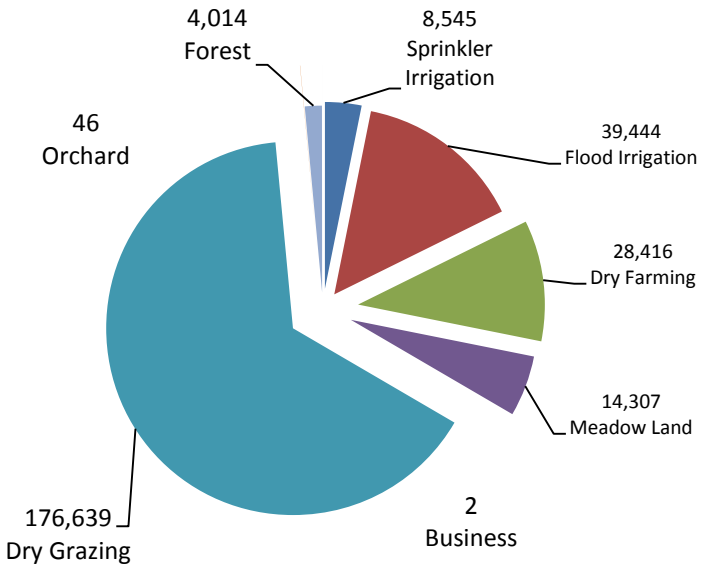
Chart 5-2
La Plata County Property Assessment by Acreage: 2010



**See Chart 5-3 for detailed breakout*
Source: La Plata County Assessor's Office

5 AGRICULTURE

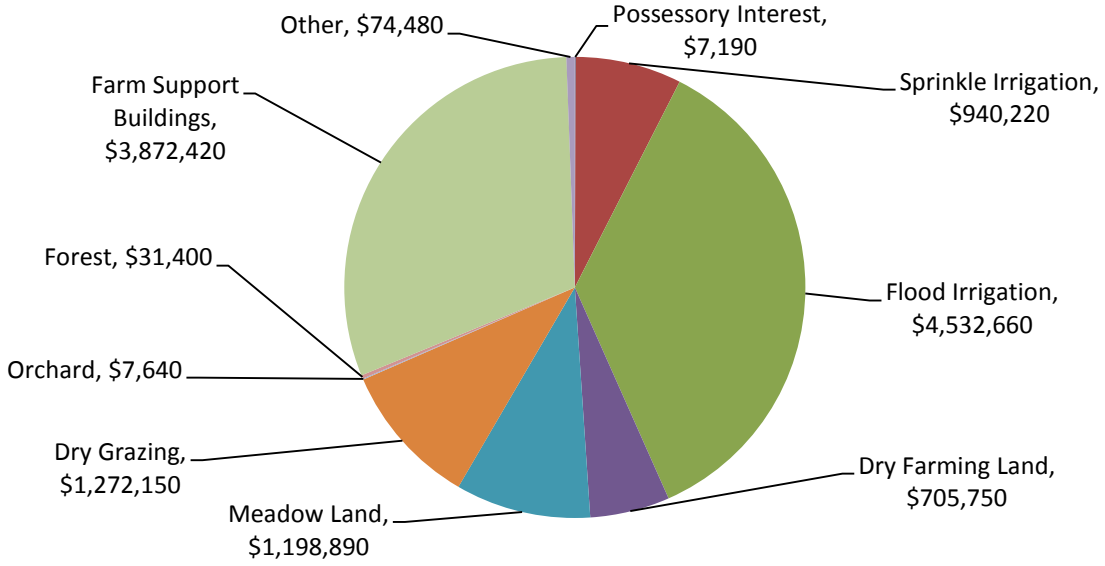
Chart 5-3
Agricultural Property Assessment by Acreage: 2010



Source: La Plata County Assessor's Office

Coupled with high real estate values, the data from Table 5-1 creates an attractive option for farmers and ranchers to sell all or part of their land leading to the higher density rural residential population growth discussed earlier. The simplest and fastest means of selling land is in tracts of 35 acres or larger, which are not subject to County development review. This approach overall results in a transition of the rural landscape in La Plata County.

Chart 5-4
Agricultural Assessed Property by Value: 2010



Source: La Plata County Assessor's Office

5 AGRICULTURE

There are several realized consequences over time, stemming from the division of agricultural land into residential lots. They include:

- A reduction in available land for farming and ranching;
- Reduction in groundwater recharge as a result of reduced agricultural irrigation;
- The proliferation of noxious weeds, as a result of infeasibility to maintain the larger property for residential uses;
- Diminished sense of agricultural landscape;
- Creation of parcels too small to accommodate larger scale farming and ranching;
- Fragmentation of wildlife habitat; and
- The reallocation of water rights previously used for only agricultural purposes.

Recognized as an issue of concern for quite some time, the loss of agricultural lands to development came to the forefront in the early to mid-1990s as the economy strengthened. In Colorado, a continued influx of new residents has put significant development pressure on local communities and agricultural producers. Additionally, public roads have historically been, and are still, used for moving livestock between summer and winter ranges. These perceived conflicts continue to lead to myriad of initiatives at the State and local level to find ways to help preserve agriculture and the working landscape.

It is clear that strategies, in addition to a streamlined subdivision process, will be required if the County commits to preserving agriculture as an integral part of the community.

In 1995, La Plata County established the Agricultural Protection Task Force, made up of members within the farming and ranching community. The purpose of the Task Force was to determine what actions the County could take to help protect agriculture activities and property while also helping to protect open lands. Several changes have already been initiated, including the refinement of the eligibility requirements for home-based businesses and the revision of eligibility requirements for Minor Exempt Subdivisions (3 or fewer lots).

A number of La Plata County initiatives have occurred since 2001, which include the modification of subdivision regulations and the adoption of district land use plans that have designated areas for higher density development in areas served by central services while maintaining lower density in outlying more agricultural areas.

In 2009, a group of agricultural producers were convened to provide guidance and suggestions on steps the County could take to support agricultural producers. The committee identified a number of recommendations that could be implemented to make agricultural operations more diverse and productive. Based on broad suggestions that came from the group:

- Encourage agricultural operations to establish or expand, regardless of parcel size;
- Develop a subdivision option that allows for more lots (smaller acreage) than the current MES process, in exchange for expanded agricultural land retention;

5 AGRICULTURE

- Establish and expand "uses by right" that are compatible and supportive of agricultural operations. Examples could include: onsite sales of agricultural products (farm stands), home office, vet clinic, outfitting operations, wholesale greenhouses and nurseries; and
- Strengthen local protections for agricultural operators.

AGRICULTURE GOALS

Goal 5.1: Encourage the continuation of agriculture as an integral part of La Plata County; recognizing the rights of operation, freedom of choice as to the methods of cultivation, crops/livestock, rotation of crops and other functions within agricultural management.

Objective 5.1.A: To identify and recognize, sound agricultural practices, which promote the long-term viability of agriculture.

Policy 5.1.A1: The County should promote the diversification of agricultural operations and explore ways to promote businesses directly related to the working farms and ranches.

Policy 5.1.A2: The County should consider applicable resource protection programs and regulations in order to support various agricultural operations.

Policy 5.1.A3: The County should create and maintain/regularly update an inventory of irrigable or other important agricultural lands identified for continued farming/ranching.

Policy 5.1.A4: The County should establish a land use process that provides farmers and ranchers with additional alternatives to 35-acre subdivisions.

Policy 5.1.A5: The County should work with project applicants to promote site planning that maximizes the protection of agricultural lands consistent with County regulations and the landowner's development goals.

Policy 5.1.A6: County residents should recognize that the generation of noise, smoke, odor and dust is a natural consequence of normal agricultural practices provided that agriculturalists exercise reasonable measures to minimize such effects.

Policy 5.1.A7: The County should encourage and support the development of water infrastructure which is necessary for continued agricultural operations.

Objective 5.1.B: To establish voluntary and/or incentive/compensation-based programs for supporting and strengthening agriculture in La Plata County.

Policy 5.1.B1: The County should support open space acquisition programs that would

assist with agricultural land preservation.

Policy 5.1.B2: The County should support the agricultural community's own efforts to improve the economic viability of farming/ranching in the County.

Policy 5.1.B3: The County should consider segregating annual agricultural property tax revenues for exclusive use in agricultural preservation strategies, such as funding costs associated with managing conservation easements or expanding the existing noxious weed abatement program.

Policy 5.1.B4: The County should explore the possibility of strengthening the local protections for agricultural operations that would protect smaller or newly established operations from nuisance claims.

Policy 5.1.B5: The County should coordinate with interest groups, such as land trusts, to assist in land owner education regarding the physical and financial benefits of agricultural land preservation, including the provision of information regarding potential tax benefits to agricultural land owners.

Policy 5.1.B6: The County should consider a subdivision option that allows for more lots (smaller acreage) than the current MES process, in exchange for expanded agricultural land retention.

6 AIRPORT

OVERVIEW

La Plata County is home to the Four Corners area's largest commercial airport, owned and operated jointly by the City of Durango and La Plata County. Currently served by four major commercial airlines, Durango-La Plata County Airport (DRO) is located approximately 16 miles southeast of the city limits offering travelers a convenient way to access larger hubs for travel around the world. Pursuant to Title 41 of the Colorado Revised Statutes (C.R.S.), the Board of County Commissioners (BOCC) is granted the authority to establish, acquire real property, incur indebtedness, and operate a facility such as DRO at their discretion. (C.R.S. §41-4-102 to §41-4-106).

Also within the County is the privately owned/maintained general aviation airport, Animas Airpark (Airpark). Located 4 miles south of the City of Durango, the Airpark exists within a public-use residential, commercial and industrial air park covering approximately 35 acres in the La Posta Road Area Planning District. The Airpark is designated an "intermediate airport" by the 2012 Colorado Aviation System Plan Update (CASPU), which indicates the airpark primarily serves and meets the operating requirements of single engine, multi-engine and general aviation business jet activity. A recent master plan for the airpark was completed in September of 2015 (see list of references). Primarily, the historic use of the Airpark has been via single-engine piston, multi-engine piston, turboprop, as well as light turbojet aircraft. Flight trainings, as well as general business and recreational transportation are the primary uses associated with the aircraft identified.

AIRPORT GROWTH

The DRO property is approximately 1,382 acres. The first 257 acres of land was purchased in 1947 from the Southern Ute Indian Reservation. Through Federal funding/aid, an additional 1,125 acres was purchased in 1959 comprising what is the current-day DRO. Construction of the main terminal began in 1987, opening for business later in 1988. The main facility of DRO has a footprint of roughly 36,400sq/ft, with an additional 5,100 sq/ft of temporary building space installed in 2013 giving way to the airport's current 41,500 sq/ft configuration of terminal, restaurant, and vending space[1].

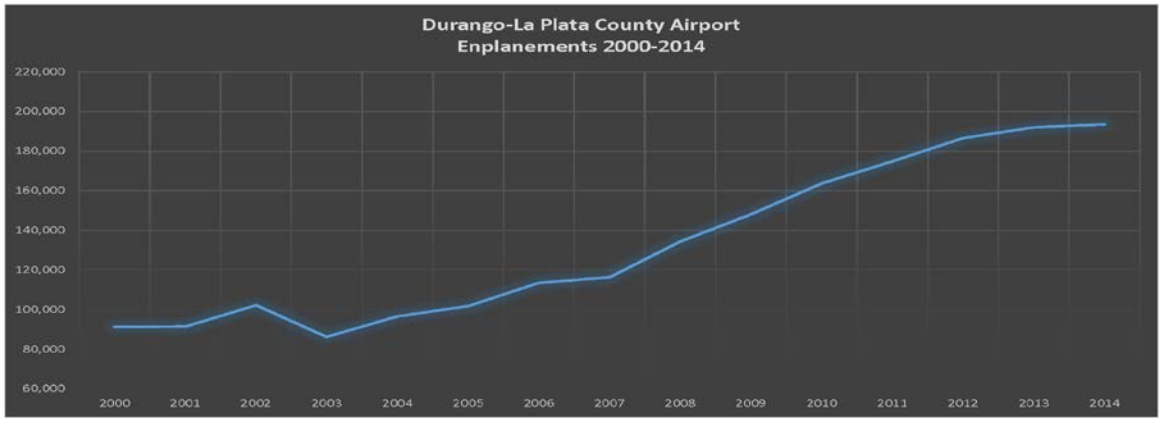
Since the establishment of DRO, significant changes have occurred in the County, population increase being one of the more notable aspects. From 1970 to 2000, the County's total population increased by approximately 178% (5.9% annually). Further, as projected by the Colorado Department of Local Affairs (DOLA), the County is on-course to reach a population of about 75,000 by 2030. For a more in-depth analysis regarding population growth and distribution, see

[1] Durango-La Plata County Airport Master Plan 2015. See Appendix 14.

6 AIRPORT

Element 2 – Growth Trends, of this Plan. Nevertheless, in addition to events such 9/11 and the downturn in the economy in 2008, increases in population have translated into a significant increase of passenger travel to and from DRO, where other airports of similar characteristics nationwide continued to lag.

Chart 6-1



2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
91,276	91,405	102,175	86,198	96,560	101,742	113,516	116,310	134,386	148,077	163,611	174,805	186,567	191,980	193,537

City of Durango Enplanement Data, 2000-2014

As depicted in the graph above, *Chart 6-1*, enplanement[2] data reflects a steady increase in passenger travel over the last fifteen years. This also altered the type of aircraft utilized for travel. Pre-9/11, the typical aircraft sat less than 20 passengers per departure, whereas today, aircraft vary in size from 50 to nearly 140 per departure[3]. Furthermore, the increase in enplanement data, and an increase of aircraft passengers, has undoubtedly caused stress on the infrastructure and facility associated with the airport.

Forecasted growth of the Airport is expected to continue upward over the next 20 years. The recent DRO Airport Master Plan forecasts enplanements to reach 304,784 by 2035 based upon a moderate annual growth rate of 1.9%. This is a 46% increase over the existing 2015 level of 208,476 enplanements. The primary factors driving an increase in forecasted enplanements is the continued trend in larger regional aircraft that will serve markets such as DRO, the transition of existing seasonal frequency to year round service, and the probable addition of one or more new destinations and increased frequency to existing destinations in the future.[4] Recognizing its regional scale and potential associated growth of DRO, its existing size, which currently operates at 50% of the needed space to accommodate travelers, and configuration are not adequate to service the current influx of passengers without contemplation for significant planned, strategic facility improvements.

[2] Enplanement: a person boarding an aircraft on a departing flight.
[3] Durango-La Plata County Airport 2014 White Papers
[4] Durango La Plata County Airport Master Plan 2015

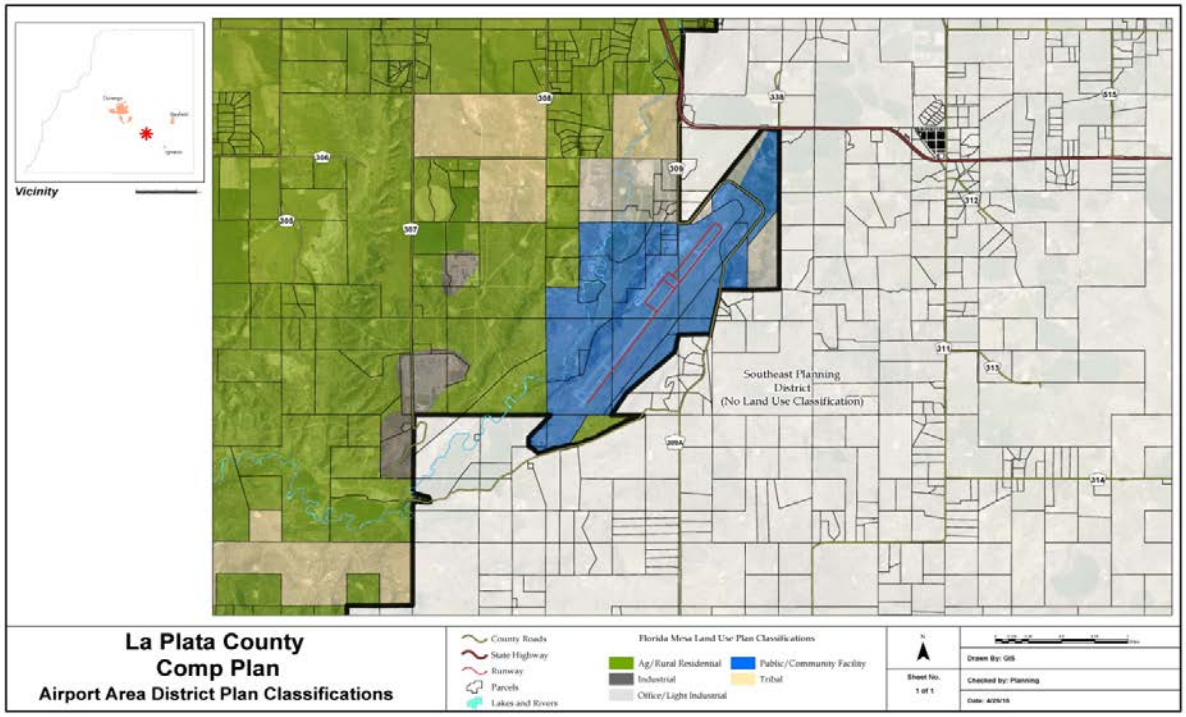
6 AIRPORT

AIRPORT LAND USE

With steady population growth occurring in La Plata County, the agricultural and rural residential landscapes have also seen significant changes. Residential growth has been moving from the activity/growth hub of Durango, to outer lying areas such as Grandview, Elmore's Corner, and Bayfield as well as along the main transportation corridors such as Hwy 550 and Hwy 160. Because of this, infrastructure demands have seen shifts from individual water and sewer systems, to expansion of central utility services that were once not in place.

Additional guidance for that growth is provided by La Plata County's thirteen individual planning districts. DRO property, in particular, lies on the eastern edge of the Florida Mesa Planning District (FMPD), with one small piece of property falling within the Southeast District (SED). Specific to FMPD, the property has a land use designation of *Public/Community Facility*, a land use classification specific public land uses such as airports, schools, and government uses. In contrast, residents of the SED elected not adopt a district plan and as a result there are no formal land use classifications. Lands immediately surrounding DRO are primarily designated as *Office/Light Industrial*, and *Ag/Rural Residential* as depicted below. Descriptions of these designations can also be found in Appendix 6.

