LA PLATA COUNTY ECONOMIC DRIVERS

JOB GENERATION BY SECOND HOMES AND OTHER ECONOMIC DRIVERS

PREPARED FOR

REGION 9 ECONOMIC DEVELOPMENT DISTRICT OF SOUTHWEST COLORADO, INC.

JULY 2008

LLOYD LEVY CONSULTING LLC
WHEAT RIDGE, COLORADO

LA PLATA COUNTY ECONOMIC DRIVERS

Job Generation by Second Homes and Other Sectors of the Export Base

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EXECUTIVE SUMMARY

This report presents an analysis of economic drivers in La Plata County, Colorado. The focus is on quantifying the impact of second homes and comparing their effects to other economic drivers. The purpose of this study is to use IMPLAN analysis to quantify the economic drivers in the La Plata County economy for the base year, 2006. The study is Phase 3 of Region 9 EDD's continuing study of second homes. Phase 1 and Phase 2 provide the data for this analysis in terms of identifying second homes in La Plata County and their characteristics and quantifying key characteristics of second-home owners.

The Region 9 economic drivers study uses a method that is comparable to the Region 10 and Region 12 studies. A key component is to use IMPLAN Social Accounting and Impact Analysis Data and Software[1] to estimate impacts of economic drivers for which local data are available and to estimate impacts of drivers that are not easily measured at the local level. The IMPLAN model used for this study was customized by substituting locally validated employment by sector for La Plata County instead of the default employment in the model's 2006 data set. This forces the model to more accurately reflect actual relationships between industries and institutions and makes sure that impacts are consistent, meaning that they add up to a total employment number that has been reviewed and accepted by La Plata.

As shown in Table ES-1, La Plata County's economic drivers generated 18,295 direct jobs out of total employment of 33,125, the total reported by the Colorado State Demographer. This equates to a ratio of 1.81 total jobs for every direct job attributed to export final demand. The total impact of second homes was about 7 percent of total employment after counting the effect of second-home owner consumer expenditures, second-home construction, and real estate brokerage services on the sale of second homes.

Table ES-1: La Plata County – Direct and Total Jobs from Economic Drivers in 2006 in Order of Contribution to Total Employment

ECONOMIC DRIVER	DIRECT JOBS ATTRIBUTABLE TO ECONOMIC DRIVERS (CIOMPARE TO FIGURE ES-1)		TOTAL JOBS ATTRIBUTABLE TO ECONOMIC DRIVERS (COMPARE TO FIGURE ES-2)		RATIO OF TOTAL TO DIRECT JOBS
	AMOUNT	SHARE OF TOTAL	AMOUNT	SHARE OF TOTAL	
CONSTRUCTION					
Federal Government	101	< 1%	177	< 1%	1.75
Other State & Local Government	390	2%	676	2%	1.73
Private Local (Residential, Commercial & Industrial)	2,987	16%	5,766	17%	1.93
Other Non-Local	237	1%	333	1%	1.40

[1] The IMPLAN software and data are products of the Minnesota IMPLAN Group, Inc. (MIG), Stillwater MN 55082. The MIG website address is www.implan.com.

ECONOMIC DRIVER	DIRECT JOBS ATTRIBUTABLE TO ECONOMIC DRIVERS (CIOMPARE TO FIGURE ES-1)		TOTAL JOBS ATTRIBUTABLE TO ECONOMIC DRIVERS (COMPARE TO FIGURE ES-2)		RATIO OF TOTAL TO DIRECT JOBS
	AMOUNT	SHARE OF TOTAL	AMOUNT	SHARE OF TOTAL	
SUBTOTAL	3,715	20%	6,952	21%	1.87
SPENDING OF HOUSEHOLD "BASIC" INCOME					
Retiree Households – Basic Income plus Medicare Payments	1,709	9%	3,143	10%	1.84
Other Households – Government Payments	417	2%	710	2%	1.70
Other Households – Dividends, Interest & Rent	1,328	7%	2,227	7%	1.68
SUBTOTAL	3,454	18%	6,080	19%	1.76
TOURISM & TRAVEL	3,218	18%	4,954	15%	1.54
REGIONAL SERVICES					
Trade & Transportation	332	2%	618	2%	1.86
Information & Communications	62	< 1%	116	< 1%	1.86
Financial & Insurance	304	2%	558	2%	1.83
Professional & Business	1,162	6%	2,161	7%	1.86
Education & Health	498	3%	927	3%	1.86
SUBTOTAL	2,358	13%	4,380	13%	1.86
AGRICULTURE, MINING, UTILITIES & MANUFACTURING	1,568	9%	3,711	11%	2.37
FEDERAL, STATE & TRIBAL GOVERNMENT					
Federal Government	552	3%	1,115	3%	2.02
Southern Ute Tribal Government Agencies (excluding Sky Ute Casino-Hotel)	1,011	6%	1,552	5%	1.54
State Government (excluding Fort Lewis College & Southern Ute Tribal Government)	186	1%	286	1%	1.54
SUBTOTAL	1,749	10%	2,953	9%	1.69
2ND HOMES					
2nd Home Construction	270	1%	555	2%	2.06
Real Estate Commissions on 2nd Home Sales	28	< 1%	60	< 1%	2.17
2nd Home-Owner Spending	955	5%	1,670	5%	1.75
SUBTOTAL	1,253	7%	2,285	7%	1.82

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FORT LEWIS COLLEGE					
Fort Lewis College Employment & Spending	645	4%	1,178	4%	1.83
Fort Lewis College Capital Construction	10	< 1%	17	< 1%	1.79
Fort Lewis College Student Spending	325	2%	615	2%	1.89
SUBTOTAL	980	5%	1,810	5%	1.85
TOTAL	18,295	100%	33,125	100%	1.81

Sources: Estimates by Lloyd Levy Consulting LLC using IMPLAN model and available data

The second home market consists of three separate activities. These activities, which generate a total of 2,285 jobs in the economy as a whole, break down as follows:

- 1,670 jobs due to the spending of second-home owners (5% of total employment);
- 555 jobs due to the construction of second homes (2% of total employment); and
- 60 jobs due to commissions on real estate brokerage services for second-home sales (less than 1% of total employment).

The results in Table ES-1 also indicate that La Plata County had a wide range of job-generating economic drivers in 2006. These include Fort Lewis College, which generated 1,810 total jobs from payroll, purchasing, capital construction and direct student spending, and Southern Ute Tribal Government agencies, not including the tribe's Sky Ute Casino-Hotel, which generated 1,474 total jobs in the economy as a whole.[2]

Five other economic drivers that made large contributions to total employment in 2006 are called out here:

- 6,080 total jobs due to spending by households who received "basic" (i.e., non-labor) income (19% of total jobs)
- 5,766 total jobs due to private capital invested in new residential, commercial and industrial construction (17% of total jobs)
- 4,954 total jobs due to tourists and business travelers that stayed in La Plata County (15% of total jobs);

[2] It is safe to assume that the Sky Ute Casino-Hotel is significant to La Plata County's economic base because of trade from outside the county. Base jobs attributable to the casino-hotel are probably among the total jobs attributable to tourism, where one would also find economic-base jobs driven by attractions like Durango Mountain Resort, the Durango-Silverton Railroad, and the region's abundant public land and parks.

- 4,380 total jobs due to the county's regional services (excluding real estate brokerage on second homes) which attract personal and business spending from outside the county (13% of total jobs); and

- 3,711 total jobs attributable to agriculture, mining (including the gas extraction, processing and pipelining industries), utilities, and manufacturing (11% of total jobs).

These estimates emphasize the diversity of La Plata County's economy, which benefits from government, education, tourism, trade, natural resources, capital construction, and the various types of household wealth and income that originate outside the local job market. Figure ES-1 and Figure ES-2 graphically illustrate the share each major economic driver contributed to the 2006 economy in La Plata County. The graphics are based on data from Table ES-1.

Interpreting the figures is straightforward if each "pie slice" is viewed as how the La Plata County economy responds to an external "market". The major economic drivers illustrated in the figures are groups of institutions, firms or households that are related because they attract outside dollars from the same market. Figure ES-1 illustrates the jobs generated directly by "serving" the market. Through the spending of the economic agents in each driver group, a share of outside dollars re-circulates within the local economy, generating additional local jobs. Figure ES-2 illustrates the total number of jobs generated by a driver, including the direct jobs plus the additional jobs, or "multiplier" effect.

For example, La Plata County's retiree households receive government and other institutional payments, dividends and interest on stock holdings and savings, and tap into private pensions and annuities, all of which are forms of income that originate from sources that are independent of local, current economic activity. Funds such as these provide these households with income that they can spend locally. When they do spend locally, the non-labor income is translated into local jobs.

Table ES-1 and the related figures also call attention to capital construction as a principal economic driver for La Plata County. Private capital investment, the largest segment of the capital construction driver, is a composite of most of the residential, commercial and industrial construction that is under way in a given year. The La Plata County economy in 2006 also benefitted from substantial investments in capital construction by federal, state and local government. Capital construction is an economic driver, even when development is undertaken by local households, business and institutions, because capital investments, even private dwellings, are generally paid for with borrowed funds that originate from external capital markets, from draw-downs of savings (which originated in a different time period), or from granted funds that come from other levels of government or from outside institutions.

The household basic economic driver combines two types of households and several different sources of basic, or non-labor, income. Retiree households are generally older households living mostly or entirely on non-labor sources of income. Non-retirees, the other household type, are still employed, but may also receive non-labor income. The non-labor income types accounted for in the analysis are "transfer payments" and "dividends, interest and rent."

