

FORTY-NINTH ANNUAL

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COLORADO

BUSINESS ECONOMIC  
OUTLOOK

2014

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**Leeds** School of Business  
UNIVERSITY OF COLORADO BOULDER

**BUSINESS RESEARCH DIVISION**



FORTY-NINTH ANNUAL

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**COLORADO  
BUSINESS ECONOMIC  
OUTLOOK  
2014**

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## Introduction

**T**he Business Research Division (BRD) in the Leeds School of Business is proud to present our 49th annual Colorado Business Economic Outlook. The 2014 Colorado outlook is a product of partnerships that rely on research conducted by our students and staff, and members of the public and private sectors.



This forecast analyzes changes that have occurred in all economic sectors during the past year, and looks at the opportunities and challenges that will shape population, employment, and the overall economy in the coming year. The information in this book is initially presented at the forty-ninth annual Colorado Business Economic Outlook Forum in Denver, followed by roughly 50 forecast speeches that are held throughout the state during the year, ranging from presentations to industry associations and nonprofit organizations to the Federal Reserve Bank of Kansas City.

### Methodology

We are fortunate to have more than 100 individuals from the business, education, and government communities who serve on 13 sector estimating groups. These groups convene at a kickoff meeting

in September where members discuss trends and issues that are likely to affect economic growth during the upcoming year. During the second half of September and into October, the committees apply this information to their industry. From this series of meetings, the sector write-ups and forecasts are prepared and submitted to the BRD in November, when they are edited and published in this book. The following June, the Steering Committee, which is comprised of the sector chairs, meets to review their forecasts and identify factors that will positively or negatively drive change in their industry's economic performance during the second half of the year. These updates are published in the summer issue of our quarterly e-newsletter, the *Colorado Business Review*.

### Related Economic Research

The BRD conducts customized business and economic research that expands the knowledge base of decision makers throughout the state and region. The annual Colorado Business Economic Outlook provides the foundation for all research the BRD conducts within the state. Among the other BRD research tools available to businesses and organizations is the Leeds Business Confidence Index, a forward-looking index that gauges Colorado business leaders' opinions about national and state economic trends and how their industry will perform in the coming quarter, and the

*Colorado Business Review*, which explores current topics of importance to the state's economy. Visit [leeds.colorado.edu/brd](http://leeds.colorado.edu/brd) for more information about BRD offerings.

## Acknowledgments

We are humbled and thankful to have dedicated partners in producing this forecast. A complete list of committee members appears at the back of this book. Their efforts are very much appreciated. We also thank the staff of the Colorado Department of Local Affairs and the Colorado Department of Labor and Employment who supply us with much of the employment and population data used in the forecast.

Finally, I would like to thank the many Leeds School of Business and CU-Boulder personnel who worked hard at preparing, presenting, and promoting this project. My sincerest thanks go to Brian Lewandowski, Research Associate; Cindy DiPersio, Project Coordinator; Bonnie Beverly, Administrative Assistant; Lynn Reed, Graphic Designer; Kim Warner, Publications Project Manager; and Rick Brubaker, Jim Dalton, Sam McMeley, Noah Seidenfeld, Ryan Thorpe, and Emily Zalasky, Student Research Assistants, for their help in assembling and presenting the 2014 Colorado Business Economic Outlook Forum. The assistance provided by Rex Whisman, director of Marketing

and Communications, and Erik Jeffries, production/project manager, both in the Leeds School, is greatly appreciated, along with the assistance provided by Elizabeth Lock and Dirk Martin with the CU-Boulder Office of News Services.

## Colorado Economic Forecast for 2014

The sections that follow provide a summary of 2013, a forecast for 2014, and industry-specific data analysis and insight into the key factors influencing each sector. We believe this information will prove useful in your business and policy decision-making process.



Richard L. Wobbekind, PhD  
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## Celebrating More Than 95 Years of Service to Colorado

### BRD: Business Research Division

The Business Research Division conducts economic impact studies and customized research projects that assist companies, associations, nonprofits, and government agencies with making sound business and policy decisions. Among the tools offered are the annual Colorado Business Economic Outlook, which provides a forecast of the state's economy by sector, and the quarterly Leeds Business Confidence Index, which gauges Colorado business leaders' opinions about the economy. The quarterly *Colorado Business Review* e-newsletter offers decision makers in-depth analysis and information about Colorado's economy.

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BUSINESS RESEARCH DIVISION

## Colorado Then and Now

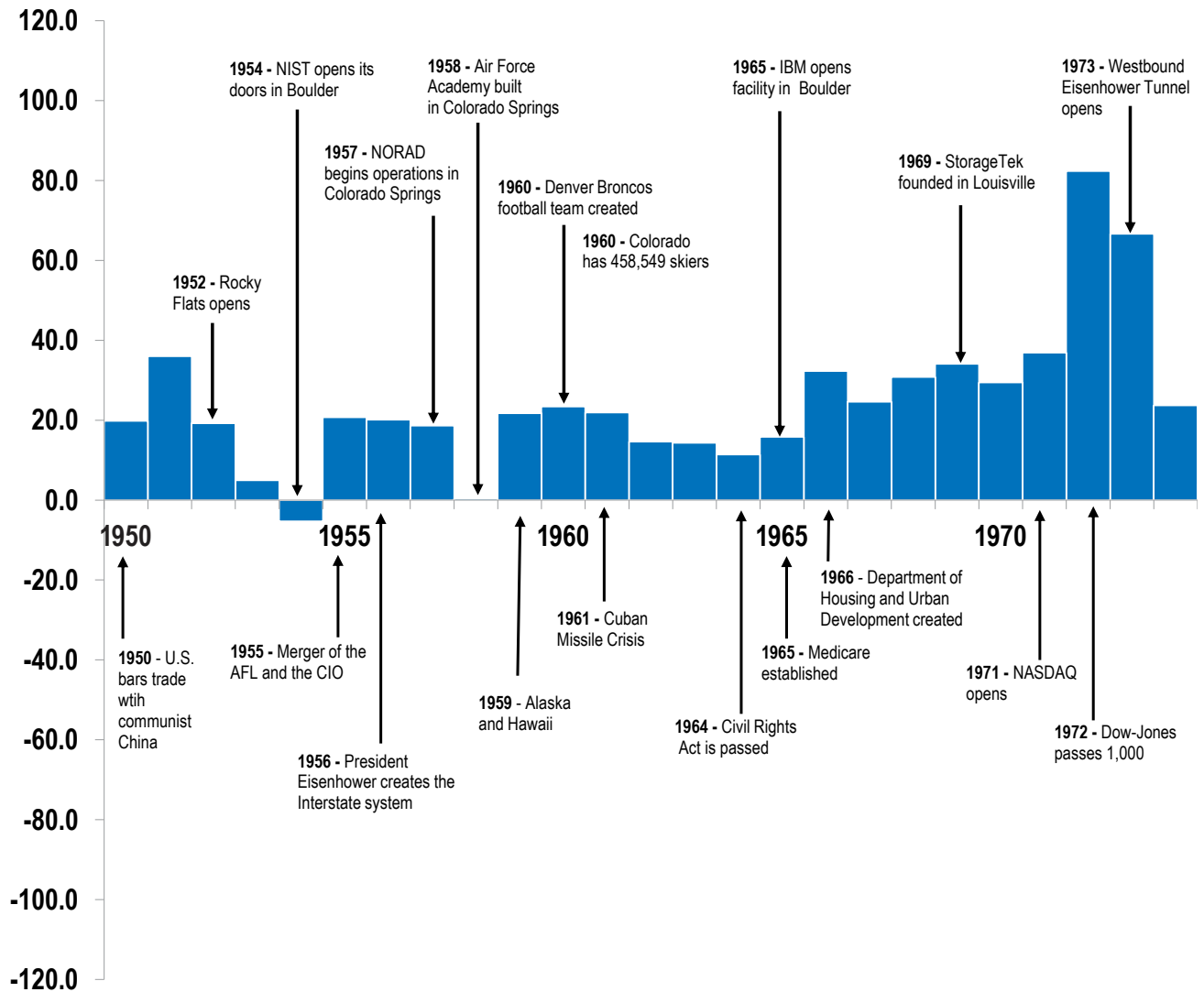
The nation's economy and culture has been shaped by numerous factors and changes over the past 60 years, many leaving footprints that can still be seen today. The United States has experienced monumental events ranging from technological advances to international trade to political turmoil and war. For Colorado, the continuous growth in key high-technology areas and expanding political influence has defined the state's place in the world economy.

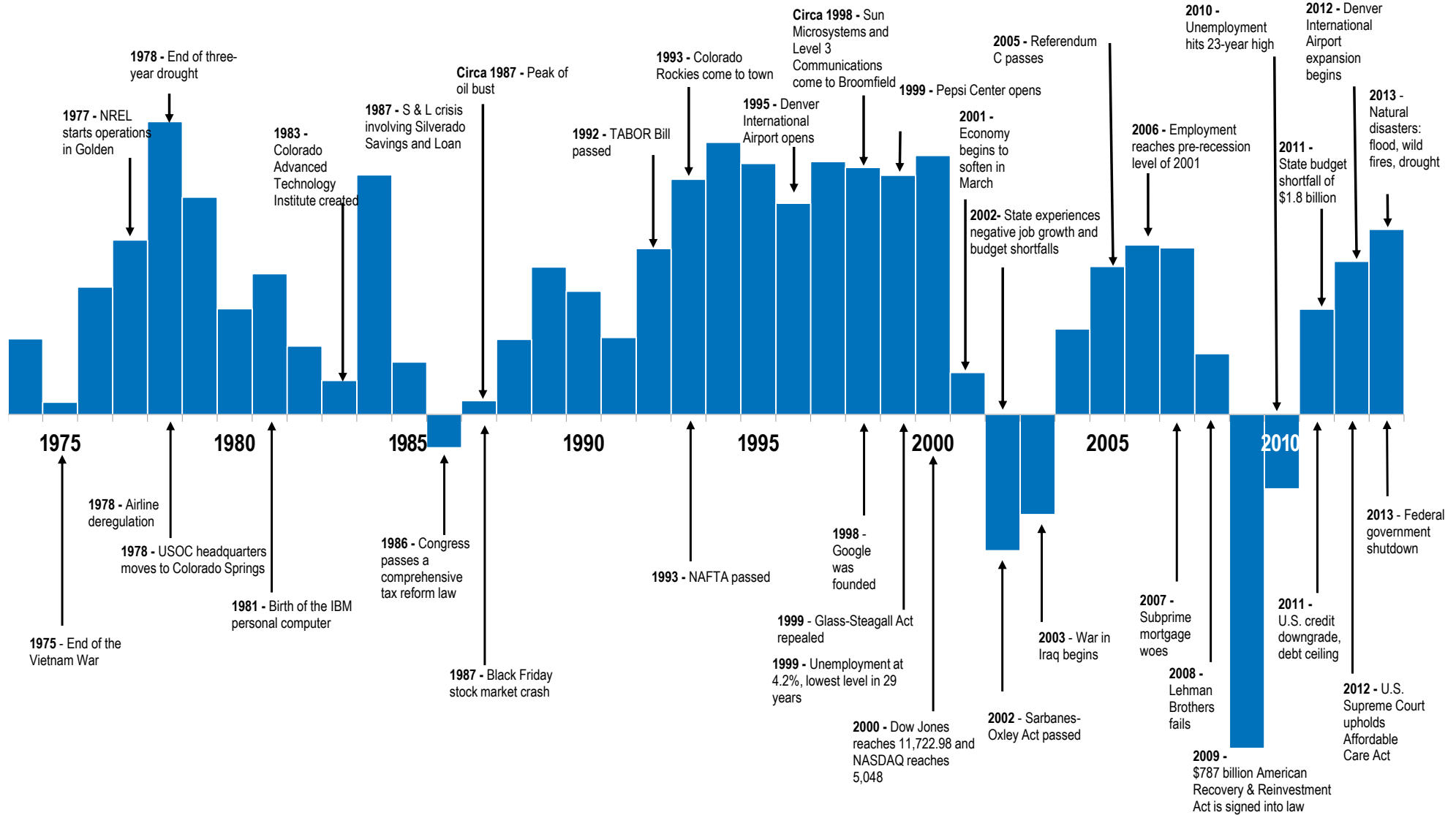
In 1950, the United States was a net exporter of goods. The nation's population was about 151 million, and approximately 1.3 million people resided in Colorado. The Dow Jones reached a monthly high of 235, and Colorado per capita personal income was \$1,512.

