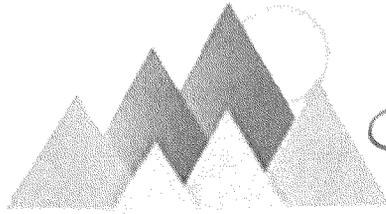
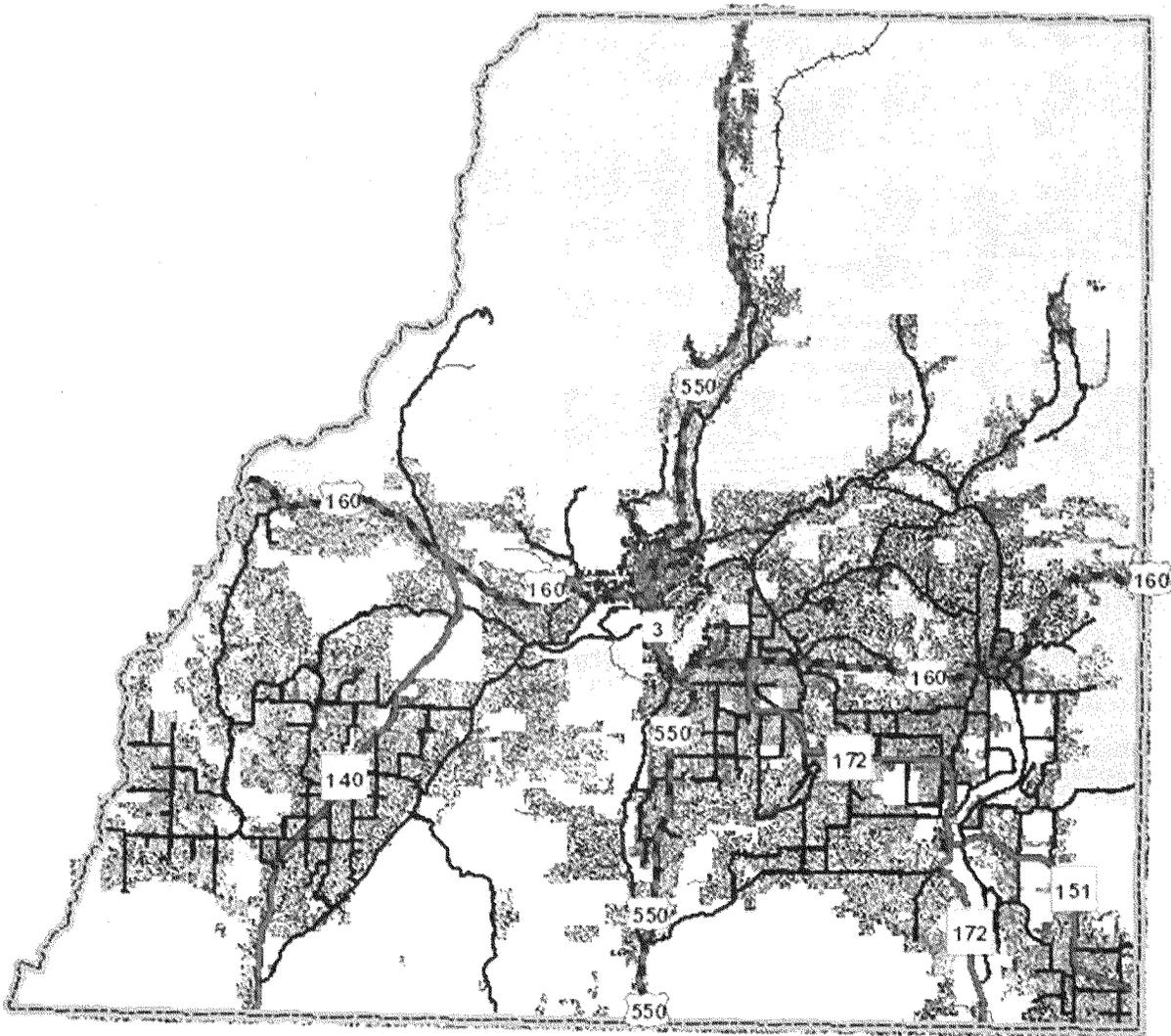


Recorder's Note: To see the comp plan in its entirety please contact the clerk and recorder's office



La Plata County
Colorado

Comprehensive Plan



by the Planning Commission 2016
La Plata County Community Development Team

Planning Department

Rtn: Planning Dept.

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COMPREHENSIVE PLAN



by the Planning Commission
November 2016

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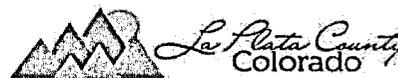
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INTRODUCTION



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 Revised 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 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.

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.

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 adoption of the “La Plata County Comprehensive Land Use Plan: Element 1-Policy Plan”. Both



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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 Policies & 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.*

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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
- (11) Plan Implementation
- 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.

Over the course of the following two years, planning staff, in conjunction with a planning



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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.

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 Commissioners 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.

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

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:

The City of Durango and the Towns of Bayfield and Ignacio all have adopted comprehensive plans



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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.

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

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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 PLACE¹

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 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



¹ Prepared by Jill Seyfarth, Cultural Resource Planning, Oct 2009

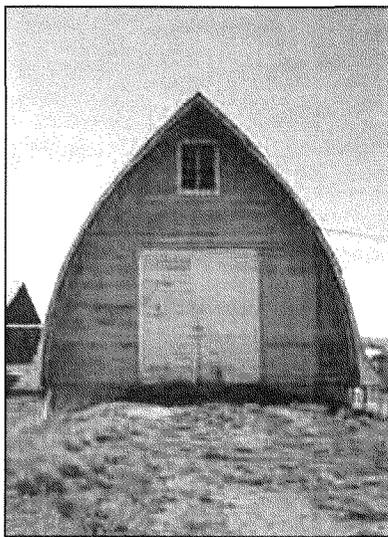


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members selected allotments in 1896. The Weeminuche Band (now the Ute Mountain Ute Tribe) opted to continue to retain their lands in common. The available lands, located in a 15-mile wide band stretching across the southern one third of the county, 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



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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. 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.



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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.

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



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.



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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 led 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								
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**

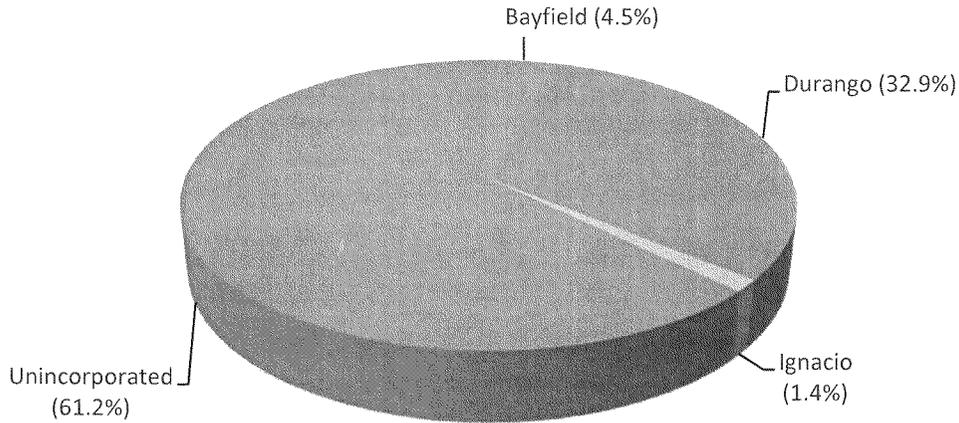
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Percent of Total
Bayfield	1,624	1,635	1,652	1,639	1,678	1,824	1,962	2,025	2,087	2,333	4.4
Durango	14,636	14,970	14,967	15,366	15,623	15,888	16,019	16,420	16,627	16,887	31.6
Ignacio	839	841	833	820	810	799	790	786	797	697	1.3
Unincorporated *	28,004	28,533	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

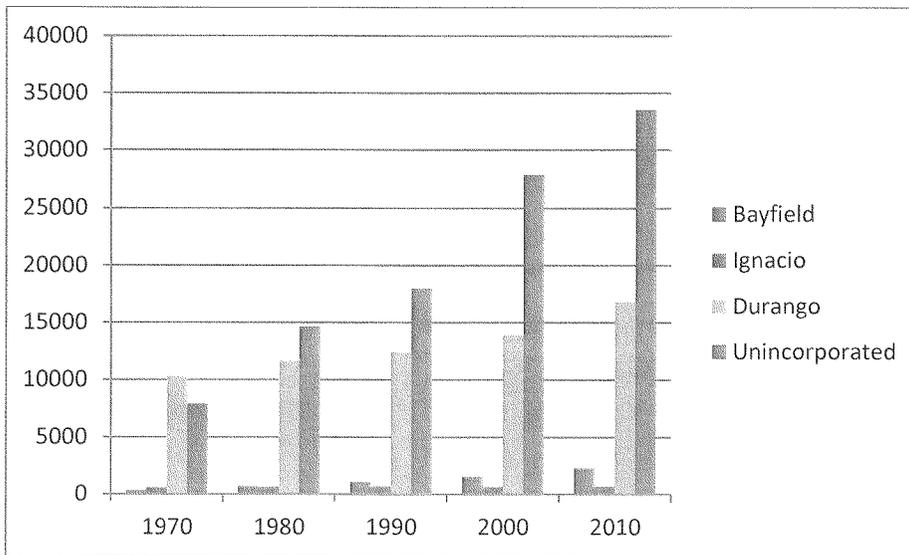


Chart 1
Population Distribution: 2010



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

Chart 2
Historic Population Distribution: 1970 - 2010

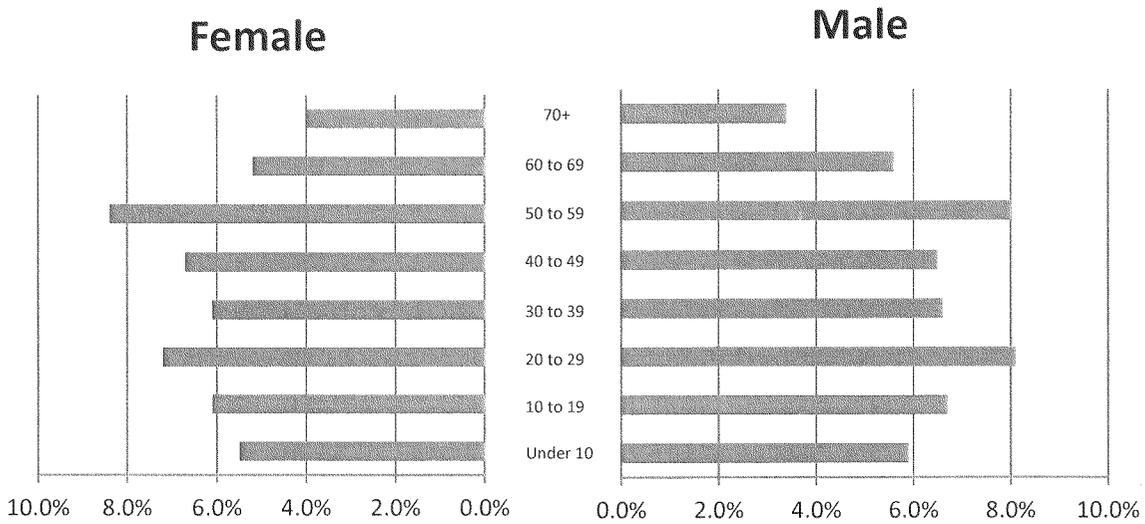


Source: U.S. Census Bureau

GROWTH TRENDS



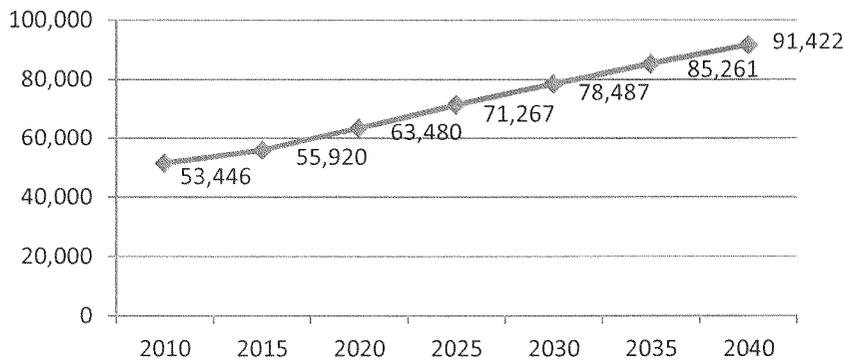
Chart 3
Gender and Age Profile of La Plata County Population



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

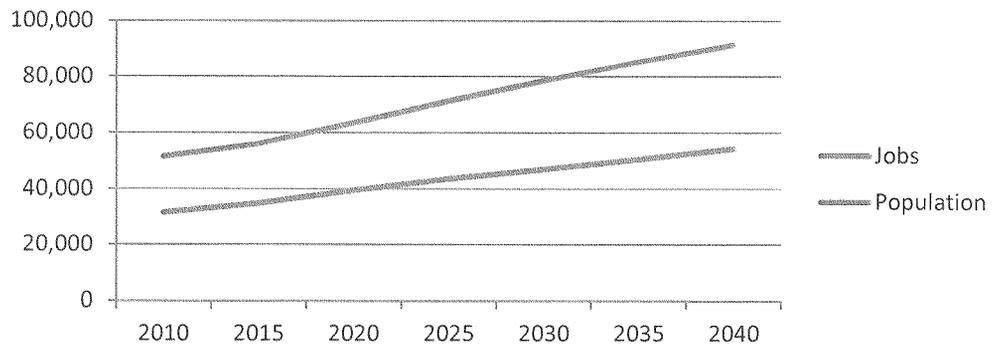


Source: Colorado Department of Local Affairs

GROWTH TRENDS



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

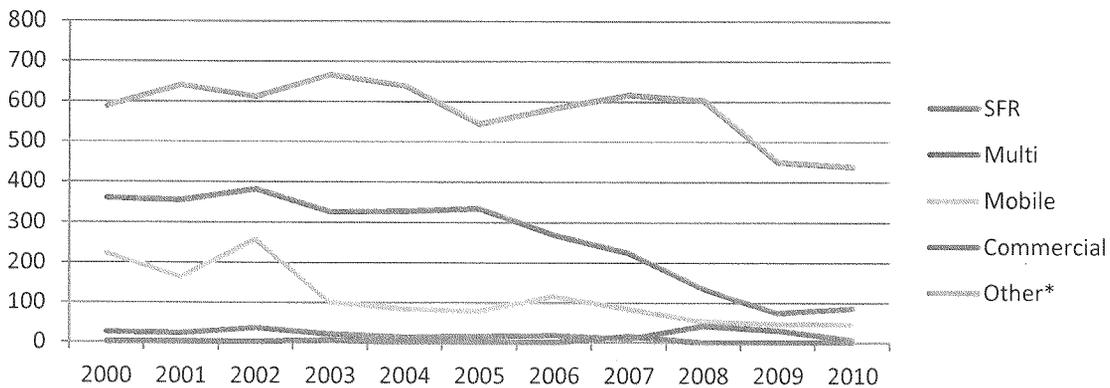


Source: Colorado Department of Local Affairs

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

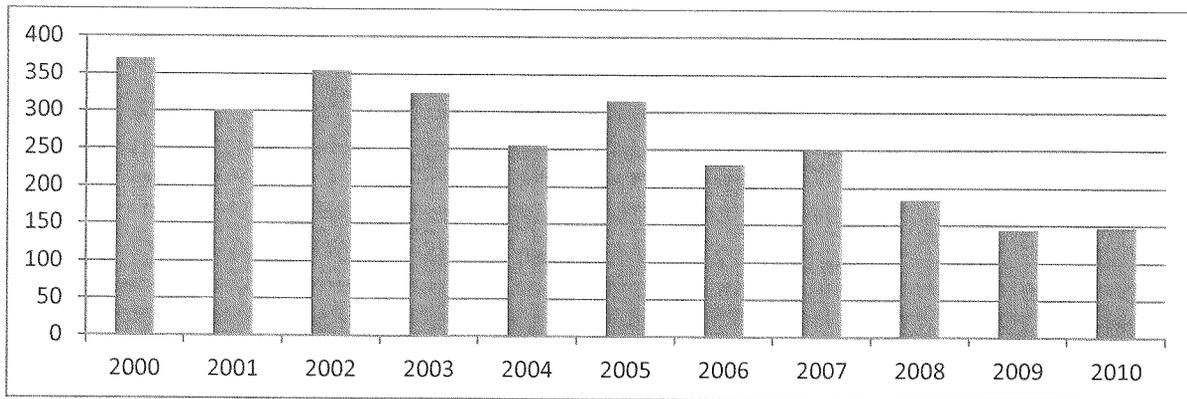
GROWTH TRENDS



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

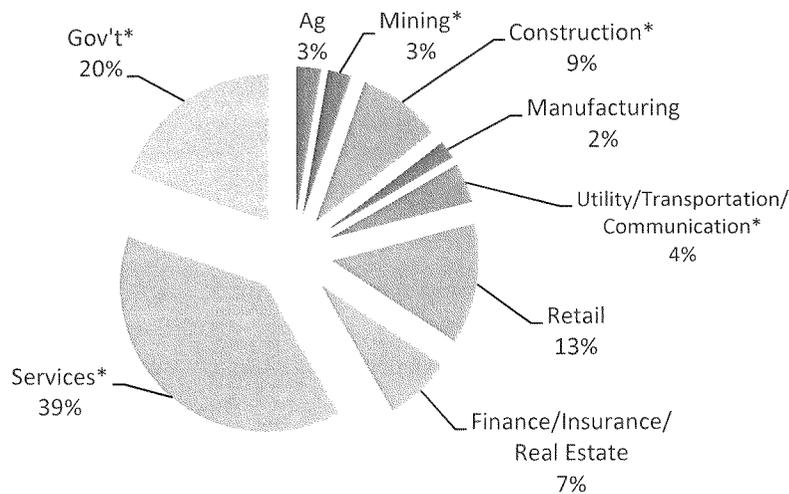


Table 3
County Employment by Job Sector: 1980 - 2010

	1980		1990		2000		2010		Change 1980 - 2010	
	Number	Percent of Total	Number	Percent 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