Dividend income is cash and other assets paid to stockholders who are residents of the area. Interest income consists of monies received by local residents from money market mutual funds and other sources. Rental income consists of the rental of real property, royalties received from patents, copyrights, and from the rights to natural resources paid to local residents. Transfer payments consist primarily of retirement and disability benefit payments, medical payments (i.e. Medicare and Medicaid), income maintenance benefits, unemployment insurance, veteran's benefits, and other government payments to local residents. Many households receive non-labor income in one form or

another. Households with a high proportion of non-labor income tend to be retiree households and wealthy households. Wealthy retiree households, for example, who combine high income with a large share of income from non-labor sources, can contribute to job generation when they are induced to shop and invest liberally in the local economy.

Figure ES-1: Direct Jobs Attributable to Economic Drivers in La Plata County in 2006 (Total Direct Jobs = 18,295)

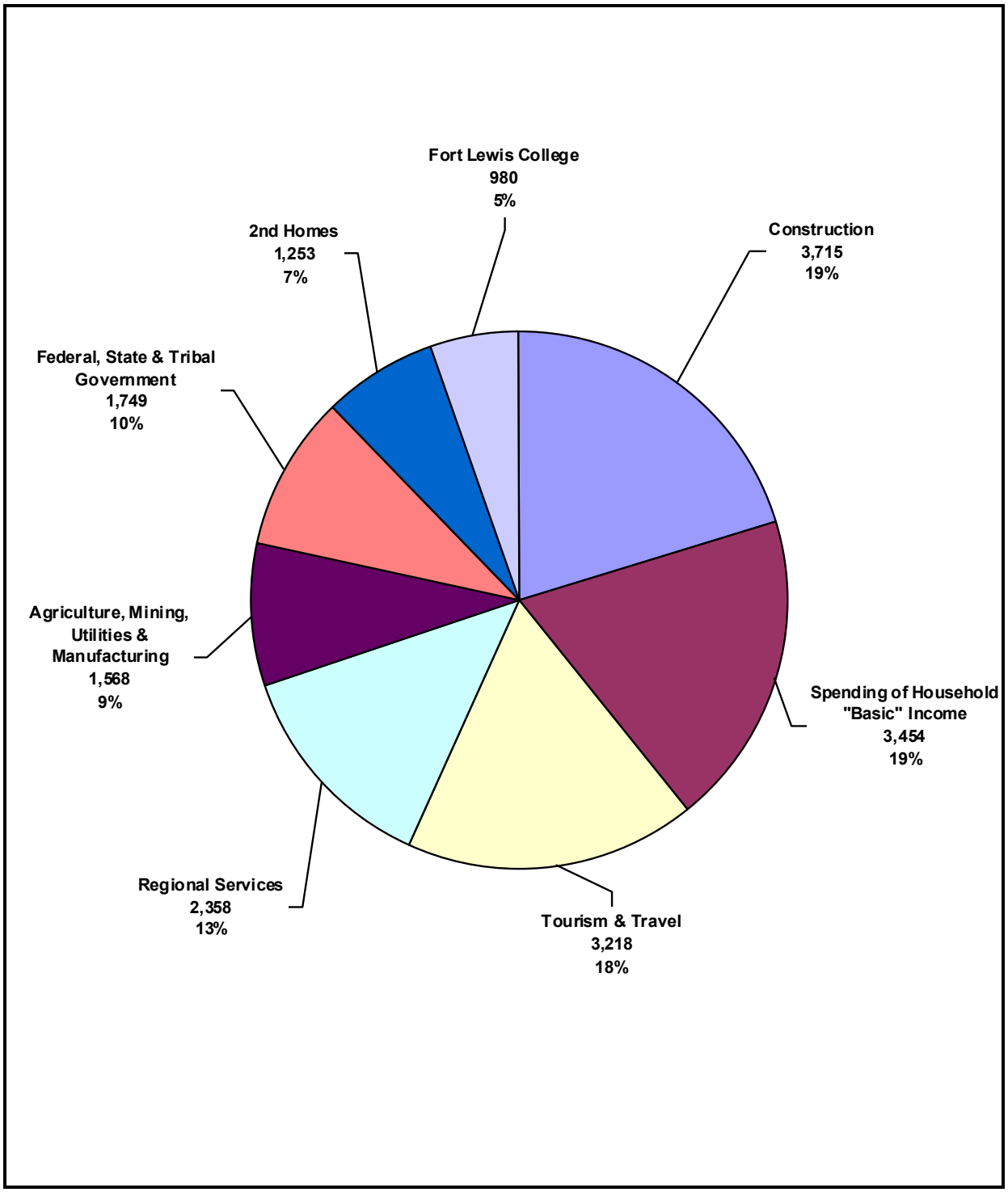
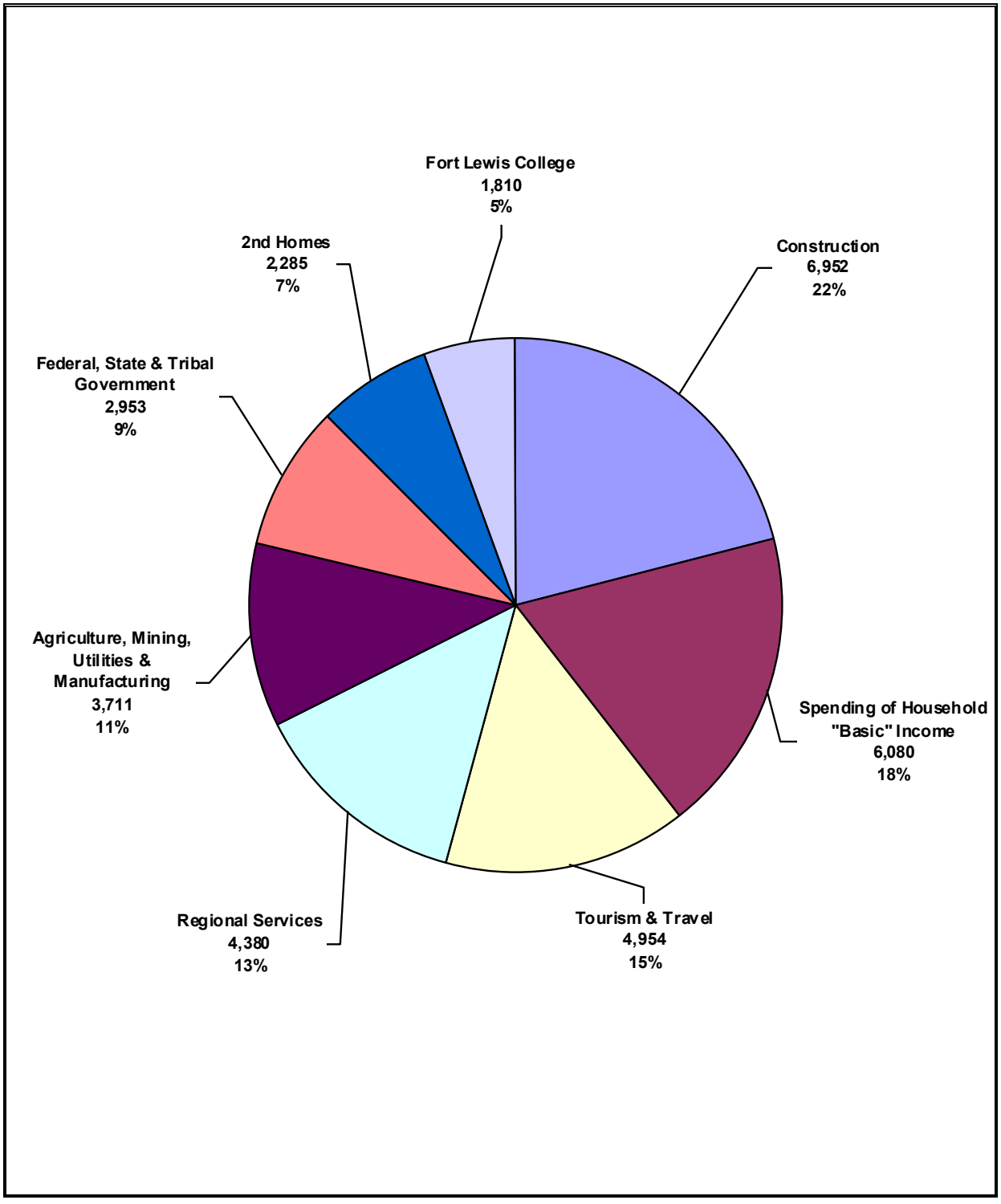


Figure ES-2: Total Jobs Attributable to Economic Drivers in La Plata County in 2006 (Total Jobs = 33,125)



LA PLATA COUNTY ECONOMIC DRIVERS

Job Generation by Second Homes and Other Economic Drivers

JULY 2008

ACKNOWLEDGEMENTS

The following contributed to this study and deserve thanks for their efforts:

- Donna K. Graves, Information Services, Durango, Colorado;
- Carol J. Gibson, La Plata County Assessor's Office;
- Mike Retzlaff, Economic Insights of Colorado, Lone Tree, Colorado (formerly Economist, Region 2, U.S.D.A Forest Service); and
- Ed Morlan, Executive Director, and the Board of Directors of the Region 9 Economic Development District of Southwest Colorado, Inc.;
- Elizabeth Garner, Jim Westkott and Cindy DeGroen, State Demographer's Office, Colorado Department of Local Affairs.

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INTRODUCTION

This report presents an analysis of economic drivers in La Plata County, Colorado. The focus is on quantifying the impact of second homes and comparing their effects to other economic drivers. La Plata County is an active and diversifying economy. It is an important contributor to the Region 9 Economic Development District of Southwest Colorado, Inc. (Region 9 EDD), composed of Archuleta, Dolores, La Plata, Montezuma and San Juan Counties. La Plata County also participates in other regional trade and economic development efforts. Among these are the Southwest Colorado Travel Region, comprising 12 counties within three economic development districts, and the San Juan Foundation, a non-profit corporation that promotes economic development in the Four Corners region of Colorado, New Mexico, Utah and Arizona.