Since then, the U.S. population has grown to over 312 million, and Colorado has more than 5.1 million residents. The United States has a considerable trade deficit, the Dow is approaching 16,000, and Colorado per capita personal income is more than \$45,000.

The adjacent timeline provides Colorado's annual employment changes, along with a glimpse of some of the social, economic, educational, and political changes that have occurred since 1950. Colorado events are listed above the line, and national events are listed below. This timeline emphasizes the importance of learning from the past: a historical perspective of earlier events can help businesses make more effective decisions today and in the future. ❖

Annual Change in Employment in Thousands





## U.S. Economic Outlook

**R**obust economic growth is what was expected following the severe recession that officially ended in 2009. Four and a half years later, macroeconomic forecasts continue to be revised downward in the short term, and robust growth is pushed out for another year. GDP, the total value of goods and services created in the United States, has grown at an average annual rate of 2.4% since the recession ended, compared to 3.2% for the period between 1970 and 2000, and 2.7% for the first part of the decade leading up to the recession. While we are becoming more resigned to slow economic growth as the norm, there are sufficient data to suggest an improving economy in 2014.

However, there are risks that pose threats to this sustained and stronger growth.

Positive signals include increased job and business creation, higher personal income and wages, and record-setting measures of wealth. To some extent, the economic uncertainty that persisted following the recession has abated, with increasing consumer confidence and individuals' willingness to move residences, increase spending, and in general take more risks. In fairness, the pace of growth in some of these positive measures is a concern.

Risks to sustained economic growth domestically include sequestration, the debt limit, government shutdown, Federal Reserve policy, and health care

reform. International risks include slow euro-zone economic growth and Middle East conflicts. Sequestration is apparent in federal employment, and implied in federal contracts. The federal government is running smaller deficits, attributable to both cuts in spending and improved tax collections. The disruption and uncertainty spurred by a shutdown paused economic improvements, reversing the positive trends in jobless claims and sending a negative signal about the trustworthiness of U.S. sovereign debt. The resolution did not solve the fiscal debate, but rather kicked the can down the road to February 2014. Domestically, the other great concern is the rollout of health care reform, and the unintended consequences it could have on

### REAL GROSS DOMESTIC PRODUCT 2005–2014 (In Millions of Chained 2005 Dollars)

Economic Indicator	2005	2006	2007	2008	2009	2010	2011	2012	2013 <sup>a</sup>	2014 <sup>b</sup>
Real Gross Domestic Product	\$14,235.6	\$14,615.2	\$14,876.8	\$14,833.6	\$14,417.9	\$14,779.4	\$15,052.4	\$15,470.7	\$15,718.23	\$16,174.1
<i>Percentage Change</i>	3.4%	2.7%	1.8%	-0.3%	-2.8%	2.5%	1.8%	2.8%	1.6%	2.9%
Fixed Investment	\$2,611.0	\$2,662.5	\$2,609.6	\$2,432.6	\$2,025.7	\$2,056.2	\$2,184.6	\$2,365.3	\$2,431.5	\$2,589.6
<i>Percentage Change</i>	6.8%	2.0%	-2.0%	-6.8%	-16.7%	1.5%	6.2%	8.3%	2.8%	6.5%
Personal Consumption	\$9,527.8	\$9,814.9	\$10,035.5	\$9,999.2	\$9,842.9	\$10,035.9	\$10,291.3	\$10,517.6	\$10,728.0	\$11,028.3
<i>Percentage Change</i>	3.5%	3.0%	2.2%	-0.4%	-1.6%	2.0%	2.5%	2.2%	2.0%	2.8%
Government Expenditures	\$2,826.2	\$2,869.3	\$2,914.4	\$2,994.8	\$3,089.1	\$3,091.4	\$2,992.3	\$2,963.1	\$2,898.0	\$2,869.0
<i>Percentage Change</i>	0.6%	1.5%	1.6%	2.8%	3.1%	0.1%	-3.2%	-1.0%	-2.2%	-1.0%
Net Exports	-\$777.1	-\$786.2	-\$703.6	-\$546.9	-\$392.2	-\$462.6	-\$445.9	-\$430.8	-\$428.0	-\$430.0

<sup>a</sup>Estimate. <sup>b</sup>Forecast.

Note: Components do not sum to total since the fixed investment component excludes changes in inventories.

Sources: Bureau of Economic Analysis, Economy.com, National Association for Business Economics, and Colorado Business Economic Outlook Committee.



the economy—how will employers react? Will the costs place a drag on economic growth? Will states bear too much of the burden down the road? Will employers change employees' full-time work status to minimize costs? Internationally, the eurozone is emerging from recession and will show growth in 2014, China's growth is not expected to flatten but rather grow less rapidly. Last, Fed policy is a lingering risk to the economy. The Fed is currently propping up the mortgage environment, purchasing mortgage-backed securities each month and keeping rates low. What happens when the Fed reverses course remains to be seen. That said, this "tapering" will likely occur in the near future.

Despite the uncertainty, companies are doing what they do best—finding ways to market goods and services even during uncertain times. And they are finding success—sales and profits are growing. The deep discounts that existed for durable goods (e.g., homes and cars) have dissolved as inventory has been absorbed and production comes back in to equilibrium.

With this backdrop, the following sections examine forecasts of output and the key components of GDP.

## Total Output

Through Q3 2013, the United States recorded 10 consecutive quarters of GDP growth. The rates of growth for 2011 and 2012 were 1.8% and 2.8%, respectively. While Q4 2012 and Q1 2013 exhibited signs of slowing growth, the economy stabilized with growth of 2.5% in Q2 2013 and 2.8% in Q3 2013. The year should end with growth around

1.6%, with slow growth in the first half dragging down more robust growth in the second half. Growth in 2014 is estimated at 2.9%, barring unforeseen external shocks.

## GDP Components

### Consumer Spending

Personal consumption increased in 2010, 2011, and 2012, with goods outpacing growth in services, 2.2% compared to 1.6% in 2012. Durable goods experienced the steepest decline during the recession, but now exhibits the most robust growth, with growth of 6.1%, 6.6%, and 7.7% from 2010 through 2012. On a quarterly basis, this trend continues to hold with strong gains, especially in durable goods, and modest gains in services. This growth is spurred by increased consumer confidence, driven by improved employment, income, and wealth. Total nonfarm employment peaked in January 2008 (seasonally adjusted) before losing 8.7 million jobs; 7.2 million have since been recovered, leaving U.S. employment 1.1% below peak. Nonfarm total wages dropped \$282.9 billion, but have been on the rise since Q2 2010. On a four-quarter rolling sum basis, wages are 12% above the trough, and 6.3% higher than the previous peak. Personal income reached record levels in Q3 2013, and there are a record number of establishments nationally. The Dow Jones Industrial Average decreased 54% from October 2007 to March 2009, but has since increased 145% as of November 2013. Total assets of households and nonprofit organizations regained peak in Q4 2012.

*continued on page 8*



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**BUSINESS MINOR**

## U.S Economic Outlook

*continued from page 7*



Despite dropping from the 10% recorded in October 2009 (seasonally adjusted), the unemployment rate has remained high. The October 2013 figure stands at 7.3%, and is on a slow trajectory of decline. The remaining disparity in labor force is between those temporarily unemployed and those now structurally unemployed.

Continued employment growth is anticipated in every state in 2014. The unemployment rate is expected to drop below 7% in 2014, with full employment still a couple of years out. Vehicle sales will round out 2013 at 15.5 million, climbing to 16.6 million, and regaining the levels of units sold annually between 2004 and 2007.

Construction will improve marginally, from just shy of 1 million units in 2013 to 1.15 million in 2014, barring an unusually strong reaction to

rising mortgage rates. This continues the trend back to the long-term average of 1.5 million units.

While households have improved their debt ratios, consumers have demonstrated a return to the market. Retail sales will continue to improve in 2014, while consumer prices will grow roughly 1.9%. The fact that overall inflation remains in check understates the consumer-affecting price changes in some important consumer purchases, primarily food and fuel.

### Fixed Investment

Fixed investment includes investment in residential structures, as well as nonresidential structures, equipment, software, and changes in inventory. Excluding changes in inventory, fixed investment is expected to increase 2.8% in 2013 and 6.5% in 2014. In 2012, about 82% of real investment was business related.

### Government Expenditures

Approximately three-fifths of total government expenditures are at the state and local level, roughly 26% are allocated to national defense, and 15% to nondefense programs. With the national debt remaining in the political spotlight, government spending is expected to decline 2.2% in 2013 and 1% the following year, marking four consecutive years of government spending decreases. The federal budget deficit is projected to remain high, at nearly \$775 billion, in 2013, and to decline, to \$740 billion, in 2014.

At the beginning of 2013, the “fiscal cliff” was officially avoided with a last-minute compromise that included federal budget cuts. The debate continued, with a debt ceiling crisis and federal government shutdown that affected the economy and the Colorado community. Another compromise sent the issue further down the road.

### Net Exports

The trade imbalance will continue to be impacted by currency fluctuations, especially with an improving eurozone economy, aggressive Japanese monetary policy, and Chinese currency pegging. The United States maintains a net deficit on goods and a net surplus on services. Despite the resurgence of the consumer, net exports remain somewhat in check, with virtually no change in the balance of exports expected in 2013 and 2014. Expect net exports to hover around -\$430 billion in 2013 and 2014. ❖



## Colorado Economic, Employment, and Population Outlook

### State GDP and Income

In 2012, Colorado enjoyed a stronger recovery compared to most of the nation. The state's employment growth ranked 4th in the nation, behind only North Dakota, Utah, and Texas, while growth in per capita personal income ranked 14th and growth in real GDP ranked 21st.