Map 6-1
DRO Airport – Florida Mesa District Plan



6 AIRPORT

Due to the surrounding uses and lack of traditional zoning measures in the vicinity of DRO, it is important to contemplate the future build out of the area surrounding the airport. As mentioned above, the continued expansion of central utility services following the residential population's movement out of downtown Durango has drawn a correlation of those services being shifted towards DRO. Currently, La Plata-Archuleta Water District (LAPLAWD) has expanded their water servicing area to just northeast of the town site of Oxford, approximately 3.4 miles from DRO. Additionally, South Durango Sanitation and Loma Linda sewer services are located at the junction of State Highway 160 and 172, northwest of the Airport. With that in mind, focusing on higher intensive commercial and industrial uses in and around DRO may be appropriate to consider.

Impacts generated from airports range from high average daily trips (ADTs) to and from the airport, significant noise, and construction of necessary infrastructure to support those activities. Responding to those impacts through planning may require similar uses to be present in the DRO area, with a focus on moving business to the area. Although parcels in the surrounding area may be of residential classifications, the relocation of companies such as British Petroleum America (BP America) to the airport access road highlights the need for industry to be around an airport. Furthermore, with compatible uses operating in the same locale, mitigation typically required for residential establishments would become less of an issue.

To drive compatible development in and around the Airport, infrastructure for utilities needs to be in place. Typically, commercial ventures in La Plata County require higher demands of utility services due to their intensive operations. Specific to water and sewer needs, those entities providing utilities have been expanding their service area east of Durango, encroaching on those outlying areas around the Airport. Further, as discussed in *Element 2 – Infrastructure*, policies contained therein encourage the development of infrastructure where future growth of the County at large has been identified. As a result, one can draw a correlation between those infrastructure demands, in addition to those locations identified for build out with the expansion of the Airport, and furthermore driving commercial and light industrial development to those areas. The goal is to ensure that such development surrounding the Airport does not result in incompatible land uses that could interfere with safe operations and pose hazards to the public.

Focusing on higher intensive commercial and industrial uses in and around DRO may be appropriate to consider.

Fortunately, the Airport is predominantly surrounded by agricultural and low-density residential, which have proven to be compatible land uses since the establishment of the Airport. Given the absence of any formal zoning in this area, the recommendation of the Airport Master Plan limits additional land use controls to monitoring trends in subdivisions in the county and keeping a good dialog with surrounding residents. Such a minimal regulatory approach is partly enabled by the fact that there are no noise sensitive land uses within the 65db day/night average noise contour.

6 AIRPORT

The 65 DNL contour is a standard metric for identifying average noise levels, above which would not be compatible with noise sensitive uses such as residential development.

As a long-term strategy, the Airport Master Plan suggests DRO could benefit from the establishment of an Airport Zone or Overlay Zone that would provide for notification of the airport's proximity to prospective real estate buyers and would allow DRO staff to be notified of any development proposals within the zone so that staff could provide the Planning Commission and Board of County Commissioners comments on the effects that a proposed development could have on airport operations and compatibility.[5]

There are several aspects of the Airport that are recommended in the Airport Master Plan for expansion or redevelopment in the future. This includes a new access road north of the Airport to SH 172 due to the substandard sight distance of the existing intersection of CR 309 (Airport Road) and SH 172. Additionally, extension of the Runway Protection Zone (RPZ) at the south end will require the Airport to acquire two small pieces of land, whereas the north RPZ expansion can occur within existing airport property. The most significant redevelopment at the Airport is the potential for a new terminal, of which the three alternatives are described in the Airport Master Plan.

In recognition of the County's smaller general aviation airport, the Airpark has also been identified for future growth. A recent construction project partially funded by the Colorado Department of Transportation (CDOT) brought central water to the Airpark vicinity, allowing for those commercial and industrial businesses to have a more reliable water supply to continue. As depicted in the map below, a majority of the properties have a designation of *mixed commercial/light industrial*, giving way to an area primed for future development for operations aligning with that designation. Further, the area surrounding the Airpark has been identified for not only commercial and industrial businesses, but also that type of industry that may need reliable access to a localized airport for transportation of goods and services.

[5] Airport Master Plan 2015

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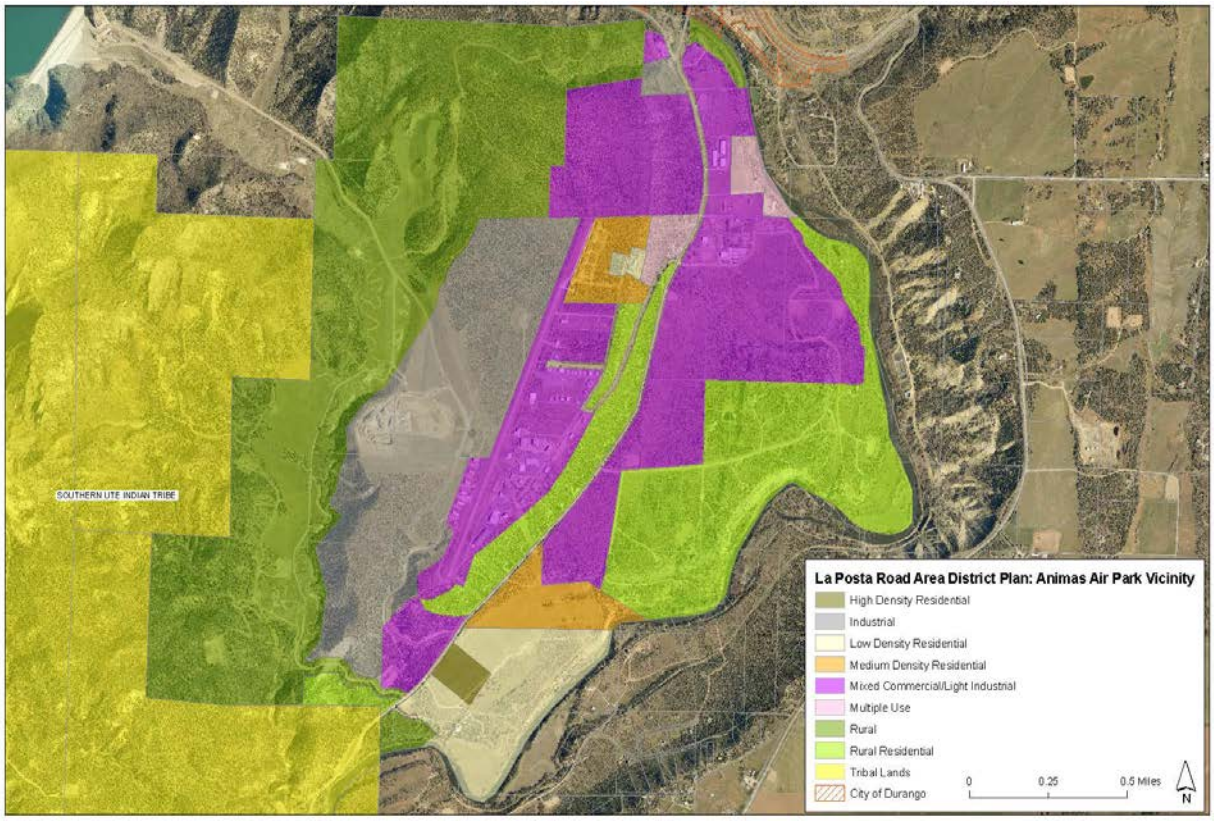
Map 6-2
Animas Air Park – La Posta Road Area District Plan



ECONOMIC IMPACT

In rural counties such as La Plata, economies rely on diverse outputs in terms of contributions to the community at large. Although oil and gas has played a significant role in generating local tax revenues, DRO has become part of that makeup, as one of the economic drivers to not only the County, but the region at large. As stated in a 2013 Economic Impact Study conducted by the Colorado Department of Transportation, "economic contributions of these activities are measured through jobs, associated payroll, and economic output." Through two different lenses, these impacts can be measured on both a local and regional scale.

At the local level, DRO has been a significant contributor to the area at large. DRO employs twenty one (21) full-time employees to oversee the daily functions and maintenance of the airport, with an estimated 2,636 jobs in the County that contribute DRO services. Because of increases noted above, demands for services looking forward should expand this number even further. With a pay roll of $94 million, DRO accommodates more than 200,000 visitors annually, providing an estimated $282 million in economic contributions. Further, working collaboratively with DRO, two big players in the area that can be credited with driving an influx of tourism dollars to the local area are Telluride and Purgatory ski areas. In 2015, DRO began to establish an affiliation

with Telluride Ski Resort to promote the airport as a means of access to the ski area. Additionally, because of the proximity of Purgatory to the town of Durango, local hotels, restaurants, and businesses have benefited from DRO bringing those recreationists to the local area from locations around the country. Moreover, with an increase in airplane size coupled with the introduction of new flight paths to and from DRO, businesses in the local area can expect a steady increase of tourism dollars.

Although smaller in scale and activity, the Airpark has also been a contributor to the local economy. Completed in 2013, Colorado Department of Transportation conducted an economic impact assessment of the Airpark, looking at the operation outputs and tax revenues generated. The Airpark by way of jobs and dollars spent by travelers utilizing the facility contribute roughly $82,000 to the local and regional economy. Additionally, looking forward, the Airpark which as mentioned above has 29 commercial properties in its vicinity will likely increase their tax base contribution in years to come as businesses who need localized air commerce will move into those locations, and will be incentivized to do so as infrastructure needs are accommodated.

Lastly, although aviation facilities are located in the four corners region including Farmington and Cortez, only Grand Junction sees comparable enplanement. As stated in the 2015 Airport Master Plan, DRO saw an estimated 208,476 passengers, with Grand Junction receiving just over 214,000. Cortez saw a significant decrease (-53%) in enplanement servicing just 3,920 passengers[6] over the annum. Because of this, trends will likely give way to DRO being the major aviation facility in the four corners for years to come.

AIRPORT GOALS

Goal 6.1: The Airport should sufficiently meet current and projected future needs of traveling public, persons and area businesses in a manner that is safe, economical, and environmentally sound.

Objective 6.1.A: Continue to identify and promote the maintenance of infrastructure needs for the Airport throughout the County.

Policy 6.1.A1: Develop an inventory of all infrastructure components needed for basic operations of the Airport.

Policy 6.1.A2: Develop and maintain a capital improvements budget with funds appropriated directly for long-term Airport infrastructure improvements.

Objective 6.1.B: Coordinate with local agencies regarding the future build-out of facility and infrastructure components which may be beneficial for the Airport and those operations in the vicinity of such facility and

[6] CDOT Division of Aeronautics Annual Report

infrastructure.

Policy 6.1.B1: Identify an inventory of lands in and around the Airport that could accommodate commercial and industrial uses.

Policy 6.1.B2: Explore funding mechanisms to invest in the County's infrastructure needs that would benefit aviation and commercial facilities.

Policy 6.1.B3: Consider opportunities to incentivize complementary uses within the vicinity of the Airport.

Policy 6.1.B4: Coordinate future build-out efforts of the Airport, as well as surrounding properties, consistently with the adopted DRO Master Plan.

Objective 6.1C: Identify and inventory key roads and travel patterns used by the general public to access the airport from the City of Durango and surrounding areas.

Policy 6.1.C1: Establish a funding mechanism to secure financial contributions providing for maintenance and construction of identified roadways.

Policy 6.1.C2: Work with local transportation agencies to promote uniform traffic patterns for access to Airport facilities.

Policy 6.1.C3: Identify, accommodate, and promote multi-modal forms of transportation county-wide, used for accessing the Airport where applicable.

Objective 6.1.D: Develop planning strategies to identify appropriate land uses along the primary transportation corridors to, and around the airport.

Policy 6.1.D1: Consider the use of corridor overlay's along primary travel routes to the airport from more populated areas, in order to identify and plan for appropriate land uses.

Policy 6.1.D2: Maintain existing and conventional planning techniques to manage compatible/incompatible development, such as monitoring trends in subdivision activity in the county and maintaining a dialog with area residents.

Policy 6.1.D3: Identify and establish strategies to protect wildlife, view sheds, and recreational opportunities within the vicinity of DRO. Such strategies should consider Federal safety standards when applicable.

Policy 6.1.D4: Consider implementing an Airport Zone or Overlay Zone which could clearly articulate compatible uses.

Policy 6.1.D5: Identify and consider adoption of land use code provisions for avigation easements, where appropriate.

Policy 6.1.D6: In accordance with Colorado Revised Statutes (CRS) §24-65-102(1) consider use of *1041 Powers* to manage land uses around the Airport (Area of State Interest).

Policy 6.1.D7: Identify appropriate land uses around and proximate to the airport which promote efficient development necessary for Airport travelers and surrounding businesses.

Policy 6.1.D8: Encourage and guide infrastructure development toward areas identified by a corridor planning strategy.

Goal 6.2: DRO and Animas Airpark should be encouraged to develop in a manner consistent with safety standards in their respective, adopted master plans.

Objective 6.2.A: Continue to participate with updates to the airports adopted master plans.

Policy 6.2.A1: Maintain safety standards as outlined by CDOT, FAA and IATA as applicable.

7 PUBLIC SAFETY

OVERVIEW

Covering roughly 1,700 square miles, La Plata County and its expanding population is home to a unique rural setting which includes mountainous terrain, high country mesas, two Native American Indian reservations and three municipalities. To maintain a viable community, the County must provide for planning and mitigation strategies pertaining to public safety so that the health and welfare of our constituents is accommodated. This element is intended to provide an outline of issues and events which have, or may, affect its residents; and additionally to identify agencies and their coordinated efforts which plan for those events.

LAW ENFORCEMENT

The La Plata County Sheriff's Office is the primary law enforcement agency for the unincorporated County, and also the second largest law enforcement division on the Western Slope. Other agencies providing law enforcement include: the Durango and Ignacio Police Departments; Bayfield Marshal's Office; Department of Homeland Security; Drug Enforcement Agency; Southern Ute and Ute Mountain Ute Tribal Police; Colorado State Patrol; Colorado Bureau of Investigation; Colorado Division of Parks and Wildlife; Federal Bureau of Investigation and Bureau of Land Management; Fort Lewis College Campus Police; Immigration and Naturalization Service; and United States Forest Service.

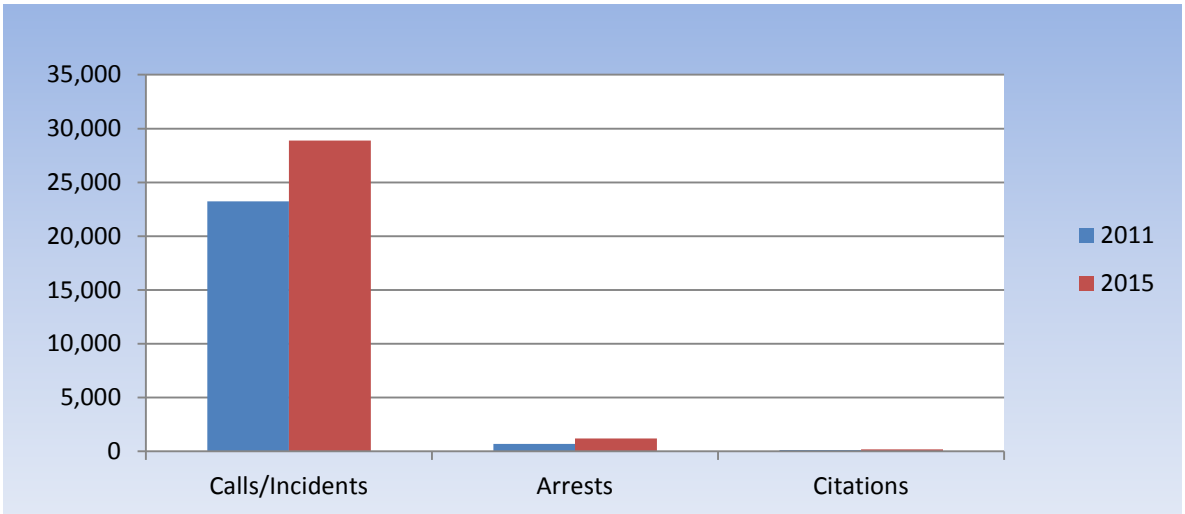
Demand for law enforcement services has grown significantly in recent years. As discussed in *the Growth Trends* section of this document, population in the County has seen a roughly 22% increase since 2000. As population increases and communities grow, a correlation can be drawn with increased crime rates. Ensuring law enforcement is supported by adequate communication facilities and infrastructure, such as fiber optic cables necessary to support 911 dispatch centers, is important as demands increase in the region and is covered further in the *Element 2 – Infrastructure.*

Between 2000 and 2011 the number of incidents investigated by the Sheriff's Office increased by 5%, from 22,100 incidents investigated to 23,227. In more recent years, the reported incidents as documented by the Sheriff's Office have further increased from reporting 23,227 calls/incidents, 705 total arrests, and 131 issued citations in 2011; to 28,890 calls/incidents, 1,201 total arrests and 199 issued citations in 2015; or a 24% increase overall. See *Chart 7-1* for a graphical representation of this data.

The Sheriff's Office is also responsible for operating the jail and the juvenile detention facility. Constructed in 1987, the jail was designed to accommodate the County's inmate population through 2010. Due to increases in crime and stricter sentencing, overcrowding has been prevalent not only in La Plata County, but on a national level as well. As stated in a 2015 report conducted

by the U.S. Department of Justice, local jail populations have increased 21% between 1999 and 2013.[1]

Chart 7-1
La Plata County Sheriff's Incident Data



Source: La Plata County Sheriff's Office

As stated above, the country at large (including Colorado), is experiencing the pressures of increased inmate populations. By contrast, the County jail currently has the capacity to house 184 inmates, with an average daily population of approximately 159 persons. (In 2015, the "old" portion of the County jail was closed, leaving the maximum capacity for inmates at 184.) Currently, the Sheriff's Office is strategizing ways to increase capacity by utilizing vacant space. After renovations of the old County jail space, the capacity at the County jail could increase to 232 inmates. If achieved, the County jail will utilize a parole based treatment program for such offenders, which has proven to reduce recidivism. The Sheriff's Office has identified four (4) counties (Boulder, El Paso, Mesa, and Pueblo) with overcrowded jails that may relocate approximately 48 low level offenders to be housed in the once-utilized jail space. Moreover, by assisting those overcrowded jails, the County would see financial contributions for each inmate transferred.

La Plata, Archuleta, and San Juan County comprise the Sixth Judicial District of Colorado. The District Attorney is elected by voters in these counties and prosecutes criminal cases within the District, working closely with local law enforcement agencies. In recent years some new initiatives have been started in La Plata County, one in particular titled "Alternatives to Incarceration," focusing its efforts on non-violent offenders. Started in January 2009, the District

[1] U.S. Dept. of Justice, Bureau of Justice Statistics: *Census of Jails: Population Changes, 1999-2013 (2015).*

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Attorney's Office coordinated efforts to identify ways to reduce inmate jail sentences by way of strict community supervision, conversion of jail sentencing to electronic home monitoring, and work release programs, to name a few. The District Attorney's Office has also taken it one step further to reduce inmate jail time by instituting an Adult Diversion program where low risk offenders (e.g. driving with a suspended license due to inadequate finances for prior fines) are taken completely out of the court system. This program, utilizing restorative justice[2], has proven to reduce the number of offenders in an already backlogged court system, reduce the likelihood of repeat offenders, and create a strong community bond by hosting community conferences for offenders.