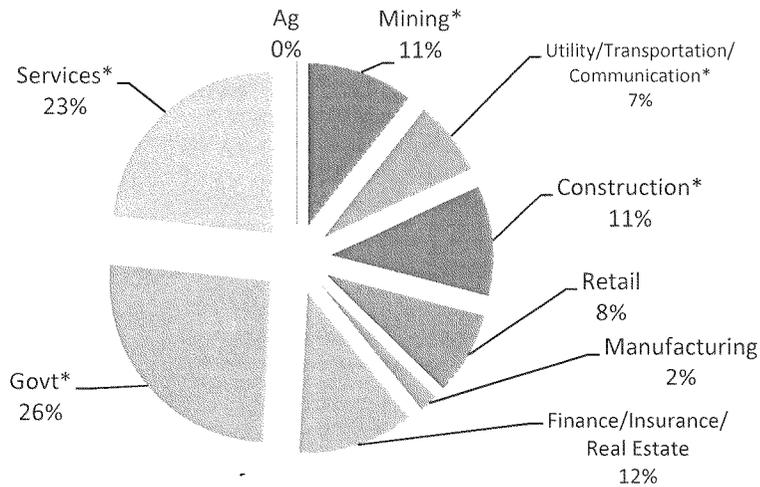


Source: Colorado Department of Local Affairs
 *Accounts for Oil and Gas

GROWTH TRENDS



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

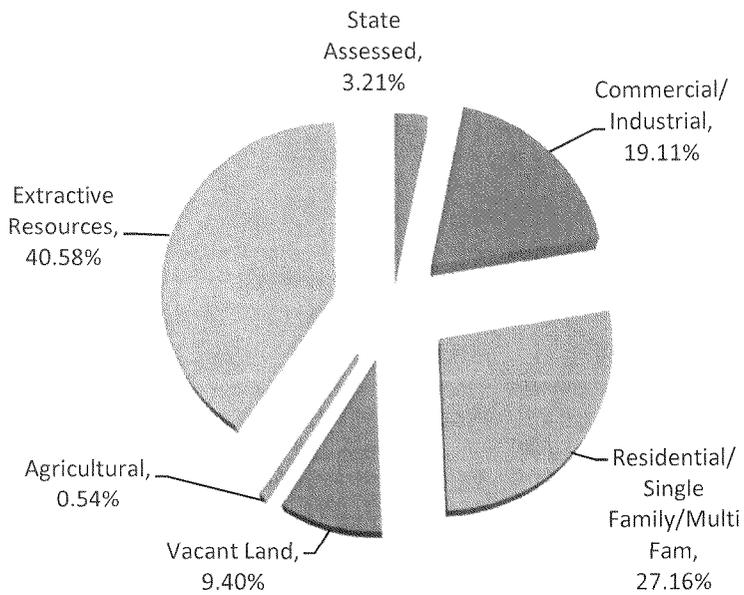
Source: La Plata County Assessor's Office

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.

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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

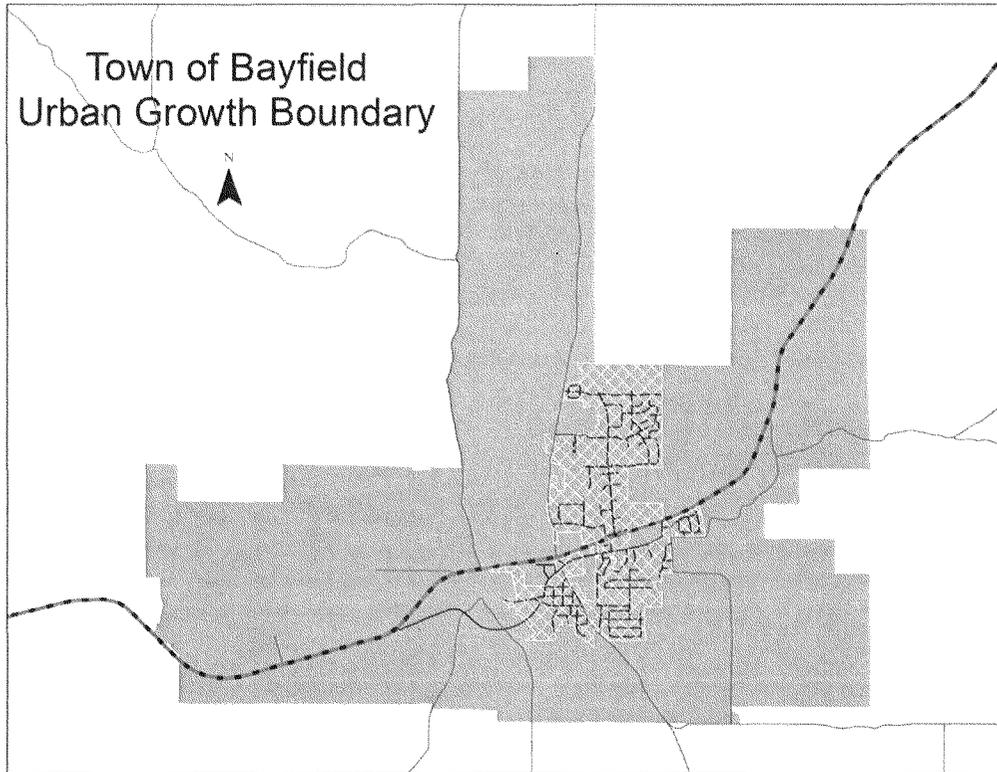
Municipal Service Areas (3-Mile Plans)

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).

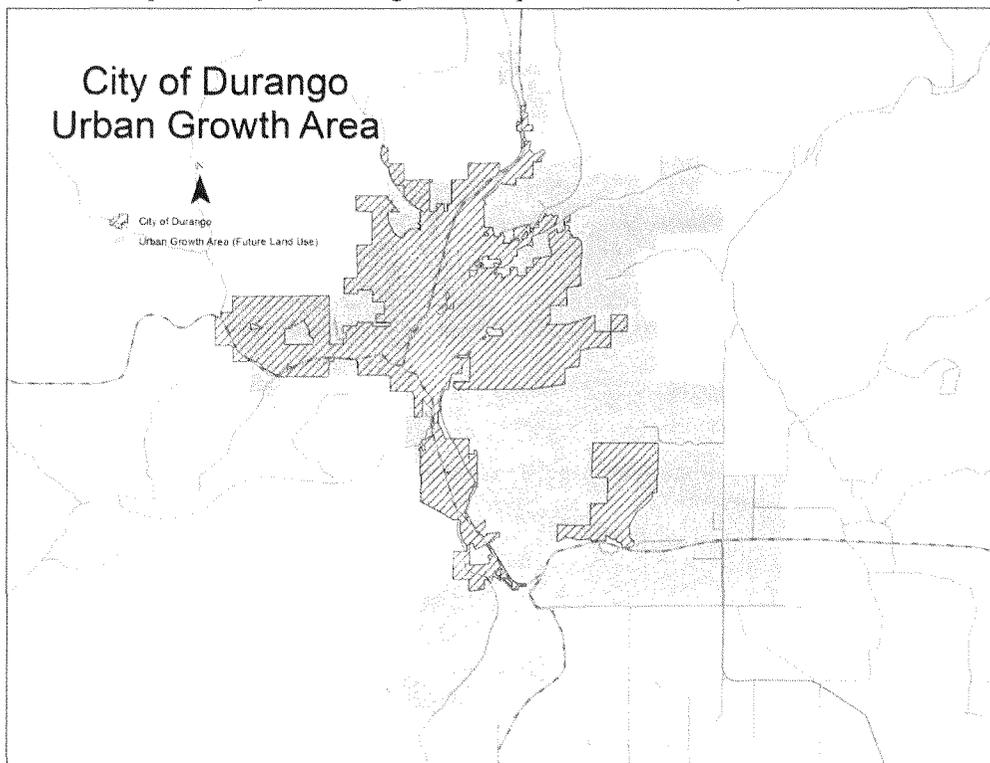
1 LAND USE



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



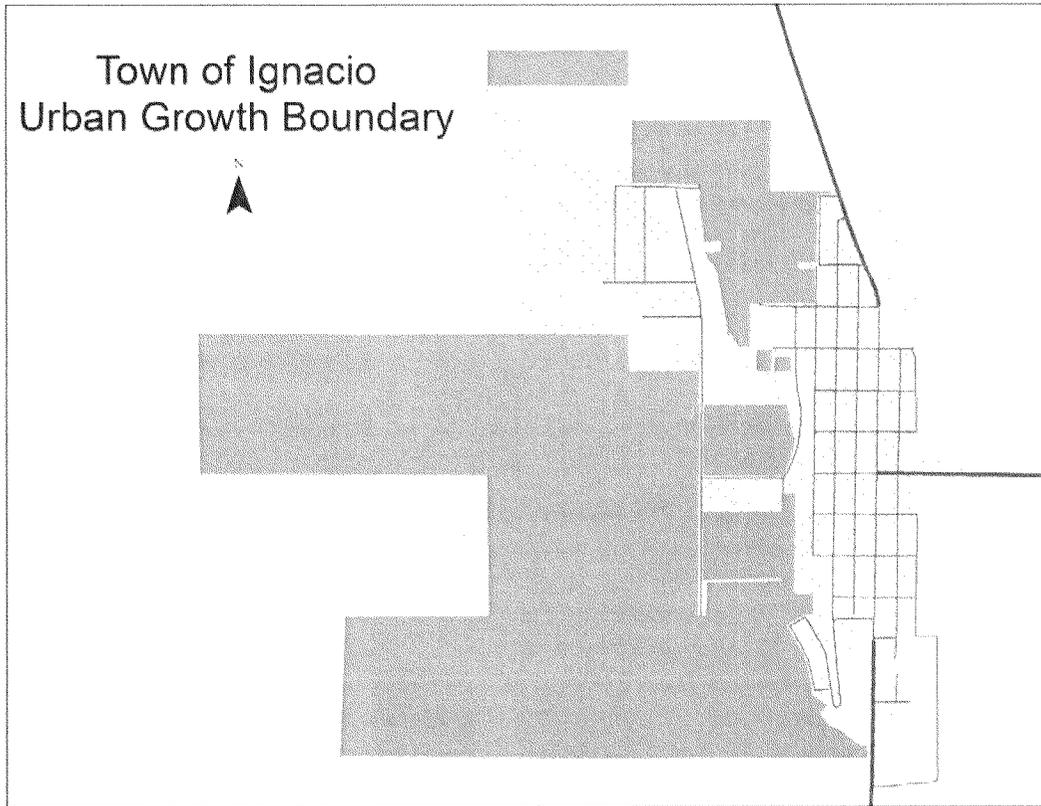
Map 1-2 City of Durango Municipal Service Area (3-Mile Plan)



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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

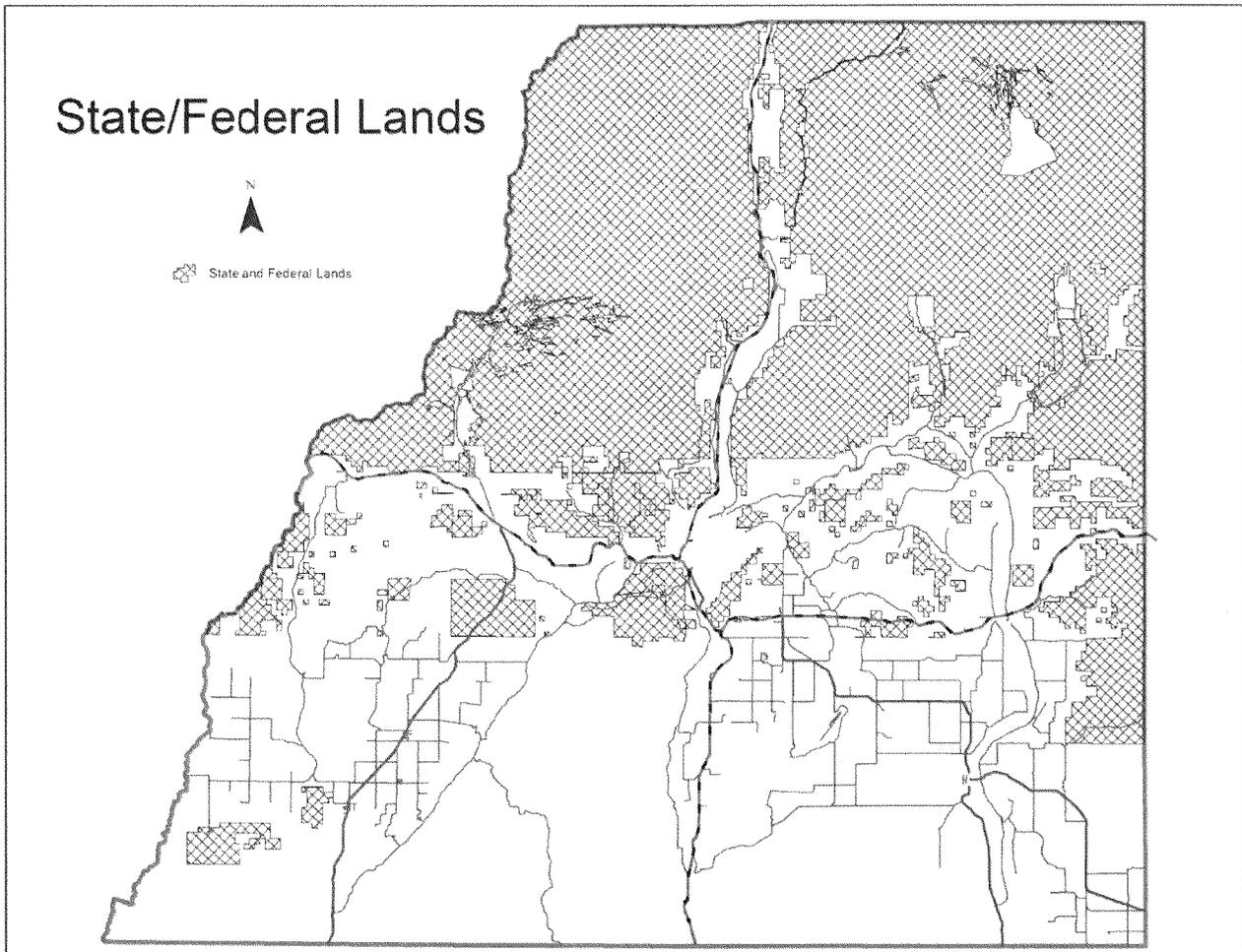
In areas of the County where central water and sewer services are available, these services are provided by entities such as local municipalities, metropolitan districts, private companies, homeowner associations, and, in some cases, Tribal governments. Existing Infrastructure