GDP growth was 2.1% in Colorado. Colorado ranked 5th in the region, behind Texas, Utah, Arizona, and Montana, but ahead of Oklahoma,

Idaho, New Mexico, and Wyoming. Employment growth in Colorado was 2.3% in 2012, compared to 1.7% nationally. While all of the Rocky Mountain states gained employment in 2012, only Texas and Utah did so at a higher rate than Colorado. Idaho, New Mexico, Oklahoma, Wyoming, Arizona, and Nevada all recorded slower rates of growth than Colorado.

Colorado per capita personal income in Colorado grew 5.9% in 2011 and 3.6% in 2012, slightly exceeding the national average of 5.3% and 3.4%.

Part of Colorado's economic growth may be attributed to aggressive efforts by state and local development. The Colorado Blueprint, as termed by the Colorado Office of Economic Development and International Trade, focuses on a bottom-up approach to economic development, with attention paid to business retention and acquisition, as well as key industry clusters ranging from

*continued on page 10*

### STATE AND NATIONAL ECONOMIC COMPARISON, 2005–2012

	2005	2006	2007	2008	2009	2010	2011	2012
<b>Colorado</b>								
Real GDP (\$ billions, chained 2009 dollars)	217.3	223.2	228.1	231.0	226.0	231.0	234.9	239.9
Nominal GDP (\$ billions)	217.3	230.2	242.6	252.5	244.4	253.1	264.3	274.0
Total Personal Income (\$ billions)	177.9	191.8	202.7	212.2	206.4	210.6	226.0	237.5
Per Capita Personal Income (\$)	38,407	40,627	42,199	43,406	41,515	41,717	44,179	45,775
Employment (thousands) <sup>a</sup>	2,226.0	2,279.1	2,331.3	2,350.3	2,245.6	2,222.3	2,255.3	2,310.0
Unemployment Rate (percent)	5.1	4.3	3.8	4.8	8.1	9.0	8.6	8.0
<b>United States</b>								
Real GDP (\$ billions, chained 2009 dollars)	14,235.6	14,615.2	14,876.8	14,833.6	14,417.9	14,779.4	15,052.4	15,470.7
Nominal GDP (\$ billions)	13,095.4	13,857.9	14,480.3	14,720.3	14,417.9	14,958.3	15,533.8	16,244.6
Total Personal Income (\$ billions)	10,610.3	11,389.8	11,995.7	12,430.6	12,082.1	12,435.2	13,191.3	13,743.8
Per Capita Personal Income (\$)	35,888	38,127	39,804	40,873	39,357	40,163	42,298	43,735
Employment (thousands)	133,703	136,086	137,598	136,790	130,807	129,874	131,359	133,739
Unemployment Rate (percent)	5.1	4.6	4.6	5.8	9.3	9.6	8.9	8.1

<sup>a</sup>Revised.

Note: Unless noted, figures are not inflation-adjusted.

Sources: Bureau of Labor Statistics and Bureau of Economic Analysis.

## Colorado Economic, Employment, and Population Outlook

continued from page 9

aerospace to information. For more information, see [advancecolorado.com](http://advancecolorado.com).

### Inflation

The U.S. city average all items Consumer Price Index for All Urban Consumers (CPI-U) increased by 3.2% in 2011, followed by growth of 2.1% in 2012. Inflation is expected to average 1.5% in 2013 and 1.9% the following year. Core inflation—all

items, less food and energy—increased nationally 2% in 2011 and in 2012. Moderating fuel prices are tempering inflation in 2013.

Inflation is reported by the Bureau of Labor Statistics for the Denver-Boulder-Greeley combined metropolitan statistical areas, which is often used as a proxy for Colorado. The state typically tracks closely with national inflation, although prices increased slightly faster than the rest of the nation

in 2011 (3.7%) and slower in 2012 (1.9%). In 2013 and 2014, Colorado prices are expected to rise 2.8% and 2.1%, respectively. *Core* inflation (inflation excluding the volatile food and energy components) in the Denver-Boulder-Greeley region increased 1.8% in 2011 and 2.5% in 2012.

### Population

#### Total State Change and U.S. Comparison

The July 2012 Colorado population is estimated by the State Demography Office to be 5,188,683. This is an increase of 70,157 or 1.4%, compared to one year earlier. Population change is the result of net migration (those moving in minus those moving out) and natural increase (births minus deaths). Net migration is estimated at 38,187, with 28,705 from net domestic migration and 9,482 from net international migration. Natural increase is estimated at 31,970. Colorado's growth rate in 2012 is very close to what it was between 2010 and 2011. Colorado is the 7th-fastest in percentage change behind North Dakota; Washington, DC; Texas; Wyoming; Utah; and Nevada. The state is the 9th-fastest in the United States for absolute change and 22nd in the nation for total population.

#### Change by County

Eighty-three percent of Colorado's population live in the 12 counties that make up the Front Range, 11% live in the 21 counties that encompass the Western Slope, 3% live in the 16 counties that constitute the Eastern Plains, 2% live in the 9 counties that include the Central Mountains, and 1% live in the 6 counties that make up the San Luis Valley.

### CONSUMER PRICE INDEX, U.S. AND DENVER-BOULDER-GREELEY 2005–2014 (1982–1984=100)

Year	United States		Denver-Boulder-Greeley	
	CPI	CPI Rate	CPI	CPI Rate <sup>a</sup>
2005	195.3	3.4%	190.9	2.1%
2006	201.6	3.2	197.7	3.6
2007	207.3	2.8	202.0	2.2
2008	215.3	3.8	209.9	3.9
2009	214.5	-0.4	208.5	-0.6
2010	218.1	1.6	212.4	1.9
2011	224.9	3.2	220.3	3.7
2012	229.6	2.1	224.6	1.9
2013 <sup>b</sup>	233.1	1.5	230.8	2.8
2014 <sup>c</sup>	237.5	1.9	235.7	2.1

<sup>a</sup>Consumer Price Index (CPI-U) is not calculated for the state of Colorado. This is the CPI-U for the Denver-Boulder-Greeley CMSA, often used as a proxy for the inflation rate of Colorado (it is calculated semiannually).

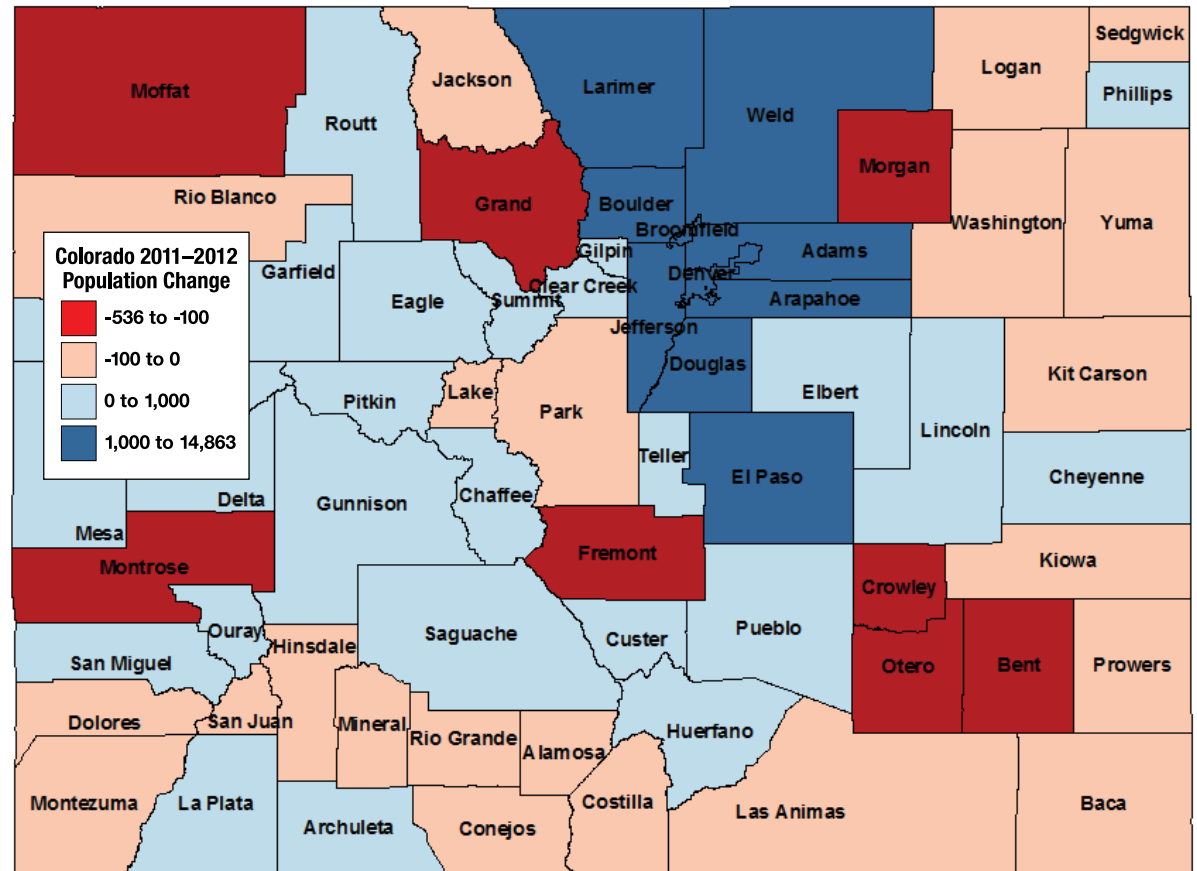
<sup>b</sup>Estimated. <sup>c</sup>Forecast.

Sources: Colorado Department of Labor and Employment, Bureau of Labor Statistics, and Colorado Business Economic Outlook Committee.

Colorado’s 2012 county population ranges from El Paso County, with a population of 646,160, to San Juan County, with a population of 691. Twenty-six counties (40% of Colorado’s 64 counties) have fewer than 10,000 people. Eleven, or 17%, have greater than 100,000 residents. Between 2011 and 2012, a total of 34 counties gained population and 30 counties lost population. The previous year a total of 34 counties lost population. The counties with the largest growth in absolute terms are along the Front Range. The faster-growing counties in percentage change are split between smaller rural and Front Range counties. Denver ranks in the top five fastest-growing counties for both absolute and percentage change. The North Front Range is the fastest-growing region, at 1.9%, followed by the Denver Metro Region, at 1.8%.

Many of Colorado’s counties continue to lose population. Most of the decline is driven by out-migration rather than negative natural increase. Only Sedgwick and Kiowa experienced declines from negative natural increase. The counties experiencing a decline are diverse, ranging from mountain counties still struggling with the recession to the Eastern Plains and the San Luis Valley. The population declines are not large numbers; however, in the small counties, a loss of 500 people can be a large share of the total population as can be seen for both Bent and Crowley counties. The declines in Bent, Crowley, and Fremont were primarily driven by decreases in the prison population or prison closures as was the case in Bent.

### COLORADO POPULATION CHANGE 2011–2012 BY COUNTY



Source: Colorado Department of Local Affairs, State Demography Office (July 1 estimates).

*continued on page 12*

## Colorado Economic, Employment, and Population Outlook

continued from page 11

The decline in Bent should reverse slightly with the opening of the Fort Lyons Transitional Therapeutic Residential Community.