Local law enforcement agencies have also instituted mountain bike patrols in and around the local biking trails of Durango to combat the vagrant issues the community has been facing. Both the City of Durango and the Sheriff's Office have purchased mountain bikes to patrol and document illegal, derelict camps, and to provide further public safety for the users of local trails. The Sheriff's office is also researching prospects for a renovation to the shooting range in the vicinity of Bodo Park, to be updated and used as a regional training facility for law enforcement and fire departments.

As noted in the Human-Wildlife Interaction sub-section of *Element 4 – Environmental Resources*, wildlife on roads create a risk for collisions with vehicles which is a public safety concern. Local law enforcement agencies and the Colorado State Patrol (CSP) are involved with receiving reports and responding to such collisions. To mitigate vehicle-wildlife accidents on highways where higher speeds are of particular concern, the Colorado Department of Transportation (CDOT) has installed wildlife underpasses, fencing, signage, detectors and other safety improvements. Public safety with regard to this issue is primarily addressed through education by a number of agencies and organizations such as Colorado Parks and Wildlife, CSP, CDOT and La Plata County. The Living with Wildlife Advisory Board advises the La Plata County Commissioners on methods of preventing and resolving wildlife conflicts which includes providing public education for drivers.

FIRE AND EMERGENCY MEDICAL SERVICES

In Colorado, fire protection districts are created under and operate within the statutory provisions of the Special District Act (Title 32, Article 1, C.R.S.). Once created, the fire protection districts are governed by a board of directors elected by registered voters who either reside or own property within the boundary of their associated district. The local districts are primarily funded by property tax mill levies. Funding sources also include fees and agreements for the provision of services. The board of directors has autonomous authority for managing their district within the scope of the district's authority, which includes a *Service Plan* approved by the Board of County

[2] Restorative Justice: a system of criminal justice that focuses on the rehabilitation of offenders through reconciliation with victims and the community at large.

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Commissioners.

Fire protection in the County is provided by four distinct protection districts: Durango Fire (DFPD), Fort Lewis Mesa (FLMPD), Los Pinos (LPFPD), and Upper Pine (UPFPD). Due to an increase in demand for services, coupled with the decrease in recruitment/retaining of volunteers, all departments employ both paid full time and volunteer staff to provide around the clock coverage within their districts (including fire and ambulance service).

Fire protection districts routinely provide comments specific to project design, as projects process through the County's development review. Although the districts do not play a major role in determining the location of new developments, their input typically comes in the form of site specific development fire flow requirements which often can be correlated to the location of development (based on water resource, and other infrastructure availability). Ultimately, the goal of the fire protection districts when dealing with new or established development proposals is to ensure their ability to access and have available means to combat fires at an appropriate level. In rural, mountainous communities such as La Plata County which lack infrastructure, this often can prove to be a challenging endeavor.

The interface of development with wildfire is another important aspect of fire protection. La Plata County, having various land jurisdictions, requires coordinated efforts on this front as well. The United States Forest Service, responsible for fire suppression and emergency events on federal lands, is an integral part of the fire protection service makeup. Covering approximately 1.8 million acres, the San Juan National Forest often is contiguous to residential development creating an interface that requires fire mitigation. Although located in Bayfield, the U.S. Forest Service Columbine Range District is responsible for those federal lands in the four corners area. Refer to *Element 4 - Environmental Resources* for background information regarding wildfire and related firefighting service providers.

As land prices continue to rise in the City of Durango, development has been occurring in more rural parts of La Plata County. With this in mind, service levels as provided by the fire protection districts have become more complicated due to the lack of water availability to combat fires, in addition to difficult terrain when accessing properties. DFPD alone, with a servicing area of approximately 375 square miles, on average fields about 4,800 calls per year. As reflected on Maps 7-1 through 7-4, fire protection district boundaries can be seen as compared to fire house locations, and the proximity to varying densities of the County's residential population.

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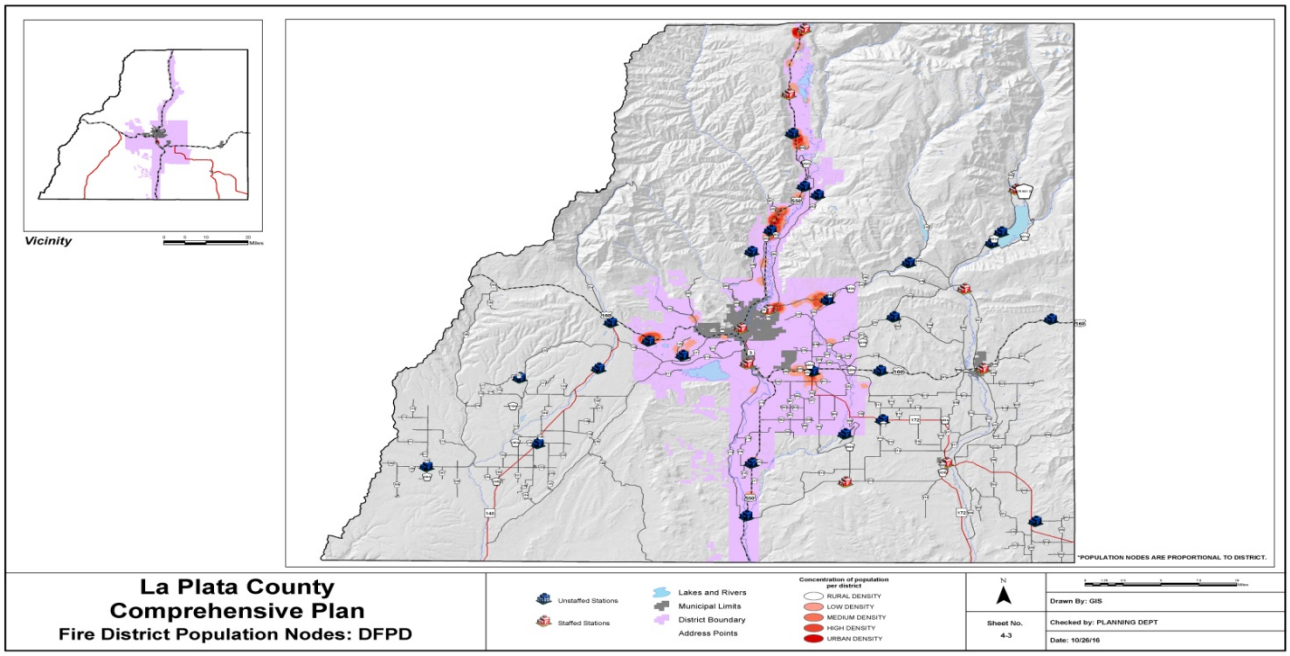
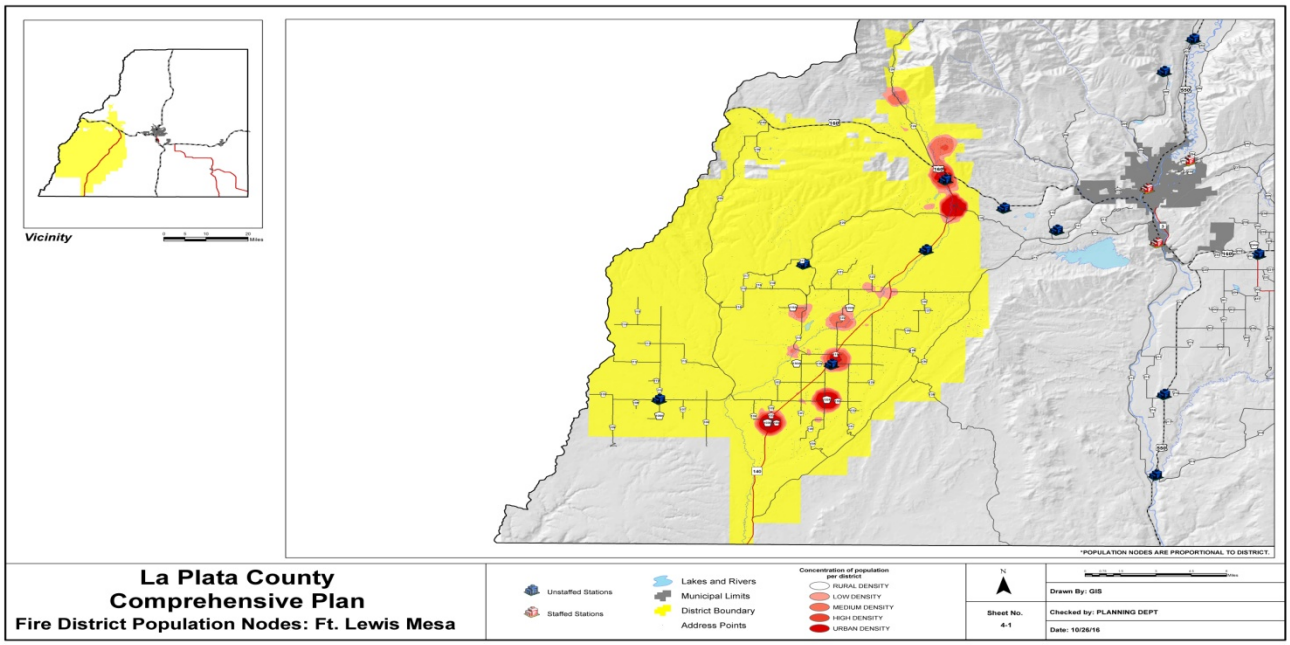
Map 7-1
Durango Fire Protection District



Map 7-2
Fort Lewis Mesa Fire Protection District



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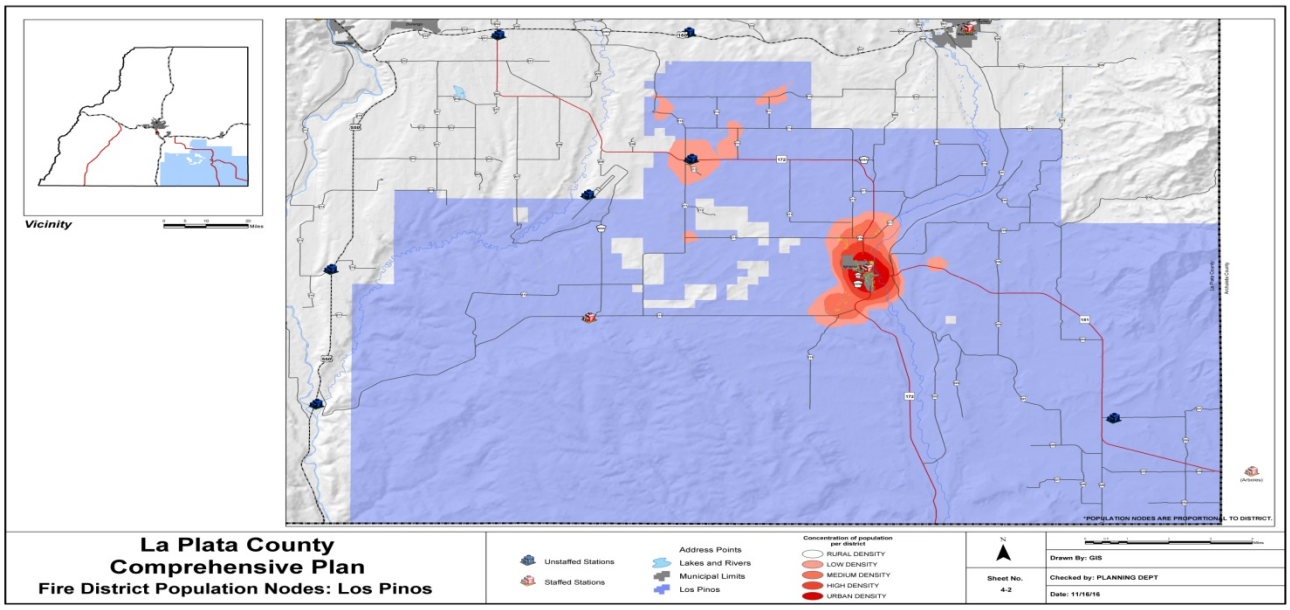
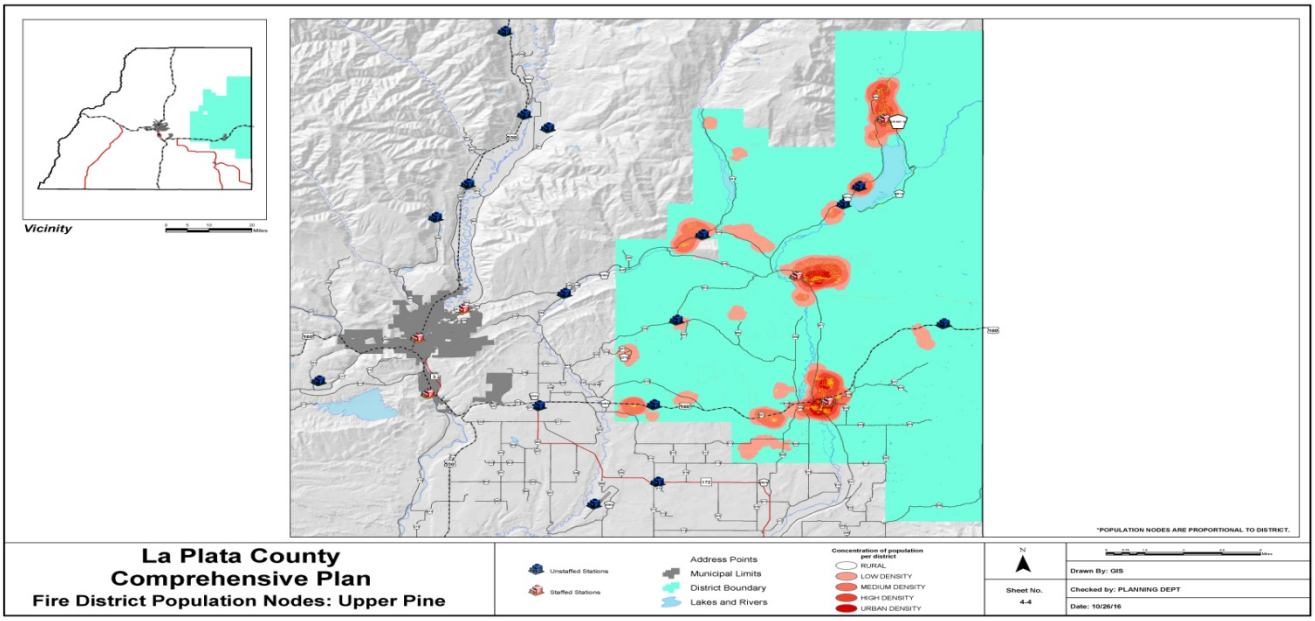
Map 7-3
Los Pinos Fire Protection District



Map 7-4
Upper Pine Fire Protection District



Fire protection districts may also assume responsibility for emergency medical services (EMS), to include ambulance transport, in varying capacities. The state is broken into eleven regions, each of which has their own Regional Emergency and Trauma Advisory Council (RETAC). The four

corners area includes five counties within their RETAC: Archuleta, Dolores, La Plata, Montezuma, and San Juan, each of which provides representatives to the Council. Looking further within our regional area, La Plata and Montezuma also have an Emergency Medical Services Council, which is required when licensed ambulance services are provided; this Council is a 501(c)(3) not-for-profit corporation which works collaboratively at the County level. Statutorily, ambulance and personnel are separated within the State's purview (notably when a County provides licensing for ambulatory services). It is the individual responsibility of the County for oversight of ambulance licensing, whereas the State monitors EMS services and has direct authority over all individual medical practice via the Colorado Department of Public Health and Environment (CDPHE).

Key Point
DFPD in 2015 received roughly 4,800 incident calls; approximately 80% of which were EMS/ambulance related.

With the exception of Fort Lewis Mesa, each fire district supports ambulance services within their district utilizing a number of medical facilities located in and around the County (see map below for locations) as well. The Fort Lewis Mesa area is served with ambulance service primarily through a mutual aid agreement with DFPD. EMS focuses on all types of medical trauma, which is provided by each of the fire districts utilizing 911 communication centers as the access point for dispatch. Depending upon the location of the event, district boundaries will determine which entity will be called to respond. As stated above, DFPD in 2015 received roughly 4,800 incident calls, approximately 80% of which were EMS/ambulance related. Typically, those calls are population based, meaning where there are higher intensive uses, more call volume can be correlated with those areas (e.g. Horse Gulch needing trauma/medical services).

When needed, emergency air/helicopter transport services are available as well. Flight for Life, based out of Mercy Regional Medical Center, and operations based out of Farmington and Santa Fe, New Mexico, can be utilized to access difficult terrain. Within mountainous regions such as La Plata County, factors such as landing locations, weather issues, and accessible terrain can determine if the helicopter service is a viable option. These entities perform inter-agency trainings as well, fine tuning airlift patient transport services with emergency medical services from around the four corners region. When the service is limited, other collaborative medical resources can be called upon for assistance, including La Plata County Search and Rescue and Purgatory Ski Patrols.

Looking forward, the fire protection districts and EMS are anticipating a continued increase in call volume due largely in part to an increase in population within the County. As population increases, so will events and gatherings requiring dedicated services from emergency personnel, which may require the County to pursue guidance strategies and funding measures so those agencies can perform at the highest potential service level. Moreover, to keep up with the changing landscape, an update to the La Plata County EMS resolution may prove to be fruitful to

stay in line with current state laws, in addition to fostering relationships which assure collaborative efforts are available in times of emergency events.

Key Point
Rather than the ultimate exclusion of development in those [floodplain] areas, when analyzed early in the proposal stages, strategic steps can be implemented to allow for safe development.

There are also needs for specialized emergency services, such as those at local airports. Aircraft rescue and fire fighting (ARFF) is a special category for fire fighting on airports for the response, evacuation and rescue of aircraft passengers and crew. The Durango-La Plata County Airport (DRO) has professional aircraft firefighters with ARFF equipment. ARFF is not required at airports such as Animas Airpark which does not have regular passenger service containing 10 or more passenger seats. Aviation-rated fire extinguishers are available at Animas Airpark, and the Durango Fire Protection District responds to emergencies there. Additional information for the facilities at DRO and Animas Airpark are contained in the respective master plans located in Appendix 14 and see list of references.