SCOPE OF THE REGION 9 ECONOMIC DRIVERS STUDY

The purpose of this study is to use IMPLAN analysis to quantify the economic drivers in the La Plata County economy for the base year, 2006. The study is Phase 3 of Region 9 EDD's continuing study of second homes. Phase 1 defined the typology of second homes and vacant lands owned by "non-locals" and "locals" using assessor's databases and estimated key characteristics of properties owned by non-locals (property owners whose mailing addresses are outside of La Plata County).

Phase 2 fielded a survey of home owners to investigate shopping and travel patterns, demographics, values, current and future usage of property, recreational activities, and community involvement, among many items of interest. The scope for Phase 3 was drawn to complete the investigation of second homes by quantifying their economic impacts in a comprehensive framework that includes all of La Plata County's economic drivers.

This report documents the completion of five specific tasks called for in Phase 3:

- Analysis of the job generation effects of economic drivers in the regional economy focusing on second homes;
- Identifying other important drivers and their job generation effects;
- Characterizing job generation effects in terms of direct jobs, total jobs, and shares of direct and total jobs attributable to each driver;
- Producing job generation estimates for second-home activities that are comparable to previous studies conducted for Colorado planning regions 10 and 12;[3] and

[3] : See "Second Homes and the Economic Base of Four Counties in West Central Colorado: An Economic Drivers Study for Gunnison, Hinsdale, Ouray and San Miguel Counties"(Prepared for the USDA Forest Service, Region 2, in Partnership with the Region 10 League for Economic Assistance and Planning, Inc., September 2006 [available from the Region 10 League]) and "The Social and Economic Effects of Second Homes"(Prepared by Linda Venturoni for the Northwest Colorado Council of Governments, June 2004[http:// www.nwc.cog.co.us/ Second%20Home%20Study/ NWCCOG%202ndHome%20Study%20Binder.pdf]).

- Delivery of the multipliers by industry used in the analysis (Appendix A).

OVERVIEW OF METHODS

The Region 9 economic drivers study uses a method that is comparable to the Region 10 and Region 12 studies. A key component is to use IMPLAN Social Accounting and Impact Analysis Data and Software[4] to estimate impacts of economic drivers for which local data are available and to estimate impacts of drivers that are not easily measured at the local level. In this way, the study makes use of two important characteristics of the IMPLAN modeling system.

First, IMPLAN includes a descriptive model of the economy that includes information about the local economic interactions in terms of the flow of dollars from purchasers to producers and transfers of funds between industries and institutions. The descriptive model includes information on trade flows within the region and between the region and the "outside world," and it relates dollar flows to employment using information on existing productivity.

Second, IMPLAN includes a predictive model. IMPLAN uses the descriptive model characteristics to construct the local level multipliers in the predictive model. Multipliers describe the response of the economy to a change in demand or production.

Another feature of IMPLAN used in this study is the ability to customize the model. For this study, the model was customized by substituting locally validated employment by sector for La Plata County instead of the default employment in the model's 2006 data set. IMPLAN's default employment and locally validated employment from the Colorado Division of Local Government State Demography Office originate with the published estimates, which are produced by the federal Bureau of Economic Analysis (BEA).[5] Subsequently, the State Demography Office reviews the BEA numbers with local experts and compares the numbers to other local data. The State Demography Office makes adjustments to the BEA numbers before publishing them on the State Demography website.[6] Substituting the State Demography Office's employment numbers in the IMPLAN model forces the IMPLAN software to adjust both the descriptive and predictive relationships in the model (flows of transactions and the resulting multipliers) to conform to the State Demography Office's locally validated information.

Finally, using IMPLAN as the framework for the analysis ensures a comprehensive assessment. Keeping the results within the overall constraints of locally validated total employment and the relationships between industries and institutions incorporated in the descriptive and predictive models maintains consistency of results. In other words, impacts attributed to the economic drivers must add up to the known totals incorporated in the model.

Other features of the methods used in this study are comparable to the studies in other Colorado regions:

- Considering a detached residential unit or condominium unit to be a second home if it the owner lists an out-of-county address;

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[4] The IMPLAN software and data are products of the Minnesota IMPLAN Group, Inc. (MIG), Stillwater MN 55082. The MIG website address is www.implan.com.

[5] See U.S. Department of Commerce, Bureau of Economic Analysis, "BEA: Regional Economic Accounts" (http://www.bea.gov/regional/).

[6] See Colorado Department of Local Affairs, Division of Local Government, State Demography Office, "Colorado Department of Local Affairs: Colorado Jobs by Sector (NAICS based) – Parameters" (http://www.dola.colorado.gov/demog_webapps/jobs_sector_naics).

- Structuring the analysis around the concept of an economic driver, defined as a "bundle" of export final demands for related goods and services; and
- Using a past benchmark year for which actual data are available as the "laboratory" for the analysis, though this leaves the analysis open to the qualification that the results have an unknown "shelf life" because of growth and change.

One more aspect of the Phase 3 study should be addressed as background for appreciating its relationship to other economic analysis in La Plata County. The methods used in Phase 3 lead to results that do not necessarily agree with the findings of other impact assessments. One in particular should be mentioned: the Economic Base Analysis published annually for Colorado counties by the State Demography Office.[7] The Phase 3 study is independent of the State Demography Office's Economic Base Analysis, which uses different concepts, data, and methods. Reconciling these two analyses may be helpful in the future but is not attempted here.

STUDY TEAM

Donna Graves, Information Services, Durango, Colorado, provided data on second homes. The Colorado Demography Office, Elizabeth Garner, State Demographer, provided data on employment and non-labor income. Mike Retzlaff, Regional Economist, USDA-Forest Service, Rocky Mountain Region, supplied the IMPLAN data and model calibrated to the DOLA employment estimates. Lloyd Levy Consulting LLC of Denver, Colorado, conducted the analysis and is solely responsible for the results and the report.

JOB GENERATION EFFECTS

The analysis addresses two key questions for La Plata County. The objective is to provide answers in quantitative terms:

- What shares of the economic base are due to second homes or other drivers? and
- What is the total effect of second homes and other economic drivers, as measured by the direct and secondary jobs they generate?

The remainder of the section summarizes the characteristics of second homes and presents the analysis results.

SECOND HOME CHARACTERISTICS

Phase I and Phase II of the Region 9 Second Homes Study provide the data for this analysis. Phase I identified second homes in La Plata County and their characteristics.[8] Phase II surveyed and characterized second-home owners.[9]

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[7] See Colorado Department of Local Affairs, Division of Local Government, State Demography Office, "Colorado Department of Local Affairs: Colorado 2005 Economic Base Analysis – Parameters" (http://www.dola.colorado.gov/demog_webapps/economic_base_analysis).

[8]The Social and Economic Effects of Second Homes in Southwest Colorado, Summary of Work in Progress. Prepared by Donna K. Graves, Information Services, Durango, Colorado. Prepared for Region 9 Economic Development District of Southwest Colorado Inc. January 10, 2006. http://www.scan.org/2nd%20home%20typology%20summary.pdf (accessed 6/18/2007).

Tables 1 through 4 present a profile of La Plata County second homes in terms of unit type, value, owner income, and the amount of use by owners. The estimates of second home impacts depend on these factors:

- Detached, single-family structures are the most common second homes in La Plata County. As shown in Table 1, they are 73 percent of the second-home inventory. Condominiums comprise the remaining 27 percent;

- Second homes in La Plata County range in value from $100,000 to more than $5,000,000. The average valuation of second homes on the 2006 tax roll (stated at 2004 prices) was approximately $377,000 (Table 2);[10]

- The Region 9 EDD Phase 2 survey showed that the annual household income of La Plata County second-home owners ranged from more than $35,000 to more than $1 million in 2004, with an average of $217,000 a year (Table 3); since the survey has not been repeated, a 2006 value of about $222,000 was estimated, using an approach described later; and

- The Phase 2 survey indicated that second home usage in La Plata County ranged from none at all to more than 300 days a year in 2004 (Table 4), with an average usage of 113 days or about 31 percent of full-time occupancy; since the survey has not been repeated, this value is used for the 2006 analysis on the assumption usage patterns of second homes haven not changed materially.

Table 1: 2nd Homes by Type in La Plata County in 2006

	UNITS	PERCENTAGE OF UNITS
TOTAL 2ND HOMES	4,104	
Detached (including mobile and modular)	2,993	73%
Condos (and other multi-unit)	1,111	28%
TOTAL HOUSING UNITS (HU)	18,743	
2nd Homes as % of Total HU	22%	

Source: Analysis by Lloyd Levy Consulting LLC from county assessor's data provided by Information Services, Durango, Colorado.

[9]The Social and Economic Effects of Second Homes in Southwest Colorado: Phase 2 – Homeowners Survey. Prepared by Donna K. Graves, Information Services, Durango, Colorado. Prepared for Region 9 Economic Development District of Southwest Colorado Inc. January 10, 2006. July 10, 2006. http://www.scan.org/survey%20analysis-draft%207-10-06.pdf (accessed 6/18/2007).

[10]County assessors re-value real property every odd-numbered year. Generally, the value remains in effect the following year. Appraisers use market sales of similar properties that occurred during the eighteen-month period prior to and including the appraisal date of the June 30 preceding the re-valuation year. This means that the values cited here for property on the roll in 2006 reflect prices in the housing market as of June 30, 2004.