### Migration

Gross in-migration to Colorado was estimated at 205,000 and out-migration was 161,500 using the American Community Survey 2012 state-to-state migration flows (not the same source that the State Demography Office uses for creating estimates). Four of the top five states receiving Colorado migrants were also top donor states. They

are: Texas, California, Arizona, and Florida. In terms of net migrants, only two of the top donor states are also top net migrant states (California and New York). Arizona contributes the third-largest number of migrants to Colorado, and it tops the list for destinations for Colorado's net out-migration.

### Housing Units

Colorado housing units increased by slightly more than 10,000 from July 2011 to June 2012, while households increased by over 28,000. The larger

growth in households versus housing units continued to help decrease the oversupply of housing units that has been present since the mid-2000s. Estimates indicate that statewide vacancy rates fell from 10.6% in 2010, to 9.8% in 2011, and to 8.9% in 2012.

### Population Forecast

The short-term population forecast for Colorado is an increase of 85,000, or 1.6%, for 2013 and 90,000, or 1.7%, for 2014. A gain of 1.7%, or 92,000, is forecast for 2015 bringing the total population to 5,456,000. Growth rates of 1.7% are similar to what Colorado experienced prior to the recession. Over the next five years, annual growth rates are forecast to vary from a high of 1.9% per year along the North Front Range to 1% on the Eastern Plains. The forecast is for Colorado to reach a population of 6 million by 2020.

Colorado's median age is expected to continue to increase from 36.1 in 2010 to 38.3 by 2040. The increasing share of the state's older population will be most significant this decade. A continued slowing in the labor force growth rate as a result of the shift of population to older age groups with lower participation rates is expected.

### Leeds Business Confidence Index

The Business Research Division produces a quarterly leading indicator that measures the expectations of Colorado business leaders. Now in its 10th year, the Leeds Business Confidence Index (LBCI) asks business leaders about their expectations for

### COMPONENTS OF COLORADO RESIDENT POPULATION, 2005–2014 (In Thousands)

Year	Births (Resident)	Deaths (Resident)	Natural Increase	Net Migration	Population Change	Total <sup>a</sup> Population
2005	69.0	29.1	39.9	13.8	53.7	4,662.5
2006	69.5	29.3	40.2	42.9	83.1	4,745.7
2007	70.8	29.7	41.1	35.0	76.1	4,821.8
2008	70.7	31.0	39.7	40.5	80.2	4,901.9
2009	69.1	30.5	38.6	36.3	74.9	4,976.9
2010	67.3	31.4	35.9	37.0	72.9	5,049.8
2011	65.9	32.0	33.9	34.9	68.8	5,118.6
2012	64.7	32.8	31.9	38.2	70.1	5,188.7
2013 <sup>b</sup>	69.5	33.0	36.5	48.5	85.0	5,273.7
2014 <sup>c</sup>	71.0	34.0	37.0	53.0	90.0	5,363.7

<sup>a</sup>Due to rounding, the sum of the individual items may not equal the total.

<sup>b</sup>Estimated.

<sup>c</sup>Forecast.

Source: Colorado Department of Local Affairs, State Demography Office (July 1 estimates).

the national and state economies, hiring, capital expenditures, sales, and profits. These metrics are reported in an aggregated index, as well as individually.

Looking back at the results for 2013, the forward-looking LBCI reflected optimism among Colorado business leaders. The composite index has been positive (50=neutral) for eight consecutive quarters.

One measure that is consistent is confidence in Colorado's economy outperforming the nation's economy. In the Q4 2013 survey, the greatest decline in optimism was measured for the national economy, coinciding with the federal debt limit discussions and the federal shutdown. Expectations for sales, profits, hiring, and capital expenditures all remained high.

As a supplement to the information gained in this book, business leaders are invited to track the performance of the Colorado economy throughout the year via the LBCI. For additional information about how to participate as a panelist or receive survey results, go to [leads.colorado.edu/brd](http://leads.colorado.edu/brd) and select Leeds Business Confidence Index.

### Colorado Labor Force and Employment

For 49 years, the Colorado Business Economic Outlook has been compiled by industry leaders in the state and presented by the Business Research Division (BRD) of the Leeds School of Business at the University of Colorado Boulder.

### 2012 AVERAGE ANNUAL WAGES BY SECTOR COLORADO AND UNITED STATES

Sector	Colorado	United States
Agriculture, Forestry, Fishing, Hunting	\$30,181	\$28,619
Mining	104,153	96,685
Utilities	97,273	93,722
Construction	50,151	52,298
Manufacturing	62,237	60,496
Wholesale Trade	73,378	68,226
Retail Trade	27,833	27,731
Transportation and Warehousing	45,512	46,612
Information	88,504	81,955
Finance and Insurance	77,610	91,218
Real Estate and Rental and Leasing	46,940	48,308
Professional and Technical Services	84,065	83,368
Management of Companies and Enterprises	152,493	108,201
Administrative and Waste Services	35,500	34,855
Educational Services	38,650	44,509
Health Care and Social Assistance	45,689	45,406
Arts, Entertainment, and Recreation	31,032	33,745
Accommodation and Food Services	18,432	17,946
Other Services	34,714	30,090
Government	48,759	49,757
All Industries	\$50,563	\$49,289

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

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## Colorado Economic, Employment, and Population Outlook

*continued from page 13*

This book presents historical data and forward-looking estimates on employment for each sector of the economy. It also offers discussions on other relevant economic metrics, ranging from sales and cash receipts to building permits and airport enplanements. This section lays the foundation for the each of the NAICS supersectors by providing an overview of labor force and wage and salary employment totals.

### Labor Data Sets

The data for this forecast are derived from two U.S. Bureau of Labor Statistics (BLS) sources: Current Employment Statistics (CES) and Local Area Unemployment Statistics (LAUS).

The CES data set is the most frequently cited labor series and is typically used to evaluate sector trends. Compiled from a survey of companies, it

includes full-time and part-time workers, temporary workers, employees on paid holiday or sick leave, and those who worked for only part of a pay period. It does not include sole proprietors. CES data for a particular year are revised twice—3 months and 15 months after the end of the year—based on the Quarterly Census of Employment and Wages (QCEW) that all firms are required to submit.

The LAUS labor series provides an estimate of the size of the total labor force and is used to calculate the unemployment rate. The LAUS data considers the labor force as everyone of working age who is actively employed or looking for a job. Students, retirees, stay-at-home parents, institutionalized individuals, and discouraged workers are not included in the workforce. This data series, which is more inclusive than the CES data set, is compiled from a survey of households. It includes farm

workers, self-employed individuals, and full-time or part-time employees.

### Labor Force

Between 2004 and 2007, household employment grew faster than the labor force. As a result, the unemployment rate declined from 5.6% to 3.8%. Colorado's unemployment rate more than doubled by 2009, to 8.1%, reflecting the impact of the recession and decelerating wage and salary employment growth from the prior years. In 2010, the unemployment rate rose to 9% as the state continued to grapple with a declining labor force, increasing number of unemployed, and continuing population growth. The rate declined to 8.6% in 2011 and 8% in 2012 due to stabilization of the labor force and an increase in the number of employed. The unemployment rate is projected to trend down to 6.9% in 2013 and 6.4% in 2014.

### COLORADO RESIDENT LABOR FORCE, 2005–2014 (Not Seasonally Adjusted) (In Thousands)

Labor Force	2005	2006	2007	2008	2009	2010	2011	2012	2013 <sup>a</sup>	2014 <sup>b</sup>
Colorado Labor Force	2,588.4	2,655.6	2,685.0	2,731.1	2,732.8	2,720.5	2,723.1	2,743.3	2,763.0	2,797.0
Total Employment	2,455.8	2,541.8	2,583.4	2,599.7	2,511.2	2,475.8	2,490.0	2,523.5	2,571.2	2,619.2
Unemployed	132.6	113.7	101.6	131.3	221.6	244.7	233.1	219.7	191.8	177.8
Unemployment Rate	5.1%	4.3%	3.8%	4.8%	8.1%	9.0%	8.6%	8.0%	6.9%	6.4%

<sup>a</sup>Estimated. <sup>b</sup>Forecast.

Note: There are slight differences between the LAUS data series and the CES employment data series that is used throughout the rest of this book.

Source: Colorado Department of Labor and Employment (LAUS data) and Colorado Business Economic Outlook Committee.



## Employment

Economic growth accelerated in Colorado in 2013, with the state adding nearly 66,900 jobs (2.9%). Incomes rose in the state, real estate prices rebounded, and the value of construction grew year-over-year. New companies were lured to the state, and many more grew organically as demand for goods and services improved. No industries lost jobs in 2013, and the year will record the fastest job growth in the last 10 years in both absolute and percentage terms. This trend will continue in

2014, with the state adding 61,300 jobs, or 2.6% growth.

The 19-month recession that ran from December 2007 to June 2009 devastated the labor market. The nation lost 6.3% of total nonfarm employment from January 2008 to February 2010, when it bottomed out. The nation has spent 44 months rebuilding the employment base—now up 5.6% from the trough, but still 1.1% below peak.

Colorado hit peak employment in May 2009, five months after the nation, but lost employment more precipitously, eventually surpassing the nation's jobs deficit at 6.6% in January 2010. However, Colorado has outperformed the nation in job growth since bottoming out, growing 7.4% in 45 months, and surpassing the previous peak by 0.4%. The combined Denver-Boulder MSAs have performed even better, adding 8.8% since turning the corner in January 2010, and surpassing the previous employment peak by 2.2% as of October 2013. ❖

### COLORADO NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT 2005–2014 (In Thousands)

Sector	2005	2006	2007	2008	2009	2010	2011	2012 <sup>a</sup>	2013 <sup>b</sup>	2014 <sup>c</sup>
Natural Resources and Mining	17.2	21.1	25.2	28.5	24.2	24.4	27.9	30.3	30.1	31.1
Construction	160.0	167.8	167.8	161.8	131.3	115.1	112.5	115.8	127.0	138.0
Manufacturing	150.4	149.1	147.0	144.1	129.6	125.5	129.4	132.0	132.7	134.4
Trade, Transportation, and Utilities	413.0	419.3	429.2	429.2	403.9	397.7	401.7	408.8	419.9	429.0
Information	76.9	75.4	76.4	76.8	74.7	72.0	71.8	69.7	69.7	69.4
Financial Activities	158.5	160.4	159.5	155.6	148.0	144.3	143.8	146.2	150.8	153.5
Professional and Business Services	316.8	331.8	347.9	351.9	330.2	329.4	340.2	355.5	372.8	387.0
Education and Health Services	224.6	231.2	240.4	250.5	257.2	264.7	273.5	281.9	290.8	298.8
Leisure and Hospitality	257.5	264.9	270.4	272.9	262.4	263.0	271.4	279.6	289.6	297.1
Other Services	88.5	90.8	92.9	94.8	93.7	92.4	93.5	95.5	97.3	99.3
Government	362.6	367.2	374.7	384.1	390.5	393.8	392.9	395.1	396.6	401.0
Total <sup>d,e</sup>	2,226.0	2,279.0	2,331.4	2,350.2	2,245.7	2,222.3	2,258.6	2,310.4	2,377.3	2,438.6

<sup>a</sup>Revised. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

<sup>d</sup>Nonagricultural self-employed, unpaid family workers, and domestics are excluded from the total.

<sup>e</sup>Due to rounding, the sum of the individual sectors may not equal the total.