Identifying facilities for medical treatment is essential in determining service levels as well as target points for emergency responders. Where these are located and distributed throughout the County has been identified on Map 7-5.

OFFICE OF EMERGENCY MANAGEMENT/SEARCH AND RESCUE

La Plata County operates both an Office of Emergency Management (OEM) and Search and Rescue (SAR). OEM is responsible for emergency planning with coordination housed within the Community Development Services (Building Department), staffed with one full time director. The director of OEM is also charged with collaborating efforts with La Plata County SAR, a volunteer organization under the purview of the Sheriff.

Drafted in 2013, the La Plata County Hazard Mitigation Plan[3] was created in a multi-jurisdictional effort to establish a document that outlines hazard mitigation and planning tools to better protect the people and property within La Plata County. Utilizing state and federal standards, types of hazards are identified within the document in addition to mitigation measures which can be implemented regarding potential hazards. By prioritizing locations, types and standards via this document, La Plata County and those entities providing emergency services have an established baseline to work collaboratively during an event.

[3] See list of references

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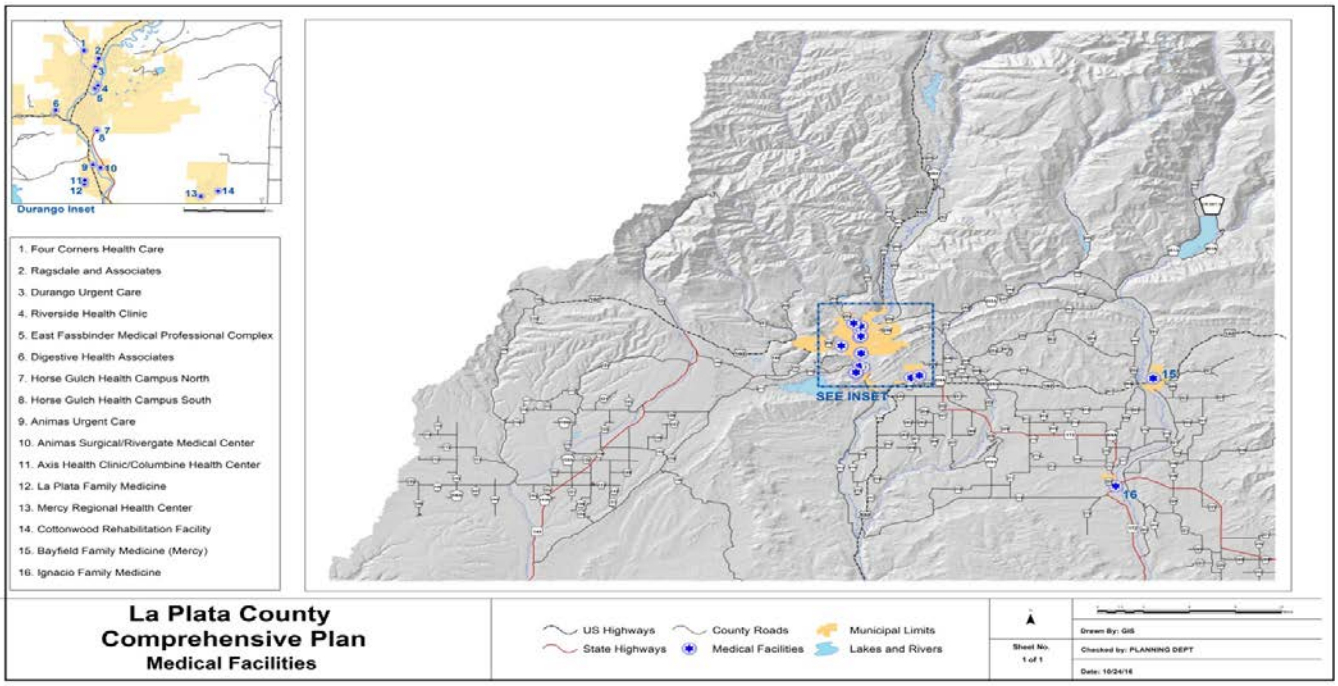
Map 7-5
Medical Facilities



FLOODPLAIN MANAGEMENT

The La Plata County Community Development team is tasked with the administration and regulation of floodplain management. In 2010, a much needed collaborative effort took place when a digital remapping process established flood zones in La Plata County, specifically focusing on the Animas River, Pine River, and Vallecito Creek drainages. Without this mapping system in place, floodplain studies often impacting development proposals were extremely expensive to perform for private entities. Accurate volumes were noted and calculated as part of this exercise, when historically those numbers were once unavailable. Currently, this mapping system is available for the public to utilize when contemplating development proposals via the La Plata County Geographic Information Systems free website[4].

Floods are viewed as a "community disaster", meaning when one occurs, a coordinated effort at both the local and state level respond to associated impacts. Working collaboratively with the Fire Districts, La Plata County will be first responders to assess the situation at hand and determine if the event is within their management threshold. Should the flood be greater than what the local authorities can manage, via a declaration process, the State can utilize resources to provide assistance in the forms of financial, construction, and personnel.

[4] Website: http://lpcgis.laplata.co.us/laplatajs/

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In the context of development, floodplain management is regulated by a three-fold collaborative effort:

1. During initial project proposals, Planners are tasked with identifying the location and potential impact to the development project that may be caused by the floodplain[5] or floodway[6];

2. The Building Department then identifies site specific management for developments in those areas to curtail the potential for impacts; rather than the ultimate exclusion of development in these areas, when analyzed early in the proposal stages, strategic steps can be taken to allow for a safe development to occur in those areas while also implementing control measures to protect the site; and

3. Should it be challenged, the Board of County Commissioners are the appellate body for floodplain appeals.

PUBLIC SAFETY GOALS

Goal 8.1: To ensure emergency preparedness planning and emergency services continues to meet or exceed the growing demands of the County's constituents and visitors.

Objective 8.1.A: Continue to work and coordinate with public safety and emergency service providers to ensure adequate development standards are implemented.

Policy 8.1.A1: Identify and obtain comments from key emergency service providers early in development process.

Policy 8.1.A2: In collaboration with emergency service providers, promote development standards to address unique characteristics of development in La Plata County.

Policy 8.1.A4: Identify and update pertinent documents to make sure emergency personnel have adequate resources to perform vital functions.

Objective 8.1.B: Continue to collaborate with emergency service providers to identify hazardous areas utilizing current technologies, and determine appropriate mitigation requirements for development in those areas.

Policy 8.1.B1: Continue to develop floodway mapping for all major drainages in La Plata County.

Policy 8.1.B2: Continue to coordinate with emergency service providers toidentify mitigation measures for development in and around the urban wildfire interface.

[5] Floodplain - the area that has been designated with the potential for 100-year volume discharge flows may occur.
[6] Floodway - the area that's been designated on flood hazard maps identifying where highest velocities, highest erosion, highest debris movement, and highest impacts of flood waters may occur.

Policy 8.1.B3: Promote collaborative efforts between governmental agencies to develop better response strategies when dealing with an emergency event.

Policy 8.1.B4: Encourage commercial development near existing infrastructure to ensure emergency service entities have adequate water and access to perform their duties.

Objective 8.1.C: Establish a system of measurement in order to regularly assess and evaluate level of service standards for public safety and emergency services within the County.

Policy 8.1.C1: Maintain and map an inventory of data to evaluate existing levels of service from each public safety resource including Fire, EMS, Law Enforcement, and Medical Facilities.

Policy 8.1.C2: Establish targeted level of service standards for measuring and projecting growth impacts.

Policy 8.1.C3: Inventory existing emergency response agencies to ensure future service to County residents will be a viable option.

Policy 8.1.C4: Coordinate with the various agencies in La Plata County associated with public safety to identify adequate levels of service necessary in order to accommodate weighted growth within the County (existing and projected).

8 EXTRACTIVE RESOURCES & RENEWABLE ENERGY

OVERVIEW

Resource extraction is the removal of natural resources from their place of discovery. Extractive resources are considered non-renewable resources. The primary extractive resource in La Plata County is natural gas, along with some oil. Sand, gravel, coal, gold, and silver are also mined in the County. Extractive natural resources play a major role in the County, both in terms of fiscal impacts as well as impacts upon the physical environment and local residents. The State Legislature has adopted Title 34 Mineral Resources to acknowledge the importance of commercial mineral deposits for the State's economy (C.R.S. § 34-1-301 et seq.). As a result of La Plata County's expanding rural population (See Growth Trends, of this Plan), increasing conflicts have occurred between the private rural population and extractive industries. The challenge is to find a balance between accommodating extractive resource development with an increasing population and to develop ways for mitigating potential conflicts between extractive resource development activities and other land uses.

> ***Key Point***
> *Extractive natural resources play a major role in the County, both in terms of fiscal impacts as well as impacts upon the physical environment and local residents.*

There is a significant regulatory network in place for extractive resources in the County which involves multiple agencies at the federal, state, and local levels. Each agency involved with the various extractive resources industry has their prescribed roles. Therefore, local coordination with the various agencies is a primary interest of the County. It is important for La Plata County to be aware of the activities under its jurisdiction and to further coordinate with other regulatory agencies as well as local residents to ensure areas of concern are addressed. The State of Colorado provides legislation for local regulation that could be used to address various subjects of this Element, such as hard mineral extraction and renewable solar power generation on a large scale. That legislation is termed "*1041 Powers*", which the County does not currently utilize, however may wish to pursue in the future.

Renewable energy is an emerging part of the County's energy portfolio. Renewable energy is energy generated from natural processes that are continuously replenished rather than from fossil fuels. An increase in renewable energy production has the benefits of reducing the community's dependency on fossil fuels, reducing the need to bring in electricity from outside the area, as well as the associated costs; and providing a more efficient usage of the commodity. One important goal of supporting and promoting local projects is the positive economic impact to a variety of local businesses, companies and contractors. There is considerable support in the County for additional local renewable energy projects. Although there are many positive aspects of developing renewable energy resources, each of the potential sources of renewable energy has its own drawbacks. The technology associated with many renewable energy projects is fairly new and the impacts from these endeavors may not be fully realized. Although there are several

regulatory agencies involved with the development of renewable energy, the regulatory framework for the industries involved has not yet been entirely established.

BACKGROUND

OIL AND GAS

The southern portion of La Plata County lies within the northern extent of the San Juan Basin, a geologic structural basin. The San Juan Basin was the fourth largest gas basin in the United States as of 2013 (U.S. Energy Information Administration). Table 8-1 shows the number of oil and gas wells and related facilities in the County. There are currently 3,288 active wells in La Plata County, with 2,019 located on private lands. The location of these wells is shown on Map 8-1.

Table 8-1
La Plata County Active Oil and Gas Wells and Facilities

	Total	No. on Private Surface
Active oil and gas wells*	3,288	2,019
Injection wells	39	22
Compressor stations	7	6
Treatment facilities	4	3

*Includes wells with a status of active, drilling, producing, shut in, temporarily abandoned, and waiting on completion.
Source: Colorado Oil and Gas Conservation Commission, 2015

Exploration and development in the San Juan Basin is largely found in the Ignacio-Blanco field. This field was discovered in the 1940s, although oil and gas deposits were first discovered in La Plata County in the 1890s. The Ignacio Blanco field comprises the portion of the San Juan Basin within La Plata County. Production in the field is from the Dakota Sandstone, Fruitland Formation, Pictured Cliffs Sandstone, and the Mesaverde Group. Until the 1970s, most of the gas produced in the basin came from conventional wells completed in the Dakota Sandstone, Mesaverde Group, and Pictured Cliffs Sandstone, which includes the Fruitland Sand. These formations typically yield wet gas with small quantities of produced water and associated hydrocarbon liquids. Production from conventional wells in the Ignacio-Blanco field peaked in the 1990s, although there is still potential for limited development.

Coalbed methane (CBM) is currently the primary focus of natural gas development in the County. Production from CBM reservoirs in the San Juan Basin, primarily the coals of the Fruitland Formation, began in the late 1970s and accelerated in the 1980s up to the present time. The San Juan Basin has become the most productive coalbed methane basin in North America (EPA 2004). In 2012, La Plata County was the nation's tenth largest natural gas producing county (DOLA

2015). CBM development in La Plata County is expected to continue in the future.

CBM wells are considered non-conventional wells since they must be dewatered by pumping water from the well. The decrease in water pressure allows methane to desorb from coal in the formation and flow as a gas up the well to the surface. Therefore, gas production increases over time instead of decreasing. The volume of water produced from most CBM wells is high compared to conventional natural gas wells. As a by-product of oil and gas development, produced water must be disposed. In La Plata County, produced water is typically treated and reused in drilling operations or injected back into an unproductive formation through an injection well.

The most common formations targeted for injection in La Plata County are the Mesaverde Formation, at an average depth of 5,000 feet below the ground surface, and the Entrada Formation, at an average depth of approximately 7,500 feet below the ground surface. The Colorado Oil and Gas Conservation Commission (COGCC) issues Class II Underground Injection Control permits on non-tribal lands, while the Environmental Protection Agency (EPA) regulates injection wells on tribal lands. There are currently 39 wells in La Plata County permitted under the Underground Injection Control program, although not all are actively injecting (Table 8-1) 22 of these wells are located on private surface. The location of the injection wells in the County is shown on Map 8-1.

Another component of oil and gas development is the associated infrastructure needed to transport and process the oil and gas once it has been pumped from the ground. A network of pipelines leads from individual well pads to larger gathering lines that feed into processing facilities. Transmission pipelines transport processed natural gas and hydrocarbon liquids over long distances to customers and distribution facilities. Compressor stations are needed along natural gas pipelines depending on the distance and terrain to help move the gas through the pipeline. Pipelines for the transport of produced water to injection facilities are also common throughout the County.

The number of oil and gas related facilities permitted through the COGCC, and within La Plata County, is shown in Table 8-1.

Impacts:

IN 2002, a La Plata County Impact Report was prepared in response to proposed infill development within the County. The report assessed the potential impacts that result from and appropriate mitigation measures for CBM development. The County has already implemented a majority of the recommendations made in the report through changes to the La Plata County Land Use Code (LPLUC) Chapter 90 regulations.

The establishment of oil and gas facilities can have various impacts to the surrounding environment and local residents. The most noticeable impact is visual disturbances from the

clearing of vegetation and the introduction of equipment on the natural landscape (as with any development activity). Noise during construction and operation, is also similar to other types of development activity, and considered a noticeable impact. Other land use impacts could potentially include the loss of otherwise usable land for other forms of active development or uses, and the potential convergence of residential and oil and gas development over time. Development in rural areas of the County might create an impact on sensitive wildlife habitat. Oil and gas development contributes to traffic volumes on public and private roads in the County. Heavy truck traffic associated with oil and gas activities increases the costs of road maintenance for the County. Construction and traffic associated with oil and gas also contributes to an increased potential for noxious weeds to become established along roadways.

Oil & gas development also must find a balance to other impacts such as health and safety within the community. These efforts usually surround ensuring quality of proximate surface water quality from surface disturbances, and potential erosion or sedimentation from surface run-off. Concerns regarding impacts to the water quality in water wells have been expressed by the general public. In 2000, the COGCC began requiring routine domestic water well sampling for operators drilling new CBM wells in the San Juan Basin. A data analysis report in 2011 identified 71 water wells out of 2,038 containing thermogenic (originating from the earth rather than biologic sources) methane, although a trend was not identified that directly related the occurrence of methane to oil and gas development activities (*San Juan Basin Water Quality Analysis Project, AMEC Geomatrix Inc.*). Methane, nitrous oxides, and volatile organic compound emissions from wells and associated equipment have the potential to impact air quality. Preventative measures for public safety risks are typically focused toward the presence of large equipment on well pads during construction or operation, as well as, the potential for explosions due to the presence of volatile gases.

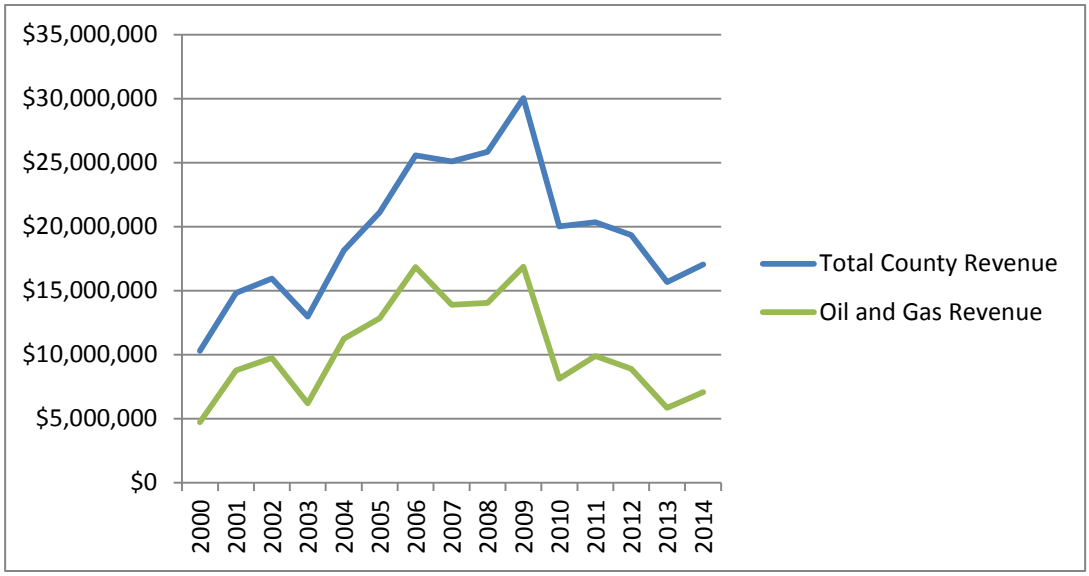
> ***Key Point***
> *Oil & gas development also must find a balance to other impacts such as health and safety within the community.*

The presence of the oil and gas industry has facilitated rural development in many areas of the County through the construction and maintenance of roads, as well as, the extension of power lines to electrify well equipment. The La Plata Energy Council (LPEC) and local operators maintain approximately 165 miles of private roads within the County through cost sharing.

Oil and gas development represents a significant source of revenue for the County and community. In fact almost half of the County's tax base (Table 8-1) is derived from the oil and gas industry. The County also receives revenue from state severance taxes and federal mineral lease payments paid to the State. Severance tax is imposed on non-renewable natural resources that are removed from the earth in the State of Colorado. Federal mineral lease payments are the portion of the revenue from leasing federal minerals that is paid to each state under the Mineral Lands Leasing Act of 1920. The State of Colorado distributes a portion of these revenues to local

governments. Chart 10-2 shows the severance tax and federal mineral lease distributions received by the County from 2009 through 2014. The municipalities of Durango, Bayfield, and Ignacio also receive severance tax and federal mineral lease distributions. The Durango, Bayfield, and Ignacio school districts benefit from property tax revenue and federal mineral lease distribution payments as well. Many residents also receive royalty payments for their mineral interests. Revenues to local governments, special districts, and royalty owners are based on commodity price and production rate and can fluctuate widely (Chart 8-1).