1 LAND USE



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

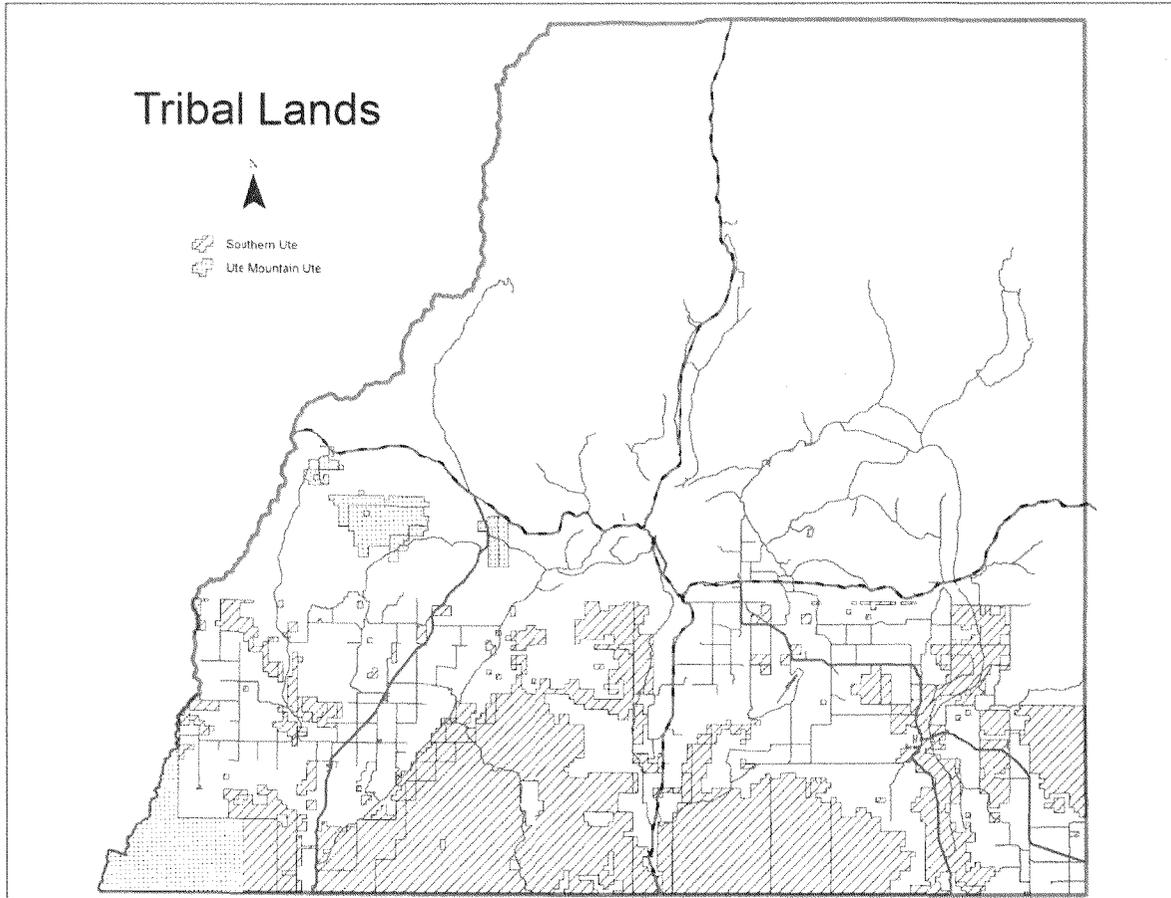


There are several terms which identify various nodes of service activity in the County for different purposes. Those include *Rural Activity Centers* (RAC) which tend to provide general or neighborhood services for various rural locations; *Urban Service Areas* (USA) which entail an extension of municipal 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.

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Map 1-5 Tribal Nations Transecting La Plata County



Activity/Growth Hubs

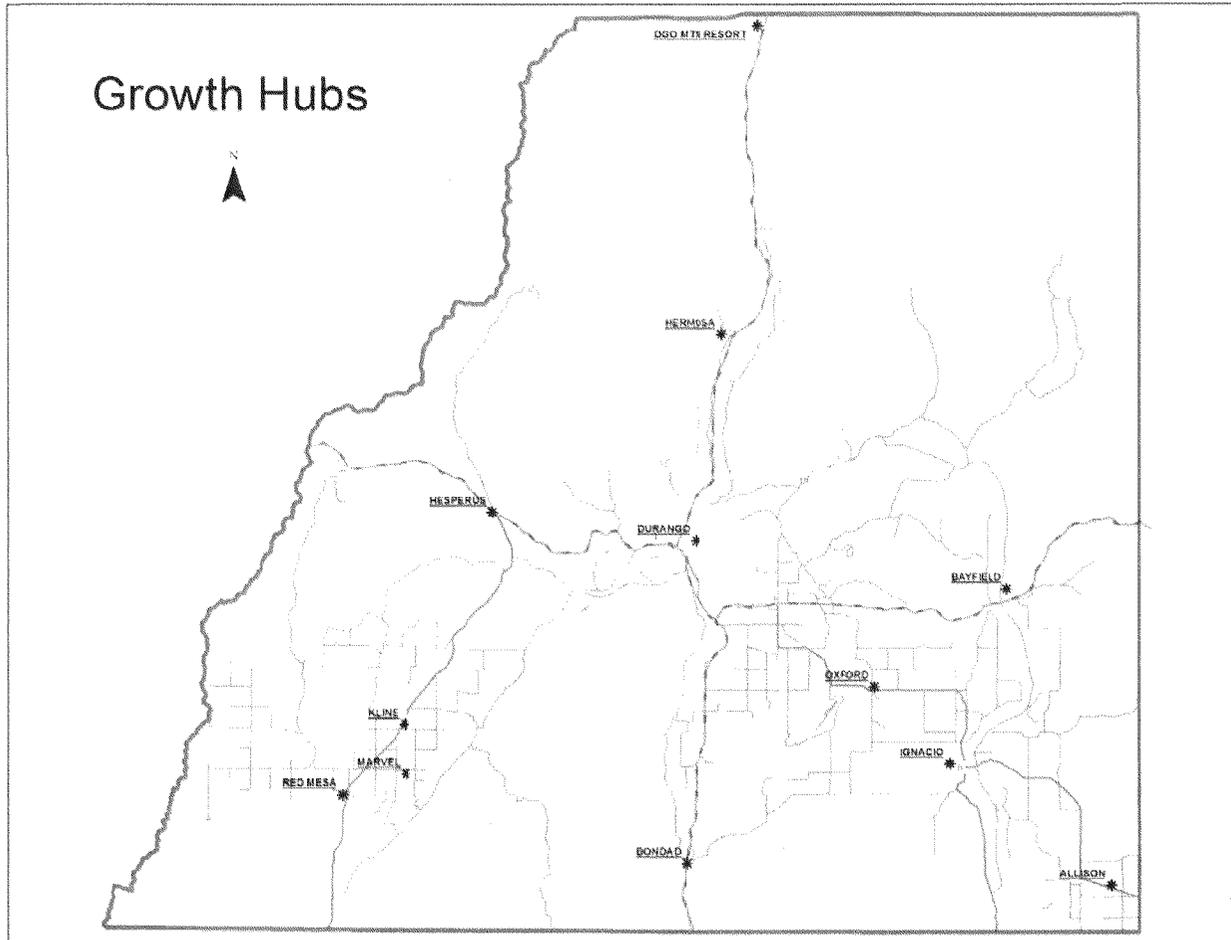
Where activity hubs exist throughout the County, there may be opportunities for further growth to occur in these areas. Being flexible and able to accommodate such growth is, therefore, important. The County has recognized opportunities for growth based upon availability, or the potential for available, 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.

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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.

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

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correlation, of the comprehensive policies identified within this Plan, as well as the classifications designated within each of the area plans.

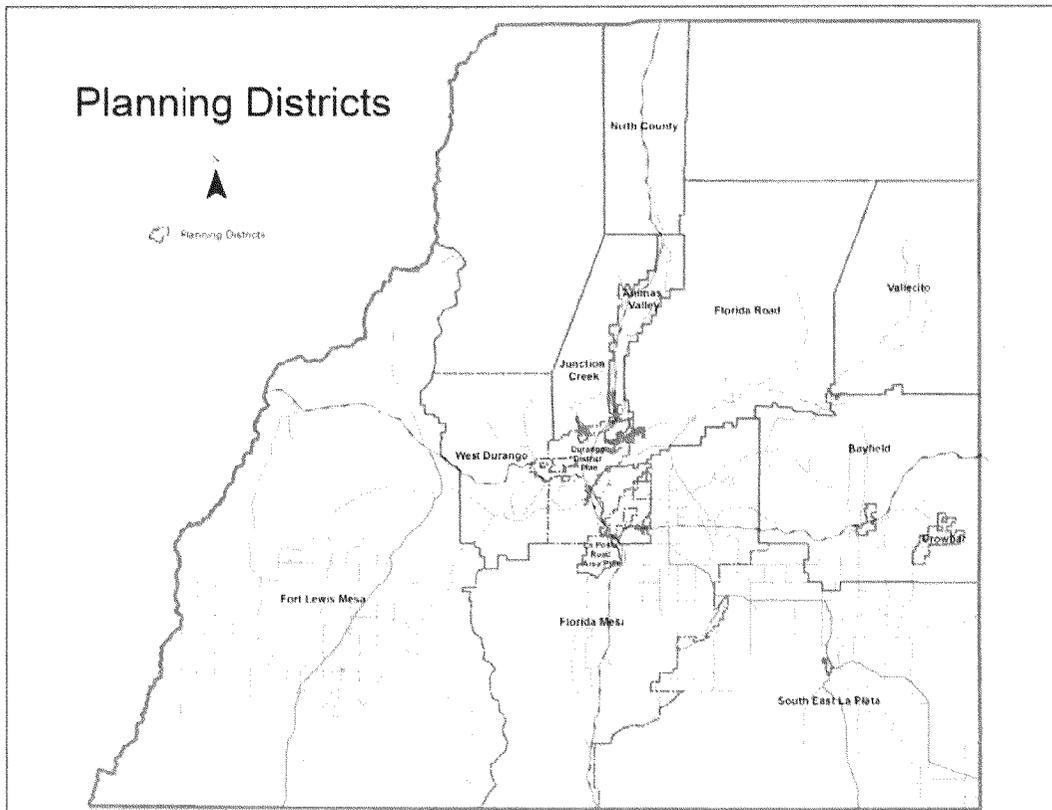
A land use classification system should include an inventory of all classifications defined, and then applied within each area plan (district map). This exercise should take place upon a complete update of this Plan, in order to ensure such consideration/correlation. Also, extending the public process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

GOALS

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

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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.

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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.

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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.

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.

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

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

2 INFRASTRUCTURE



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.

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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.

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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.

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.

2 INFRASTRUCTURE



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
2. Community Water Systems Map
3. Drainage Sub-Basins
4. Sanitation Facilities
5. Utility Gas Service and Vacant Parcels
6. Vacant Parcels over 1 mile from Utility Gas Service
7. Telecommunications Facilities

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 insurance², 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

¹ La Plata County Housing Demand Forecast – RHA, 2015

² La Plata County Housing Demand Forecast – RHA, 2015



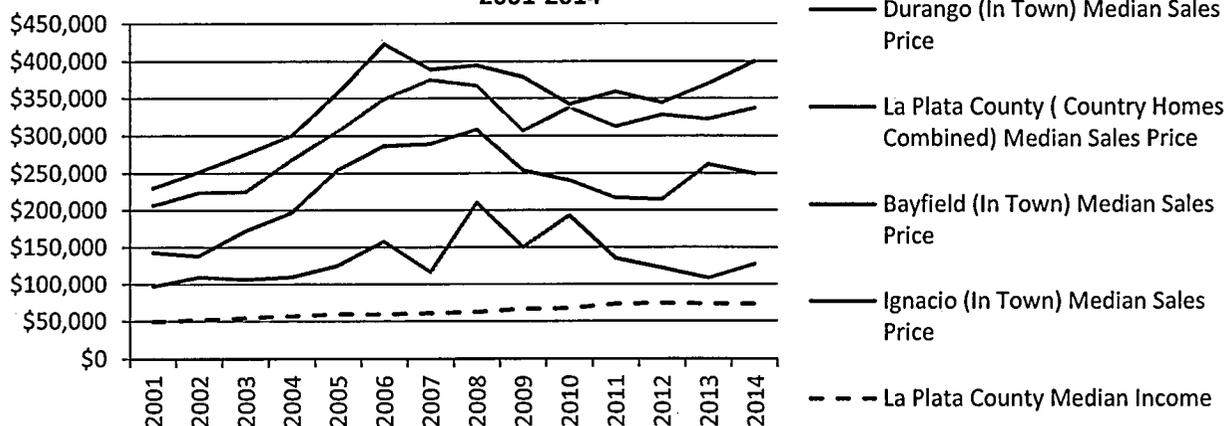
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more demand for housing that is close to employment and services. Also, impacted by such commutes is the cost and demand placed on dispersed infrastructure, which is an inefficiency of expense to the County at-large.

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

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.

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



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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.

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.

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.

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 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-

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

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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.

⁷ La Plata County Housing Demand Forecast –RHA, 2015

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



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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.

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.

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 (Appendix 22). 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.

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

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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

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

* * * * *

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

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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 decline¹.

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.

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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 Health Department (SJBHD) is the regulatory authority for onsite wastewater treatment system permitting.

Groundwater 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

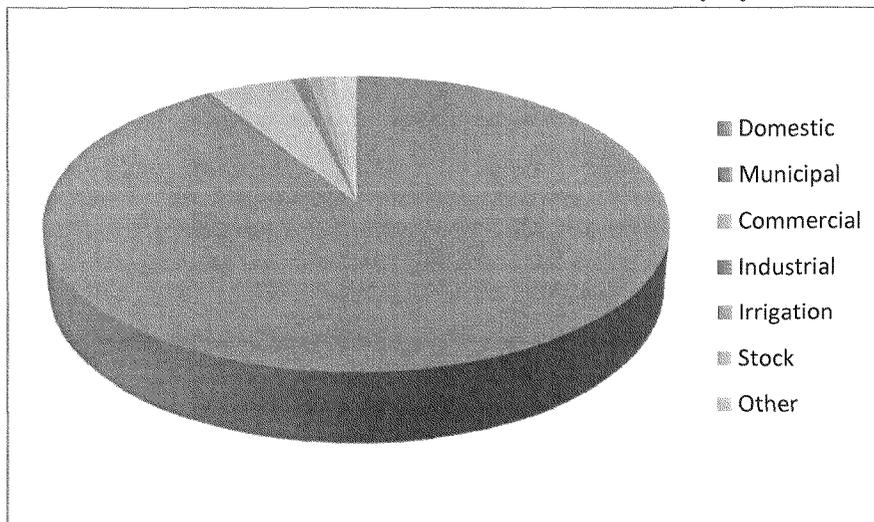
4 ENVIRONMENTAL RESOURCES



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 Formation². 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 County³. 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.