Sources: Colorado Department of Labor and Employment (CES Data) and Colorado Business Economic Outlook Committee.

## Agriculture

### Market Adjustments to Challenge Colorado Agriculture in 2014

**M**other Nature has always been a major force in determining the profitability of Colorado's farmers and ranchers. This was especially true in 2013 as wheat producers on the Eastern Plains experienced Dust Bowl-like conditions, ranchers grappled with drought-impacted pastures and high country fires, and fruit growers on the Western Slope saw yields cut by late frosts. Hail also damaged Front Range vegetable fields, and producers along the Platte River Basin suffered both crop and livestock losses as a result of devastating rains and floods. Along with generally lower crop prices, especially for corn, the effect will be a contraction in net farm and ranch income for 2013, to \$1.59 billion—a level \$167 million less than recorded for 2012 and some \$240 million less than had been projected a year ago. Looking ahead to 2014, net income is projected to fall by about 7%, to \$1.48 billion. Estimated gains from higher livestock prices and the continued growth in Colorado's dairy sector will be more than offset by further decreases in crop prices.

### Colorado Crops—It's All about Corn

Within Colorado, as well as across the United States, agriculture is continuing to adjust to commodity markets largely driven by the dynamics surrounding corn. Below-average U.S. corn yields in 2012 brought about higher market prices and increased plantings for 2013. The increased acreage is expected to be offset by modestly below-trend yields in 2013; however, U.S. corn stocks are

### COLORADO FARM INCOME AND PRODUCTION EXPENSES 2005–2014 (In Millions of Dollars)

Year	Gross Value of Farm Revenue	Total Farm Production Expenses	Net Farm Income
2005	\$6,755.7	\$5,379.8	\$1,375.9
2006	6,761.5	5,843.9	917.6
2007	7,478.2	6,203.1	1,275.1
2008	7,269.4	6,168.0	1,101.4
2009	6,795.0	6,160.0	635.0
2010	7,190.9	6,052.1	1,138.8
2011	8,475.5	6,739.2	1,736.3
2012	8,641.4	6,888.1	1,753.3
2013 <sup>a</sup>	8,436.3	6,850.0	1,586.3
2014 <sup>b</sup>	8,377.2	6,900.0	1,477.2

<sup>a</sup>Estimated. <sup>b</sup>Forecast.

Source: Colorado Business Economic Outlook Committee.

projected to reach levels not seen since 2009. Prices have already retreated significantly from the 2012 average record high \$7.05 per bushel to levels in the \$4.25–\$4.50 per bushel range.

In Colorado, these lower market prices for corn will shift acres to other crops in 2014, such as dry beans, hay, sunflowers, and wheat. These shifts in acreage will be much watched and talked about, and will cause many commodity price changes in the next two years. The lower corn prices will also provide some much-needed relief to livestock feeders. **Corn** production for 2014 is projected at 131 million bushels, down about 10% from 2013. With

prices forecast to remain in the \$4.25–\$4.50 range, total cash receipts from corn production will decline to \$540 million for 2014. This will mark a 42% decrease from the record high \$939 million in 2012 and a 27% drop from the estimated 2013 level of \$744 million.

At a projected 45 million bushels, Colorado **wheat** producers harvested one of the state's smallest wheat crops in recent history in 2013. Increased acres will be planted with wheat in 2014, and given that producers planted in soils with better-than-average moisture, production could potentially increase to about 90 million bushels of wheat.



Although average prices are expected to decline from approximately \$7.00 per bushel in 2013 to \$6.50 per bushel in 2014, total cash receipts from wheat production in 2014 are projected to increase to \$450 million. Colorado's wheat industry is also expected to benefit in the longer term from the decision by ConAgra Foods, Cargill, and CHS to locate the headquarters for a new flour milling conglomerate, Ardent Mills, in Colorado.

**Hay** production is estimated to decline to 3.2 million tons in 2013 due to dry growing conditions and a lack of water for irrigation during the summer months. Prices in 2013 are estimated to

average about \$235 per ton, only slightly off the record high of \$237 per ton recorded in 2012. Going into 2014, demand remains strong for quality alfalfa for Colorado's growing dairy industry, and some corn acres are anticipated to shift to alfalfa, pushing production upward to about 4 million tons. Prices can be expected to soften slightly in 2014, to about \$200 per ton, with total receipts from hay production remaining constant, at roughly \$435 million.

The availability of water for irrigation continues to be a key driver for **potato** and **barley** production in Colorado, especially in the San Luis Valley where

the majority of both crops are grown. Despite a significant reduction in potato acres in 2013, the aquifer beneath the valley floor is at its lowest recorded level. Demand for Colorado fresh potatoes could get a boost in 2014 if, as expected, access to the Mexican market is expanded beyond just the 26-kilometer trade zone along the U.S.– Mexico border. Potato prices are expected to average in the \$8.00–\$10.00 per hundredweight (cwt) range through 2014, putting cash receipts at \$161 million, an increase over 2013 but well off the 2008 record of \$250 million.

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### VALUE ADDED BY COLORADO AGRICULTURAL SECTOR 2005–2014 (In Millions of Dollars)

Year	Livestock	Crops	Total Value of Production	Value of Services and Forestry <sup>a</sup>	Government Payments <sup>b</sup>	Gross Value of Farm Revenue
2005	\$4,129.6	\$1,511.4	\$5,641.0	\$732.7	\$382.0	\$6,755.7
2006	4,168.7	1,574.7	5,743.4	773.4	244.7	6,761.5
2007	4,324.0	2,111.6	6,435.6	845.2	197.4	7,478.2
2008	3,892.1	2,231.3	6,123.4	885.0	261.0	7,269.4
2009	3,338.2	2,324.1	5,662.3	940.9	191.8	6,795.0
2010	3,819.4	2,341.0	6,160.4	758.9	271.6	7,190.9
2011	4,301.1	2,881.4	7,182.5	1,057.6	235.4	8,475.5
2012	4,550.2	2,727.5	7,277.7	1,148.0	215.7	8,641.4
2013 <sup>c</sup>	4,759.6	2,483.7	7,243.3	975.0	218.0	8,436.3
2014 <sup>d</sup>	4,851.1	2,331.1	7,182.2	975.0	220.0	8,377.2

<sup>a</sup>Includes sales of forest products, custom feeding fees, custom harvest fees, and other farm income. <sup>b</sup>Includes farm program payments directly to producers. <sup>c</sup>Estimated. <sup>d</sup>Forecast.

Source: Colorado Business Economic Outlook Committee.

## Agriculture

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**Dry bean** production across Colorado has generally been in decline since the mid-90s but could potentially see an upturn in 2014. With current market prices for pinto beans in the \$45–\$50 per cwt range, dry bean production could be a viable alternative for corn producers looking for a more profitable option. Increased acres and greater total production could be expected to put downward pressure on prices, possibly to the \$35 per cwt range, bringing total cash receipts from dry bean production to about \$25 million.

Colorado's **onion** industry, like dry beans, has also been in steady decline since the mid-90s. Water and labor issues have been the predominant factors

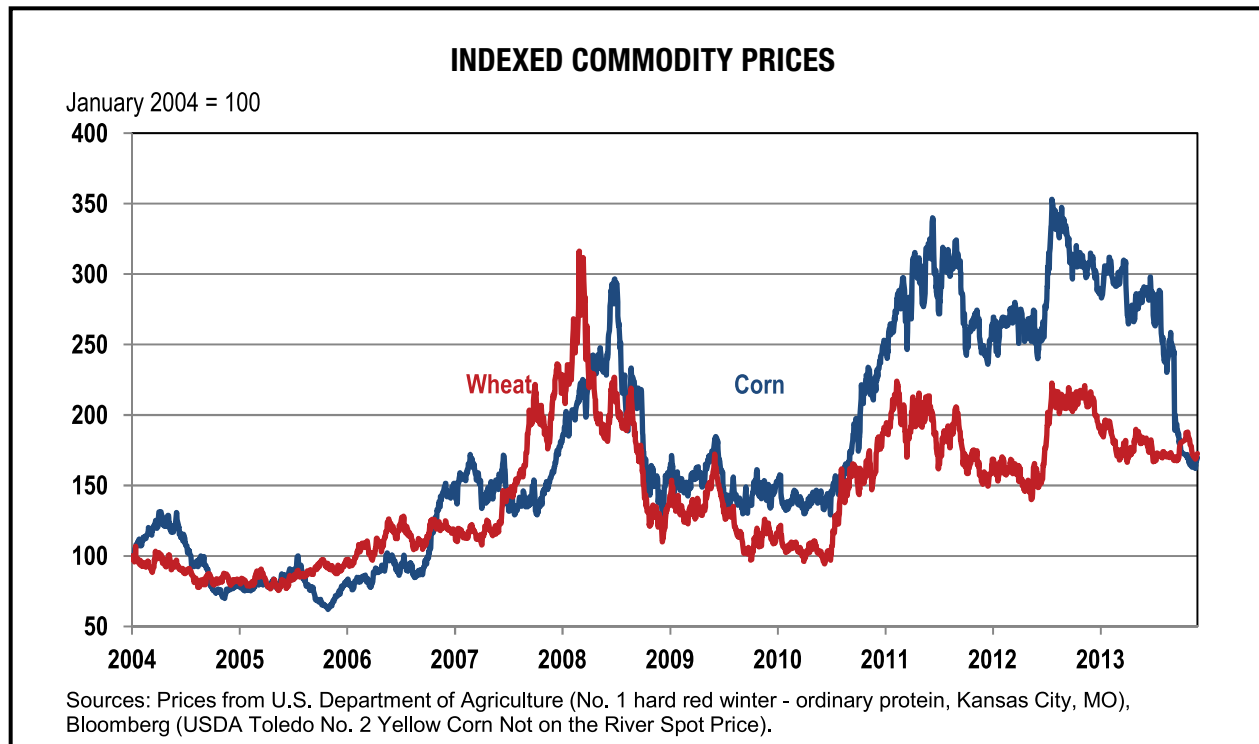
contributing to the decline. Nonetheless, onions remain an important crop, with cash receipts estimated at approximately \$35 million annually for 2013 and 2014.

Planting of higher-yielding **sugar beet** varieties is decreasing the number of acres required to operate the state's only sugar beet processing facility in Fort Morgan at full capacity. Some further decrease in Colorado acres might be expected as acres in western Nebraska are put into sugar beet production. With the farm bill again under consideration by Congress, protections afforded U.S. sugar beet growers are being debated and pose some significant downside risk to the U.S. sugar industry.

**Sunflower** and **millet** production could potentially increase again in 2014 as corn producers seek out alternatives. Sunflower production could increase by up to 20%, to 105 million cwt, in 2014 and sustain pricing in the \$18.00 per cwt range as pricing also derives some strength from strong demand for soybean oil. Millet producers, coming off a disappointing 2012 harvest, are looking to build on the development of export markets and should see cash receipts increase marginally, to about \$30 million.

Late frosts significantly reduced Western Slope fruit yields in 2013. **Grape** production continues to grow and is approaching 2,000 tons, a level that is nearly twice that of just 10 years ago. This increase in production has also helped drive expansion in the number of wineries operating in Colorado to more than 100. It is also worth noting that Colorado wines now make up about 2% of all wine sold in Colorado on a volume basis—double the market share compared to only a decade ago!