Chart 8-1
Total La Plata County and Oil and Gas Property Tax Revenue: 2000 - 2014



Source: La Plata County Assessor's Office

The oil and gas industry directly accounts for approximately 1.6% of the jobs in the County (DOLA). Mineral and energy production constitutes an important base industry, which in turn produces indirect and induced jobs within La Plata County.

Regulation:

Surface and mineral ownership within La Plata County includes private, federal, tribal, and state interests. The regulatory agencies involved with permitting and overseeing an individual well depends on the surface ownership and the ownership of the minerals being developed. Often, there is a difference in ownership between the surface land and the sub-surface minerals, a situation known as split-estate. In the case of directional wells, the minerals being developed may not be the minerals directly under the surface location. In such situations, there is an overlap in regulatory jurisdiction and multiple agencies may be involved in the permitting and oversight of a well.

8 EXTRACTIVE RESOURCES & RENEWABLE ENERGY

In 1988, the County added oil and gas regulations to its land use system. The County derives the authority to regulate land use pertaining to oil and gas development under the Local Government Land Use Control Enabling Act (C.R.S. § 29-20-101 et seq.). Specific requirements for oil and gas facilities in La Plata County are provided in Chapter 90 of the LPLUC. The Chapter 90 regulations have been revised multiple times since 1988 to address new issues and remain consistent with COGCC regulations. Chapter 90 regulations apply to oil and gas related surface development on private lands within the unincorporated area of the County. The County does not regulate any down-hole actions involved with the drilling, production, or plugging of a well. The County has also agreed through a Memorandum of Understanding (MOU) with the Southern Ute Indian Tribe to refrain from regulating tribal-owned facilities on non-Indian fee lands within the boundaries of the Southern Ute Reservation.

The main regulatory agency for oil and gas development in Colorado is the COGCC. The COGCC has developed rules for the oversight of the various aspects of oil and gas development within the State. The COGCC also has a Local Government Designee (LGD) program to promote communication and coordination between the COGCC and local county or municipal governments. La Plata County is an active participant in this program.

Federal and tribal trust minerals are administered by the Bureau of Land Management (BLM). The COGCC has a MOU with the Southern Ute Indian Tribe in which they have agreed to refrain from regulating tribal trust lands, minerals or the Southern Ute Indian Tribe within the boundaries of the reservation. Although the BLM has the primary regulatory authority for down-hole actions in tribal wells, their authority regarding surface disturbance is limited on private lands. In situations where a well is located on private surface and developing tribal minerals, unless the operator represents the Southern Ute Indian Tribe, the County is the main regulatory authority over surface disturbance.

The Office of Pipeline Safety under the Pipeline and Hazardous Materials Safety Administration, which is part of the U.S. Department of Transportation, oversees interstate pipelines. In Colorado, intrastate pipelines are regulated by the Colorado Public Utilities Commission (PUC) Gas Pipeline Safety Section. The PUC is charged with overseeing the safety of gathering, transmission, and distribution pipelines. COGCC pipeline jurisdiction generally pertains to flowlines (before entering the gathering system) along with regulating the reporting of spills, releases or leaks from flowlines and gathering lines. The La Plata County Office of Emergency Management (OEM) is also notified of any leaks or spills. The LPLUC requires an individual minor facility permit for any pipeline over 1,320 feet long. Major facility permits are required from the County for transmission lines.

In addition to the main regulatory agencies for oil and gas, operators are also required to obtain permits with several other agencies. The Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division issues stormwater permits for the construction of well

pads greater than 1 acre. The U.S. Army Corps of Engineers (USACE) issues permits under Section 404 of the Clean Water Act for any activities that will result in the release of dredged or fill materials into Waters of the U.S., including jurisdictional wetlands. Projects that require an individual Clean Water Act-Section 404 permit will also require Clean Water Act-Section 401 certification by the CDPHE Water Quality Control Division. Section 401 certification is under the jurisdiction of the EPA on Southern Ute Tribe lands and the Ute Mountain Ute Tribe, on Ute Mountain Ute lands. As a result of the Colorado Supreme Court ruling in Vance vs. Wolfe, 205 P.3d 1165 (Colo. Sup. Ct. 2009), all CBM wells that produce groundwater are required to obtain a well permit from the Colorado Division of Water Resources. Air emissions are regulated by the CDPHE Air Pollution Control Division. The Southern Ute and Ute Mountain Ute Tribes administer their own air quality programs for major sources within reservation boundaries, while the EPA regulates minor sources on tribal lands.

SOLID MINERALS

Coal

The Durango-Pagosa Springs coal field occurs along the northern margin of the San Juan Basin. Coal may be extracted by surface, subsurface, or in situ mining methods. Coal has been mined in La Plata County since the early 1880s. La Plata County's early coal mines were located around Durango and expanded to Wildcat Canyon, Hesperus, Hay Gulch and Bayfield in later years. The domestic market for coal provided a steady demand, which was later supplemented by the industrial needs of smelters and the railroads associated with hardrock mining in La Plata Canyon and Silverton. The smelters' demand for coal lasted until 1930. Small mines providing coal for domestic use operated in the Hay Gulch and Hesperus areas into the 1970s. These mines have largely been abandoned.

One large scale coal mine, the King Coal Mine, opened in Hay Gulch in 1936. Operations at the original mine ceased in 2009 and those portals have been sealed. The King Coal II Mine surface facilities were constructed in 2008 and are still active. The King Coal II Mine is a subsurface mine that develops federal minerals. The location of the lease is shown on Map 8-2. Coal is hauled from the site by truck, generally to a rail head located in Gallup, NM. The mine primarily supplies cement companies, but maintains a link to the past as the supplier for the Durango & Silverton and the Cumbres & Toltec railroads. Coal production in the County is expected to continue, although the distance to rail lines for the transport of materials may limit the potential for significant expansion.

8 EXTRACTIVE RESOURCES & RENEWABLE ENERGY

Sand and Gravel

Sand, gravel, and stone are used for building materials, aggregate, bulk fill, riprap, road surfacing, decoration, and landscaping. Deposits of common variety mineral materials occur everywhere in the County, although common sites for natural concentrations include canyon walls, stream channels, talus slopes, landslides, ancient river terraces, glacial moraines, and floodplains. Sand and gravel are typically mined using open pit or quarrying methods.

There are a total of 40 active sand and gravel pits permitted by the Division of Reclamation Mining and Safety (DRMS) in La Plata County. Two of the pits are owned and operated by La Plata County for road construction projects, the Crader Pit and Marvel Pit. Map 8-2 shows the location of active sand and gravel mining permits in the County. Due to the consistent need for sand, gravel, and stone in building and construction, the presence of pits and quarries is expected to continue in the County. The location of these pits will likely change as resources are exhausted and new pits are developed.

Hardrock Mining

Historically, La Plata Canyon has been the location of primary interest for placer activity and hardrock mining. Mining of placer gold began along the La Plata River in 1873. Miners quickly graduated from panning for gold to hard rock mining for silver. The early 1900s and the 1930s saw the greatest production in the La Plata Mining District as output switched from silver to gold. The La Platas produced mostly gold, but the ores also contained silver, lead, and copper. When the federal government suspended gold mining in 1942 and called for mining only the minerals needed by the war effort, the La Plata production came to an end. Other historic mining districts in La Plata County never accounted for much mineral production.

There are currently four active gold mines in La Plata County (Map 8-2). Two of those mines are also permitted for silver mining. The high price of gold and other precious metals may motivate new small claims in the area of La Plata Canyon, but major mining operations are not expected to develop in the County. Minor recreational gold placer activity occurs in the Animas and La Plata rivers and major tributaries.

Limestone, valuable for certain chemical and industrial uses, occurs along the Animas River Valley. Currently, there is no active mining of limestone in the County, although the potential for future interest may exist. Historic proposals to mine in the area led to the withdrawal of deposits by the federal government to protect scenic values along the U.S. Highway 550 corridor.

Impacts:

Generally, ground disturbance involved with surface mining, open pits, and quarries creates the

potential for visual impacts, habitat loss, and exposed surface soils. The exposure of soils may result in erosion, dust, and sedimentation in surface water. Invasive species may be a concern in areas of disturbed and stockpiled soils and compacted areas. Mine subsidence can occur with subsurface mining, whereby the ground level lowers as a result of materials having been mined beneath. Mining operations also have the potential to cause air quality impacts through emissions from vehicles, large construction equipment, and generators used on a regular basis; particulates from blasting activities or crushing operations; possible releases of methane, hydrogen sulfide, and coal dust through the venting of underground coal mines; or fugitive dust from exposed soil surfaces. Noise impacts can also occur with the use of large equipment and blasting.

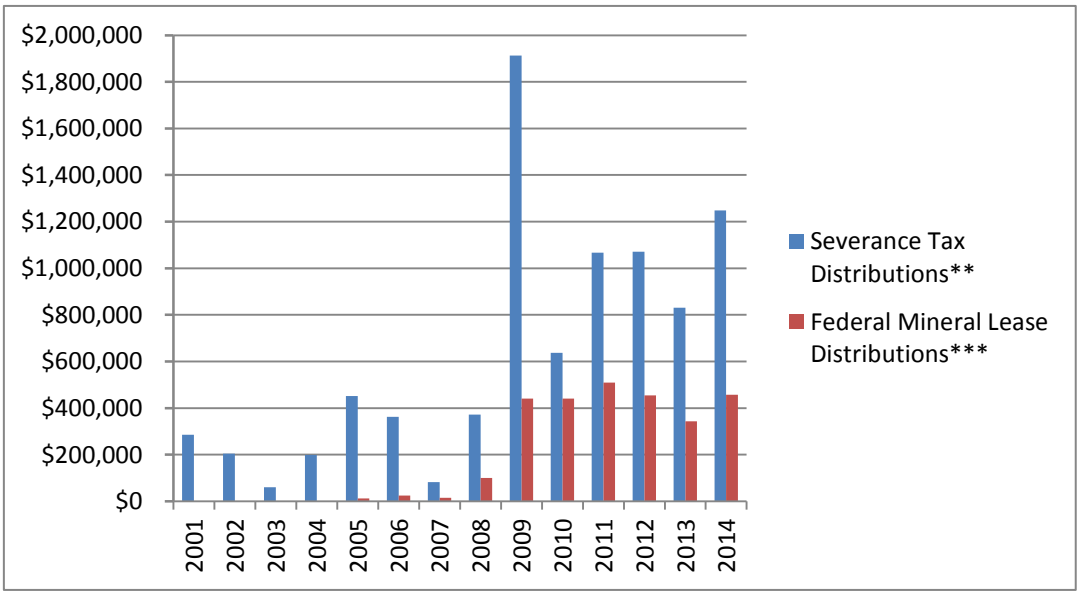
Mining alters the landscape and its natural hydrologic system. This can create a need to redirect surface water drainages. Acid mine drainage is caused when water flows over or through sulfur-bearing materials, exposed by mining activities, forming solutions of net acidity and can be an environmental challenge for some mines. Acidic runoff is not considered to be a problem at sand and gravel mining operations since the materials being mined do not have high concentrations of heavy metals. Some mining activity has the potential to affect the quantity and quality of groundwater supplies by cutting into aquifers. Blasting operations or subsidence may break up impermeable layers of rock underground, allowing or diverting the flow of groundwater. Aggregate and stone mines must use water to wash some materials on site and control dust, creating potential impacts to local water resource supplies. The most recognized health issues associated with surface mining involve airborne particulate emissions.

Subsurface mining poses different risks than surface mining, such as possible oxygen deficiency, potentially explosive gases, hydrogen sulfide, coal dust, collapse of walls or roofs in the mine, or the flooding of a mine if an aquifer is breached. There exists the potential for fires to erupt and burn in coal seams. Large volumes of mining waste could be generated because of the high waste-to-product ratios associated with producing most ores. Waste material may contain naturally occurring materials such as lead and mercury. Increases in heavy vehicle traffic on local roadways may occur during the transportation of the materials being mined. Road impacts could create several issues, including the potential to increase the cost of maintaining roads.

Positive economic impacts to the County result from severance tax distributions for coal and metal mining and federal mineral lease distributions for the leasing of federal coal minerals. The severance tax and federal mineral lease distributions shown in Chart 8-2 also include payments received by La Plata County for coal and metal mining in the County. These industries are also a significant source of jobs for County residents.

8 EXTRACTIVE RESOURCES & RENEWABLE ENERGY

Chart 8-2
La Plata County Severance Tax and
Federal Mineral Lease Distributions Received: 2001 – 2014*



Direct distribution data prior to 2009 was calculated differently than later data due to legislative changes (HB07-1139, HB08-1083, SB08-218)
***Includes amounts from coal, metal, and oil and gas severance taxes*
****Includes coal and oil and gas federal mineral leases*
Source: Colorado Department of Local Affairs

Regulation:

Within the DRMS, a division under the Colorado Department of Natural Resources, the Office of Mined Land Reclamation administers rules and regulations for mining and reclamation through the Coal Regulatory Program and the Minerals Regulatory Program. The Coal Program issues permits for coal mining and reclamation, and approves notices of intent to conduct exploration. The Minerals Program does not grant permission to mine. Instead, the program issues four different types of reclamation permits based on the type of operation and characterization of the material being mined. The Mined Land Reclamation Board, a multi-interest citizen board, establishes and enforces the regulations, standards, and policies that guide the DRMS.

The Mined Land Reclamation Board and the DRMS issue and enforce permits for all mines in Colorado on state, federal, and private lands. The La Plata County Public Works Department Environmental Specialist acts as a commenting agency on reclamation approval by DRMS. The federal Office of Surface Mining regulates mining for environmental and public impacts on tribal lands. The Mine Safety and Health Administration (MSHA) regulates all mining activities for the safety of mine workers. The BLM is responsible for the leasing of coal interests owned by the federal government. Recreational, small scale gold panning does not require a permit on state or federal lands.

8 EXTRACTIVE RESOURCES & RENEWABLE ENERGY

The La Plata County Planning Department requires a Class II land use permit for all commercial mining operations on lands under the jurisdiction of the County. Mining operations in Colorado must also obtain industrial stormwater permits from the CDPHE Water Quality Control Division and report air emissions to the CDPHE Air Pollution Control Division. Clean Water Act-Section 404 permits must be obtained from the USACE if Waters of the U.S. will be impacted. Clean Water Act-Section 401 certification from the CDPHE Water Quality Control Division is required for any projects that require Section 404 permitting, but do not qualify for a nationwide permit. Gravel pits that expose groundwater must obtain permits from the Colorado Division of Water Resources. On tribal lands, stormwater permits are administered by the EPA or Ute Mountain Ute Tribe. Air quality is regulated by the Southern Ute and Ute Mountain Ute Indian Tribes' Air Quality Programs for major sources and the EPA for minor sources.

RENEWABLE ENERGY

There are prospects for small scale residential development of renewable energy throughout the County. La Plata Electric Association, Inc. (LPEA), a rural cooperative, provides electric to all of La Plata County. LPEA and Tri-State Generation and Transmission Association, Inc. (Tri-State) have a long-term wholesale power purchase agreement in which LPEA has agreed to purchase no less than 95 percent of its electric service needs from Tri-State until December 31, 2050. This leaves 5 percent that can be purchased by LPEA from local sources. As of 2012, LPEA purchased approximately 4 percent of its power from local sources, leaving 1 percent open for additional local renewable energy projects. The potential for utility scale development of renewable energy may be constrained by the purchase agreement between LPEA and Tri-State.

In 2012, LPEA developed a Long-term Alternative Energy Outlook with the goal of supplying 20 percent of the electricity from local sources by 2020. Options to achieve this goal within the constraints of the wholesale power purchase agreement include the direct purchase of renewable energy by Tri-State, as in the Vallecito Hydroelectric facility (referenced below), or small scale facilities that provide their own electricity, such as solar photovoltaic (PV) installations. Renewable energy produced locally and purchased by Tri-State may also help the company to meet renewable energy standards mandated by the State of Colorado. As of October 2013, approximately eight percent of energy consumed by LPEA members was produced locally.

Sources of renewable energy in La Plata County include hydroelectric generation facilities, waste heat recovery, methane capture, and solar. There are three hydroelectric facilities in the County. Xcel Energy operates the Tacoma Hydro Generating Station, originally built in 1906, along the Animas River between Durango and Silverton. The Tacoma facility is connected to LPEA's transmission system. The Vallecito Hydroelectric system at Vallecito Reservoir began producing power in 1989. The facility is connected to the LPEA transmission system and the power it generates is purchased directly by Tri-State. The third hydroelectric system, located at Lemon Reservoir, is connected to LPEA's distribution grid.

8 EXTRACTIVE RESOURCES & RENEWABLE ENERGY

LPEA purchases electricity from a waste heat recovery facility located between Durango and Ignacio. Electrical energy that would otherwise be lost is captured at a natural gas treatment facility from turbine exhaust waste heat boilers, coupled with steam turbine generators. The City of Durango Wastewater Treatment Plant installed a Digester Gas Burning Micro Turbine in 2009 to capture methane gas. This methane capture cogeneration system offsets about 19 percent of the annual energy usage at the location.

A capstone micro turbine was installed in the Pine River Valley for the purposes of capturing fugitive methane gas emissions from specific locations along the Fruitland outcrop. The COGCC funded this project to evaluate the viability of combining mitigation of the gas seepage with the use of the potentially valuable resource. This system became operational in 2009 and provides energy to the local grid.

LPEA has offered interconnection and net metering to members since 2003. Customers who generate their own electricity, mostly through solar PV systems, are connected to the LPEA system and a bi-directional meter measures the amount of electricity produced and used by the consumer, offsetting their total cost. In 2012, local energy generation from net metered systems reduced LPEA's total energy purchase by about 0.28 percent. According to LPEA, there is also potential for micro hydro and small hydro systems to be installed in irrigation ditches throughout the County (LPEA Long-term Alternative Energy Outlook, 2013).

LPEA has contractual agreements with three subscriber organizations for purchasing electricity from community solar gardens. Solar gardens are large solar arrays from which community members can buy or lease shares. The energy produced by their share is then attributed to the electric meter at their home or business through virtual net metering. Four community solar gardens were built in La Plata County in 2014. Three already have full member capacity. The Armadillo Community Solar Garden is located on the roof of the Armadillo Storage facility on Highway 3. Living Solar runs the Sun Mesa Solar Garden in Durango. Shaw Solar has built two solar gardens, one in Ignacio and one on the roof of the Boys and Girls Club of La Plata County in Durango.