The mountain headwaters in the north receive the majority of the annual precipitation,

² Colorado Division of Water Resources, Well Application Permit Data, August 2016

³ U.S. Geological Survey National Hydrography Dataset

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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.

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.

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.

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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.

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

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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 SJBHD stopped issuing permits for new wastewater ponds or lagoons. Existing lagoons must meet certain SJBHD requirements and cannot 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

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

⁵ San Juan Basin Health Department On-Site Wastewater System Regulations, 2011

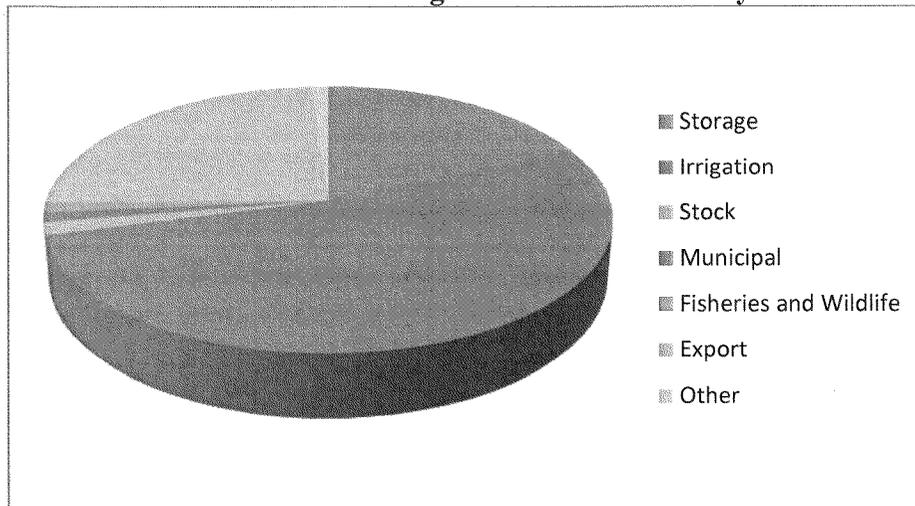
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habitat for wildlife and contributes to the scenic values of the County as well. The average annual surface water diversions for DWR Division 7 is shown by use in Chart 4-2. As the population in the County grows and urbanization continues to evolve, 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 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.

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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 4 – Infrastructure*, the CWCB approved Colorado's Water Plan (appendix), the first statewide water plan in Colorado.

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.

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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

⁶ Federal Emergency Management Agency, Flood Insurance Study, La Plata County Colorado and Incorporated Areas, August 2010

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Wetlands 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.

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

⁷ Colorado Natural Heritage Program, Survey of Critical Wetlands and Riparian Areas in La Plata County, May 2004

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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 (NO₂), sulfur dioxide (SO₂), particulate matter less than or equal to 10 microns in size (PM₁₀), particulate matter less than or equal to 2.5 microns in size (PM_{2.5}), ozone (O₃), and lead (Pb). The EPA classifies all locations in the

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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.

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

Criteria Air Pollutant	Averaging Interval	NAAQS (µg/m ³)	Measured Ambient Concentrations (µg/m ³)	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 SO₂ 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

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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

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

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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 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

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

¹² EPA National Emissions Inventory, 2011

¹³ Four Corners Air Quality Task Force Report of Mitigation Options, November 2007

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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 PM₁₀ 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.

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

¹⁴ EPA National Emissions Inventory, 2011

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

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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

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.

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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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 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.

Key Point
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.

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

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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. 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

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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

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>

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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 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 (<i>Empidonax traillii extimus</i>)	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 (<i>Strix occidentalis lucida</i>)	FT, ST	Mixed conifer or ponderosa pine/mixed conifer located in steep rock-walled canyons.
	Yellow Billed Cuckoo (<i>Coccyzus americanus</i>)	FT	Woodlands, thickets, orchards, streamside groves.
	Burrowing Owl (<i>Athene cunicularia</i>)	ST	Dry, open areas with short grasses and no trees.

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Mammals	New Mexico meadow jumping mouse (<i>Zapus hudsonius luteus</i>)	FE	Vegetation near ponds and streams. Critical habitat designated along Florida River.
	Canada lynx (<i>Lynx canadensis</i>)	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 (<i>Gulo gulo</i>)	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 (<i>Lontra Canadensis</i>)	ST	Riparian habitat
Insects	Uncompahgre fritillary butterfly (<i>Boloria acrocneuma</i>)	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 (<i>Pediocactus knowltonii</i>)	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

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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

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.

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

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

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

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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. 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

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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. The map is shown in Appendix 21.

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

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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.

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.

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- 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.

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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.

Map 4-1

La Plata County, Colorado Water Critical Rating

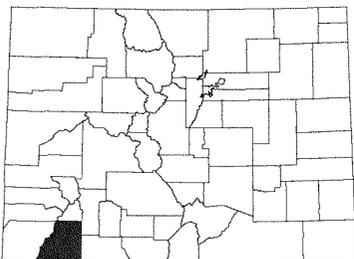
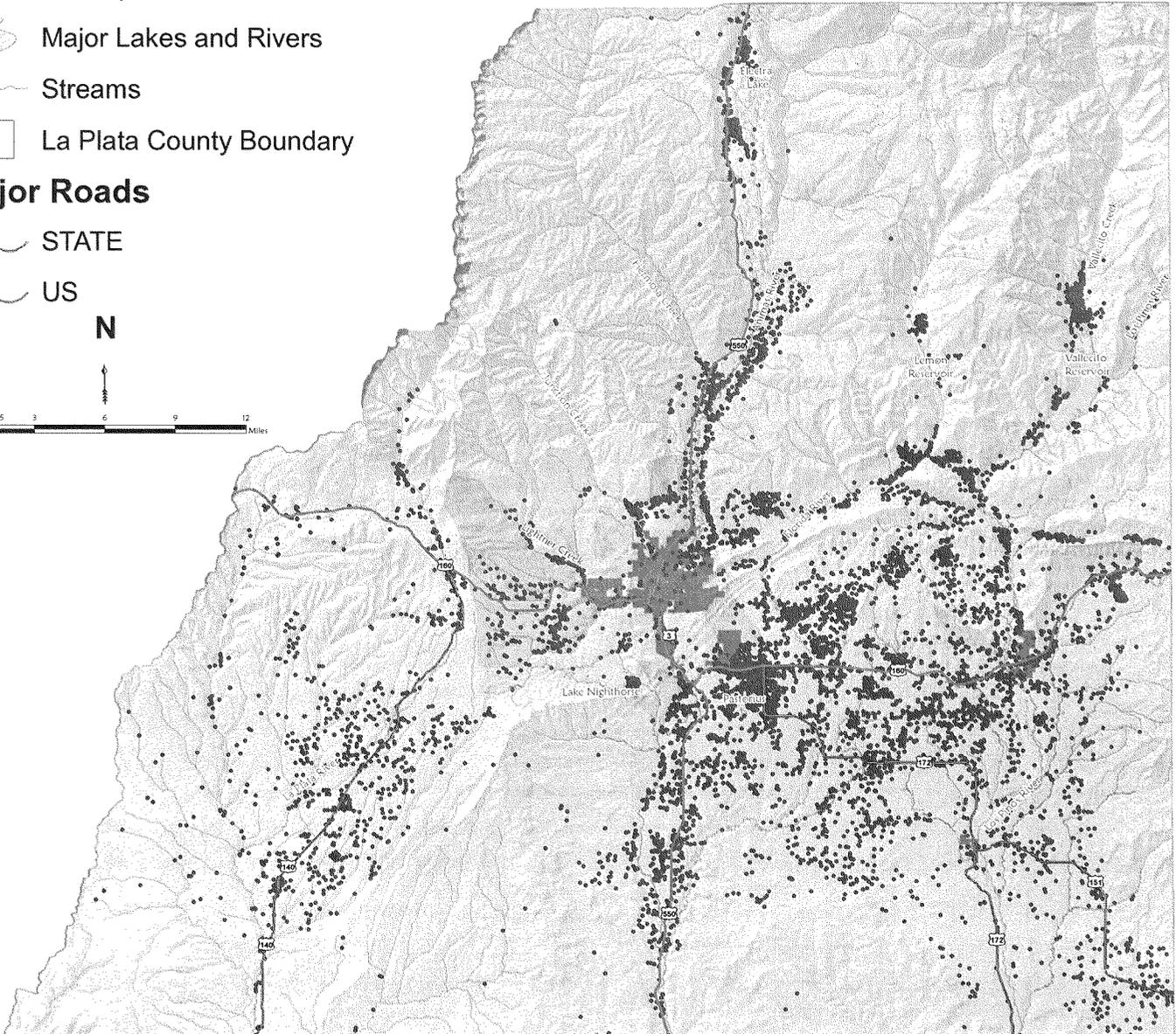
Constructed Water Wells & Water Critical Zones

-  Critical
-  Potential
-  Not-Critical
-  Constructed Water Wells
-  Municipal Boundaries
-  Major Lakes and Rivers
-  Streams
-  La Plata County Boundary

Major Roads

-  STATE
-  US

N



Colorado

Data Sources: La Plata County, USGS, COGCC, CO DWR

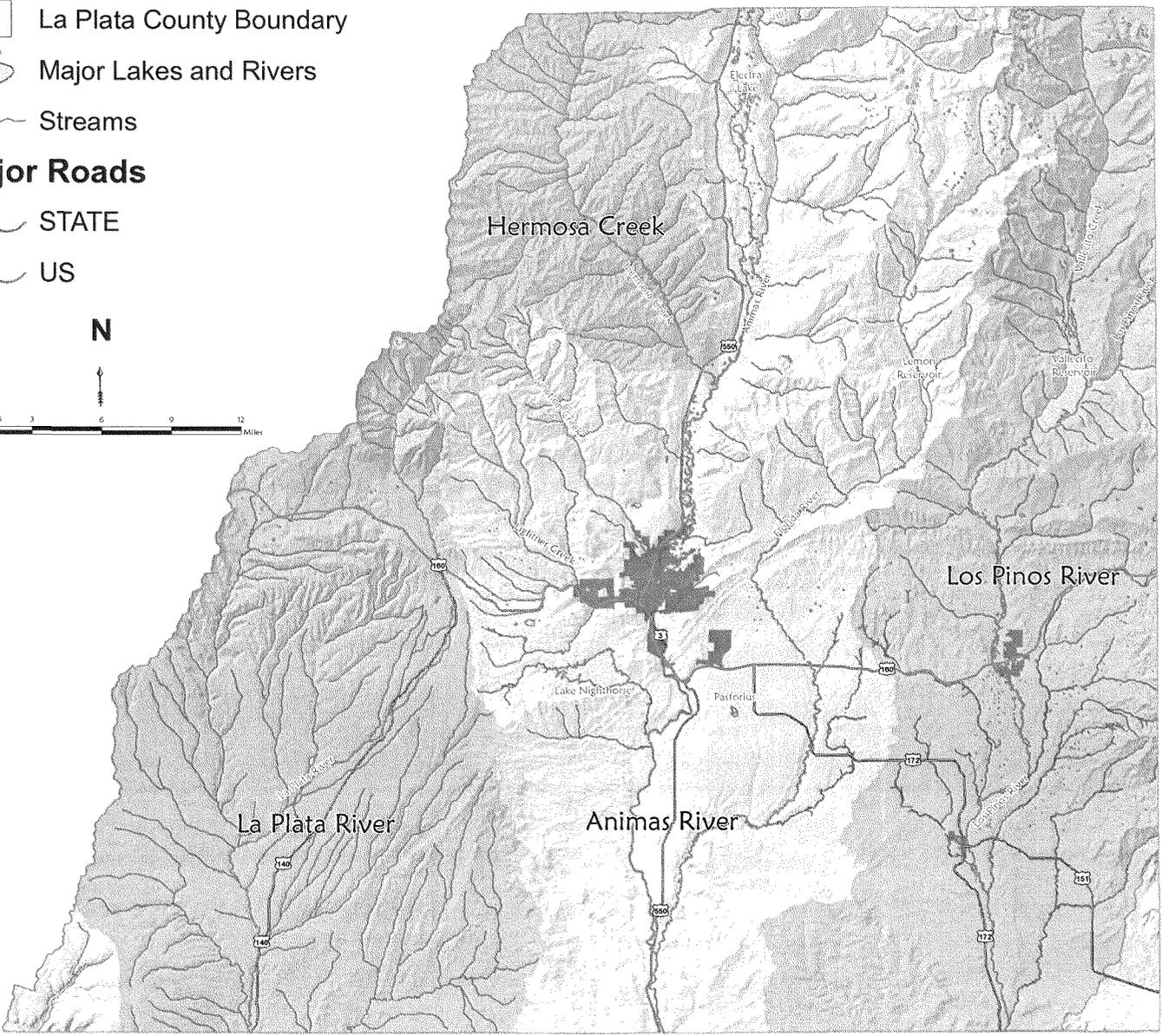
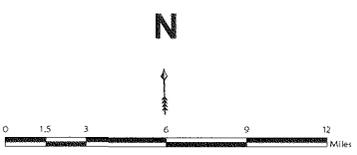
Disclaimer: The locations of features on this map are approximate and do not represent a survey.



August 16, 2016

Map 4-2 La Plata County, Colorado Drainage Sub-Basins

-  Animas River Sub-basin
-  Los Pinos River Sub-basin
-  La Plata River Sub-basin
-  Hermosa Creek Sub-basin
-  Municipal Boundaries
-  La Plata County Boundary
-  Major Lakes and Rivers
-  Streams
- Major Roads**
-  STATE
-  US



Based on Analysis of National Hydrography Dataset
 La Plata County Contains Approximately 794 Miles of Perennial Streams

Data Sources: La Plata County, USGS, COGCC, CO DWR

Disclaimer: The locations of features on this map are approximate and do not represent a survey.