**Cantaloupe** growers are continuing their recovery from the devastating listeria outbreak in 2011 that called into question the safety of Colorado's world-renowned Rocky Ford cantaloupe. Growers recently formed a producer association, and in order to participate in the association's marketing programs, producers must meet stringent safety requirements and verify the implementation of best practices through Good Agricultural Practices (GAP) audits. Provided with sufficient water for irrigation along the Arkansas River Basin, look for acreage of cantaloupe to continue to expand and distribution to again become more regional



in 2014. With above-average prices and expanding acreage, total cash receipts could begin to approach pre-outbreak levels of \$10 million annually.

**Peach** production took a hit in 2013 with late frosts cutting production by as much as 40%; however, production is expected to rebound in 2014, along with other Western Slope fruits. Cash receipts from fruit production are estimated to increase to about \$33 million in 2014.

Colorado **sweet corn** remains as popular as ever, and consumers eagerly await its arrival each season in grocery stores and at farmers' markets. Sweet corn producers are well positioned going into 2014 and if provided with adequate water resources for irrigation, acres could potentially be expanded to capitalize on strong market prices. Cash receipts from sweet corn production are expected to be at or near \$20 million in 2014.

With the U.S. economy now beginning to show signs of sustained growth, Colorado's **green industry** can expect renewed growth in 2014 as landscaping for new construction will drive sales of floral, nursery, and sod products. Cash receipts will increase from recent levels of around \$250 million to as much as \$280 million.

### Livestock Taking on Even Greater Importance

The livestock sector remains the bedrock of Colorado's agriculture industry and its contribution to the state's economy is becoming even more significant. Cattle owners have enjoyed record high **cattle** and **feeder** prices in 2013, with the season average



for steers and heifers estimated at \$126 per cwt, marking the fourth-consecutive year of steadily increasing market prices. The year 2013 will mark the best cow-calf operator profitability since 2005. These higher market prices generally reflect the continued decline in the size of the U.S. herd as well as growth of export markets. In Colorado,

despite pulling cattle from neighboring states for feeding and slaughter, fed cattle marketings are projected to decline by about 5% in 2014, to 1.9 million head—the lowest level in recent history and well below the 2.68 million head marketed in 2000. Prices for steers and heifers will continue to

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## Agriculture

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advance in 2014, to an average of \$134 per cwt, pushing cash receipts from cattle and calves to a record high of \$3.7 billion. With the higher prices and rains to improve hay production and grazing conditions, producers could begin the cycle of rebuilding herd size.

Profit margins will remain tight for cattle feeders and meat processors, with both sectors operating at levels well below capacity. Potential exists in 2014 for adjustments in these sectors that would more closely align capacity with supply. These adjustments will most likely occur outside of Colorado.

Colorado's **dairy** industry will continue to expand in 2014. Growth in herd size and steady-to-rising fluid milk prices in recent years has catapulted dairy to the #2 spot for cash receipts, second only to cattle and calves production. Cash receipts for 2013 are estimated at \$680 million, and with a projected 4–5% increase in milk prices, cash receipts for 2014 could rise to as much as \$715 million. Export growth and greater utilization of fluid milk for cheese and Greek yogurt production are key drivers in the increase in milk prices. The dairy farming industry is positioned to see much less pressure on margins given reduced feed grain prices; however, some pressure will remain as forages continue to be expensive.

**Lamb** producers appear to have alleviated the quagmire created in 2012 that put larger lambs onto the market, dampening demand and resulting in steep market price declines. Current market prices of \$160–\$170 per cwt for lamb are above 2012 levels, and prices could improve in 2014.

Consumer demand for grass-fed lamb is on the rise and could potentially affect Colorado's lamb feeding operations.

There is also some upside potential for Colorado **hog** producers. Pork exports remain strong and with lower feed costs resulting from the drop in corn prices, producers could potentially increase sow production. Cash receipts for 2014 will increase marginally, to \$245 million. Colorado's hog producers have, thus far, escaped losses other producing regions have experienced from porcine epidemic diarrhea virus (PEDV).

**Poultry** and **egg** production is expected to remain relatively stable, generating about \$90 million in total cash receipts in 2014.

Cash receipts from **government** payments will remain constant, at between \$200 and \$225 million for both 2013 and 2014. Of concern to the industry is the fact that Congress has so far failed in its efforts to authorize new farm legislation. The lack of a farm bill fosters uncertainty for producers and increases risk in the absence of meaningful reforms to crop insurance and other programs. It should also be noted that the federal budget sequestration has resulted in the loss of important market data used by producers for price discovery.

While total cash receipts to farmers and ranchers are projected to decline into 2014, expenses are anticipated to moderate only slightly. Real interest rates remain low, and fuel prices are trending downward. Perhaps the most significant reduction in expenses will be lower corn costs for livestock feeders. The lower feed costs will improve margins

throughout the livestock complex but these declines will also be tempered by higher prices paid for feeder cattle and feeder pigs.

The agricultural economy has run counter to the rest of the Colorado economy throughout the Great Recession, and it appears that this trend will continue—the agricultural economy now appears poised to soften while other segments appear ready to strengthen. Still, the food and agriculture industry network will remain one of the state's most important economic drivers. According to a study conducted by Colorado State University titled *Contribution of Agriculture to the Colorado Economy*, the industry generates some \$40 billion of economic activity annually and supports more than 170,000 jobs.

In short, 2014 might be viewed as a transitional year in which both farmers and ranchers make adjustments stemming from lower corn prices. Luckily, farm and ranch balance sheets are among the strongest in recent history and record net incomes from 2011 and 2012 generally went to paying down debt and improvements to equipment and facilities. Colorado producers have been through periods of adjustment before and will surely emerge from this transition well positioned for continued growth and prosperity. ❖



## Natural Resources and Mining

Colorado is an energy- and mineral-rich state. In the U.S. Energy Information Agency’s (EIA) most recent assessment of 2011 proved reserves, Colorado ranked ninth for petroleum liquids and seventh for dry natural gas. Colorado continues to be home to all, or part of, nine of the largest natural gas fields in the nation and two of the largest oil fields. In 2012, Colorado ranked ninth in the nation in the production of coal, fourth in gold, and first in molybdenum. The Henderson Mine is the nation’s largest primary producer of molybdenum.

### COLORADO NATURAL RESOURCES AND MINING EMPLOYMENT 2005–2014 (In Thousands)

Year	Employment	Percentage Change
2005	17.2	19.4%
2006	21.1	22.7
2007	25.2	19.4
2008	28.5	13.1
2009	24.2	-15.1
2010	24.4	0.8
2011	27.9	14.3
2012	30.3	8.6
2013 <sup>a</sup>	30.1	-0.7
2014 <sup>b</sup>	31.1	3.3

<sup>a</sup>Estimated. <sup>b</sup>Forecast.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

In addition to traditional energy resource development, Colorado is also one of the nation’s leading renewable energy states, developing a portfolio mix of wind, solar, biomass, and hydroelectric energy resources. Colorado law now mandates that investor-owned utilities (IOUs) generate 30% of electricity from renewable energy by 2020. Cooperatives must achieve a 20% standard by that same year.

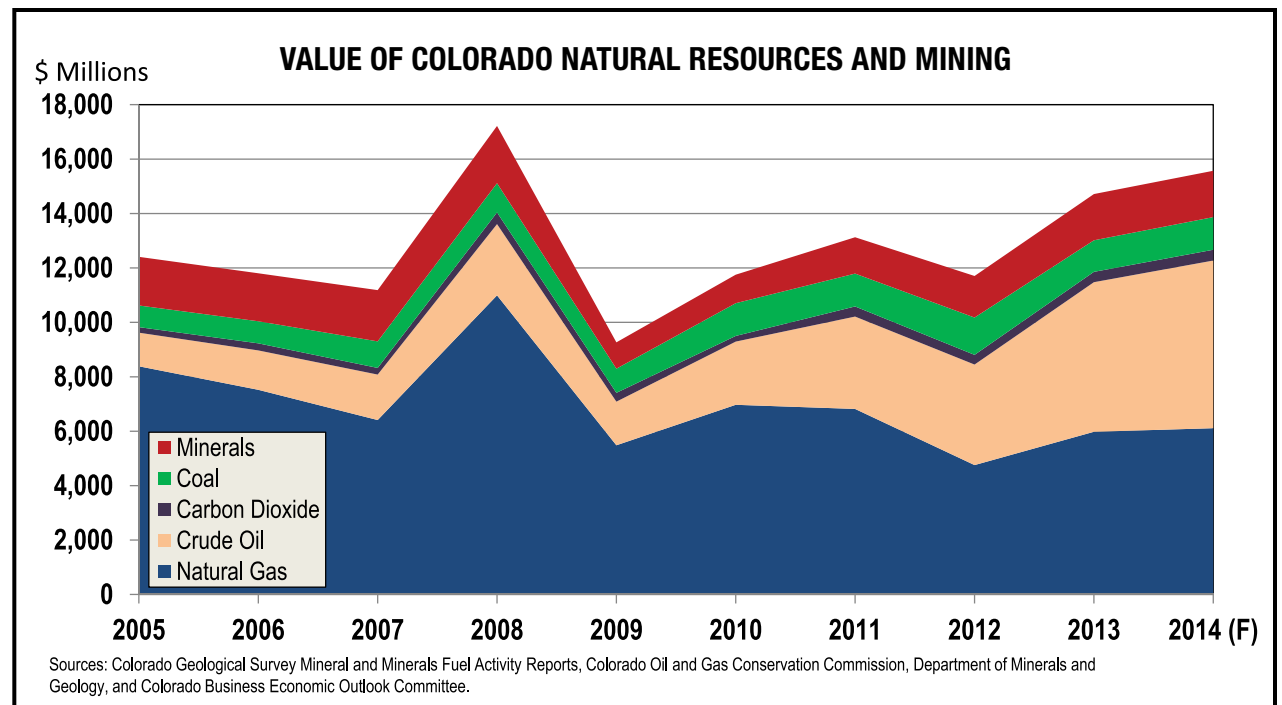
The Natural Resources and Mining industry is a significant contributor to government finances in Colorado, and also records one of the highest levels of GDP per worker in the state. For 2013 and 2014, crude oil value is continuing to increase as the Niobrara resource play develops further. In fact, Colorado will reach an all-time high for

annual oil production in 2013 and is forecast to grow more than 15% in 2014. The state’s natural gas production, however, will see flat growth or a slight decrease in overall output with prices and market demand still low. Regarding coal, a value decrease due to steady pricing and lower production is expected for 2013 and 2014. The decline in production is due to geologic problems at one of the state’s larger mines and new environmental restrictions.

### Oil and Gas

Growth in Colorado’s liquids production for 2013 is again notable. Oil’s value to the state was \$5.5

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## Natural Resources and Mining

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billion in 2013 and looks to grow to more than \$6.0 billion in 2014. Due to higher prices, natural gas increased 25% in value in 2013 from 2012, although the state's production is estimated to have decreased by 1%–3%. After a dip in valuation in 2012, total revenue for the oil and gas industry in Colorado will approach \$12 billion in 2013. The state was the ninth-largest producer of oil in 2013.