Table 2: Valuation of 2nd Homes in La Plata County in 2006

PRICE RANGE	PERCENTAGE OF UNITS
< $100,000	13%
$100,000 - $199,999	19%
$200,000 - $299,999	21%
$300,000 - $399,999	17%
$400,000 - $499,999	11%
$500,000 - $599,999	6%
$600,000 - $699,999	3%
$700,000 - $799,999	2%
$800,000 - $899,999	1%
$900,000 - $999,999	1%
$1,000,000 - $1,999,999	3%
$2,000,000 - $4,999,999	1%
$5,000,000+	< 0.5%
AVERAGE PRICE IN 2004 DOLLARS (ESTIMATED)	$377,000

Note: The assessor re-values real property every odd numbered year. Generally, the value remains in effect the following year. Appraisers use market sales of similar properties that occurred during the eighteen-month period prior to and including the appraisal date of the June 30 prior to the re-valuation year. This means that the values cited here for property on the books in 2006 were adjusted to market prices as of June 30, 2004.

Source: Analysis by Lloyd Levy Consulting LLC from county assessor's data provided by Information Services, Durango, Colorado.

Table 3: Household Income of Second-Home Owners in La Plata County in 2004 (Region 9 Survey Data)

ANNUAL INCOME	PERCENTAGE OF RESPONDENTS
$1,000,000 +	2%
$500,000 - $999,999	3%
$400,000 - $599,999	6%
$300,000 - $399,999	10%
$200,000 - $299,999	8%
$150,000 - $199,999	21%
$100,000 - $149,999	20%
$75,000 - $99,999	12%
$50,000 - $74,999	21%
$35,000 - $49,999	8%
$15,000 - $34,999	0%
< $14,999	0%
AVERAGE INCOME IN 2004 (2002 DOLLARS) (ESTIMATED)	$217,000

Source: The Social and Economic Effects of Second Homes in Southwest Colorado: Phase 2 – Homeowners Survey. Average estimated by Lloyd Levy Consulting LLC.

Table 4: Owners' Estimate of Their Own Second-Home Use in La Plata County for a 12-Month Period, in Days, (Region 9 Survey Data from 2004)

DAYS OF USE	PERCENTAGE OF RESPONDENTS
300 +	15%
120 - 299	15%
90 - 119	14%
60 - 89	7%
30 - 59	17%
15 - 29	14%
8 - 14	10%
0 - 7	0%
NONE	7%
AVERAGE DAYS OF USE (ESTIMATED)	113

Source: The Social and Economic Effects of Second Homes in Southwest Colorado: Phase 2 – Homeowners Survey. Average estimated by Lloyd Levy Consulting LLC.

A subset of the assessor's data was extracted to reflect second-home units built in 2006. These data reflect second home construction activity. Table 5 presents the number and type of units built in 2006 and their valuation on the tax roll in 2004 dollars.

Table 5: Second Homes Built in 2006 (in 2004 dollars)

UNIT TYPE	NUMBER OF UNITS	TOTAL VALUATION
Detached Single-Family Units	86	$33,749,750
Condos	5	$2,337,630
TOTAL	91	$36,087,380

Source: Analysis by Lloyd Levy Consulting LLC from county assessor's data provided by Information Services, Durango, Colorado.

The second-home market also creates demand for the services of real estate agents in La Plata County. The value of those services is equal to the amount of real estate commissions earned on the sales. Table 6 presents this amount, which was estimated from a data set of second-home sales assembled for this study.

Table 6: Real Estate Commissions Derived from 2006 Second Home Sales in La Plata County

CATEGORY	AMOUNT
Number of Second Home Sales	256
Total Value of Sales	$120,024,400
Amount of Commissions (estimated at 6% of total sales)	$7,201,464

Source: Data from county assessor's records provided by Information Services, Durango, Colorado. Estimate by Lloyd Levy Consulting LLC.

IMPACT OF SECOND HOMES AND OTHER ECONOMIC DRIVERS

As shown in Table 7, La Plata County's economic drivers generated 18,295 direct jobs out of total employment of 33,125, the total reported by the Colorado State Demographer. This equates to a ratio of 1.81 total jobs for every direct job attributed to export final demand. The total impact of second homes was about 7 percent of total employment after counting the effect of second-home owner consumer expenditures, second-home construction, and real estate brokerage services on the sale of second homes.

Table 7: La Plata County – Direct and Total Jobs from Economic Drivers in 2006 in Order of Contribution to Total Employment

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	AMOUNT	SHARE OF TOTAL	AMOUNT	SHARE OF TOTAL	
State Government (excluding Fort Lewis College & Southern Ute Tribal Government)	186	1%	286	1%	1.54
SUBTOTAL	1,749	10%	2,953	9%	1.69
2ND HOMES					
2nd Home Construction	270	1%	555	2%	2.06
Real Estate Commissions on 2nd Home Sales	28	< 1%	60	< 1%	2.17
2nd Home-Owner Spending	955	5%	1,670	5%	1.75
SUBTOTAL	1,253	7%	2,285	7%	1.82
FORT LEWIS COLLEGE					
Fort Lewis College Employment & Spending	645	4%	1,178	4%	1.83
Fort Lewis College Capital Construction	10	< 1%	17	< 1%	1.79
Fort Lewis College Student Spending	325	2%	615	2%	1.89
SUBTOTAL	980	5%	1,810	5%	1.85
TOTAL	18,295	100%	33,125	100%	1.81

Sources: Estimates by Lloyd Levy Consulting LLC using IMPLAN model and available data

The second home market consists of three separate activities. These activities, which generate a total of 2,285 jobs in the economy as a whole, break down as follows:

- 1,670 jobs due to the spending of second-home owners (5% of total employment);
- 555 jobs due to the construction of second homes (2% of total employment); and
- 60 jobs due to commissions on real estate brokerage services for second-home sales (less than 1% of total employment).

The results in Table 7 also indicate that La Plata County had a wide range of job-generating economic drivers in 2006. These include Fort Lewis College, which generated 1,810 total jobs from payroll, purchasing, capital construction and direct student spending, and Southern Ute Tribal Government agencies, not including the tribe's Sky Ute Casino-Hotel, which generated 1,474 total jobs in the economy as a whole.[11]

Five other economic drivers that made large contributions to total employment in 2006 are called out here:

[11] It is safe to assume that the Sky Ute Casino-Hotel is significant to La Plata County's economic base because of trade from outside the county. Base jobs attributable to the casino-hotel are probably among the total jobs attributable to tourism, where one would also find economic-base jobs driven by attractions like Durango Mountain Resort, the Durango-Silverton Railroad, and the region's abundant public land and parks.

- 6,080 total jobs due to spending by households who received "basic" (i.e., non-labor) income (19% of total jobs)

- 5,766 total jobs due to private capital invested in new residential, commercial and industrial construction (17% of total jobs)

- 4,954 total jobs due to tourists and business travelers that stayed in La Plata County (15% of total jobs);

- 4,380 total jobs due to the county's regional services (excluding real estate brokerage on second homes) which attract personal and business spending from outside the county (13% of total jobs); and

- 3,711 total jobs attributable to agriculture, mining (including the gas extraction, processing and pipelining industries), utilities, and manufacturing (11% of total jobs).

These estimates emphasize the diversity of La Plata County's economy, which benefits from government, education, tourism, trade, natural resources, capital construction, and the various types of household wealth and income that originate outside the local job market. Figure 1 and Figure 2 graphically illustrate the share each major economic driver contributed to the 2006 economy in La Plata County. The graphics are based on data from Table 7.

Interpreting the figures is straightforward if each "pie slice" is viewed as how the La Plata County economy responds to an external "market". The major economic drivers illustrated in the figures are groups of institutions, firms or households that are related because they attract outside dollars from the same market. Figure 1 illustrates the jobs generated directly by "serving" the market. Through the spending of the economic agents in each driver group, a share of outside dollars re-circulates within the local economy, generating additional local jobs. Figure 2 illustrates the total number of jobs generated by a driver, including the direct jobs plus the additional jobs, or "multiplier" effect.

For example, La Plata County's retiree households receive government and other institutional payments, dividends and interest on stock holdings and savings, and tap into private pensions and annuities, all of which are forms of income that originate from sources that are independent of local, current economic activity. Funds such as these provide these households with income that they can spend locally. When they do spend locally, the non-labor income is translated into local jobs.

Table 7 and the related figures also call attention to capital construction as a principal economic driver for La Plata County. Private capital investment, the largest segment of the capital construction driver, is a composite of most of the residential, commercial and industrial construction that is under way in a given year. The La Plata County economy in 2006 also benefitted from substantial investments in capital construction by federal, state and local government. Capital construction is an economic driver, even when development is undertaken by local households, business and institutions, because capital investments, even private dwellings, are generally paid for with borrowed funds that originate from external capital markets, from draw-downs of savings (which originated in a different time period), or from granted funds that come from other levels of government or from outside institutions.

The household basic economic driver combines two types of households and several different sources of basic, or non-labor, income. Retiree households are generally older households living mostly or entirely on non-labor sources of income. Non-retirees, the other household type, are

still employed, but may also receive non-labor income. The non-labor income types accounted for in the analysis are "transfer payments" and "dividends, interest and rent."

Dividend income is cash and other assets paid to stockholders who are residents of the area. Interest income consists of monies received by local residents from money market mutual funds and other sources. Rental income consists of the rental of real property, royalties received from patents, copyrights, and from the rights to natural resources paid to local residents. Transfer payments consist primarily of retirement and disability benefit payments, medical payments (i.e. Medicare and Medicaid), income maintenance benefits, unemployment insurance, veteran's benefits, and other government payments to local residents. Many households receive non-labor income in one form or another. Households with a high proportion of non-labor income tend to be retiree households and wealthy households. Wealthy retiree households, for example, who combine high income with a large share of income from non-labor sources, can contribute to job generation when they are induced to shop and invest liberally in the local economy.