Map 4-3

La Plata County, Colorado

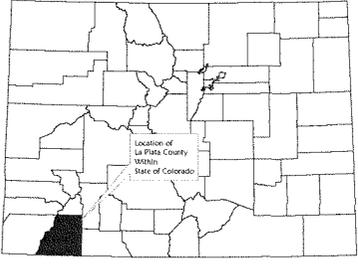
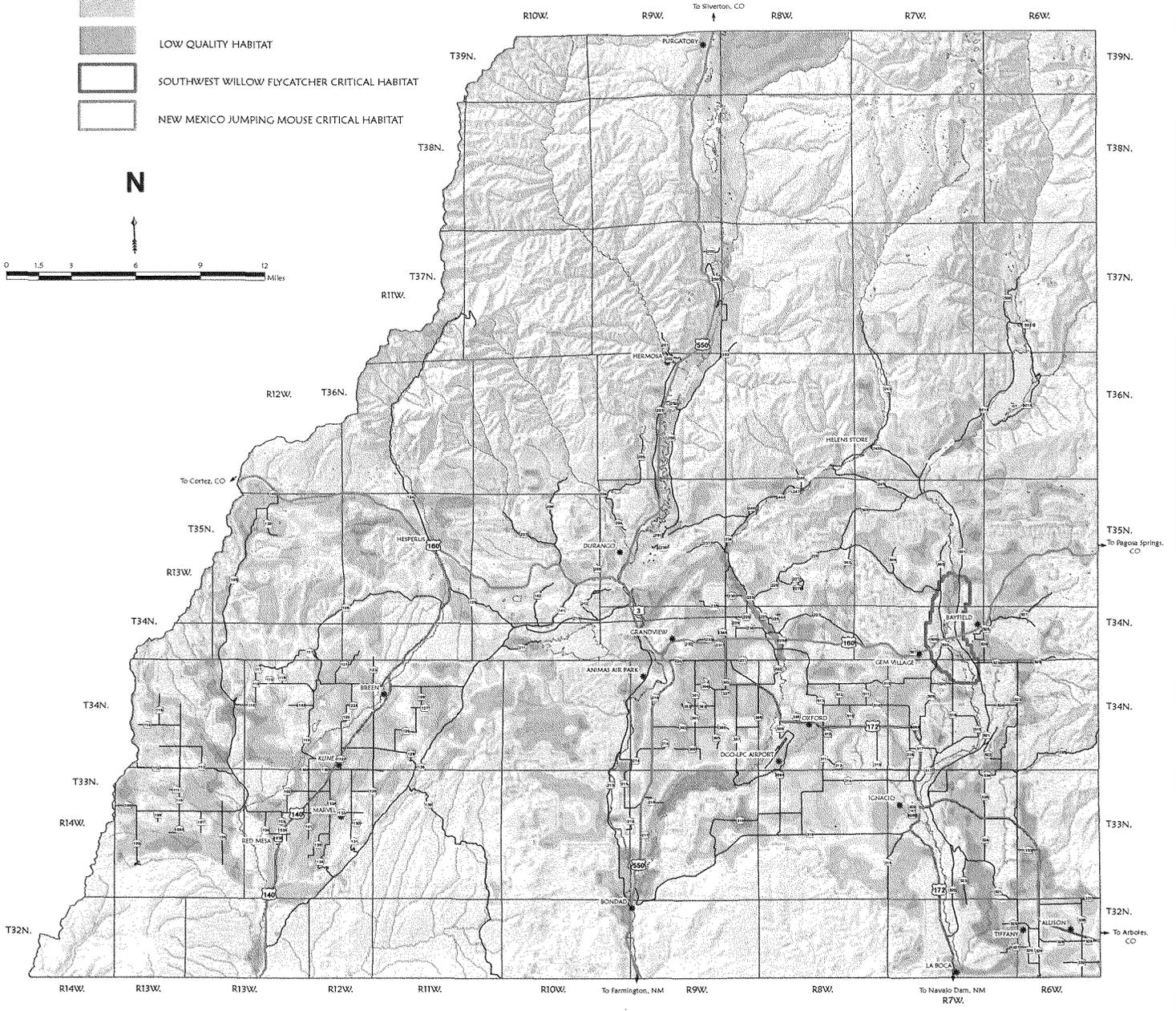
Wildlife Habitat

Fee Simple Parcel Analysis

Legend

-  HIGH QUALITY HABITAT
-  MEDIUM
-  MEDIUM / LOW
-  LOW QUALITY HABITAT
-  SOUTHWEST WILLOW FLYCATCHER CRITICAL HABITAT
-  NEW MEXICO JUMPING MOUSE CRITICAL HABITAT

N



Data Sources:
 Colorado Parks & Wildlife, U S Fish & Wildlife Service,
 U S Geological Survey, La Plata County

Disclaimer: The locations of features on this map are approximate and do not represent a survey.



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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 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.

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

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**

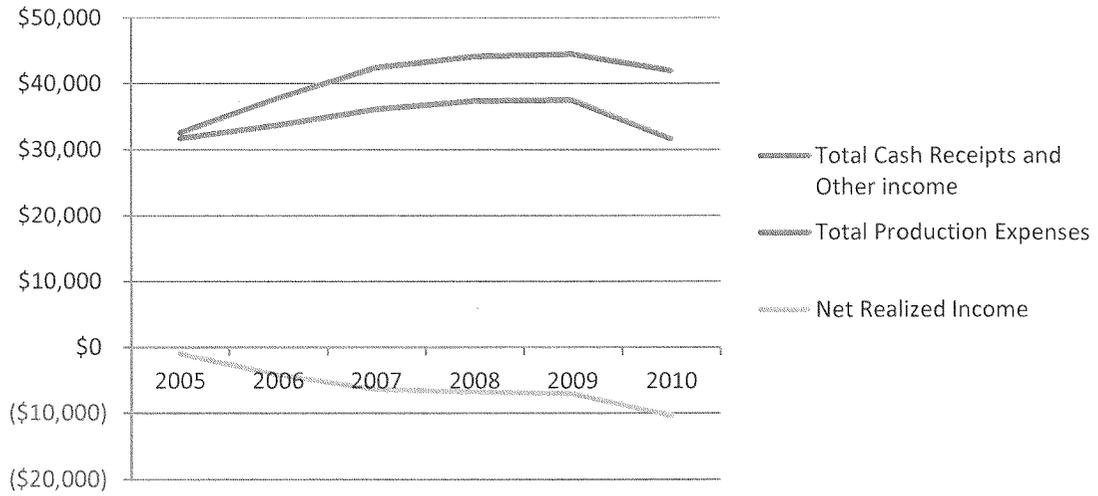
	2005	2006	2007	2008	2009	2010
Total Cash Receipts and Other	\$31,717	\$33,747	\$36,113	\$37,388	\$37,462	\$31,654
Total Production Expenses	\$32,648	\$37,801	\$42,394	\$44,068	\$44,419	\$41,974
Net Realized Income	(\$931)	\$4,054)	\$6,281)	\$6,680)	\$6,957)	(\$10,320)

Source: Bureau of Economic Analysis

5 AGRICULTURE

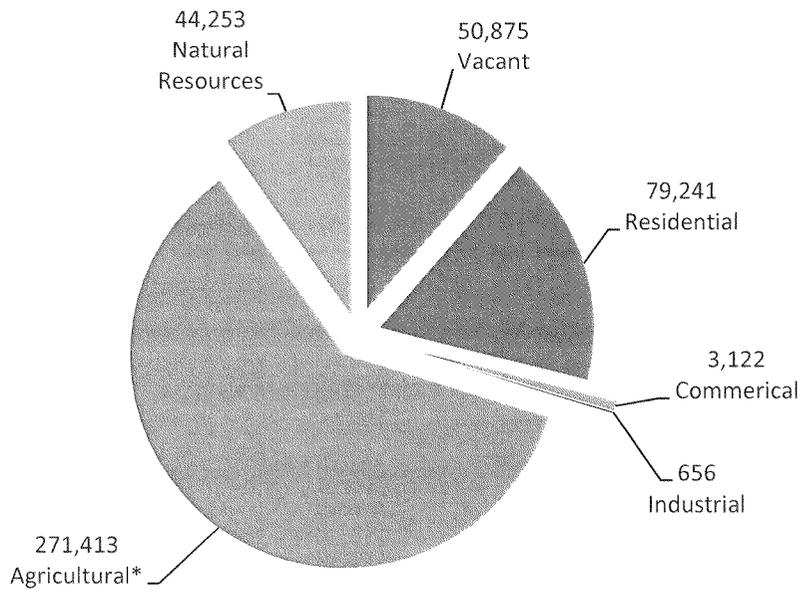


Chart 5-1
La Plata County Agricultural Income: 2005 - 2010



Source: Bureau of Economic Analysis

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

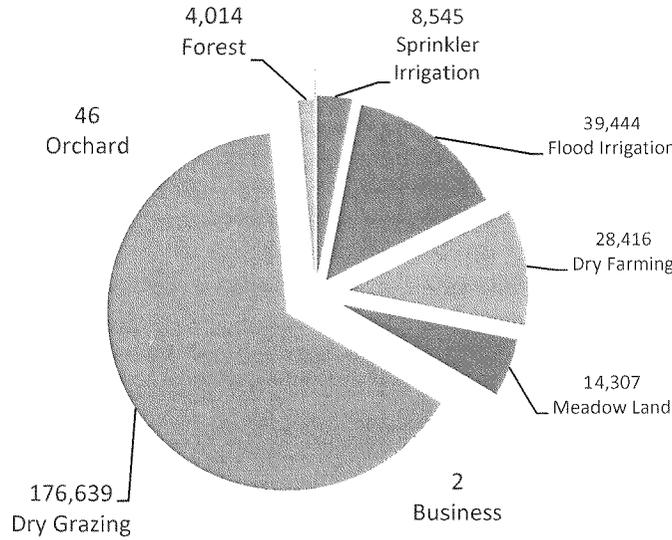


*See Chart 5-3 for detailed breakout
 Source: La Plata County Assessor's Office

5 AGRICULTURE



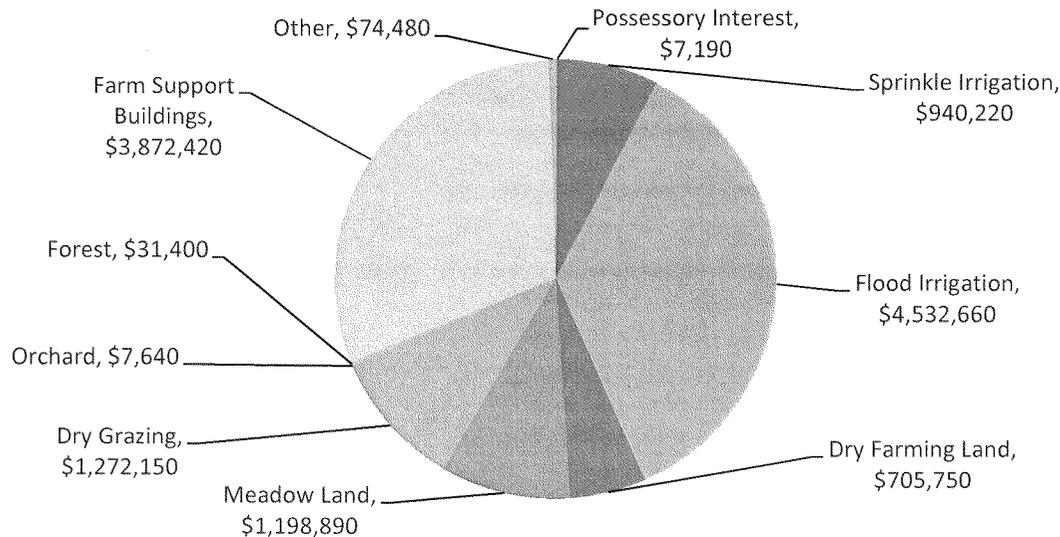
Chart 5-3
Agricultural Property Assessment by Acreage: 2010



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.

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.

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.

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;
- 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

5 AGRICULTURE



- 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.



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- 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, and can be found in Appendix 21. 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 space¹.

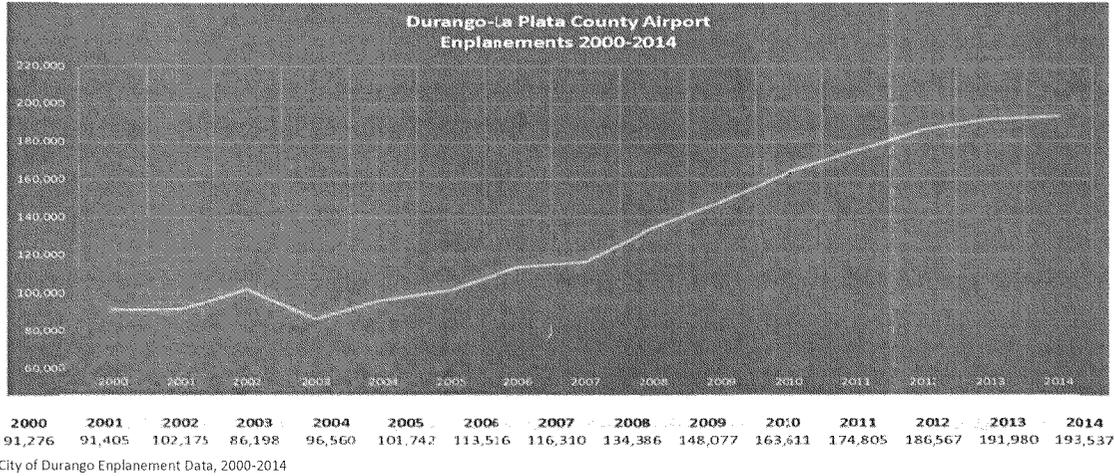
Since the establishment of DRO, significant changes have occurred in the County, population increase being one of the more notable aspects. From 1970 to 2000, the County's total population increased by approximately 178% (5.9% annually). Further, as projected by the Colorado Department of Local Affairs (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 *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.

¹ Durango-La Plata County Airport Master Plan 2015. See Appendix 16.

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Chart 6-1



As depicted in the graph above, *Chart 6-1*, enplanement² 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 departure³. 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.

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

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

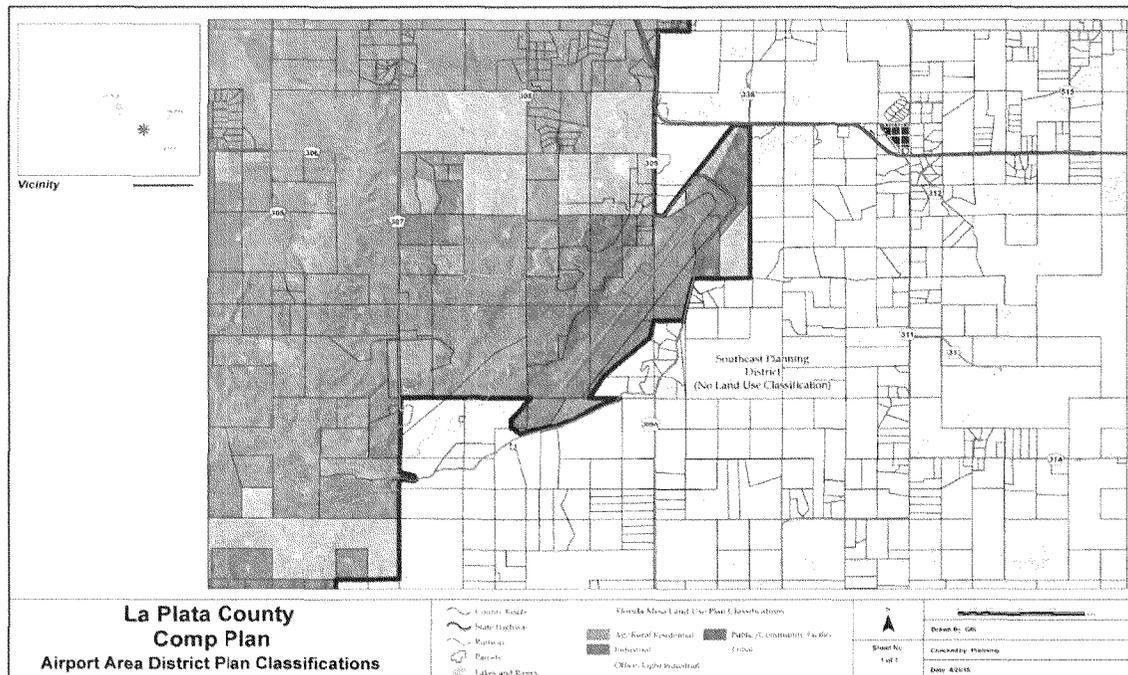
6 AIRPORT



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



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

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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 4 – 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. 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

⁵ Airport Master Plan 2015

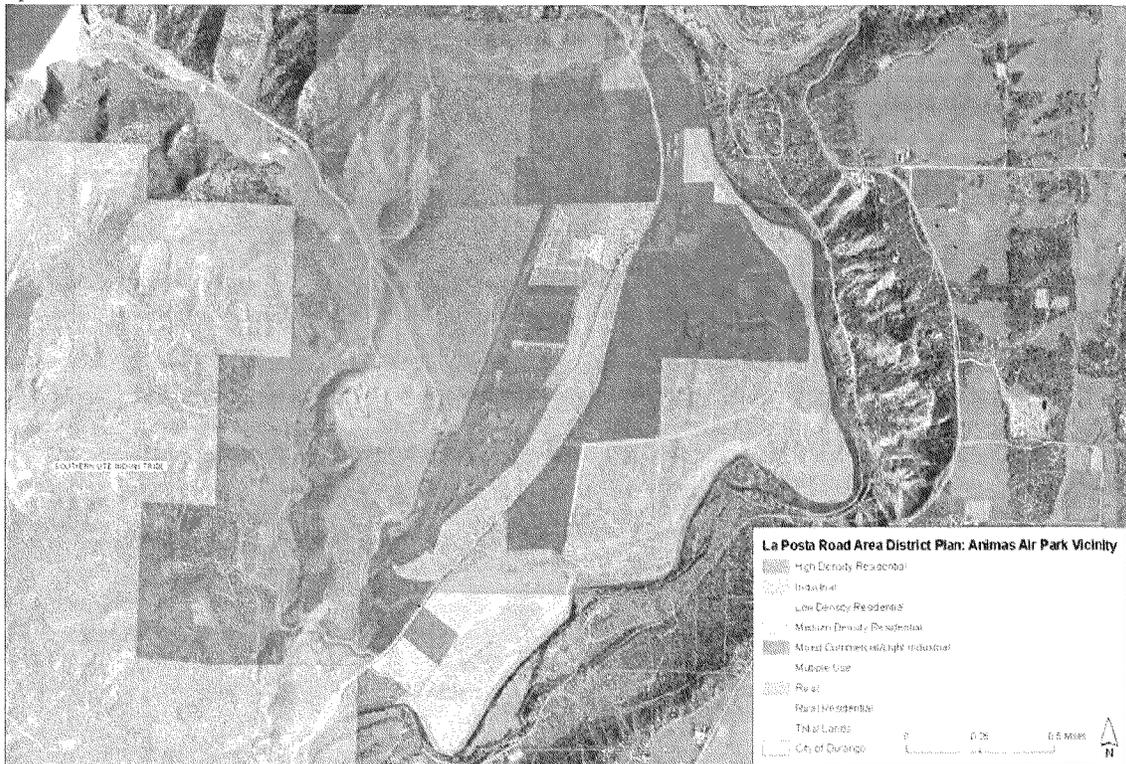
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There are several aspects of the Airport that are recommended in the Airport Master Plan for expansion or redevelopment in the future. This includes a new access road north of the Airport to SH 172 due to the substandard sight distance of the existing 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.