Growth in the combined oil and gas value should increase modestly in 2014 with a sizable increase in liquids output and little change in natural gas production. Assumptions for growth in 2014 are based on continued rapid development of shale oil plays through further implementation of horizontal

drilling and hydraulic fracturing technologies; economic stability at state, national, and international levels; high decline curves for natural gas wells; and no significant change in natural gas economics. Larger and mid-size operators are moving full-steam ahead with drilling and development of their shale oil assets in the Denver Basin and elsewhere. In Q3 2013 both Anadarko Petroleum and Noble Energy approached 60,000 MBOE per day (MBOE is one thousand barrels of oil equivalents) in sales from its Wattenberg assets. Operators using horizontal drilling technologies are aiming to increase recovery through well downspacing and,

in some cases, extended-reach laterals. Growth opportunities remain robust in this area.

The total revised value of Colorado's oil, gas, and carbon dioxide production in 2012 is \$8.8 billion, a 17% decrease from the 2011 value of \$10.6 billion. The value of oil, gas, and carbon dioxide production for 2013, however, is projected at \$11.9 billion, which represents a nearly 35% increase from the prior year. For 2014, the value of Colorado's production is forecast to rise another 7%, to about \$12.7 billion. The expectation is that fuel demand and pricing will remain stable through 2014 barring any major road bumps in the national and international economic recovery.

### VALUE OF COLORADO NATURAL RESOURCES AND MINING, 2005–2014 (In Millions of Dollars)

Year	Oil and Gas Extraction					Mining				Total
	Crude Oil	Natural Gas	Carbon Dioxide	Subtotal	Percent Change	Coal	Minerals	Subtotal	Percent Change	
2005	\$1,237	\$8,386	\$201	\$9,823	3.1%	\$796	\$1,789	\$2,585	24.3%	\$12,409
2006	1,446	7,524	258	9,228	-6.1	813	1,762	2,575	-0.4	11,803
2007	1,669	6,412	246	8,326	-9.8	974	1,886	2,860	11.1	11,186
2008	2,619	10,993	429	14,041	68.6	1,075	2,100	3,175	11.0	17,216
2009	1,600	5,485	324	7,409	-47.2	887	971	1,858	-41.5	9,267
2010	2,323	6,970	208	9,501	28.2	1,203	1,050	2,253	21.3	11,754
2011	3,395	6,819	369	10,583	11.4	1,209	1,336	2,545	13.0	13,128
2012	3,698	4,754	353	8,805	-16.8	1,371	1,530	2,901	14.0	11,706
2013 <sup>a</sup>	5,499	5,978	380	11,857	34.7	1,157	1,700	2,857	-1.5	14,714
2014 <sup>b</sup>	6,165	6,109	395	12,669	6.8	1,200	1,700	2,900	1.5	15,569

<sup>a</sup>Estimated. <sup>b</sup>Forecast.

Sources: Colorado Geological Survey Mineral and Minerals Fuel Activity Reports, Colorado Oil and Gas Conservation Commission, Department of Minerals and Geology, and Colorado Economic Outlook Committee.

Results from recent November 2013 municipal elections to ban hydraulic fracturing within Fort Collins, Boulder, Lafayette, and Broomfield (pending recount) may lead to a similar statewide initiative to be placed on the 2014 ballot. A statewide ban would have significant downside implications for the economic contribution from the oil and gas sector.

## Oil

In 2013, the U.S. petroleum benchmark known as West Texas Intermediate (WTI) fluctuated in a range between \$86 and \$110 per barrel, with a

mean daily spot average of \$98 per barrel. Colorado crude oil, typically sold at a discount to WTI due to market demand considerations, had an average weighted price of roughly \$92 per barrel in 2013. This is a modest increase from the 2012 Colorado composite price of \$89. Future energy prices depend on a myriad of factors across multiple scales, including economic recovery, geopolitical situations, technological developments, and new resource discoveries. An estimate of \$85–\$100 per barrel for 2014 appears reasonable, assuming supply and demand expectations continue on current trends.

The International Energy Agency (IEA) is forecasting 2014 oil demand to be marginally higher than it has been in 2013 due to an improving European economy and increased power demand. The range in world oil demand from IEA and EIA forecasts is 89.5 to 91 million barrels per day in 2013 and 91 to 92.5 million barrels per day in 2014. It is estimated that consumption in the United States increased by 0.13 million barrels per day in 2012, to 18.7 million in 2013, and will remain flat in 2014. For comparison, demand in China is about 10.7 million barrels per day currently, but will see growth

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## COLORADO PHYSICAL OUTPUT OF FOSSIL FUELS 2005–2014

Year	Coal Millions of Short Tons	Crude Oil Millions of Barrels	Natural Gas Billions of Cubic Feet	Carbon Dioxide Billions of Cubic Feet	Index (Base Year: 2005 = 100)			
					Coal	Crude Oil	Natural Gas	Carbon Dioxide
2005	37.8	23.0	1,120	362	100.0	100.0	100.0	100.0
2006	35.5	24.2	1,227	373	93.9	105.2	109.6	103.1
2007	36.1	25.5	1,300	375	95.5	110.9	116.1	103.7
2008	32.3	29.5	1,497	371	85.4	128.1	133.6	102.7
2009	28.6	29.9	1,559	408	75.7	130.1	139.2	112.9
2010	25.2	32.4	1,610	267	66.7	140.9	143.8	73.9
2011	27.0	38.6	1,645	470	71.4	167.8	146.9	130.0
2012	28.8	48.7	1,653	453	76.2	211.7	147.6	125.3
2013 <sup>a</sup>	24.3	59.1	1,629	447	64.3	257.0	145.4	123.6
2014 <sup>b</sup>	26.0	68.5	1,629	465	68.8	297.8	145.4	128.6

<sup>a</sup>Estimated. <sup>b</sup>Forecast.

Sources: Colorado Geological Survey Mineral and Minerals Fuel Activity Reports, Colorado Oil and Gas Conservation Commission, Department of Minerals and Geology, and Colorado Business Economic Outlook Committee.

## Natural Resources and Mining

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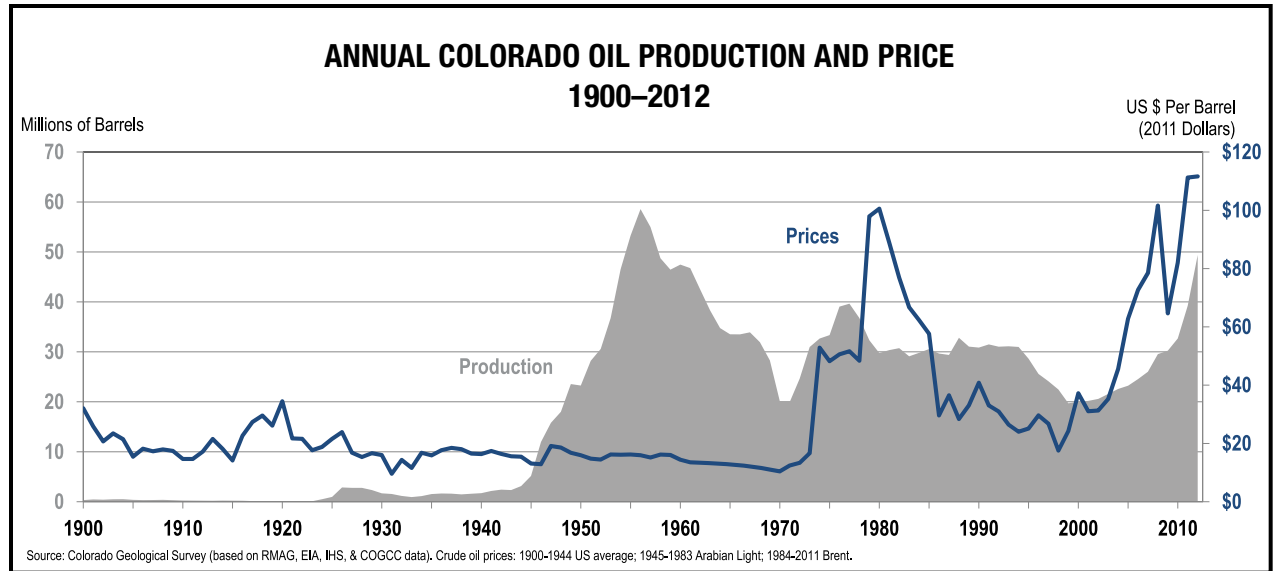
of 0.44 million barrels per day in 2014. In early November, EIA estimated that the average WTI will be approximately \$98.69 per barrel in 2013 and \$96.21 per barrel in 2014.

### Retail Gasoline

The Colorado average retail price of automotive gasoline at all grades through October 2013 was \$3.53, the same average seen in 2012. For 2014, EIA expects the national average for regular grade will be \$3.40 per gallon, a decrease attributed to lower consumption of gasoline through improvements in new-vehicle fuel economy. Regional prices for diesel (averaging \$3.94 in 2012 and 2013) have been consistently higher than prices for regular gasoline. Low volatility is expected in crude oil prices in 2014, assuming no major economic upheavals, geopolitical events, or major energy/environmental policy changes. Expectations are for gasoline to be priced between \$2.50 and \$3.50 per gallon in Colorado in 2014.

### Natural Gas

Forecasts from the EIA suggest that the average American household using natural gas for heating will see a total winter (October through March) price increase of 13% (approximately \$80) over 2012–13. More than 50% of all households in the United States depend on natural gas as a primary heating fuel; for the Midwest, this percentage climbs to more than 70%. This projected increase in average household expenditure will result from a 14% increase in price, although consumption will be slightly less than the 2012–13 winter. The



National Oceanic and Atmospheric Administration (NOAA) estimates that the total heating degree days in the 2013–14 winter season will be about the same as the previous winter, although the West will experience 3% fewer heating degree days as the region is projected to have above-normal temperatures.

Colorado is a top natural gas-producing state. EIA estimates that conventional and unconventional output from Colorado basins in 2011 accounted for nearly 7.5% of the annual U.S. natural gas production, maintaining its rank as the fifth-largest gas-producing state. The industrial and transportation sectors are the leading natural gas-consuming sectors in the state, each accounting for roughly 28% of the total. Residential gas prices in Colorado for July 2013 were the 13th-lowest in the country, at \$13.68 per thousand cubic feet.

About 75% of Colorado households use natural gas as their primary energy source for home heating, one of the highest shares in the United States. In 2012, gas-producing wells totaled more than 28,000 in Colorado, with a total production of just over 1.65 trillion cubic feet. Colorado is a net exporter of natural gas—66% of its natural gas production is transported to California and Midwest markets. The 1,679-mile Rockies Express Pipeline (REX), which became fully operational in November 2009, currently moves natural gas from Colorado to eastern Ohio, with a maximum capacity of 1.8 billion cubic feet per day. In July 2013, the owners and operators of the REX pipeline announced a binding agreement with a large Utica Shale producer to transport up to 200,000 decatherms per day of processed gas to the mid-continent, signaling a reversal in the flow direction.



Implications for producers here in Colorado could be significant.