Figure 1: Direct Jobs Attributable to Economic Drivers in La Plata County in 2006 (Total Direct Jobs = 18,295)

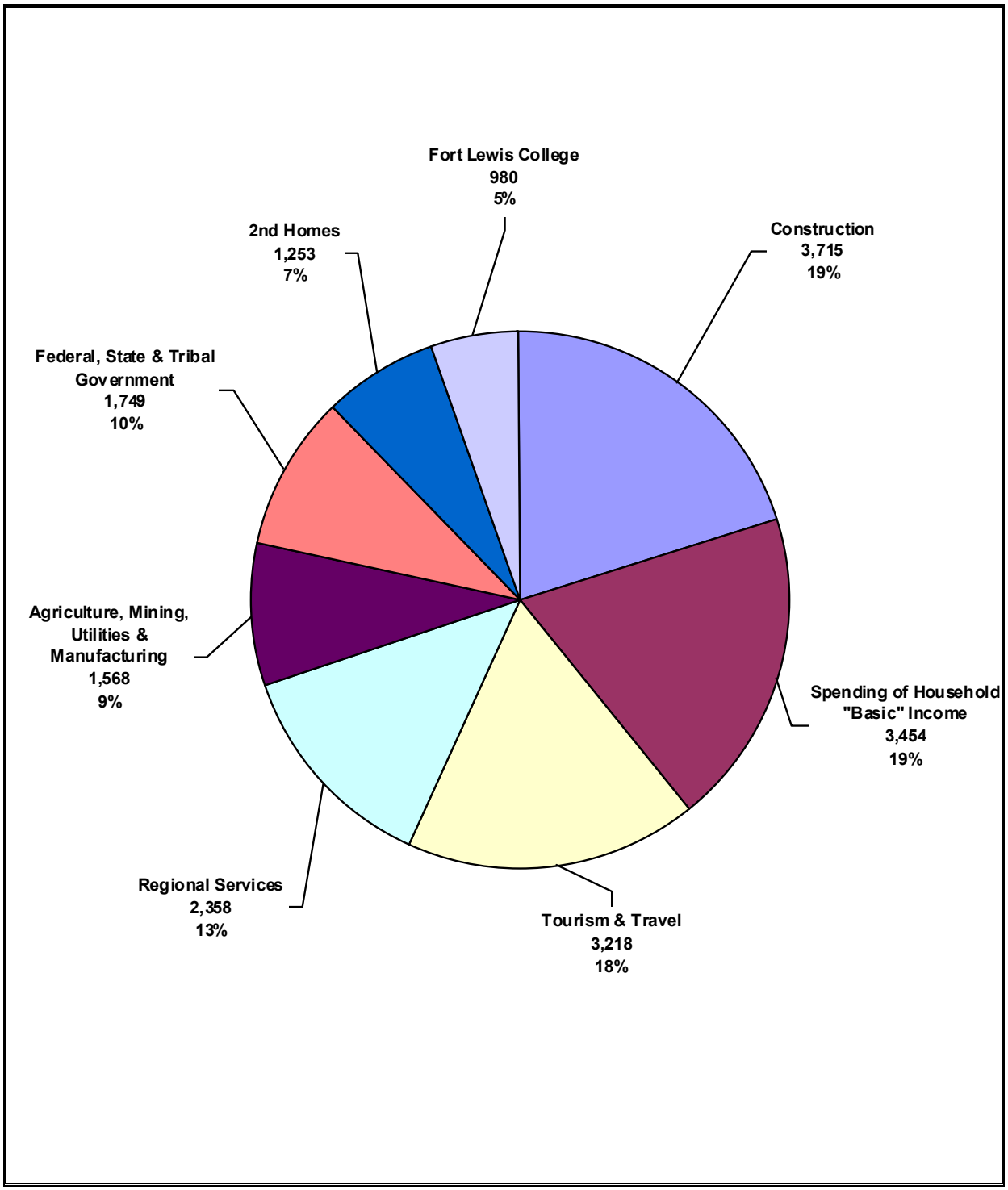
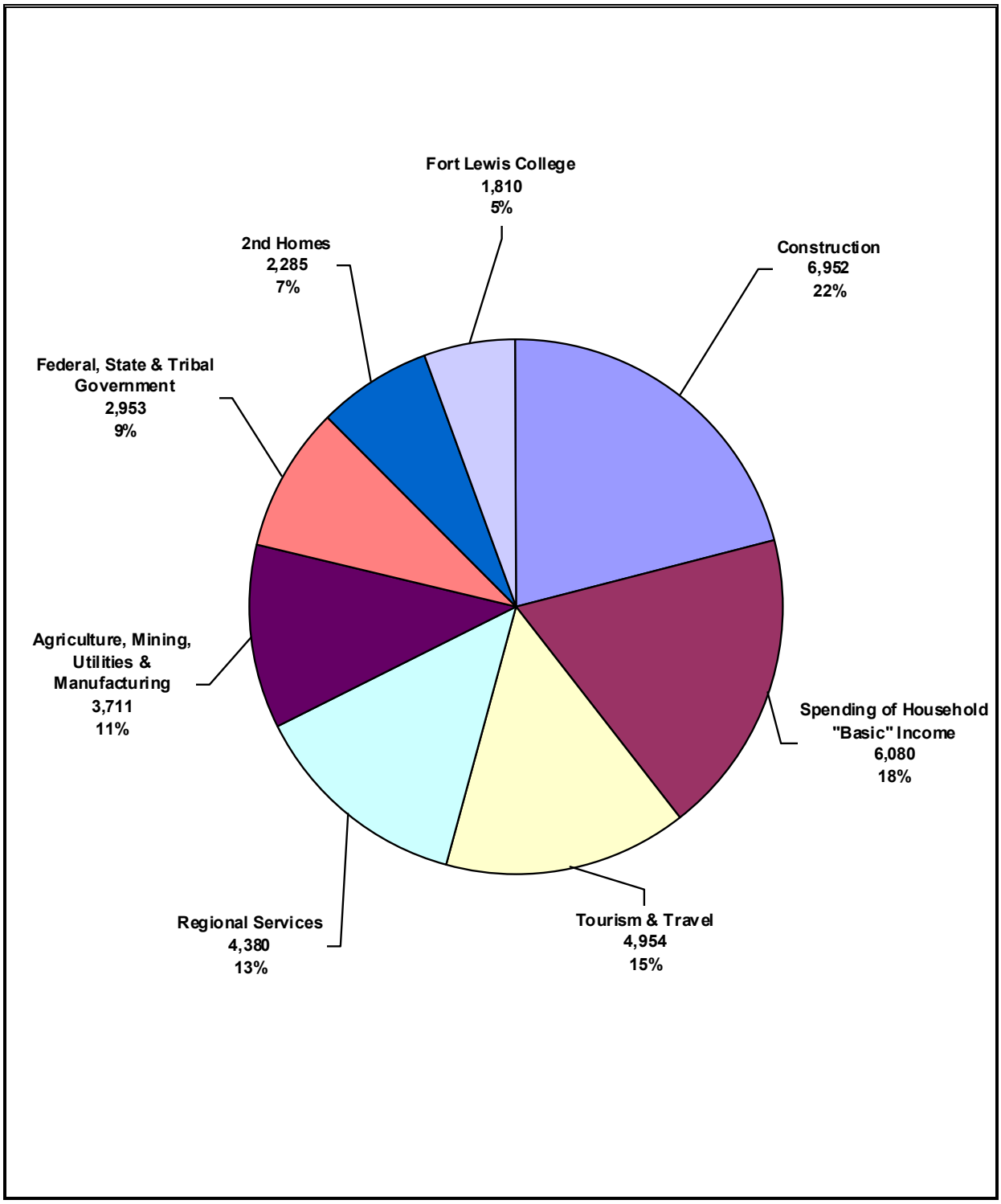


Figure 2: Total Jobs Attributable to Economic Drivers in La Plata County in 2006 (Total Jobs = 33,125)



COMPARISONS WITH OTHER ESTIMATES

Comparing La Plata County to other places with second home activity illustrates how the impact of this sector and its relative importance to the economy may vary according to local circumstances. Table 8 compares the type of second homes found and the impact of the second home market in La Plata County to Gunnison and San Miguel counties in Colorado Planning Region 10 (the location of the Crested Butte and Telluride ski resorts) and to Grand and Pitkin counties in Colorado's Planning Region 12 (the location of the Winter Park and Aspen are ski resorts). More study of data like these may help to assess how geography, economic base, resort attractions, and land and labor availability affect the growth and character of an amenity-driven second home market.

Table 8: Comparison of Second Home Type and Employment Impact in La Plata versus Other Ski Resort Counties in Colorado

	REGION 9	REGION 10		REGION 12 (1)	
	LA PLATA	GUNNISON	SAN MIGUEL	GRAND	PITKIN
Number of Second Homes	4,104	3,549	2,048	6,360	5,618
% Condominium	28%	32%	55%	50%	67%
Total Jobs in County	33,125	9,320	6,331	8,604	19,204
% of Total Jobs Due to Second Homes	9%	9%	23%	32%	41%

Sources: Source: Data for Region 9 found in previous tables and figures. Data for Region 12 from, "The Social and Economic Effects of Second Homes"(Prepared by Linda Venturoni for the Northwest Colorado Council of Governments, June 2004[http:// www.nwc.cog.co.us/ Second%20Home%20Study/ NWCCOG%202ndHome%20Study%20Binder.pdf]).

DATA AND METHODS

MODELING FRAMEWORK

This study used IMPLAN data and software to construct the model of La Plata County for use in the analysis of total employment attributable to economic drivers. The default La Plata County data set was benchmarked to the 2006 estimates of total employment published by the Colorado State Demography Office. The benchmarking process was implemented by Minnesota IMPLAN Group, Inc (MIG, Inc) the developers of the IMPLAN economic impact modeling system, using a standard procedure.[12] Table 11 contains the employment data that were used to benchmark the model. Mike Retzlaff of Economic Insights of Colorado (and formerly USDA Forest Service Region 2 economist) provided additional data and IMPLAN model enhancements.