Biomass is a renewable fuel that is developed from organic materials, including forest debris, scrap lumber, mill residuals, certain crops, manure, and municipal solid wastes. In biomass power plants, wood waste or other waste is burned to produce steam that runs a turbine to make electricity, or that provides heat to industries and homes. Fuels reduction projects around the County could provide a material source for the development of biomass as a new local source of energy, although the potential for commercial development is limited.

Despite the presence of Trimble Hot Springs, there is not high potential for the development of geothermal as a renewable energy resource. High temperature geothermal resources are required for electricity generation. The geothermal resources that occur in the County are of low or

medium temperature and are therefore not a viable option for large scale electricity generation at this time. Ground source geothermal energy (using the earth's heat to heat water in underground pipes) may be a possibility for small scale residential heating.

Good wind resources for energy production have an average wind speed of at least 9 miles per hour for small wind electric turbines and 13 miles per hour for utility scale wind power plants. Primary locations in the West include exposed ridges and mountain summits, although icing is a concern at higher elevations. In some areas of the County there is potential for wind energy generation on a smaller, residential scale; but there is little prospect for utility scale development.

Impacts:

Depending on the design of the facility, potential impacts associated with hydroelectric facilities include noise, altered hydrologic systems, and habitat loss and/or degradation for aquatic species. Sources of noise generally associated with a hydroelectric facility include powerhouse equipment (turbines, generators, transformers) and flowing water. The construction of intake structures, dams, or weirs to provide a water supply to a hydroelectric facility could affect a river ecosystem. The diversion of water from a natural stream has the potential to reduce the in-stream flows of the stream, potentially leaving aquatic species stressed. The presence of a dam or weir can also be a physical barrier to fish migration. River modifications could result in visual impacts from structures placed in or across the river or the creation of an impoundment.

Solar energy development projects, depending on the proposed number of panels and location, potentially have other environmental impacts. Solar installations can be highly visible in rural or natural landscapes. Commercial solar arrays or community solar gardens may impact land use due to the possible loss of agricultural lands or wildlife habitat for the placement of solar panels that may consume vast land area values. The area under solar panels does not receive direct sunlight, making it difficult to establish and maintain vegetation and stabilize the exposed soils. These areas are subject to possible weed infestation, soil erosion, and subsequent sedimentation of nearby water bodies.

Solar panels may contain small amounts of hazardous materials such as lead, cadmium, selenium, and arsenic. There are several different types of PV cells that vary in the individual components. Toxic elements in end of life or broken PV panels may leach into groundwater if disposed of in landfills. The solar industry is developing programs for recycling solar panels, although not all suppliers have such programs. There is currently one known facility accepting solar panels for recycling in La Plata County. Current solar modules have an expected lifespan of approximately 20 to 30 years, so most have not yet reached the end of their useful lives. The need for a method to dispose of solar panels will become more important as solar installations age. Solar PV systems are subject to electrical faults like any other electrical installation.

8 EXTRACTIVE RESOURCES & RENEWABLE ENERGY

Burning biomass to produce electricity can potentially impact air quality, local water resources, and the fuel source habitat. The level of air emissions associated with biomass power plants varies depending on the organic material used and combustion technology, but the most common pollutants include nitrogen oxides (NOx), sulfur dioxide (SO2), carbon monoxide, and particulate matter. Biomass power plants require water for cooling, but actual water withdrawal and consumption depends on the facility's cooling technology. Cooling water is returned to its source much warmer than when it was withdrawn, which can have a negative impact on plant and animal life. Using agriculture and forest wastes for biomass power, could potentially lead to land or habitat degradation.

Key Point
The most apparent benefit of renewable energy is the reduction in greenhouse gas emissions.

Impacts associated with transmission and distribution lines that connect renewable energy sources to the electrical grid include the potential for visual, static noise, habitat loss and fragmentation, and possible electrocution of birds.

The most apparent benefit of renewable energy is the reduction in greenhouse gas emissions. Electricity generated at or near its area of use, as opposed to large central facilities, is considered by some to be more sustainable, efficient, and of greater benefit to a community. Locally-produced energy can reduce system-line losses, or electricity lost in transit. Producing electricity locally also can provide support to the local economy and reduce monies leaving the region.

Regulation:

Utility scale commercial renewable energy facilities would currently be required to obtain a Class II Land Use Permit from the County. The La Plata County Building Department is preparing to adopt standards for smaller scale residential solar installation safety listed in the 2015 International Residential Code when a new county building code is adopted (anticipated in 2016). Residential solar installations will then be verified for compliance with building code standards at the time of building inspection. The residential use of boilers that burn biomass also require inspections by the Building Department. The agency regulating electric utilities in Colorado is the Public Utilities Commission (PUC), under the Colorado Department of Regulatory Agencies (DORA). In December 2005, the PUC adopted standards for net metering and interconnection. Project interconnection approval requires inspection by an electrical inspector with the DORA Division of Professions and Occupations.

Stormwater permits are required from the CDPHE Water Quality Control Division for any renewable energy facility that disturbs more than one acre (construction permit) or generates electricity through the use of steam (industrial permit). An Air Pollutant Emission Notice or air permit may be required from the CDPHE Air Pollution Control Division for air emissions,

depending on the volume and type of emissions. If a renewable energy facility will be located in or near a natural waterway or wetland, a USACE permit, under Section 404 of the Clean Water Act, may be required for the removal or deposition of any materials in the waterway. Any actions that require a federal permit, license, or approval that result in a discharge into waters of the State require Clean Water Act-Section 401 certification by the CDPHE Water Quality Control Division. Projects located on federal land are subject to the specific permitting requirements of the federal land management agency, including the removal of tree matter from U.S. Forest Service lands for biomass projects.

Hydropower projects typically require a license or exemption from the Federal Energy Regulatory Commission (FERC) or the Bureau of Reclamation (BOR). The FERC is the primary federal authority for permitting hydropower projects. For hydropower development on BOR facilities where hydropower development is explicitly mentioned in the authorizing legislation, permitting is handled by the BOR. For any individual project, determination whether FERC or the BOR is the relevant federal permitting authority is governed by a Memorandum of Understanding between FERC and BOR. A water right must also be obtained to divert water from a stream for generating hydroelectric power in Colorado. Water rights are obtained by applying to the water court and are allocated by the Colorado Division of Water Resources.

EXTRACTIVE RESOURCES AND RENEWABLE ENERGY GOALS

OIL AND GAS DEVELOPMENT

Goal 8.1: Promote responsible oil and gas development while minimizing potential impacts to the environment and local residents.

Objective 8.1.A: To maintain and enhance cooperation with Local, State and Federal agencies; the oil and gas industry; and property owners with regard to regulating activity and mitigating impacts.

Policy 8.1.A1: The County should maintain an active participant role in the COGCC LGD program.

Policy 8.1.A2: The County could consider developing a Memorandum of Understanding with the COGCC in order to ensure a mutual understanding regarding areas of potential for overlapping jurisdiction.

Policy 8.1.A3: The County could pursue more comprehensive regulation of areas with little regulatory oversight, such as flowlines between well meters and transmission line tie-ins.

Policy 8.1.A4: The County should continue to encourage communication with operators regarding future development plans in order to identify land use conflicts early.

Policy 8.1.A5: The County should continue to act as a facilitator for communication between the oil and gas industry and local residents.

Policy 8.1.A6: The County should continue to promote public understanding and awareness of oil and gas development activities through education and by making general development information accessible to the general population.

Objective 8.1.B: To protect the public health, safety and welfare of citizens while coordinating with fluid mineral extraction projects, within the limitations of local government powers and resources.

Policy 8.1.B1: The County should continue to pursue the appropriate use of instruments and methods which ensure operators contribute proportionately and concurrently with proposed projects.

Policy 8.1.B2: The County could review long-term results of water well testing and air quality impacts to assist with identifying any potential need for additional protective measures to local residents.

SOLID MINERALS

Goal 8.2: Promote responsible mineral development while minimizing potential impacts to the environment and local residents.

Objective 8.2.A: To maintain and enhance cooperation with Local, State and Federal agencies, the mineral extraction industry, and property owners with regard to regulating activity and mitigating impacts.

Policy 8.2.A1: The County should continue to coordinate with lead regulatory agencies to assist with the mitigation and reclamation of projects.

Policy 8.2.A2: The County could explore the development of *1041 Powers* for known mineral resource areas.

Objective 8.2.B: To protect the public health, safety and welfare of citizens while coordinating with mineral development projects; within the limitations of local government powers and resources.

Policy 8.2.B1: The County should continue to pursue appropriate use of instruments and methods which ensure development contributes proportionately and concurrently with proposed projects.

RENEWABLE ENERGY

Goal 8.3: Promote responsible development of renewable energy while minimizing potential impacts to the environment and local residents.

Objective 8.3.A: To maintain and enhance cooperation with Local, State and Federal agencies; the renewable energy industry; and property owners with regard to regulating activity and mitigating impacts.

Policy 8.3.A1: The County could develop a permitting program that addresses potential impacts of utility scale production to promote renewable energy development.

Policy 8.3.A2: The County could explore the development of *1041 Powers* to accommodate utility scale renewable energy systems.

Policy 8.3.A3: The County should recognize efforts with LPEA's Long-term Alternative Energy Outlook goal of 20% electricity produced locally by 2020.

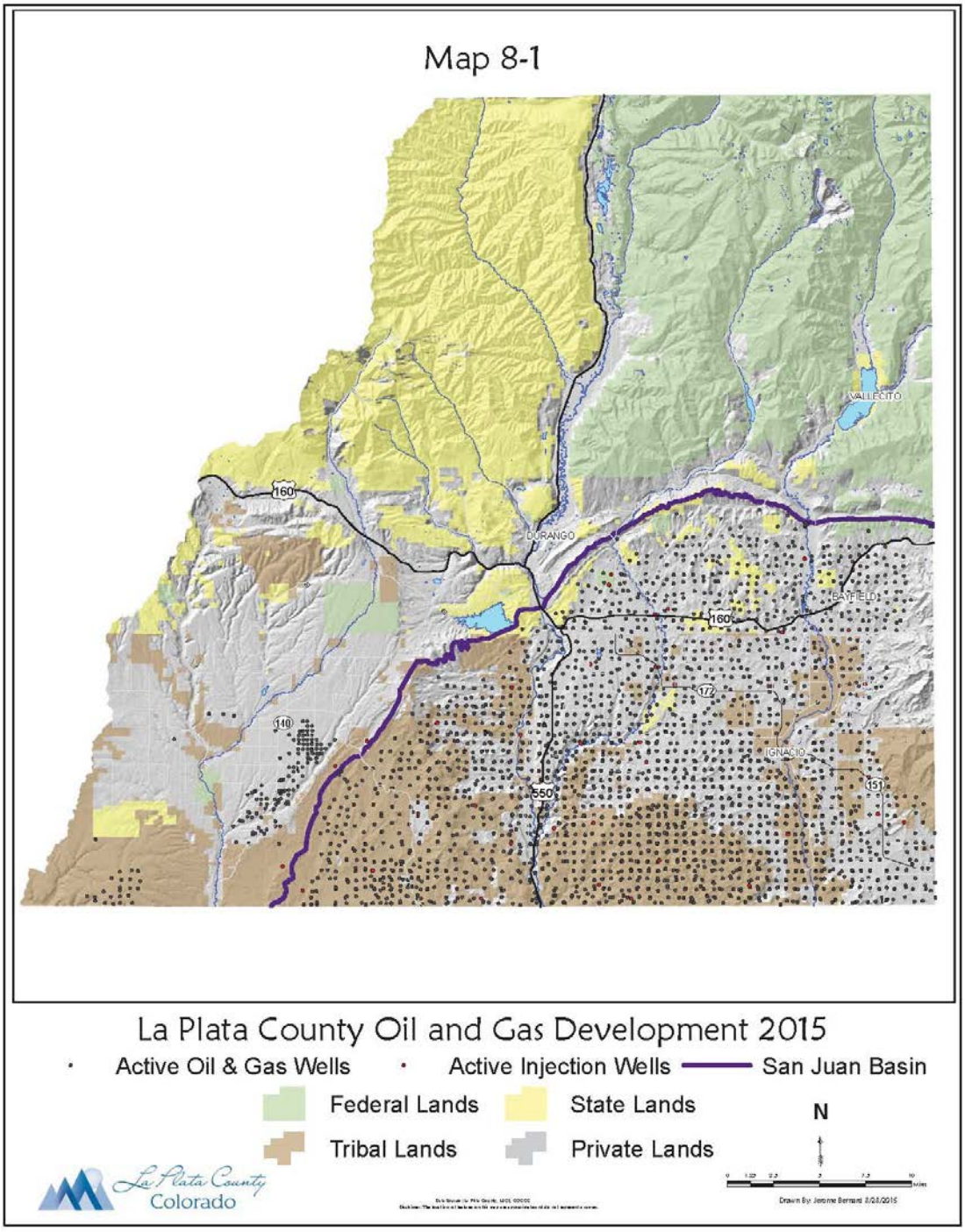
Objective 8.3.B: To protect the public health, safety and welfare of citizens while coordinating with renewable energy development projects; within the limitations of local government powers and resources.

Policy 8.3.B1: The County should encourage the recycling of solar panels and promote the development of recycling options within the County.

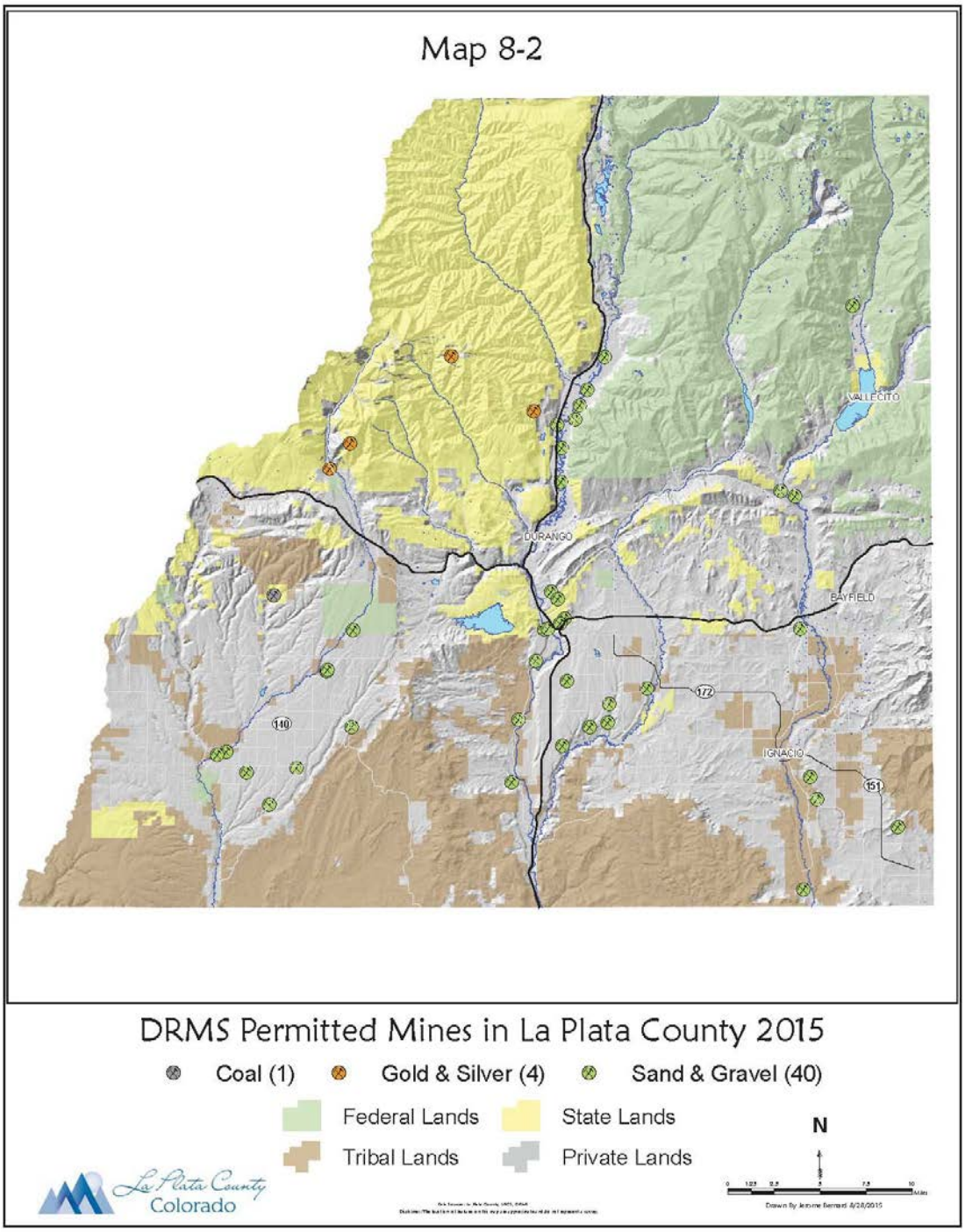
Policy 8.3.B2: The County should continue to pursue appropriate use of instruments and methods which ensure development contributes proportionately and concurrently with proposed projects.

Extractive Resources and Renewable Energy Maps
8-1, La Plata County Oil and Gas Development
8-2, DRMS Active Mining Permits in La Plata County

8 EXTRACTIVE RESOURCES & RENEWABLE ENERGY



8 EXTRACTIVE RESOURCES & RENEWABLE ENERGY



9 RECREATION & TOURISM

OVERVIEW

Recreation and tourism is one of the biggest driving industries within La Plata County, both being interconnected in a number of ways. Much of this interest is the result of the County's immense scenic beauty, public lands, recreational opportunities, rich history and cultural heritage. With over 40% of the land in the County held by public land management agencies, back country recreational opportunities such as camping, hiking, biking, climbing, horseback riding, hunting and fishing abound. Both public and private interests provide numerous recreation and tourism opportunities in both rural and urban areas of the County. In addition to recreational activities, a variety of festivals and cultural facilities and events draw visitors to the area which are sponsored by community groups, private vendors and local governments.

> ***Key Point***
> *Recreation & Tourism is one of the primary driving industries in La Plata County.*

An estimated 90% of Colorado residents partake in one of the many offered outdoor recreation opportunities provided by our natural landscape. Translated into economic impacts, those recreation activities account for roughly $34.5 billion in economic stimulus, supplying over 300,000 jobs statewide; nearly 2/3 of that spending is on food, lodging, fuel, and equipment[1]. Recognizing this impact, as recent as 2015 the Governor appointed a director to the newly established Colorado Outdoor Recreation Industry Office. Recreation services are important to the health and well-being of the citizens of the County.