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



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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 passengers⁶ 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.

⁶ CDOT Division of Aeronautics Annual Report

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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 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 6.1.C: 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.

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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 aviation 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.

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

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7 PUBLIC SAFETY



Overview and Background

The Public Safety Element of the comprehensive plan is intended to provide an overview of several public safety issues affecting residents of La Plata County. The provision of timely and adequate law enforcement, and fire and emergency medical services are paramount as the County continues to grow. So are thorough emergency preparedness planning, search and rescue services, and a number of other hazard mitigation issues such as wildfire and floodplain management.

Public Safety Goal

Goal 8.1: To ensure that, as the County grows, emergency preparedness planning and the provision of emergency services continue to meet the growing demands of residents and visitors.

Law Enforcement

The La Plata County Sheriff's Office is the primary law enforcement agency for the unincorporated County. Other agencies that provide law enforcement include: the Durango, Bayfield and Ignacio Police Departments; Southern Ute and Ute Mountain Ute Tribal Police; Colorado Bureau of Investigation; Colorado Division of Wildlife; Federal Bureau of Investigation; Immigration and Naturalization Service; and United States Forest Service.

The Sheriff's Office is also responsible for operating the jail and the juvenile detention facility. Demand for law enforcement services has grown significantly in recent years. Between 1997 and 2000 the number of incidents investigated by the Sheriff's Department has increased by 25 percent from 17,737 incidents investigated to 22,100 (estimated). In order to meet service demands, the Sheriff added a number of additional deputy positions in the detentions division and the public safety division in 2000.

Key Point: Between 1997 and 2000, the number of incidents investigated by the Sheriff's Department has increased by 25 percent

The County's 88-bed jail opened in 1987 was intended to meet the County's needs until 2010. Increases in crime and tougher sentencing laws have led to significant overcrowding at the jail. The average daily jail population increased 83 percent between 1997 and 2000, surging from an average of 63 inmates per day in 1997 to 115 inmates in 2000. While planning is underway to meet the demands of this increasing population, a request of residents to finance a new jail was defeated in a November 2000 ballot initiative.

Key Point: Between 1997 and 2000, the average daily jail population increased by nearly 83 percent.

Fire and Emergency Medical Service

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Fire protection in the County is provided by the Animas, Upper Pine, Hermosa, Los Pinos, and Fort Lewis Mesa volunteer fire districts and the city of Durango's full time paid fire department. The United States Forest Service and Bureau of Land Management fight fires on public lands in the County. Demand for fire protection services increases as the County grows. The Animas Fire District, the County's largest, had 78 calls in 1978, 800 calls in 1999, and an estimated 1000 calls in 2000.

Key Point: The Animas Fire District, the County's largest, had 78 calls in 1978 and an estimated 1000 calls in 2000.

Meeting increased demand is contingent upon adequate funding and the availability of volunteers. The ability to do this varies among the County's fire districts. In 1995, Animas Fire District received voter approval of a bond issue and property tax increase, allowing them to construct several new stations, purchase new equipment, and hire several firefighters to man their main station during daylight hours when fewer volunteers are available. Other fire districts in the County have been less successful at passing property tax increases. In the mid 1990's the Upper Pine and the Los Pinos Fire Districts lost ballot initiatives.

Key Point: Meeting the increased demand for emergency services is contingent upon adequate funding and the availability of volunteers.

With the exception of the Animas Fire, most of the districts are finding that it is becoming harder to attract volunteer fire fighters. The Hermosa Cliffs Fire District recruits volunteers county-wide because it cannot attract enough volunteers from within its own district.

In 2001, the Animas, Hermosa Cliffs and Los Pinos Fire Districts, and the City of Durango entered into a joint service agreement which establishes a single operating entity for the four districts, in essence, consolidating the four districts into one— The Durango Fire and Rescue Authority. As part of this agreement, Mercy medical's ambulance service also becomes part of the authority. This consolidation provides a number benefits for County residents by reducing service redundancies and territorial discrepancies, while also reducing response times and increasing efficiency.

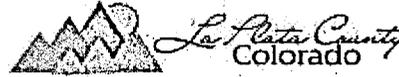
Key Point: Fire District consolidation has provided a number benefits for County residents by reducing service redundancies and territorial discrepancies, while also reducing response times and increasing efficiency.

Even with the consolidation, the adequate provision of services is very much a function of development location and design. And while fire districts routinely provide comment on project design as they move through the County's development review process, they typically do not play a major role in determining the location of new development.

Key Point: Continued cooperation between government agencies and fire districts is critical to ensuring the provision of high-quality emergency services.

As presented in Chapter 4: Land Use, over 11,000 residential structures have been placed throughout the County since 1978. This scattering of home sites results in: 1) an overall increase

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in the number and time of responses; and 2) the need for additional facilities located further out in the County. Other issues such as proper road and driveway design and maintenance; as well as adequate road naming and address signing are important considerations for ensuring good access and minimum response times. The availability of an adequate water source is also an important consideration.

Key Point: La Plata County Government, having a certain degree of control over the location and design of developments, has the ability to regulate development as a means of ensuring the continuation of adequate services.

Another factor in the regulation of development is the fire code. The County's fire districts have endorsed the adoption of the 1997 Uniform Fire Code which would give them broad authority over building and subdivision design standards and other fire hazard mitigation measures. It is likely that they will request the Board of County Commissioner's endorsement of its adoption in 2001.

Emergency Preparedness Planning

The County operates the Office of Emergency Management which oversees emergency planning, emergency services coordination and search and rescue operations. A part time director is the office's only paid staff person. It is anticipated that the Office will likely have to hire at least one full time staff person in coming years in order to meet growing demands for emergency services.

Key Point: It is anticipated that the Office of Emergency Management will likely need at least one additional full time staff person in the coming years in order to meet the growing demands for emergency services.

Search and Rescue

The County Sheriff's Office and the County Office of Emergency Management coordinate search and rescue operations. The County's search and rescue workers are a trained volunteer force. Consistent with the demand for other emergency services, search and rescue incidents continue to grow concurrently with increases in the County's population and tourism. In recent years, the difficulty of many search and rescue operations has increased due to the growing popularity of high intensity outdoor sports such as climbing, kayaking and mountain biking. This has created a need for greater training and more complex rescue apparatus in order to reach victims in remote and rugged locations.

Key Point: The popularity of high intensity outdoor sports such as climbing, kayaking and mountain biking has created a need for greater training and more complex rescue apparatus in order to reach victims in remote and rugged locations.

Wildfire Hazard Mitigation

In recent years, the risk of wildfires has increased throughout the County due to significant development in forested areas along with the buildup of tree densities and underbrush in most

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forests. During dry summer months, particularly in drought years, wildfires have been known to cause considerable property damage. Fortunately for La Plata County, it has been spared from the catastrophic wildfires that have impacted other communities in recent years.

While some fires can be allowed to burn naturally in order to maintain or restore the health of forest lands, out of control wildfires need to be prevented through cooperative, community and land management planning.

Key Point: Out of control wildfires need to be prevented through cooperative, community and land management planning.

In 2001, a wildfire risk assessment was conducted in La Plata County to identify specific areas in the County susceptible to a significant level of wildfire risk. The assessment indicated a large number of residential subdivisions with a high degree of wildfire risk. The outcome of the assessment was to provide information to fire districts, land management agencies, property owners and local governments so that they could take the actions necessary to reduce and prevent out of control wildfires.

Key Point: The 2001 wildfire risk assessment provides La Plata County with invaluable information that can be used during the development review process to ensure wildfire risk in developing areas can be minimized

Flood Plain Hazard Mitigation

La Plata County regulates development in flood plains via standards established in the National Flood Insurance Program. The program establishes development standards to be used on projects located within flood plain areas designated by the Federal Emergency Management Agency (FEMA). Some areas of the County, such as the Florida and Pine River drainages, do not have FEMA flood plain designations, and as such, applying specific development standards to projects near these waterways is difficult.

Key Point: Some areas of the County, such as the Florida and Pine River drainages, do not have FEMA flood plain maps, and as such, applying specific development standards to projects near these waterways is difficult.

Summary of Goal, Key Points and Plan Recommendations

Goal

Goal 8.1: To ensure that, as the County grows, emergency preparedness planning and the provision of emergency services continue to meet the growing demands of residents and visitors.

Key Points

The Key Points presented in this chapter include:

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- ✓ Between 1997 and 2000, the number of incidents investigated by the Sheriff's Department has increased by 25 percent.
- ✓ Between 1997 and 2000, the average daily jail population increased by nearly 83 percent.
- ✓ The Animas Fire District, the County's largest, had 78 calls in 1978 and an estimated 1000 calls in 2000.
- ✓ Meeting the increased demand for emergency services is contingent upon adequate funding and the availability of volunteers.
- ✓ Fire district consolidation has provided a number benefits for County residents by reducing service redundancies and territorial discrepancies, while also reducing response times and increasing efficiency.
- ✓ Continued cooperation between government agencies and fire districts is critical to ensuring the provision of high-quality emergency services
- ✓ La Plata County Government, having a certain degree of control over the location and design of developments, has the ability to regulate development as a means of ensuring the continuation of adequate emergency services.
- ✓ It is anticipated that the Office of Emergency Management will likely need additional staffing in the coming years in order to meet the growing demands for emergency services.
- ✓ The popularity of high intensity outdoor sports such as climbing, kayaking and mountain biking has created a need for greater training and more complex rescue apparatus in order to reach victims in remote and rugged locations.
- ✓ Out of control wildfires need to be prevented through cooperative, community and land management planning.
- ✓ The 2001 wildfire risk assessment provides La Plata County with invaluable information that can be used during the development review process to ensure wildfire risk in developing areas can be minimized.
- ✓ Some areas of the County, such as the Florida and Pine River drainages, do not have FEMA flood plain delineations, and as such, applying specific development criteria to projects near these waterways is difficult.

Plan Recommendations

Plan recommendations are included as Action Items (AI). They should be implemented through their prioritization and initiation. The Action Items summarized below are incorporated into an Action Item Prioritization Table included in Chapter 12.

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- AI8.1: Continue active role in the funding and supporting law enforcement and emergency service agencies.
- AI8.2: Continue to work cooperatively with special districts and volunteer groups to assist them in pursuing their missions.
- AI8.3: Continue to coordinate with public safety and emergency service providers to ensure adequacy of development standards and review process.
- AI8.4: Determine whether wildfire hazard mitigation standards should become further integrated into the development review process.
- AI8.5: Request completion of FEMA flood plain mapping throughout County.

* * * * *

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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.

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.

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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

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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). Twenty-two 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

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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.

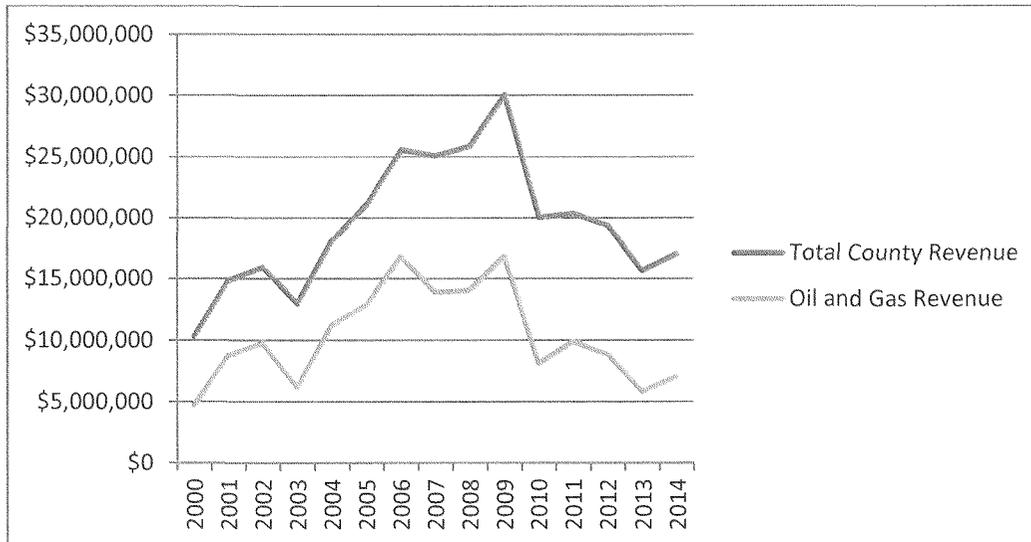
The presence of the oil and gas industry has facilitated rural development in many areas of the County through the construction and maintenance of roads, as well as, the extension of power lines to electrify well equipment. The La Plata Energy Council (LPEC) and local operators maintain approximately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

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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.

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

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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

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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.

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

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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

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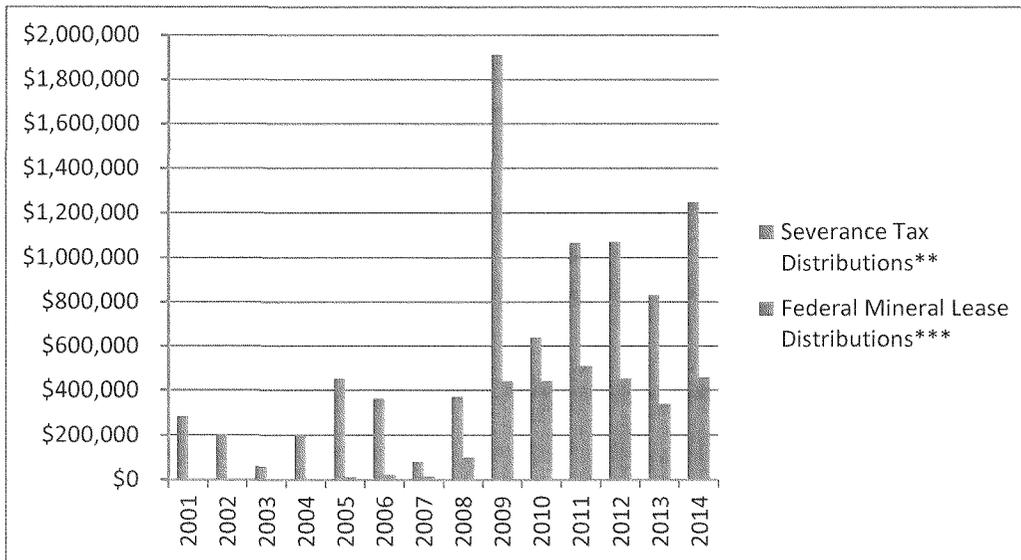


health issues associated with surface mining involve airborne particulate emissions.