[12] Minnesota IMPLAN Group, Inc. "Process Developed by MIG Inc. to Make Large Scale Changes to a Model's Employment Data" (available from MIG, Inc.,1725 Tower Drive West, Suite 140, Stillwater, MN 55082).

Table 11: Total Jobs in La Plata County, 2006

INDUSTRY SECTOR	EMPLOYMENT
Agriculture, Forestry, Fishing, Hunting & Related Services	710
Mining, Oil & Gas Extraction, and Support Services	714
Utilities	121
Construction	4,156
Manufacturing	728
Wholesale Trade	700
Retail Trade	3,729
Transportation & Warehousing	762
Information	538
Finance & Insurance	953
Real Estate & Rental Services	1,328
Professional, Scientific & Technical Services	2,280
Management of Companies	34
Administrative & Waste Services (non-governmental)	1,250
Educational Services (non-governmental)	395
Health & Social Services (non-governmental)	3,090
Arts, Entertainment & Recreation	1,065
Accommodations & Food Services	3,465
Other Personal & Business Services	1,594
Governmental Institutions	5,513
TOTAL	33,125

Notes: Data are from IMPLAN, as adjusted by the State Demography Office, Colorado Department of Local Affairs. Services in the private sector (e.g. private schools) are categorized in non-government industry sectors. Publicly funded services are categorized in the Government sector. IMPLAN industry sectors are consistent with the definitions in the North American Industry Classification System (NAICS) 2002. "Employment" is defined as full- and part-time jobs counted at the location of the establishment reporting the jobs, i.e., at the "place of work".

DRIVER IDENTIFICATION

The specification of La Plata County economic drivers to analyze reflects the combination of the experience of regional studies and Region 9 EDD's interest in targeting important local effects. Similar studies were previously completed in Region 10 and Region 12.[13] The default specification of drivers to consider was based on those studies, allowing for comparison of these findings with the previous results, especially those regarding second homes. Region 9's local interests were accommodated by including Fort Lewis College as a separately identified driver. The definition of the major groups of economic drivers facilitates comparison with the economic base analysis published annually by the Colorado Demography Office for Colorado counties.[14]

[13] The Region 10 study was reported on in "Second Homes and the Economic Base of Four Counties in West Central Colorado: An Economic Drivers Study for Gunnison, Hinsdale, Ouray and San Miguel Counties"(Prepared for the USDA Forest Service, Region 2, in Partnership with the Region 10 League for Economic Assistance and Planning, Inc., September 2006 [available from the Region 10 League]) and the Region 12 study in "The Social and Economic Effects of Second Homes"(Prepared by Linda Venturoni for the Northwest Colorado Council of Governments, June 2004[http:// www.nwc.cog.co.us/ Second%20Home%20Study/ NWCCOG%202ndHome%20Study%20Binder.pdf]).

[14] See "http://www.dola.state.co.us/demog_webapps/economic_base_analysis" for recent examples.

ESTIMATING FINAL DEMANDS

Final demand is roughly defined as the purchases made by the end-users or ultimate consumers of goods and services. The standard macroeconomic model groups final demands in four institutional categories: consumers, government, capital investment, and net exports. Final demand leads to the sale of local goods and services; local sales, in turn, create direct employment and, because of the multiplier or so-called "ripple effects", ultimately create total employment. This analysis focuses more narrowly on *export* final demand, which is the sum of purchases of a region's goods and services by end-users funded by income from outside of the local economy.

Two economic drivers, i.e., economic activities that are sources of export final demand, require localized information to adequately characterize. These are second homes and Fort Lewis College. Arguably the visitor economy should also be addressed using local data, for example data on train passengers, ski resort visits and so forth, to account for all of La Plata County's attractions. However, information on built and natural visitor attractions is unavailable consistently from county to county in Colorado, making it more practical to rely on an existing program that evaluates tourism and travel on a statewide basis.

The statewide evaluation program that his analysis relies upon is prepared on an annual basis by tourism industry consultant Dean Runyan Associates for the Colorado Tourism Office.[15] A test of Runyan data in a Colorado area comprising Gunnison and Hinsdale counties found that it is a good estimate of the tourism employment in an IMPLAN model, once the model is calibrated to locally verified employment totals.[16] The Runyan report presents a preliminary estimate of employment number for La Plata County in 2006.

The export final demands needed for the rest of the study were either adopted directly from the IMPLAN model or were derived as residuals after substituting the direct IMPLAN values and independent estimates of specific drivers in the model's macroeconomic accounting identities.

SECOND HOME-OWNER SPENDING. This study estimates second homes-related final demand as the sum of the spending of existing second-home owners, the amount spent in the study year on second-home purchases, and the real estate commissions earned on sales of second homes. Following the pattern of analyses in Regions 10 and 12, this study estimates second-home owner spending by applying household income to the number of second homes. Spending is then estimated from total income by applying an income-appropriate disposable income factor. The annual amount of spending impacting La Plata County was by applying the average use of second homes, expressed as a percentage of the year. Finally, purchases in the local economy were estimated by spreading the amount across a typical distribution of household consumption expenditures.

Local data when available or standard data were used in the formula. Region 9 EDD's Phase 2 survey obtained the data used to generate an assumption for the average income level per second-home owner household. Multiplying the average by the number of second homes generated total spending. The disposable income factor was taken from the Bureau of Labor Statistics' 2006 annual report on consumer expenditures.[17] The value for high income households with incomes greater than $150,000 is 0.54. The estimate of total disposable income attributed to the La Plata County second

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[15] Dean Runyan Associates, "County Overnight Travel Impacts, 1996-2006p." http://deanrunyan.com/impactsCO.html (accessed April 15, 2008).

[16] Retzlaff, M. and D. T. Taylor, "Assessing National Forest Recreation Estimates using Tourism and IMPLAN" (presented at the joint Mid-Continent Regional Science Association 37th Annual Conference and IMPLAN National User's Conference, 6th Biennial Conference, Indianapolis, Indiana, June 2006 [available from the authors]).

[17] U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditures in 2006 (10/2007). http://www.bls.gov/cex/home.htm#tables (accessed April 9, 2008).

homes was simulated using the IMPLAN model's default distribution of household consumption for households with incomes greater than $150,000. The default distribution found in the IMPLAN model is based on recent data from the Bureau of Labor Statistics and is comparable to data found in the annual report on consumer expenditures.

Table 3 (above) presented the Region 9 EDD Phase 2 survey data. Analysis of the data implied annual household income of La Plata County second-home owners ranged from more than $35,000 to more than $1 million in 2004, with an average of $217,000 a year. Escalating the 2004 value in proportion to the growth in aggregate square footage of second homes from 2004 to 2006 generated a 2006 estimate. Since the 2004 estimate originated from data in 2002 prices and dollars, the 2006 estimate also required inflating to the 2004 prices and dollars used by Colorado assessors in valuing the 2006 tax roll.

SECOND HOME CONSTRUCTION. Second home capital construction final demand is defined and measured as the value of new second homes put in place in the benchmark year. This impact was assigned to the category of capital investment final demand.

The total amount of non-local investment in second homes in La Plata County was obtained from the county assessor and provided by Information Services, Durango, Colorado. Properties flagged with a "year built" of 2006 were extracted from the assessor's data file and categorized by structure type. The total value of units by type was taken as the estimate of the amount of investment final demand for the year. The value for detached, single-family type units was simulated using the IMPLAN model's Sector 33 (New residential 1-unit structures) which bridges to parts of NAICS Sector 23 (Construction). Condominium construction is modeled using IMPLAN's Sector 32 (New multi-family residential structures).

The impact of second-home construction on a county's economy will vary from year to year depending on the pace and value of new construction. In addition, differences in the impact of second home construction from county to county will vary according to differences in the availability of local labor and different levels of reliance on imported construction services.

REAL ESTATE COMMISSIONS ON 2ND HOME SALES. Final demand for real estate brokerage services provided for the sale of second homes in La Plata County was defined and measured as the value of real estate commissions earned on second home sales. The data were obtained by special request from the La Plata County Assessor's Office and provided by Information Services, Durango, Colorado.

Data items are units and prices sold in 2006 to out of county buyers. The report is similar to those prepared by private vendors for clients who follow local real estate markets, and the data are considered reliable by the real estate industry. The total value of sales was multiplied by an estimate of the prevailing real estate commission rate for residential property, which is 6 percent for La Plata County.[18] The amount of commissions earned on second-home sales in was simulated using the IMPLAN model's Sector 431 (Real estate) which bridges to NAICS Sector 531 (Real estate).

FORT LEWIS COLLEGE. Fort Lewis College as an "economic driver" is composed of four different economic activities: direct employment, procurement, capital construction and the local expenditures of students. The analysis was modeled after the 2004 economic impact report produced by the Fort Lewis College Office of Economic Analysis and Business Research.[19] Updated values for

[18] Sales data and the estimate of typical real estate commission rates for La Plata County was obtained from Information Services, Durango, Colorado.

[19] Walker, D.W. and M. Klocek, "Fort Lewis College Economic Impact Report" (Office of Economic Analysis and Business Research, Fort Lewis College, Durango, CO, September 2004 draft, Appendix C [available from the authors]).

the report parameters were obtained and provided for this study by Information Services, Durango, Colorado.

Fort Lewis College operating expenditures and employee expenditures funded by employee compensation from the college were assigned to the category of government final demand. They were simulated by assigning them respectively the IMPLAN model's institutional spending categories of "State and local government-consumption by public educational facilities beyond high school" and "Personal consumption expenditure by households with $50,000 - $75,000 income". The impact of the college's capital expenditures was modeled using IMPLAN's category called "State and local government-investment by public educational facilities beyond high school." Student expenditure impacts were modeled by IMPLAN's category called "Personal consumption expenditure by households with less than $10,000 income." When this approach is used, the total dollar amount in each category is prorated by IMPLAN according to national data, assigned to industry categories, and shared down to the model's default local spending percentage for each industry.