This Element will focus on those local opportunities utilized by both La Plata County residents and tourists consistently traveling our region. By identifying the locations of public open spaces, parks and trails to name a few, this Element will also provide goals and policies of how to account for the recreational and tourism needs of residents and visitors to the County going forward[2]. It recognizes the link between land use decisions and recreation and tourism which can be an asset to future growth, and is intended to support future recreation and tourism development where appropriate.

ECONOMIC INPUT

It should be acknowledged that recreation and tourism support a full range of economic as well as social benefits, and that future development and continued success depends on the cooperation between public and private interests.

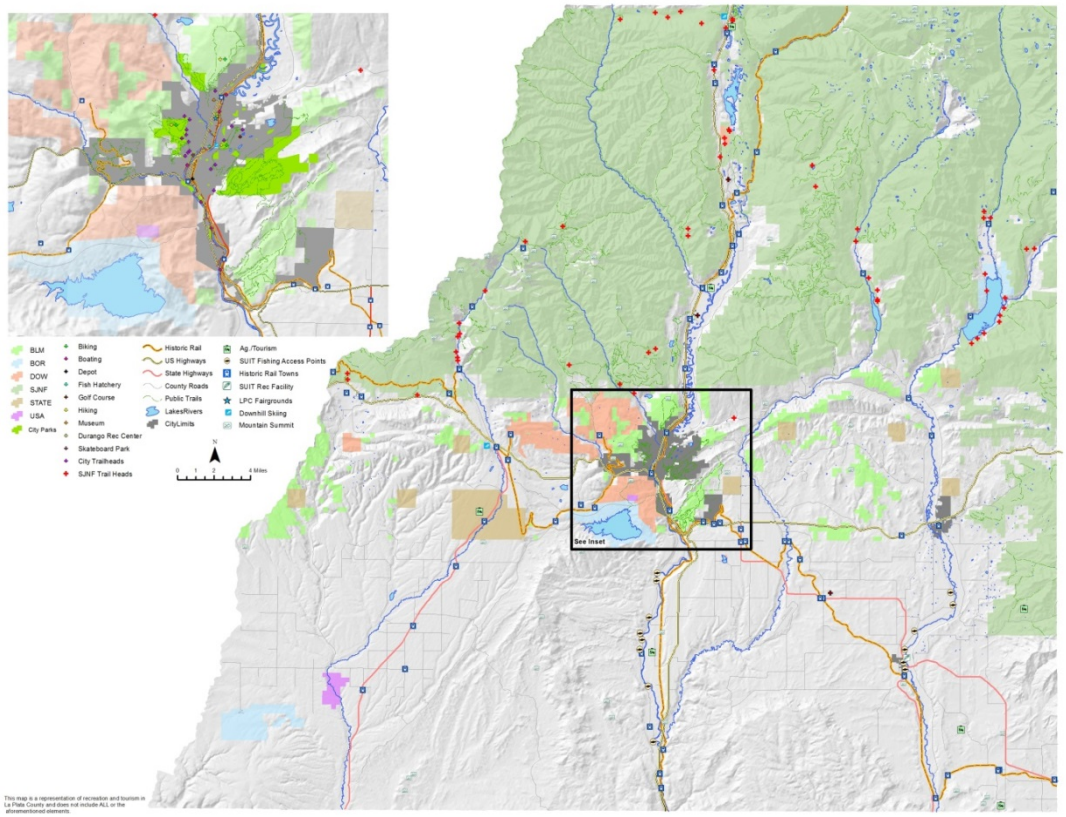
Throughout the County, recreation and tourism comes in many forms. From hiking trails and

[1] Colorado Statewide Comprehensive Outdoor Recreation Plan, 2014.
[2] C.R.S. §30-28-106(3)(II), §30-28-106(5)

9 RECREATION & TOURISM

fishing opportunities, to photogenic locations and the Durango Silverton Narrow Gauge Railroad passing by, La Plata County offers something for every outdoor enthusiast. As identified in Map 9-1 various locations of hiking trailheads, museums, lakes and rivers provide an abundance of opportunities for locals and visitors to enjoy. With that said, recreational facilities, as compared to the City of Durango, are somewhat limited. Other than school facilities (i.e. Elementary Schools) and those found on state or federal lands, unincorporated recreational facilities in the outlying County are limited to those provided within private developments and the municipalities.

Map 9-1
Recreation and Tourism Locations



The support required to provide services for these amenities, however, is no small feat and is accounted for in a number of ways. According to Region 9 Economic Development office, roughly 32,000 jobs exist in La Plata County with nearly 6,000 of them (or roughly 18%) dedicated to the tourism industry; and this number translates into a payroll of $157,000,000 in our local economy. Such jobs range from bartenders at local breweries to climbing professionals at Kling Mountain Guides, all of whom provide a critical service to a base economic driver within the County. Moreover, identifying ways to promote these tourism services in off-season periods may be a fruitful venture going forward to ensure capital is consistently moving through our economy.

9 RECREATION & TOURISM

In the last 15 years the County has experienced a 63% increase in travel expenditures as outlined in *Chart 9-1*. Relative to recreation and tourism, this industry is represented primarily by businesses and leisure, outdoor activities, hospitality, transportation, and retail all of which account for dollars entering our local economy. Tourism dollars generate a variety of tax revenue benefits to the County and filter through the economy to support services and employment. It also adds to the diversification of the local economy, keeping it healthier when other sectors take a downturn.

Key Point
Recreation and Tourism support both economic and social characteristics within La Plata County.

Chart 9-1
County Overnight Travel Impacts[3]

	2000	2002	2004	2006	2008	2010	2012	2013	2014	2015
Travel Spending ($Million)	173.0	152.0	189.5	211.8	229.1	218.2	249.0	252.8	273.1	283.0

PARKS AND RECREATION FACILITIES

While the La Plata County government, itself, does not have a formal "Parks and Recreation" department or similar function, it has been involved in a number of recreational issues, and on occasion has partnered with other entities to provide for recreational activities and facilities. Locations of existing facilities on County-owned properties are depicted on Map 9-2, which include the fairgrounds, X-Rock climbing area, La Posta Road gun range, and trails. The fairgrounds property is 32 acres and includes an exhibit hall, rodeo arena, livestock pavilion and pens, two baseball fields, the City-operated Community Recreation Center, the Boys and Girls Club, and open space for outdoor and recreational activities (located within the municipal jurisdiction of Durango). Further, the County is in the early master planning stages to explore an opportunity for establishing a multipurpose events center encompassing approximately 200 acres on Ewing Mesa (outside, but adjacent to the eastern jurisdictional boundary of the City). The vision is to replace the current Fairground functions, and create additional opportunities for outdoor events and venues which cannot be accommodated with the existing Fairground facility. The entire Ewing Mesa site (1,850-acres) also intersects with several trails and overlooks the southern portion of the valley which contains the City of Durango. Further updates to this Element will capture the progress of this effort.

As previously indicated, the municipalities of Bayfield, Durango and Ignacio, as well as the Southern Ute Tribal lands and Fort Lewis College (FLC) Campus, provide most of the developed

[3] The Economic Impact of Travel on Colorado 1996-2015, Colorado Tourism Office.

public parks and recreation facilities and programs within the County. These include a broad range of community facilities, grounds and recreation programs. There are also regular collaborative efforts with the school districts and FLC. The City of Durango has the largest open, managed public parks and recreation program within the County. It includes an extensive trails and open space component, as well as organized team sports and opportunities for lessons (exposure) to various sports and recreational activities. Local private businesses and organizations also provide a variety of sports and fitness related facilities and programs to meet the needs of residents.

NATURAL RESOURCE RECREATION AND TOURISM

The San Juan National Forest, Weminuche Wilderness, Bureau of Land Management, Bureau of Reclamation, Colorado Parks and Wildlife and other state and federal lands provide numerous hiking, backpacking, horseback riding, camping, snow shoeing, downhill skiing, cross country skiing, hunting, fishing and other recreational opportunities during various times throughout the year.

The largest water bodies in the County, Vallecito and Lemon Lakes (Reservoirs), both offer a wide-range of recreational, boating and fishing opportunities. There are other smaller lakes such as Lake Haviland, Electra Lake and Pastorious Reservoir which add to the variety of recreational, boating and fishing opportunities. Lake Nighthorse, near Durango is being planned for future potential public recreation uses by the City, in conjunction with the Southern Ute Indian Tribe.

The Pine, Florida, Animas and La Plata Rivers also provide numerous outdoor recreation opportunities. The Pine River runs from Vallecito Lake south, through the town of Bayfield to the Navajo Reservoir (which expands into the State of New Mexico). Much of this river runs through private property, but there is a section through Bayfield which has public access. It, like the Animas River, is accessible along Southern Ute Tribal Lands when a special permit is required for access and fishing. The Animas River, which has the largest river-originated flows within the County, contains large sections with public access, is popular for fishing, rafting and boating (including commercial rafting companies serving visitors to the area). The Florida and La Plata Rivers have limited public access and smaller flows which limit public recreational use; however, there are areas such as the section of the La Plata River in the San Juan National Forest where visitors can enjoy these resources.

Surrounding and intermixed throughout most of the unincorporated County, the San Juan National Forest invites hunters and backcountry explorers to experience some of the most remote parts of Colorado. Managed by the United States Forest Service's Columbine Ranger District, 691,310 acres between La Plata and San Juan Counties provided a bounty of opportunities in the high country with big and small game, in addition to miles of streams and water ways for fishing.

As determined by the Colorado Parks and Wildlife (CPAW), the state is broken out into seven

9 RECREATION & TOURISM

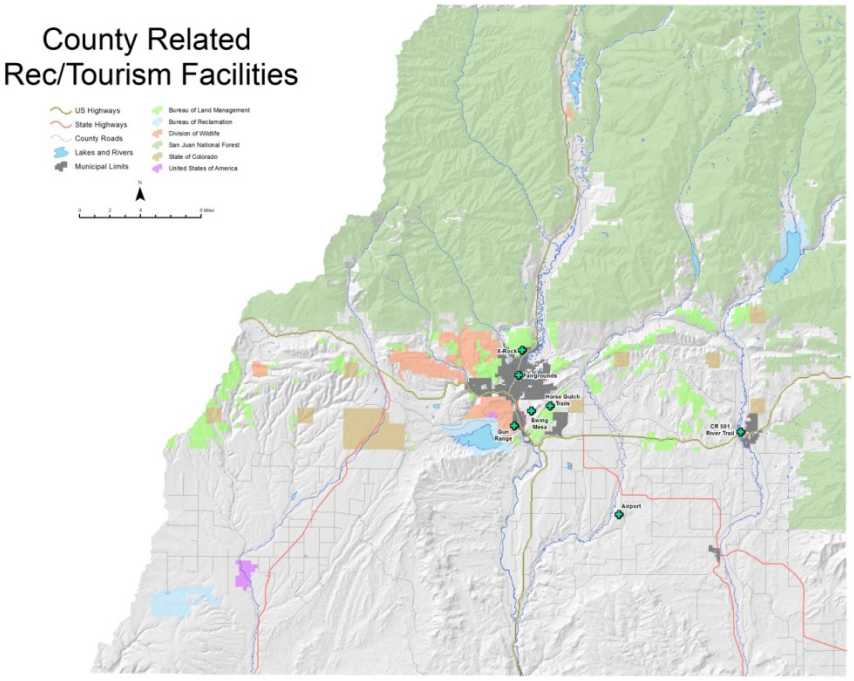
regions; the Southwest Region includes Archuleta, Delta, Dolores, Gunnison, Hinsdale, La Plata, Montezuma, Montrose, Ouray, San Juan and San Miguel Counties. A 2014 study conducted by CPAW stated that the Southwest Region alone injected more than $405 million in total economic contributions to the state through hunting, fishing, and wildlife viewing ventures.

With the outlined information above, it is clear recreation and tourism is a critical component to both the local and state economies. Recognizing this, measures have been taken to further support this industry such as "Colorado the Beautiful"; an initiative instituted by Governor Hickenlooper's office which furthers the conversation to support and make access to outdoor opportunities even easier. These assets available in La Plata County are bountiful in their own right, and ways to reduce impacts should be considered. Furthermore, concepts for keeping these resources viable for years to come is identified through plans and programs discussed below.

Photos of the Animas River (below)

9 RECREATION & TOURISM

Map 9-2
Recreation Facilities on County-Owned Properties



EXISTING PLANS AND REFERENCES

Identified in *Element 2 Growth Trends,* the population in the County is expected to grow for the foreseeable future; with that comes increased pressure for development. In a geographically constrained area such as La Plata County coupled with the amount of public areas open for recreation activities, development pressures can encroach on those areas and activities. By way of planning for continued access to those lands, documents such as the 2000 county trails plan (See list of references) have been drafted to provide guidance for maintaining access, and identifying those critical areas.

Looking forward, as the County updates its land use code, identifying methods to establish regulation for access to public lands has been discussed. As mentioned above, over 40% of lands in La Plata County are held by public land managing agencies.

HERITAGE AND AGRICULTURAL TOURISM

The historic nature of La Plata County may be one of the most important aspects of the area. The four corners area has settlements from native tribes to miners panning for gold and silver in the La Plata Mountains. Locals and visitors alike celebrate the County's cultural legacy which is embodied in historic resources and scenic assets populating our landscape.

9 RECREATION & TOURISM

From a Heritage Tourism perspective, local and regional resources such as Mesa Verde National Monument and the Durango Silverton Narrow Gauge Railroad draw tens of thousands of visitors each year to, and through, La Plata County. These prehistoric and historic anchors are complemented by the abundant structures, farms, and ranches throughout the area which define the rural character of La Plata County. Agritourism is expressed in places like Honeyville, James Ranch and Fox Fire Farm, exemplifying how harvesting, ranching and farming have become an integrated, accessible form (or compliment) of tourism for the public and support the viability of these traditional land uses into the future.

Another valuable asset to the County is designation of US Hwy 550 as the *San Juan Skyway Scenic Byway*. Popular among cars, RV's, motorcycles, runners and cyclists, this 232-mile loop connects Durango to surrounding areas and towns; and recognizes the regions unparalleled natural beauty and historic character. Further to the south, Track's *Across Borders Scenic and Historic Byway* is Colorado's newest scenic byway. This route travels along the historic narrow-gauge portion of the *Denver & Rio Grande Railroad* from Durango to Chama, New Mexico. It provides a connection to the *Durango & Silverton Narrow Gauge Railroad* and the *Cumbres & Toltec Scenic Railroad*. This byway also travels along two states and offers access to scenic countryside, mountains, Native American cultural lands, visual layers of history, and varied communities of the present day.

The subject of Heritage and Agricultural Tourism are discussed in more detail in the *Introduction* and *Element 10 – Historic Preservation* of this Plan.

LOCAL ENTITIES

At the local level, there are numerous entities involved with supporting efforts to maintain a viable recreational and tourism industry throughout La Plata County. Although the list is non-exhaustive, the following organizations are large contributors to the industry:

Durango & Silverton Narrow Gauge Railroad opened for business in 1882, operating approximately 45.2 miles of track between the towns of Durango and Silverton (San Juan County, adjacent and north of La Plata County). This iconic establishment in Durango has been federally designated as a National Historic Landmark, as one of the last remaining steam locomotive operations in the country. The train services over 300,000 passengers year–round. The train also hosts special events ranging from a winter holiday Polar Express to private social events. http://www.durangotrain.com

Fox Fire Farms is a vineyard located on a 910 acre ranch south of Ignacio that specializes in white Reisling grapes and cold climate hybrid varieties. The vineyard is open for wine tastings, and also is a venue for private events. In 2016, Fox Fire Farms was honored at the Colorado State Fair as a recipient of Colorado's "Centennial Farm" award. http://www.foxfirefarms.com

9 RECREATION & TOURISM

Iron Horse Bicycle Classic began in 1972, which involves a road bicycle challenge from Durango to Silverton over two mountain passes. Since its inception, the race has become a staple of popular biking events in the western United States bring hundreds of riders from across the world to compete. http://www.ironhorsebicycleclassic.com

La Plata Open Space Conservancy was founded in 1992, and has partnered with private and municipal landowners throughout La Plata County to permanently protect land hosting recreational trails, scenic viewsheds from public trails and county roadways, local food production, environmental education, river corridors, wildlife habitat, and historic/archaeological resources. The conservancy has protected nearly 20,000 acres of such places within La Plata County. Properties protected by the conservancy include City of Durango's Horse Gulch, Overend, and Dalla Mountain Parks as well as Oxbow Park and Preserve. Other well-known conserved lands include Durango Nature Studies, James Ranch, Sunnyside Farms and El Dorado Cattle Company. http://www.lposc.org

Purgatory Resort is located 27 miles north of the City of Durango, at the northern jurisdictional boarder of La Plata County, and is the predominant local ski area established on 1,500 acres within the heart of the San Juan Mountains. Best known for its incredible views, the terrain is both family and expert friendly, offering lodging accommodations in the village center that also houses shops, restaurants, and spa treatment. https://purgatoryresort.com

The James Ranch situated in the beautiful Animas Valley is a 400–acre, high altitude ranch offering grass fed beef, organic vegetables and a modest Harvest Grill. This location is a La Plata County agri-tourism treasure, as one of the identifiable historic agriculture and ranching locations still in operation today and open for tours, as well as other events. http://jamesranch.net

Trails 2000 is a local non-profit organization which plans, builds, educates, and maintains the local hiking and biking trails, in and around La Plata County. Fueled by community volunteers, this organization has grown to more than 2,000 members inspiring stewardship for trails in the local area. The *La Plata County Trails Plan 2000* (*Appendix 15*) was drafted in a collaborative effort with Trails 2000 to identify locations and policy measures in order to maintain support for these invaluable resources. https://www.trails2000.org

RECREATION & TOURISM GOALS

Goal 9.1: Encourage public and private recreation activities which support the public health, safety and welfare of the community.

Objective 9.1.A: Promote continued maintenance and dedication of areas where access to public lands may be impacted with increased development

pressures; and recognize economic benefits of recreational/tourism components within and nearby proposed projects and development.

Policy 9.1.A1: Incentivize projects where new developments provide for increased access to public lands and dedication of new recreation accommodations within proposed development.

Policy 9.1.A2: Consider appropriate standards/mitigations for tourism activities and recreational businesses, and promote a balanced approach for the responsible management of the County's natural resources.

Policy 9.1.A3: Where appropriate, encourage recreation and tourism related development in order to maintain and enhance the benefits of these to the local economy.