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.

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

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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.

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.

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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.

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

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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 are 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

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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.

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 (NO_x), 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.

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

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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.

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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.

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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.

8 EXTRACTIVE RESOURCES & RENEWABLE ENERGY



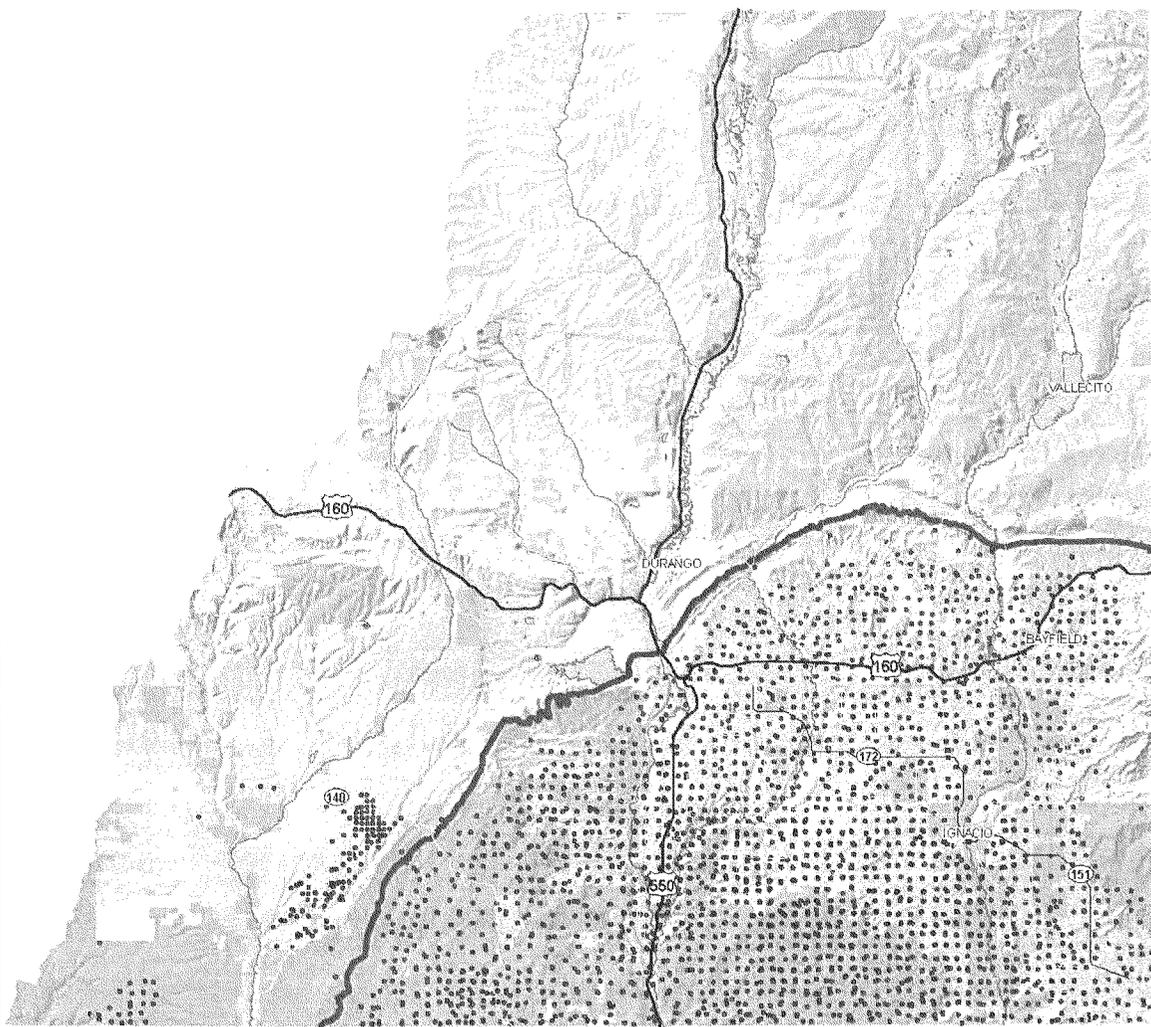
Policy 8.3.B2: The County should continue to pursue appropriate use of instruments and methods which ensure development contributes proportionately and concurrently with proposed projects.

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

8 EXTRACTIVE RESOURCES & RENEWABLE ENERGY

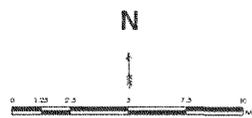


Map 8-1



La Plata County Oil and Gas Development 2015

- Active Oil & Gas Wells
- Active Injection Wells
- San Juan Basin
- Federal Lands
- State Lands
- Tribal Lands
- Private Lands



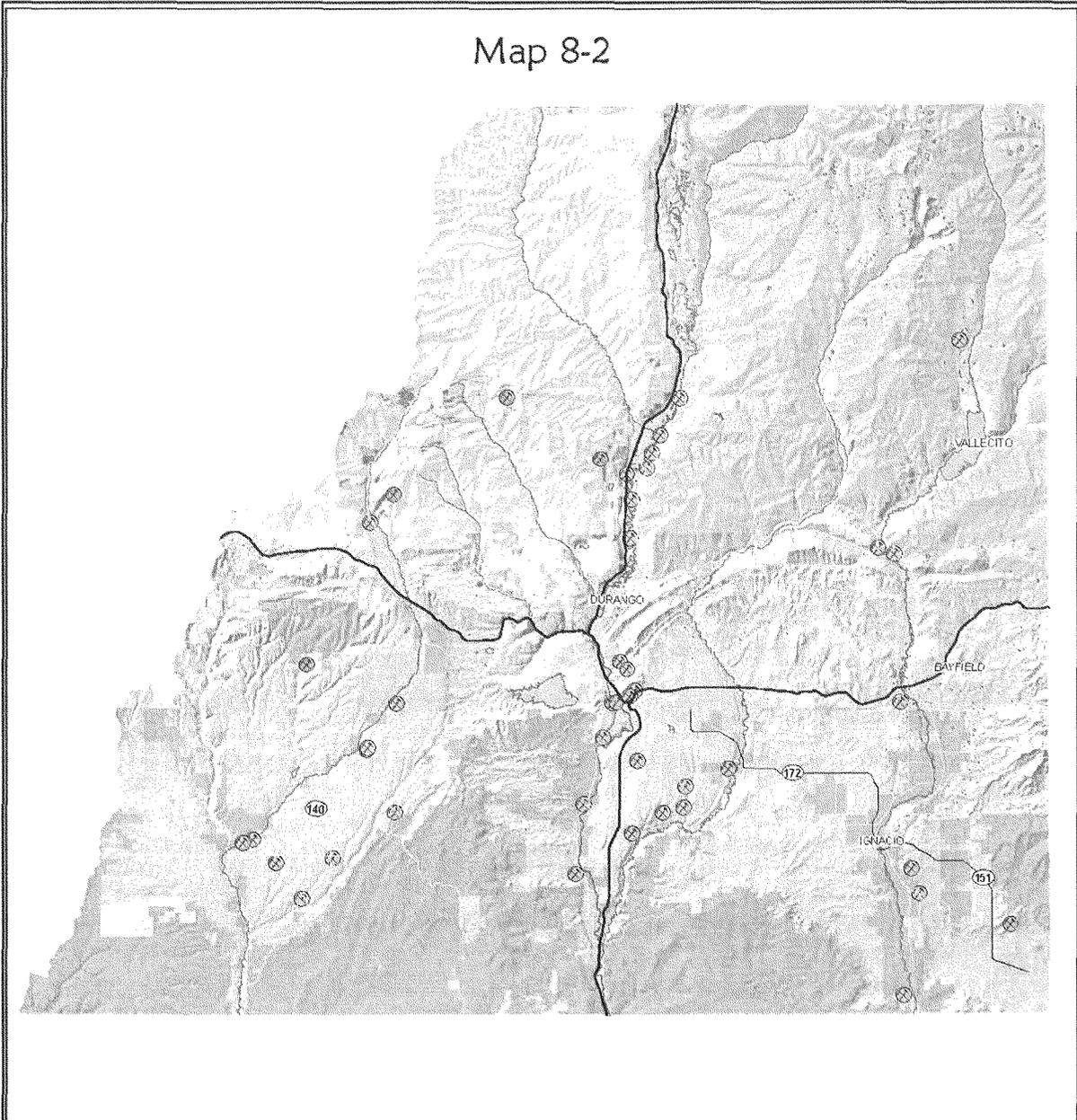
City of Durango, CO, 2015
 Date: The date of publication of this map is 11/22/2015

Drawn By: Jacine Bernard 1/28/2015

8 EXTRACTIVE RESOURCES & RENEWABLE ENERGY



Map 8-2



DRMS Permitted Mines in La Plata County 2015

● Coal (1) ● Gold & Silver (4) ● Sand & Gravel (40)

Federal Lands

State Lands



Tribal Lands



Private Lands

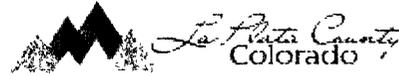


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Drawn By Jerome Bernard 5/28/2015

9 RECREATION & TOURISM



Overview and Background

The Parks, Recreation, and Trails Element of the County comprehensive plan focuses on recreational programming and facility needs in the County—something which La Plata County government has historically played only a limited role in providing. The plan element overviews existing conditions, programs and plans; the need for partnerships and intergovernmental coordination; the identification of potential funding sources; and plan recommendations.

In recent years, La Plata County has become a hot bed for new residents and tourists. Much of this interest is the result of the County's immense scenic beauty, public lands and recreational opportunities. With over 40 percent of the land in the County held by public land management agencies, back country recreational opportunities such as camping, hiking, biking, and horseback riding abound. However, as the County population continues to increase, so does the demand for more traditional recreational facilities such as ball fields, tennis courts, swimming pools, and picnic grounds.

Key Point: Active recreation refers to land that is managed for high levels of public use, with the purpose of providing a variety of opportunities to the public. This includes such facilities as ball fields, golf courses, playgrounds and picnic grounds.

While it has traditionally been the communities of Bayfield, Durango and Ignacio that have provided such amenities, shifting demographics would indicate that it may have become more of a County-wide issue in recent years. The 2000 Census indicates that of the approximately 44,000 residents of the County, nearly 28,000 of those residents, or approximately 57 percent, live in the unincorporated County, outside the communities that provide the recreational amenities. In fact, it is the unincorporated County residents who make up the majority of the users of the recreational programs provided by Durango, Bayfield and Ignacio. In 1998, Ignacio reported that more than 80 percent of the participants in its three recreation programs were non-town residents. Bayfield also reported such figures. In 1999, the Town's estimated population was 1,607, while its recreation program had 1,400 participants. Over 50 percent of the participants were reported to be non-town residents. Durango, which presides over the County's largest parks and recreation program, also reported such figures, with non-city residents accounting for over 57 percent of the participation in its youth sports programs.

Key Point: While it has traditionally been the communities of Bayfield, Durango and Ignacio that have provided recreational amenities, shifting demographics would indicate that it may have become more of a County-wide issue in recent years.

Recreational facilities in the unincorporated County are somewhat limited. The municipal recreation programs often partner with the 9-R School District to utilize school site facilities. Other than school facilities and those found on State and federal lands, recreational facilities in the outlying County are limited to those provided within private developments.

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Parks, Recreation & Trails Goal

Goal 11.1: To Ensure That the Recreational Program and Facility Needs of County Residents Are Met as the County Grows.

Existing County Recreational Activities

While La Plata County government, itself, does not have a formal parks and recreation function, it has been involved in a number of recreational issues, and on occasion has even provides financial assistance for recreational activities and facilities. These efforts have included:

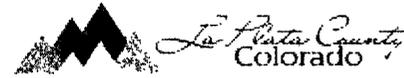
- 1) Fairgrounds – The County fairgrounds has been the historic center for County sponsored recreational activities over the years with equestrian activities, public use buildings, and acreage for fairs and carnivals. A recent master planning effort has set the stage for an overhaul of the physical layout and probable future uses of the facility.
- 2) Gold Rush Gym – While no longer in existence, the County had partnered with this private gymnastics group by offering subsidized rent of a County-owned building located at the north end of the fairgrounds. The City has since taken over the gym's activities.
- 3) City of Durango Recreation Center – The County partnered with the City by leasing County-owned land for the recreation center at the north end of the fairgrounds.
- 4) Trail Issues – The County has been involved with a number of trail issues in recent years including providing funding for the development of a County-wide trails plan; cosponsoring a Great Outdoors Colorado grant for a trail feasibility study; taking an easement on a trail through the Horse Gulch/Ewing Mesa area; and assisting in finding resolution to the Colorado Trail extension into the City of Durango issue.
- 5) Equestrian Center – The County has been active in trying to find a new site for an equestrian center that was displaced as a result of the changes occurring at the fairgrounds.
- 6) Joint Sales Tax – The County and the City of Durango utilize joint sales tax revenue to partner with the 9-R School District to improve and/or maintain recreation facilities around the County. This is an annually reviewed partnership.
- 7) Park Requirements – As part of Durango Mountain Resort's development plans, a district park is envisioned, with maintenance of the facility taken over by the Lake Purgatory Metro District.

Key Point: While La Plata County government, itself, does not have a formal parks and recreation function, it does get involved in recreation issues, and on occasion provides financial assistance to recreation-oriented activities.

Existing County Regulations and Plans

Continued growth in the County will add to the demand for municipal recreation facilities. It will likely lead to residents requesting additional park and recreational facilities for the unincorporated County. Areas of the County experiencing the most growth, such as Florida Mesa, possess the least public open lands or passive recreation areas. As a result, residents in the most populated and fastest-growing areas of the County have

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limited access to recreational facilities near their homes.

The County's land use system does address this issue in a limited fashion. The land use code and several of the district land use plans contain generalized requirements and/or objectives regarding park development and recreational use of public lands. The following is an overview of the treatment of recreational facilities in the County's existing codes and plans:

La Plata Land Use Code

The land use code contains limited references to recreation facilities within developments. The code is more notable for its omissions than its inclusions. It does not require development of parks within developments, with the exception of some minimal standards for small playgrounds within multi-family developments and mobile home parks. The code also does not require the payment of park development fees, or land dedications, in conjunction with developments.

Key Point: The County land use code does not require the payment of park development fees, or land dedications, in conjunction with developments.

District Land Use Plans

Four of the district plans contain limited references to park and recreation issues:

- West Durango: Establish a multi-purpose community center building that fosters a sense of community, e.g. meeting room, day care, fire station, etc.
- Junction Creek, West Durango, Florida Road: Management of recreational use; trail access; and trail head parking on public land.
- North County: Identify potential locations and pursue funding for the development of local parks, playgrounds, garbage collection, a post office and, possibly, a community center to serve area residents. Encourage development to provide public benefits, including recreation areas, trail systems and needed public facilities.

Key Point: The district land use plans provide a foundation for determining appropriate locations for recreational facilities in the County.

La Plata County Trails Plan

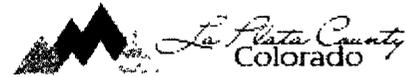
The County Trails Plan was adopted as an element of the County Comprehensive Plan in June 2000. The mission of the plan is to promote the ongoing development and maintenance of a strategic, well designed network of trails that provide safe, convenient and enjoyable recreation and transportation experiences for all trail users. The plan addresses recreation in a number of ways including improving access to public lands, and ensuring connectivity between neighborhoods.

Key Point: The mission of the County Trails Plan is to promote the ongoing development and maintenance of a strategic, well designed network of trails that provide safe, convenient and enjoyable recreation and transportation experiences for all trail users.