TOURISTS & TRAVEL. As noted, this category was estimated by extrapolating an aggregate spending amount from the tourism employment level reported by the 2006 Runyan tourism report for La Plata County.[20] The impact of aggregate tourism spending was simulated by an IMPLAN industry distribution developed by the USDA Forest Service from a national survey.[21] The distribution assumes expenditure types that are on the high end of the scale for forest recreation. The category includes non-local visitors to national forests and to ski areas on forest land (e.g., Durango Mountain Report) and assumes the use of overnight lodging but not camping ("US_HIGH TOTAL NL OVERNIGHT_TRIP").

TRADITIONAL BASIC. For the "traditional basic" category the IMPLAN model provided the estimate of the direct employment, total employment and output (industry sales) originating from exogenous final demand. These data are found in the social accounting matrix (SAM) of the IMPLAN model. A modified version of the SAM that reflects closure of the model for both households and for state and local government was prepared and provided for this study by Mike Retzlaff of Economic Insights of Colorado, Lone Tree, Colorado.

HOUSEHOLD BASIC INCOME. Household income sources that are independent of the regional economy are an important source of final demand. For this analysis, the impact of these income sources are modeled on data extracted from the modified SAM prepared and provided for this study by Mike Retzlaff of Economic Insights of Colorado, Lone Tree, Colorado.

The aggregate employment impact was distributed to three categories defined by the Colorado Demography Office: basic income of retiree households; transfer payment income of households headed by persons under 60 years old; and property income (dividends, interest and rent) of households headed by persons under 60 years old. The aggregate amount estimated from the IMPLAN model was distributed to each category in proportion to separate estimates made by and provided to this study by Jim Westkott of the Colorado Demography Office.

REGIONAL SERVICES. Total direct and total attributed employment for regional services is a balancing entry equal to the difference between employment totals and the estimated values just

[20] Dean Runyan Associates, "County Overnight Travel Impacts, 1996-2006p." http://deanrunyan.com/impactsCO.html (accessed April 15, 2008).

[21] Compare to Stynes, D.J. and E.M. White, "Spending Profiles for National Forest Recreation Visitors by Activity" (http://www.fs.fed.us/recreation/programs/nvum/spending_profiles_2006.pdf [7/22/07]). The institutional array supplied in the IMPLAN model and used for this analysis is based on profiles in this report (Retzlaff, M., Economist, Region 2, USDA Forest Service. Personal communication, 7/19/07).

described. It was not possible to make direct estimates of this category using the data and methods available for this study.

The aggregate employment impact for regional services was distributed to five services industry categories defined by the Colorado Demography Office: trade and transportation, information and communications, financial and insurance, professional and business, and education and health. The aggregate amount estimated from the IMPLAN model was distributed to each category in proportion to separate estimates made by and provided to this study by Jim Westkott of the Colorado Demography Office.

DIRECT AND TOTAL EMPLOYMENT CONTROL TOTALS. The direct and total employment aggregates that provide the grand totals in Table 7 are control totals for the analysis. The total jobs amount of 33,125 is the official county employment total published by the Colorado Demography Office. As noted, the IMPLAN data set used to build the IMPLAN SAM and multipliers (the IMPLAN "model) was calibrated to the Colorado Demography Office total jobs and jobs by industry. The grand total for "total direct jobs" in Table 7 was estimated from a modified SAM and multipliers prepared and provided for this study by Mike Retzlaff of Economic Insights of Colorado, Lone Tree, Colorado.

MULTIPLIERS. The total effects multipliers used in the preceding analysis are reproduced in Appendix A. These multipliers are the result of modifications to the IMPLAN SAM to correct for minor errors in the software. They modified SAM and multipliers were prepared and provided for this study by Mike Retzlaff of Economic Insights of Colorado, Lone Tree, Colorado.

POTENTIAL APPLICATIONS

This study contributes to the Region 9's goal of understanding second homes, other local economic drivers, and their regional economic effects. Application of the analysis will advance this goal in at least two important ways.

COMPREHENSIVE APPROACH TO ECONOMIC DRIVERS

The results presented here are quantitative estimates of the size and relative importance of economic drivers that are constrained by an estimate of total employment in the county economy and by estimates of final demand in the four final demand categories of household consumption, government expenditure, capital investment and next exports.

The nature and extent of differences between the estimates reported here and estimates from other studies are not being explored in this study. Some general reasons for differences include definitions of economic concepts, measurement of inputs and differences in economic impact models, including whether the impact models are industry specific or incorporate all industries

ENHANCEMENT OF LOCAL PLANNING AND POLICY

At the local level the information can be used to develop policy, assist in planning for and responding to growth, and strategize for economic development. Current estimates and forecasts of second home demand can be used in conjunction with the estimates of the secondary effects to analyze likely future growth patterns. These can be translated into projections of needs for housing, transportation and community services.

FUTURE STEPS

A key issue for studies like this is that the findings inevitably become obsolete over time. Local, regional and national trends can significantly alter the mix of local economic drivers. In addition growth can bring structural change to local economies by changing the roster of industries and their linkages. Structural change is especially likely if the study area grows to the point that local businesses offer a larger and more varied range of goods and services.

Another point for follow up activity in the future is to resolve the nature and extent of differences between the estimates reported here and estimates from other studies that were mentioned previously. Reconciling the results of this study with other impact analyses would require a detailed, comparative examination of data and methods. Though intensive, conducting this sort of evaluation would be useful in establishing a basis for consistent economic analysis in the future and solidifying its role as a source of credible information for planning and policy-making.

Undertaking other related activities on a continuing basis also would enhance the data base available for this kind of analysis and facilitate its use:

- Continuation of second-home owner surveys;
- Tracking changes in the housing stock, in terms of structures, values and uses;
- Extending social survey efforts to retirees, another economically important, household type; and
- Incorporating GIS-based location data in the housing data base to create a resource for business development and facilities and services planning.

The study has relied on data "snapshots" of the local economies. With time it will be useful to update the analysis as economies grow and other aspects of the socioeconomic landscape change. Tracking important variables over time will indicate when significant structural changes may have occurred. Some of the tracking variables are published data items. Others may require surveys or survey updates:

- The number and characteristics of second homes in the housing stock;
- Resident and second-home owner incomes;
- Characteristics of other visitor markets;
- Usage and occupancy of conventional lodging, units under management (including second homes), and timeshares/interval ownerships;
- Retiree household, retirement income and other asset-based income; and
- Commuting patterns, commuter income and in-commuter spending.

APPENDIX A

The total effects multipliers used in the preceding analysis are presented on the following pages. These multipliers are the result of modifications to the IMPLAN SAM to correct for minor errors in the software. They modified SAM and multipliers were prepared and provided for this study by Mike Retzlaff of Economic Insights of Colorado, Lone Tree, Colorado.

Employment Multipliers: 2006 IMPLAN Model for La Plata County, Colorado, Modified for the Colorado Department of Local Affairs

IMPLAN Sector	Industry Title	Total Industry Employment[22]	Total Employment Multiplier (Type SAM)[23]
2	Grain farming	5	1.08938
5	Fruit farming	4	1.54294
6	Greenhouse and nursery production	9	1.38885
10	All other crop farming	95	1.44432
11	Cattle ranching and farming	289	1.68584
12	Poultry and egg production	5	1.83430
13	Animal production- except cattle and poultry	151	1.16906
14	Logging	73	2.09643
17	Hunting and trapping	2	2.12718
18	Agriculture and forestry support activities	78	1.21803
19	Oil and gas extraction	362	4.31220
20	Coal mining	60	4.60536
23	Gold- silver- and other metal ore mining	1	1.87803
25	Sand- gravel- clay- and refractory mining	39	1.82265
27	Drilling oil and gas wells	5	4.74528
28	Support activities for oil and gas operations	242	1.63302
29	Support activities for other mining	5	2.40106
30	Power generation and supply	85	2.56770
31	Natural gas distribution	24	7.62257
32	Water- sewage and other systems	12	1.58804
33	New residential 1-unit structures- all	1,478	2.08272
34	New multifamily housing structures- all	334	1.79141
35	New residential additions and alterations-all	174	2.02244
37	Manufacturing and industrial buildings	69	1.60779
38	Commercial and institutional buildings	1,065	1.74877
39	Highway- street- bridge- and tunnel construct	184	1.66996
40	Water- sewer- and pipeline construction	126	1.81018
41	Other new construction	367	1.72760
42	Maintenance and repair of farm and nonfarm re	57	1.82987
43	Maintenance and repair of nonresidential buil	168	1.91359
44	Maintenance and repair of highways- streets-	39	1.62830
45	Other maintenance and repair construction	95	1.55662
58	Confectionery manufacturing from purchased ch	200	2.42110

[22] The model calibration for this analysis of the La Plata County, Colorado, economy used data on total employment published by the State Demography Office, Colorado Department of Local Affairs.

[23] Type SAM multipliers predict direct, indirect, and induced effects. The induced effect is based on information in the IMPLAN model's social account matrix (SAM). Induced effects based on the recirculation of income through households and through state and local government are included in these Type SAM multipliers.