Policy 9.1.A4: Encourage the continuation of existing tourist related businesses and activities as well as new or expanded opportunities such as for cultural heritage and agricultural tourism.

Goal 9.2: To ensure continued recognition for recreation and tourism opportunities and needs within La Plata County; and seek to provide local residents, organizations, investors and visitors incentives, further accommodating such opportunities.

Objective 9.2.A: Continue to identify those areas of importance which provide for recreational and tourist activities throughout La Plata County; and encourage such activities through a variety of organized establishments throughout the County.

Policy 9.2.A1: In collaboration with other entities, encourage support for recreational and tourism related efforts.

Policy 9.2.A2: Identify and update pertinent documents, providing adequate guidance resources for various interests. This should include up-to-date plans, maps, etc., which would be valuable to the public and other organizations in the County.

Policy 9.2.A3: Encourage recreation and tourism entities/organizations to be part of land use planning processes in order to recognize their important efforts and needs during evolving development throughout the County.

10 HISTORIC PRESERVATION

OVERVIEW

La Plata County supports a rich history ranging from the Ancestral Puebloans, followed by the Ute Indians, and ultimately the settlement of European Americans as outlined in the *Introduction*. The residents of La Plata County are appreciative of and knowledgeable about our treasured cultural legacy which is embodied in the historic resources and scenic assets populating our landscape. Consistent with Colorado as a whole, these historic resources define La Plata County's sense of place and western identity. Whether it is archeological evidence of pit dwellings or our agricultural heritage as evident in the ranches and farms, it is through the preservation of these historic resources that we are connected to our past and provide context to our current lives. According to History Colorado[1] there are nearly 13,000 documented cultural resources in La Plata County of which almost 5,800 of these are prehistoric archaeological sites. Numerous Traditional Cultural Properties (TCPs), not formally recorded, are also located within La Plata County. TCPs and prehistoric archaeological sites located within La Plata County are significant to groups far beyond the County and State. Most of the Native American Tribes and Pueblos in New Mexico, and some in Arizona, consider these places to be sacred and/or significant. La Plata County is home to some of the oldest agriculture practiced in what is now the state of Colorado.

In evaluating our diverse heritage and landscape, it is clearest to view the County in the twelve land use planning districts (See *Element 1- Land Use*). These districts, while they have many similarities, also have unique characteristics as exemplified in our mountainous North County, to the arid Fort Lewis Mesa, to the verdant Florida Mesa. Within these districts there are townships which have a strong sense of community and identity, often connected to buildings such as a historic grange or school house which served as a gathering place at the crossroads of the County. The heritage and character that is embodied in our landscape and buildings is captured in this Element, putting in writing policies to protect these resources, both identified and potential, for generations to come.

Image 10.1 McDonald Ranch Barn (Resolution 2006-24) was the first designation to the La Plata County Historic Register

[1] Colorado Historical Society- Office of Archaeology and Historic Preservation

10 HISTORIC PRESERVATION

BACKGROUND

Historic preservation efforts in the County were greatly advanced by the formation of the Historic Preservation Review Commission (HPRC) and the creation of the La Plata County Historic Register. This occurred in November 2004 by Resolution 2004-33 of the La Plata County Board of County Commissioners. The purpose of the HPRC is to: 1) Review requests for designation of historic landmarks and historic districts, and 2) Make recommendations to the La Plata County Board of County Commissioners with respect to the preservation of cultural, historic, and/or architectural history within the boundaries of La Plata County and any requests for designation of historic landmarks and historic districts. The HPRC membership was increased from three to five in February 2010 by Resolution 2010-09. The establishment of the HPRC and La Plata County Historic Register created a recognizable and formal archive of historic resources within the County which warrant preservation and those that are to be celebrated.

The mission of the Historic Preservation Review Commission is:

- To provide an application and review process for residents to receive Historic Landmark designation and other designations by the La Plata County Board of County Commissioners.
- To increase awareness of historic and cultural heritage as embodied in these designated historic landmarks and other designations.
- To provide educational opportunities to increase public appreciation of the County's unique heritage.
- To increase economic and financial benefits through heritage-tourism.

In 2008, La Plata County began a large project to support the establishment of a historic preservation program and historical resources database. The project included the preparation of a historic context for the County that described the themes of the County's history and recorded 100 historic sites that represented those historical themes (Lambert, A Historic Resource Survey of 100 Sites in La Plata County, CO 2010). The historic resource survey of 100 sites (Volume 1) was accompanied by *Pioneers, Prospectors, and Trout* (Volume 2) providing extensive documentation of the county's historic context (Lambert, Pioneers, Prospectors and Trout 2010). Both the survey and historic context were funded by the State Historical Fund and La Plata County and were completed by the San Juan Mountains Association and Cultural Resource Planning in 2010.

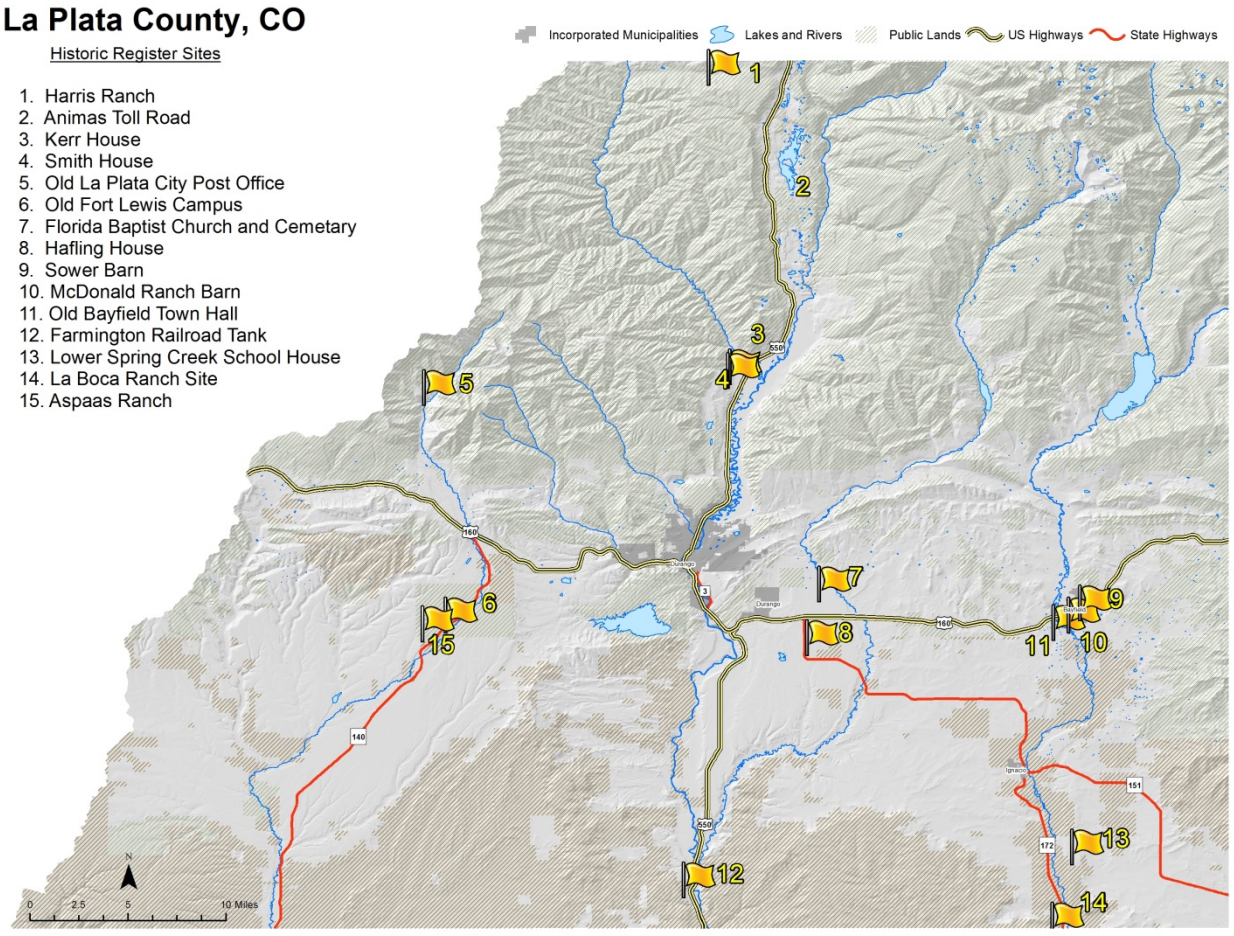
As of 2017, there are 15 properties listed on the County's Historic Register.

The project consisted of a reconnaissance level survey of the County's privately owned land in the unincorporated areas and an intensive survey and recording of the 100 selected sites that were at least 50 years of age and represented the County's historical themes. The information about the

project report and the individual properties forms a part of the County's growing historic preservation program.

As of January 2017 there are (15) properties listed on the County's Historic Register (See Map 10-1). As a result of the resolution that created the HPRC and Historic Register, the County formally established the archive of the 100 sites surveyed and the 15 (and counting) that have been officially designated to the Historic Register. Increasing the number of properties designated remains one of the highest priorities for the HPRC, including but not limited to the 100 structures already surveyed.

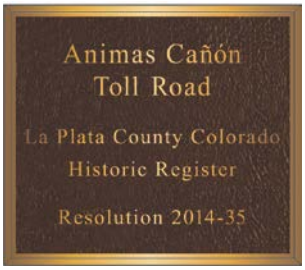
Map 10-1
La Plata County Historic Register



The historic resources that can be designated to the County's Historic Register derive their significance from periods ranging from prehistory through historic European settlement. Prehistoric resources include sites and objects that were used by ancient groups or tribes such as archeological sites, campsites, cemeteries, burial sites, rock carvings, pictographs, traditional

resource gathering areas, trails, and religious and ceremonial sites. The specific location of these sites is often very sensitive in nature. Gathering information concerning these properties should be undertaken with careful consideration and involvement of the cultural group involved.

Examples of historic resources during the period of European settlement include buildings, bridges, structures, ranch houses, school houses, barns, churches and objects which are at least 50 years old. The majority of designations to the Historic Register fall into this category. The Animas Canon Toll Road, designated to the Historic Register via Resolution 2014-35 and the historic Aspaas Ranch designated via Resolution 2017-07 are two historic resource examples.



The County's Historic Preservation program is successful in part because it is a voluntary incentive-based preservation program. In keeping with the overarching philosophy of the County to minimize regulatory oversight, the County's Historic Preservation program carries with it no regulations which dictate the use or maintenance of the resource. A property owner is encouraged to list their historic resource in order to receive public recognition and a bronze plaque certifying inclusion of the property on the County's Historic Register. Listing on the local County Register aids in the eligibility of a qualifying resource to be listed on the State Register, and for State Grants. A key goal of this element is to maintain and expand upon this voluntary incentive-based program to encourage further historic preservation.

In order to encourage participation in the Preservation program, incentives may be developed. These include possible establishment of a grant program which would make funds available to property owners of a historic resource or organizations which advance historic preservation in La Plata County. To be eligible for funding, a historic resource would first have to be listed on the County Historic Register, thereby encouraging participation in the program. Other incentives that could be considered include tax credits for resources placed on the Historic Register or waiving of any fees associated with rehabilitation. The underlying premise would be promoting participation in the County's Historic Preservation program through incentives rather than through regulatory means.

Although Register listing is voluntary, the County's somewhat limited nomination criteria draw from established professional standards, resulting in a high standard for preservation. More clearly identifying and expanding upon the criteria for designation of resources based upon not only professional standards and best practices, but local preferences and input, would strengthen the program.

10 HISTORIC PRESERVATION

HISTORIC PRESERVATION THROUGH EDUCATION AND PARTNERSHIPS

The field of historic preservation often achieves its greatest successes as a result of empowered individuals and incremental efforts to build the local preservation network. This is exemplified nowhere better than La Plata County where motivated individuals, County Staff, and the Board of County Commissioners collaborated to establish the Historic Preservation Review Commission, sought grant funding to survey 100 structures, and continue to this day documenting and designating the historic resources within the County.

An example of a potential partnership is the growing interest in food quality and production, coupled with an emphasis on local economies, which may prove to be a powerful nexus for historic preservation and agritourism[2] in La Plata County. Since many of the operating ranches and farms in La Plata County include barns and farm houses which are older than 50 years, there are opportunities to incorporate historic resources into heritage and agritourism. Locally, this partnership could lead to surveying and mapping of historic orchards, building our records of the County's farms past and present. More broadly, there is an opportunity for partnership with the State Historical Fund and the regional field office to provide support in preserving a historic resource while expanding business activity. The state could also provide assistance to agricultural as well as cultural preservation properties to market their assets and visitation.

As part of the mission of the Historic Preservation Review Commission, the Commission organizes an annual educational event during Colorado's Archaeology and Historic Preservation month in May. In 2014, the Commission launched a driving tour for residents to visit selected sites in the Bayfield area that had been identified during the large county-wide historical survey project of 100 sites. In May 2015, the Commission sponsored a historical cemetery themed driving tour that visited four cemeteries. Each cemetery visit was hosted by the cemetery's caretaker association. The 2016 tour focused on the old Fort Lewis and the ranching history of that area. The 2017 tour is planned for the Hermosa and Upper Animas Valley area to acquaint the public with the early agricultural settlement in that area.

The driving tours have become very popular over the years and provide the HPRC with the opportunity to exercise the educational aspects of its mission and for County residents to celebrate their heritage. The Driving Tour is expected to continue in the future as tangible means for not only individual historic sites to be showcased, but for the County's residents to discover the cohesive communities which exist within each of the Districts.

[2] Agritourism is the form of tourism which capitalizes on rural culture as a tourist attraction. It involves touring agricultural areas to see farms and often to participate in farm activities.

10 HISTORIC PRESERVATION

The County's Historic Preservation Review Commission also serves as a regional resource providing comments in support of initiatives that advance historic preservation. Federal and state agencies such as CDOT and the FCC include the HPRC as a commenting agency relative to the National Historic Preservation Act, Section 106 reviews. The HPRC has provided letters of support for organizations which seek state or federal grant funding such as the initiative to survey and preserve local cemeteries and the Scenic & Historic Byways project.

Partnerships with local and regional organizations are an ongoing opportunity to strengthen the preservation network in La Plata County. Organizations and groups interested in historic preservation include:

- Bureau of Land Management
- Colorado Department of Transportation
- Cemetery Associations
- Center of Southwest Studies
- City of Durango
- City of Cortez
- Colorado Archeological Society
- Colorado Preservation, Inc.
- Durango Silverton Narrow Gauge Railroad
- Fort Lewis College – students and faculty
- Southwest Colorado Genealogical Society
- HistoriCorps
- History Colorado
- La Plata County Historical Society
- La Plata Open Space Conservancy
- Montezuma County
- Pine River Heritage Society
- San Juan Basin Archeological Society
- San Juan County
- San Juan Mountains Association
- San Juan National Forest
- Scenic and Historic Byways Commission
- Southern Ute Indian Tribe
- Town of Bayfield
- Ute Mountain Ute Indian Tribe

10 HISTORIC PRESERVATION

HISTORIC PRESERVATION GOALS

Goal 10.1: Preserve places/structures which carry historic significance through programs, incentives, education and other means; as well as perform ongoing identification, documentation, evaluation, protection and interpretation of La Plata County's considerable historic and prehistoric cultural resources.

Objective 10.1.A: To encourage regular and applicable designation of historic resources within the La Plata County Historic Register.

Policy 10.1.A1: Coordinate with interested and affiliated organizations in order to achieve a comprehensive representation of the County's history upon the Historic Register.

Policy 10.1.A2: Maintain outreach of historic preservation programs and tools with property owners in the County.

Policy 10.1.A3: Maintain an inventory of identified resources which may qualify for an historic program of the County; and which may either exist as or become a threatened historic resource.

Policy 10.1.A4: Identify and regularly update local criteria in order to evaluate historic resources within the County.

Policy 10.1.A5: Develop/maintain implementation strategies which expand the County's voluntary and incentive-based historic preservation program/s.

Policy 10.1.A6: Create incentives, instruments or mechanisms which provide financial assistance to properties and organizations in order to encourage expanded historic preservation within La Plata County.

Policy 10.1.A7: Consider designation as a Certified Local Government through the State Historic Preservation Office, History Colorado.

Policy 10.1.A8: Promote and facilitate avoidance of impacts to cultural resources located within the County, and mitigate impacts if they are unavoidable.

Objective 10.1.B: To focus efforts of preservation through public education.

Policy 10.1.B1: Create/maintain documents, such as brochures, forms, and preservation guides, to inform the public regarding programs,

events, guidelines and practices of the County relative to historic preservation.

Policy 10.1.B2: Increase the public's awareness and understanding of the County's Register and the benefits of historic preservation.

Policy 10.1.B3: Create programs to engage youth in understanding and appreciating cultural and historic resources.

Policy 10.1.B4: Develop/host public trainings and workshops regarding Colorado-specific preservation issues.

Objective 10.1.C: To strengthen the local and regional historic preservation network.

Policy 10.1.C1: Continue to grow outreach such as driving tours and engagement of cohesive communities throughout the County. Encourage these communities to celebrate their history and share it with others.

Policy 10.1.C2: Maintain a list of local and regional preservation organizations and interests while seeking to build new partnerships.

Policy 10.1.C3: Expand upon the mutually beneficial outcomes of conservation easements and historic preservation, through coordination with conservation easement organizations.

Policy 10.1.C4: Establish/maintain relations with the Southern Ute and Ute Mountain Ute Indian Tribes and other interested Tribes and Pueblos for the preservation of archeological sites and associated cultural resources.

Policy 10.1.C5: Continue to provide letters of support and agency referrals for efforts that protect historic resources.

Objective 10.1.D: To promote the incorporation of historic preservation principles into land use planning, in order to accommodate heritage tourism and promote protection and/or restoration of historic resources.

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Policy 10.1.D1: Continue to protect historic and prehistoric cultural sites by incorporating a review and recognition of archeological and historic sites.

Policy 10.1.D1: Link historic preservation and heritage tourism's role with planning and land use considerations, by incorporating

incentives for voluntary initiatives toward designs and applications which recognize these.

Policy 10.1.D3: Identify/document historically significant resources within new development proposals.

Bibliography

Lambert, Jill Seyfarth and Ruth. *A Historic Resource Survey of 100 Sites in La Plata County, CO.* Durango: San Juan Mountains Association and Cultural Resource Planning, 2010.

Lambert, Jill Seyfarth and Ruth. *Pioneers, Prospectors and Trout.* Durango: San Juan Mountains Association and Cultural Resource Planning, 2010.