Partnerships and Intergovernmental Coordination

Providing quality recreational opportunities for all residents of the County will require a number of creative approaches. Establishing partnerships and intergovernmental coordination may help to ensure the efficient allocation of resources and a minimization of redundancies.

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Local Communities

The City of Durango has taken a number of significant steps in recent years to ensure that the recreation needs of area residents are met. This has included the development of the City of Durango Parks, Open Space, and Trails Plan; the construction of a community recreation center; continued work towards Completing the Animas River Trail; and the establishment of an open space acquisition program. Bayfield and Ignacio have also been active in ensuring that recreational programming is available in their communities. These activities have largely been possible because of political support, and more importantly, funding. Funding for these activities comes from sales tax revenues and matching state and federal grants.

Key Point: Funding for recreational programming and facilities comes predominantly from sales tax revenues generated from the sale of goods and services in the local communities.

The City of Durango has recognized for quite some time that a majority of the revenue used for community improvements is generated by residents of the unincorporated County and by tourists. It is partially for this reason that the City has not differentiated between City and non-City residents when assessing program user's fees, and has not made a significant issue of the fact that the majority of program users are non-City residents. As the area's population continues to grow and the percentage of non-city residents using city programs and facilities also continues to grow, so will the pressure to upgrade facilities and programs. This may require more resources than the City alone may be willing to provide for. It is therefore critical that La Plata County government begin to evaluate potential funding sources that will allow it to further assist with the provision recreational facilities and programs.

Key Point: As the County and the local communities within it grow, the pressure to upgrade and maintain park and recreational facilities and programs may require formal governmental partnerships in order to meet the needs of the community.

Key Point: It is critical that La Plata County government begin to evaluate potential funding sources that will allow it to further assist with the provision recreational facilities and programs.

School Districts

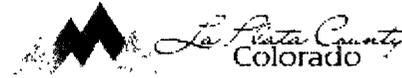
School districts in the County have typically made their facilities available to the local communities. This type of partnership is essential for ensuring that recreational activities continue to be available in areas other than within the confines of each community. Additionally, as school sites are developed and remodeled, local communities should be consulted to determine whether there are any recreational partnership opportunities available.

Key Point: The use of school site recreational facilities such as ball fields and playgrounds should continue in order to minimize the need to develop additional recreational facilities.

Land Management Agencies

The Bureau of Land Management, the Forest Service, the Colorado State Lands Board, and to a somewhat lesser extent, the State Division of Wildlife, all have the capability of allowing some degree of passive and active recreational activities to occur on the land they manage. The feasibility of strengthening partnerships to provide active recreation facilities on these properties should be evaluated.

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Key Point: The feasibility of establishing partnerships with Land Management Agencies to provide active recreation facilities on properties they manage should be evaluated.

Land Trusts/Private Entities

While currently narrow in their scope and numbers, land trusts working in La Plata County may at some point in the future provide opportunities for adding recreational amenities. Private land holders and/or corporations in the community may also have interest in forming partnerships that would provide long term land leases or funding assistance.

Key Point: Land Trusts and private entities should not be overlooked when evaluating potential partnerships for recreational amenities.

Additional Potential Actions and Funding Alternatives

Additional Potential Actions

The County could take additional action in relation to providing recreational amenities for County residents. It could expand upon its incentive-based public benefit criteria system within its district plans to provide density bonuses for providing active recreational facilities within developments. Active recreational facilities could include such things as tennis and basketball courts, golf courses, playground equipment, community centers, etc.

Key Point: The County could expand upon its incentive-based public benefit criteria within its district plans to provide density bonuses for providing active recreational facilities within developments.

Potential Funding Sources

Sales Tax: As discussed previously in this chapter, local municipalities typically fund recreational programs and facilities through their general fund which is predominantly based on sales tax revenue. La Plata County, as a statutory County, does not have the same taxing authority as its local municipalities, and, as such, takes in far less sale tax revenue as a percentage of its total budget. In fact, the County already collects what it can under State law, 2 percent, and cannot increase beyond that amount. Additionally, budgetary constraints limit the County's ability to make discretionary expenditures beyond commitments it already has.

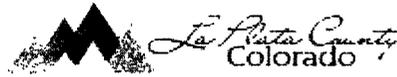
Key Point: Budgetary constraints limit the County's ability to make discretionary expenditures for things such as recreational programs or facilities.

Mill Levy: While raising the historically low mill levy for County property tax payers is a viable alternative for increasing revenues; this option has historically not received much political support.

Key Point: While raising the historically low mill levy for County property tax payers is a viable alternative for increasing revenues; this option has historically not received much political support

Capital Expansion Fees: La Plata County does not require the payment of park development fees or land dedication in conjunction with new development. This type of capital expansion fees is quite common in many communities. Like any capital expansion fee, however, such fees are typically passed on to the

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consumer via higher lot costs.

Key Point: Capital expansion fees are typically passed on to the consumer.

Use Tax: Another alternative is a use tax. A use tax is, essentially, a sales tax collected on certain goods purchased outside the County, purchases that can be tracked through auto registrations or building permits.

Key Point: A use tax is a sales tax collected on certain goods purchased outside the County, purchases that can be tracked through auto registrations or building permits.

The issue of establishing a use tax in La Plata County received significant discussion in 2001. Local automobile dealers wanted a use tax instituted in La Plata County to level the playing field, so to speak, with auto dealers outside the County who are, theoretically, at a competitive advantage to local dealers because the sales tax is lower in the community where they operate. By instituting a use tax, the purchaser of the auto would be required to pay the "differential" tax at the time that they register the auto in La Plata County. The same could apply to building material at the time of building permit application.

Key Point: By instituting a use tax, the purchaser of an auto outside the County would be required to pay a "differential" tax at the time that they register the auto in La Plata County.

Because the institution of a use tax would require approval of the voters, earmarking the proceeds for a particular use that is supported by the community is the most likely way to get the tax approved. The 2001 ballot initiative revolved around a proposal to direct use tax revenue towards open space acquisition and affordable housing. The measure failed by a 3 to 1 margin in the November 2001 election.

Key Point: The institution of a use tax requires approval of the voters

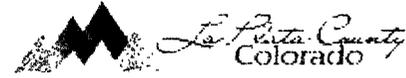
Recreation District: Another revenue generating option is the establishment of a special "recreation district" which would have the ability to levy taxes for recreational facilities and/or programming. A recreation district would, essentially, have autonomy over how it utilized the funds it rose. This option would not require County involvement once the district was formed. There have been attempts to form special recreation districts in the unincorporated County in recent years. Residents of North County discussed the possibility purchasing a parcel of land on which a community center and a playing field could be built. In the Bayfield area, residents proposed a ballot measure to create a special recreation district encompassing the Town of Bayfield and surrounding areas. The Bayfield ballot measure was defeated in December 1999.

Key Point: A recreation district would not require County involvement once the district was formed.

Great Outdoors Colorado (GOCO) Funding: GOCO is good source for funding specific planning, development, and acquisition projects. However, GOCO funds are intended as supplemental funds leveraged by other funding sources and as such would not alone sustain an ongoing parks and recreation effort.

Key Point: GOCO funds are intended as supplemental funds, leveraged by other funding sources.

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Summary of Goals, Key Points and Plan Recommendations

Goal

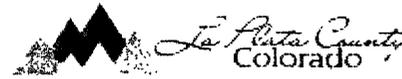
Goal 11.1: To Ensure That the Recreational Program and Facility Needs of County Residents Are Met as the County Grows.

Key Points

The following Key Points were presented.

- ✓ While it has traditionally been the communities of Bayfield, Durango and Ignacio that have provided recreational amenities, shifting demographics would indicate that it may have become more of a County- wide issue in recent years.
- ✓ While La Plata County government, itself, does not have a formal parks and recreation function, it does get involved in recreation issues, and on occasion provides financial assistance with recreation-oriented activities.
- ✓ The County land use code does not require the payment of park development fees, or the dedication of land, in conjunction with developments.
- ✓ The district land use plans provide a foundation for the determining appropriate locations for recreational facilities in the County.
- ✓ The mission of the County Trails Plan is to promote the ongoing development and maintenance of a strategic, well designed network of trails that provide safe, convenient and enjoyable recreation and transportation experiences for all trail users.
- ✓ Funding for recreational programming and facilities comes primarily from sales tax revenues generated from the sale of goods and services in the local communities.
- ✓ As the County and the local communities within it grow, the pressure to upgrade and maintain park and recreational facilities and programs may require formal governmental partnerships in order to meet the needs of the community.
- ✓ It is critical that La Plata County government begin to evaluate additional funding sources that will allow it to further assist local communities with the provision recreational facilities and programs.
- ✓ The use of school site recreational facilities such as ball field and playgrounds should continue in order to minimize the need to develop additional recreational facilities.
- ✓ The feasibility of establishing partnerships with land management agencies to provide active recreation facilities on properties they manage should be evaluated.
- ✓ Land trusts and private entities should not be overlooked when evaluating potential partnerships for recreational amenities.
- ✓ Budgetary constraints limit the County's ability to make discretionary expenditures for things such as recreational programs or facilities.

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- ✓ The County could expand upon its incentive-based public benefit criteria within its district plans to provide density bonuses for providing active recreational facilities within developments.
- ✓ While raising the historically low mill levy for County property tax payers is a viable alternative for increasing revenues, this option has historically not received much political support.
- ✓ Capital expansion fees are typically passed on to the consumer.
- ✓ A use tax is a sales tax collected on certain goods purchased outside the County, purchases that can be tracked through auto registrations or building permits.
- ✓ By instituting a use tax, the purchaser of an auto outside the County would be required to pay a
- ✓ “differential” tax at the time that they register the auto in La Plata County.
- ✓ The institution of a use tax would require approval of the voters.
- ✓ A recreation district would not require County involvement once the district was formed.
- ✓ GOCO funds are intended as supplemental funds, leveraged by other funding sources.

Plan Recommendations

A number of alternatives and recommendations have been presented in this plan element. Implementation should be achieved through the prioritization and initiation of action items. The Action Items (AI) identified below are incorporated into an Action Item Prioritization Table included in Chapter 12: Implementation.

- AI11.1: Establish discussions with local municipalities to assess likely future impact of County-wide use of municipal recreation programs.
- AI11.2: Identify a viable long-term revenue source for future funding of: 1) park facility development and maintenance in the unincorporated County; and 2) existing municipal recreation programs.
- AI11.3: Evaluate the merits of establishing requirements for the development of private parks within larger developments, and/or park fees-in-lieu of land dedication.
- AI11.4: Revise district plans to include reference to the County Trails Plan as part of public benefit criteria process.
- AI11.5: Continue to establish and/or enhance partnerships with local municipalities, land management agencies, and others to assist in the provision of recreation programs and facilities.
- AI11.6: Evaluate merits of expanding district plan public benefit criteria to include active recreational facilities.

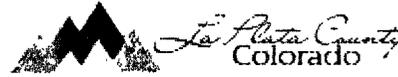
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10 HISTORIC PRESERVATION



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IMPLEMENTATION



OVERVIEW

The various Elements of the La Plata County Comprehensive Plan provide a foundation for guiding development within the County. The purpose of the *Implementation* section of the Plan is to set forth a framework that ensures the Goals outlined in the plan are met via realization of the objectives and fulfillment of the various Policies. Included in this section, is a recommended approach for Plan review and monitoring and a summary of generalized actions/tasks the County can use in establishing an ongoing work program.

Plan Review and Monitoring

The La Plata County Comprehensive Plan outlines a number of strategies for achieving the Goals established in the Plan. In order to determine whether the strategies are effective, a program for plan monitoring and review must be established. The monitoring program will help the Planning Commission and Board of County Commissioners understand both progress and challenges while achieving the plan's Goals. It will also help staff and decision-makers determine the effectiveness of various strategies, as well as help identify appropriate revisions.

On an annual basis, staff should report to the Planning Commission and Board of County Commissioners on the previous year's progress towards implementing identified actions/tasks listed in *Table 11-1*. Prior to the budget cycle of each year, staff and/or the Planning Commission should determine whether there are any priority items for recommendation to the Board of County Commissioners; or changes to the Table.

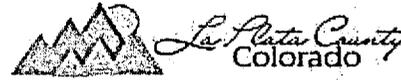
It is recommended that District Land Use Plans be put into an annual rotating review schedule. This will help to ensure that the plans remain relevant, consistent with the Plan and dynamic. It is also recommended that there be a bi-annual *plan amendment process* allowing for project-specific Plan changes.

The Goals of the Comprehensive Plan should be revisited every 5-years to determine whether they are still relevant to the County's needs and interests.

Action Items/Tasks

The Action Items/Tasks identified in *Table 11-1* are an initial list of actions/tasks which the County should undertake to help ensure that the Goals of the Comprehensive Plan are met. The list is not intended to be all-inclusive. The County may pursue different strategies and adjust priorities based on changing opportunities, interests and conditions. These action items/tasks are categorized by Element from within the Plan's Objectives and Policies.

IMPLEMENTATION



**Table 11-1
 Implementation Table**

Element	Objective/ Policy	Page #	Action Item/Task
Infrastructure/Transportation	2.1.A	2.3	Identify County roadway network: Map
Infrastructure/Transportation	2.1.A1	2.3	Map/Capacity Needs/LOS
Infrastructure/Transportation	2.1.B2	2.3	Incorporate Airport Plans/ Plan Appendix
Infrastructure/Water	2.2.A1	2.4	Identify potable distribution systems/anticipated capacity: Map/Chart
Infrastructure/Water	2.2.B1	2.4	Create incentives for water conservation
Infrastructure/Sewer - SW	2.3.A1	2.4	Identify sewer facilities/anticipated capacity: Map/Chart
Infrastructure/Sewer-SW	2.3.A3	2.4	Site appropriate locations – waste disposal/treatment (solid waste)
Infrastructure/Sewer-SW	2.3.B3	2.5	Identify solid waste facilities/anticipated capacity: Map/Chart
Infrastructure/Sewer-SW	2.3.B1	2.5	Identify solid waste facilities/anticipated capacity: Map/Chart
Infrastructure/Utility	2.4.A1	2.5	Identify major utilities/capacity: Map/Chart
Infrastructure/Utility	2.4.A3	2.5	Create incentives for areas needing service
Infrastructure/Telecom	2.5.A1	2.6	Identify telecom facilities/service areas: Map
Infrastructure/Telecom	2.5.A3	2.6	Create incentives for areas needing service
Infrastructure/Telecom	2.5.A4	2.6	Explore various funding sources
Agriculture	5.1.A1	5.5	Explore ways to promote diverse business opportunities for agricultural operations
Agriculture	5.1.A2	5.5	Investigate resource protection programs/regulations
Agriculture	5.1.A3	5.5	Identify irrigable/ag lands: Map
Agriculture	5.1.A4	5.5	Develop alternative process for ag land subdivision
Agriculture	5.1.A5	5.5	Develop Site Planning standards to protect ag
Agriculture	5.1.B3	5.6	Consider ag tax revenues for ag needs
Agriculture	5.1.B5	5.6	Explore opportunities for local ag business education
Agriculture	5.1.B6	5.6	Explore alternatives to MES subdivisions for ag lands/expanded ag land retention
Extractive Res/Renew Engy	8.1.A2	8.14	Consider MOU with COGCC/overlapping jurisdiction
Extractive Res/Renew Engy	8.1.A3	8.14	Pursue regs/areas limited oversight
Extractive Res/Renew Engy	8.1.A6	8.14	Explore opportunities for education of public/provide information sources
Extractive Res/Renew Engy	8.1.B1	8.15	Consider review of water wells and air quality
Extractive Res/Renew Engy	8.2.A2	8.15	Explore 1041 Powers (mineral resources & accommodate renewable energy)
Extractive Res/Renew Engy	8.3.A2	8.16	Explore permitting utility scale production promoting renewable energy
Extractive Res/Renew Engy	8.3.A1	8.16	Explore permitting utility scale production promoting renewable energy
Extractive Res/Renew Engy	8.3.B1	8.16	Explore promotion of recycling options