Employment Multipliers: 2006 IMPLAN Model for La Plata County, Colorado, Modified for the Colorado Department of Local Affairs

IMPLAN Sector	Industry Title	Total Industry Employment[22]	Total Employment Multiplier (Type SAM)[23]
67	Animal- except poultry- slaughtering	9	9.60454
80	Coffee and tea manufacturing	2	3.68289
84	All other food manufacturing	1	2.12046
85	Soft drink and ice manufacturing	35	3.01552
86	Breweries	11	4.20252
101	Textile bag and canvas mills	5	1.40824
107	Cut and sew apparel manufacturing	19	1.63045
112	Sawmills	2	2.70284
116	Engineered wood member and truss manufacturin	17	1.46188
117	Wood windows and door manufacturing	2	1.55774
119	Other millwork- including flooring	17	1.76070
120	Wood container and pallet manufacturing	5	1.45445
139	Commercial printing	52	1.32958
160	Pharmaceutical and medicine manufacturing	2	2.93566
192	Ready-mix concrete manufacturing	47	1.98921
193	Concrete block and brick manufacturing	15	1.97716
232	Prefabricated metal buildings and components	20	1.85545
236	Sheet metal work manufacturing	29	1.60943
237	Ornamental and architectural metal work manuf	1	1.47919
243	Machine shops	5	1.59200
255	Miscellaneous fabricated metal product manufa	2	1.69068
269	All other industrial machinery manufacturing	17	1.86288
273	Other commercial and service industry machine	30	1.94340
302	Electronic computer manufacturing	0	0.00000
303	Computer storage device manufacturing	1	2.91220
305	Other computer peripheral equipment manufactu	1	2.71766
306	Telephone apparatus manufacturing	0	0.00000
307	Broadcast and wireless communications equipme	0	0.00000
308	Other communications equipment manufacturing	0	0.00000
309	Audio and video equipment manufacturing	0	0.00000
310	Electron tube manufacturing	0	0.00000
311	Semiconductors and related device manufacturi	1	5.48609
312	All other electronic component manufacturing	1	1.91258
313	Electromedical apparatus manufacturing	0	0.00000
314	Search- detection- and navigation instruments	1	2.37876
315	Automatic environmental control manufacturing	0	0.00000
316	Industrial process variable instruments	0	0.00000
317	Totalizing fluid meters and counting devices	0	0.00000
318	Electricity and signal testing instruments	0	0.00000
319	Analytical laboratory instrument manufacturin	0	0.00000
320	Irradiation apparatus manufacturing	0	0.00000

Employment Multipliers: 2006 IMPLAN Model for La Plata County, Colorado, Modified for the Colorado Department of Local Affairs

IMPLAN Sector	Industry Title	Total Industry Employment[22]	Total Employment Multiplier (Type SAM)[23]
321	Watch- clock- and other measuring and control	0	0.00000
322	Software reproducing	0	0.00000
323	Audio and video media reproduction	0	0.00000
324	Magnetic and optical recording media manufact	0	0.00000
325	Electric lamp bulb and part manufacturing	0	0.00000
326	Lighting fixture manufacturing	0	0.00000
327	Electric housewares and household fan manufac	0	0.00000
328	Household vacuum cleaner manufacturing	0	0.00000
333	Electric power and specialty transformer manu	0	0.00000
334	Motor and generator manufacturing	0	0.00000
335	Switchgear and switchboard apparatus manufact	0	0.00000
336	Relay and industrial control manufacturing	0	0.00000
337	Storage battery manufacturing	0	0.00000
338	Primary battery manufacturing	0	0.00000
339	Fiber optic cable manufacturing	0	0.00000
340	Other communication and energy wire manufactu	0	0.00000
341	Wiring device manufacturing	0	0.00000
342	Carbon and graphite product manufacturing	0	0.00000
343	Miscellaneous electrical equipment manufactur	0	0.00000
350	Motor vehicle parts manufacturing	2	1.70038
353	Other aircraft parts and equipment	2	1.39094
354	Guided missile and space vehicle manufacturin	2	2.12029
355	Propulsion units and parts for space vehicles	0	0.00000
359	Motorcycle- bicycle- and parts manufacturing	4	2.75125
361	All other transportation equipment manufactur	10	2.42887
362	Wood kitchen cabinet and countertop manufactu	41	1.58626
364	Nonupholstered wood household furniture manuf	4	1.54160
365	Metal household furniture manufacturing	8	1.42722
376	Surgical appliance and supplies manufacturing	8	1.84370
377	Dental equipment and supplies manufacturing	3	1.80371
379	Dental laboratories	20	1.68857
380	Jewelry and silverware manufacturing	38	2.02707
381	Sporting and athletic goods manufacturing	2	2.12176
382	Doll- toy- and game manufacturing	2	1.57090
384	Sign manufacturing	5	1.44205
386	Musical instrument manufacturing	8	2.05011
389	Buttons- pins- and all other miscellaneous ma	17	1.54326
390	Wholesale trade	700	2.18306
391	Air transportation	50	1.88229
392	Rail transportation	2	1.65098
393	Water transportation	181	2.26931

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IMPLAN Sector	Industry Title	Total Industry Employment[22]	Total Employment Multiplier (Type SAM)[23]
394	Truck transportation	124	1.54010
395	Transit and ground passenger transportation	27	1.68432
396	Pipeline transportation	163	7.51730
397	Scenic and sightseeing transportation and sup	67	1.56551
398	Postal service	52	1.38379
399	Couriers and messengers	75	1.41027
400	Warehousing and storage	23	1.65537
401	Motor vehicle and parts dealers	427	2.06060
402	Furniture and home furnishings stores	201	1.58017
403	Electronics and appliance stores	144	1.32098
404	Building material and garden supply stores	463	1.71741
405	Food and beverage stores	644	1.46095
406	Health and personal care stores	132	1.38484
407	Gasoline stations	232	1.36031
408	Clothing and clothing accessories stores	245	1.46667
409	Sporting goods- hobby- book and music stores	283	1.33114
410	General merchandise stores	478	1.50311
411	Miscellaneous store retailers	276	1.30108
412	Nonstore retailers	203	1.27349
413	Newpaper publishers	138	1.52080
414	Periodical publishers	7	1.81684
415	Book publishers	1	1.55511
416	Database- directory- and other publishers	1	3.69580
417	Software publishers	141	2.76408
418	Motion picture and video industries	73	2.62757
419	Sound recording industries	2	1.34153
420	Radio and television broadcasting	86	2.33122
421	Cable networks and program distribution	2	3.58594
422	Telecommunications	54	2.74796
423	Information services	12	2.76813
424	Data processing services	20	2.20491
425	Nondepository credit intermediation and rela	207	1.95251
426	Securities- commodity contracts- investments	120	1.95774
427	Insurance carriers	70	2.76681
428	Insurance agencies- brokerages- and related	140	1.36980
429	Funds- trusts- and other financial vehicles	21	2.67553
430	Monetary authorities and depository credit in	395	1.95879
431	Real estate	886	2.16808
432	Automotive equipment rental and leasing	60	1.97969
433	Video tape and disc rental	70	1.25213
434	Machinery and equipment rental and leasing	79	2.96497

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IMPLAN Sector	Industry Title	Total Industry Employment[22]	Total Employment Multiplier (Type SAM)[23]
435	General and consumer goods rental except vide	233	1.51696
437	Legal services	338	1.89494
438	Accounting and bookkeeping services	312	1.69778
439	Architectural and engineering services	839	2.04680
440	Specialized design services	67	1.91234
441	Custom computer programming services	77	1.39795
442	Computer systems design services	51	1.78095
443	Other computer related services- including fa	11	1.82545
444	Management consulting services	134	2.15139
445	Environmental and other technical consulting	174	2.29520
446	Scientific research and development services	14	1.78034
447	Advertising and related services	60	2.01241
448	Photographic services	39	1.44847
449	Veterinary services	133	1.41764
450	All other miscellaneous professional and tech	31	4.72038
451	Management of companies and enterprises	34	2.08352
452	Office administrative services	73	2.43041
454	Employment services	448	1.24184
455	Business support services	74	1.55276
456	Travel arrangement and reservation services	39	1.79754
457	Investigation and security services	39	1.35990
458	Services to buildings and dwellings	398	1.47481
459	Other support services	122	1.69706
460	Waste management and remediation services	57	2.68201
461	Elementary and secondary schools	102	1.21670
463	Other educational services	293	1.57851
464	Home health care services	3	2.32869
465	Offices of physicians- dentists- and other he	1,118	1.72393
466	Other ambulatory health care services	335	1.96869
467	Hospitals	729	1.75169
468	Nursing and residential care facilities	241	1.51001
469	Child day care services	180	1.25227
470	Social assistance- except child day care serv	484	1.26914
471	Performing arts companies	30	1.27643
472	Spectator sports	9	1.19802
473	Independent artists- writers- and performers	53	1.84063
474	Promoters of performing arts and sports and a	79	1.23277
475	Museums- historical sites- zoos- and parks	27	1.55559
476	Fitness and recreational sports centers	437	1.28608
478	Other amusement- gambling- and recreation ind	431	1.56026
479	Hotels and motels- including casino hotels	761	1.43770

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IMPLAN Sector	Industry Title	Total Industry Employment[22]	Total Employment Multiplier (Type SAM)[23]
480	Other accommodations	132	1.64898
481	Food services and drinking places	2,572	1.29474
482	Car washes	8	1.60640
483	Automotive repair and maintenance- except car	310	1.46106
484	Electronic equipment repair and maintenance	62	1.56862
485	Commercial machinery repair and maintenance	56	1.51462
486	Household goods repair and maintenance	23	1.62210
487	Personal care services	308	1.37752
488	Death care services	31	1.31310
489	Drycleaning and laundry services	98	1.28290
490	Other personal services	113	1.99804
491	Religious organizations	81	1.79447
492	Grantmaking and giving and social advocacy or	218	1.52649
493	Civic- social- professional and similar organ	190	1.33686
494	Private households	96	1.15059
503	State & Local Education	3,407	1.28252
504	State & Local Non-Education	1,554	1.40790
505	Federal Military	112	1.36166
506	Federal Non-Military	440	1.99973
508	Inventory valuation adjustment	0	0.00000
509	Owner-occupied dwellings	0	0.00000
	Totals	33,125	