### Carbon Dioxide

Colorado's carbon dioxide production is marketed primarily for enhanced oil recovery (EOR) operations and secondarily for use in the food industry. In 2013, just under 450 million cubic feet of CO<sub>2</sub> were produced in four counties (Montezuma, Dolores, Huerfano, and Jackson), with the total production value grossly estimated to be \$380 million. For 2013 and 2014, CO<sub>2</sub> production levels and total values are likely to remain flat or increase slightly.

### Drilling Permits

The Colorado Oil and Gas Conservation Commission (COGCC) reports 3,773 drilling permits were approved in 2012, representing a 19% decrease from the 4,659 permits approved in 2011. For 2013, the commission has approved roughly 3,161 permits as of early October. More than 60% of these permitted wells are located in Weld County.

The monthly drill rig count in Colorado reached a low of 51 in late January 2013 and has since steadily increased to around 70 rigs per month as of October 2013. A total of 1,469 newly drilled wells have been initiated in Colorado in 2013, suggesting the total number of well starts will be less than the 2,301 wells that were drilled the prior year.

Horizontal drilling and hydraulic stimulation continue to be integral to Colorado's oil and gas

activity. In 2010, 5.6% of all Colorado drilling permits issued were for horizontal wells. In 2013, that percentage is on track to be greater than 55% of all issued permits. Of the horizontal wells permitted, 94% are located in Weld County—the vast majority of these in the Wattenberg field.

### Coal

Coal mining in Colorado dates back to 1864. Colorado's clean, high-quality coal reserves help utilities meet the stringent requirements of the Clean Air–Clean Jobs Act. The industry accounts for more than \$1.1 billion in sales and, according to the National Mining Association's survey entitled *Economic Contributions of Mining (2011)*, the industry contributes \$2.75 billion to Colorado's economy and direct employment (including transportation) of 6,200, and 23,700 jobs in the general economy. Colorado also ranks second among the states in federal royalty payments from coal producers, at nearly \$54 million annually—about half of which is returned to Colorado to support public education and other activities. Coal mines also paid \$4.3 million in royalties to the state of Colorado in 2012.

Coal is the fastest-growing major source of electricity worldwide, and sales of Colorado coal outside the United States have increased to approximately 15% of total production, while domestic sales both within Colorado and to other states have fallen. The state's total production rose from 27 million tons in 2011 to 28.8 million tons in 2012. Production is expected to decline to 24.3 million tons in 2013 due to geologic problems at a major

mine and falling domestic demand. This will be the lowest level since the mid-1990s. Coal must now compete in an environment where governmental mandates for renewable energy could limit sales in Colorado. The slated closure or conversion to natural gas of nearly 1,000 megawatts (MW) of electricity currently generated by coal-fired plants along the Front Range will also cause annual production losses of up to 4 million tons. This is due to legislation enacted in 2010. New EPA regulations may also hinder future production, unless they are changed significantly.

### Mines

In 2012, Colorado coal mines produced bituminous and sub-bituminous coal for electricity generation at power plants, and to a lesser extent, cement and coking operations. Coal was produced in nine Colorado counties: Las Animas, Routt, Moffat, Rio Blanco, Garfield, Delta, Gunnison, Montrose, and La Plata. Routt County has been the leading coal-producing county for years, and in 2012 the Peabody Energy Foidel Creek Mine produced 8.0 million tons. In 2011, Peabody Energy initiated development of a new mine, the Sage Creek Mine, also in Routt County. This underground mine is in the Wadge Coal Seam, the same seam that is mined in the nearby Foidel Creek Mine. Production is expected to transition from the Foidel Creek Mine to Sage Creek as the Foidel Creek reserves are depleted. The Bowie Mine #2 in Delta County is back online at full production

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## Natural Resources and Mining

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after many years of engineering problems, and production at the Colowyo surface mine in Moffat County is strong with its new owner, Western Fuels-Colorado, LLC.

### Production

In 2012, Colorado ranked as the ninth-most productive coal mining state. Using the Colorado Division of Reclamation, Mining and Safety coal production data (through August 2013) as a base, the state's total coal production by year-end 2013 is estimated at 24.3 million tons, a 16% decrease from 2012. This is significantly more than the expected 3% decline in U.S. coal production that is due, in part, to the use of low-priced natural gas to generate electricity and uncertainty over the direction of EPA regulations.

### Value

Along with higher coal sales, the price for contract coal ticked up in 2012. In 2011, the total value of coal sold in Colorado was estimated at \$1.2 billion, based on an average coal price of \$45.68 per ton. Prices have increased, and between August 2011 and September 2012 the average price per ton for federal-leased Colorado coal was \$47.63. The value of Colorado coal sold during this time was \$1.37 billion. With falling production, the estimated value of Colorado coal sold in 2013 is expected to drop to \$1.16 billion. According to a 2013 report prepared by the National Mining Association, the overall economic contribution of coal mining to Colorado is substantial, at \$2.75 billion in 2011.

### Employment

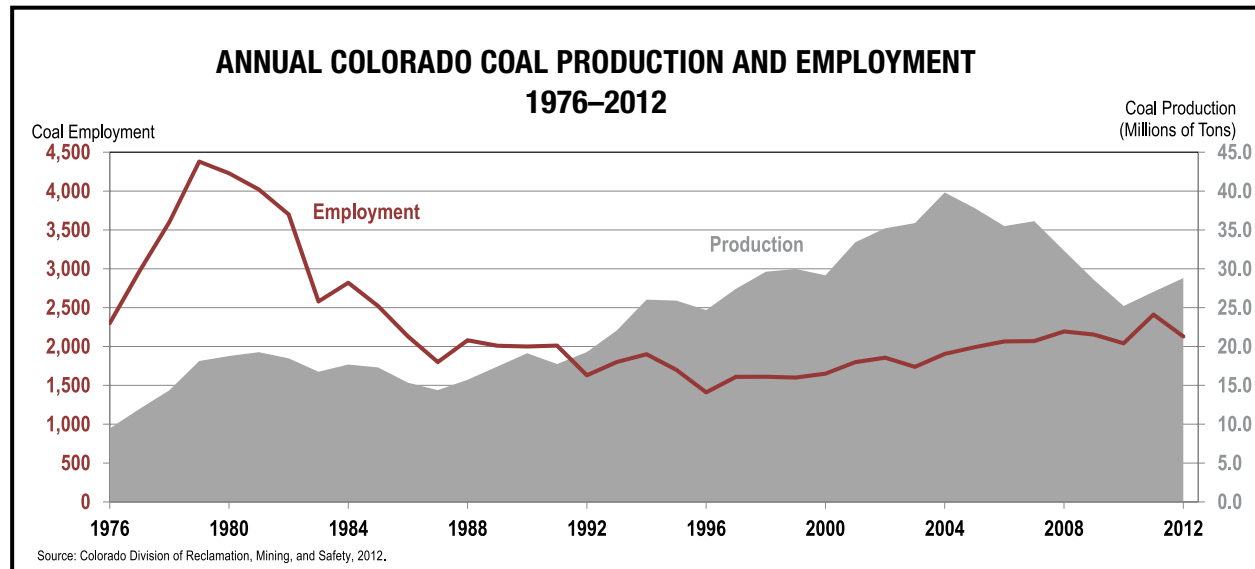
The Colorado Division of Reclamation, Mining and Safety tracks coal production and the employment of coal miners on a monthly basis. In 2011, employment at Colorado's coal mines increased by 370 miners, to a 25-year high of 2,411 miners in December. This was due, in part, to the employment of new coal miners at the New Elk Mine in Las Animas County. In December 2012, employment slid to 2,129 miners, partially due to the idling of the New Elk Mine. With additional decreases, coal miners in Colorado totaled 2,024 at the end of August 2013.

### Export Coal

More than 47% of the coal produced in Colorado is shipped by rail or truck to 24 other states, with destinations as far as Florida. In 2012, the five states that use the most Colorado coal were Tennessee, Kentucky, Utah, Alabama, and Illinois. Sales to Alabama, Kentucky, and Tennessee have fallen significantly as the Tennessee Valley Authority reduced its take of Colorado coal by 2.8 million tons per year between 2008 and 2012.

### Consumption and Generation

According to EIA data, 57% of the 18.5 million tons of coal delivered to electric utilities in Colorado in 2008 came from Colorado mines, with the remainder from Wyoming. In 2012, total tons delivered increased to 18.7 million tons while the percentage that came from Colorado mines fell to 44%. Based on data for the first seven months of 2013, the percentage of coal from Colorado is



expected to drop to 41%. Coal-fired power plants in Colorado consumed 18.4 million tons of coal in 2011, supplying the state with 67% of its electricity. Electricity generated at Colorado's 12 coal-fired power plants decreased from 2010 to 2011, from 38.6 million megawatt-hours (Mwh) to 36.9 million Mwh total generation, while natural gas consumption increased. Colorado ranks 21st nationally for energy consumption of coal per capita.

## Minerals and Uranium

Colorado's mining sector returned higher value to the state in 2012 compared to the previous year. The Colorado Geologic Survey calculated a total value of \$1.53 billion for 2012, up 15% from 2011. It is anticipated that the value of mineral materials will increase another 11% for 2013 and remain about the same in 2014.

The price of molybdenum—the largest component of Colorado's mineral production—averaged around \$13 per pound in 2012 and \$11 per pound a year later. The price has been dropping since 2011, with slowing demand. Colorado gold production for 2012 is estimated at 247,000 ounces. Production of industrial minerals (primarily construction materials) increased modestly in 2012 and is expected to increase further in 2013.

Production at the Henderson Mine in Clear Creek County maintained a level of 34 million pounds for the year in 2012. The Climax Mine on Fremont Pass, also owned by Climax Molybdenum, a subsidiary of Freeport McMoRan Copper and Gold, Inc., joined the Henderson Mine in active production of molybdenum in 2012, producing about 7

### VALUE OF COLORADO NONFUEL MINERALS AND URANIUM PRODUCTION 2005–2014 (In Millions of Dollars)

Year	Nonfuel Minerals	Uranium	Total
2005	\$1,782	\$7.3	\$1,789
2006	1,762	0.0	1,762
2007	1,886	<1.0	1,886
2008	2,084	16.0	2,100
2009	965	6.0	971
2010	1,050	0.0	1,050
2011	1,336	0.0	1,336
2012	1,530	0.0	1,530
2013 <sup>a</sup>	1,700	0.0	1,700
2014 <sup>b</sup>	1,700	0.0	1,700

<sup>a</sup>Estimated. <sup>b</sup>Forecast.

Source: U.S. Geological Survey, Mineral Survey Reports.

million pounds. The Henderson Mine is currently the largest primary producer of molybdenum in the United States, and the Climax Mine is anticipated to become the second largest. More than 500 workers are employed at each facility, including the Henderson Mill in Grand County. Concentrate from the mill is subsequently trucked and shipped to Climax plants in Iowa and the Netherlands where it is used for a variety of products.

The Cripple Creek and Victor Gold Mining Company's Cresson Mine, a subsidiary of AngloAshanti North America Inc., produced 247,000 ounces of gold in 2012. Total production value was \$409

million. The Cresson Mine employs 485 people in Teller County and is undergoing a major expansion to extend the life of the mine.

No uranium or vanadium was produced in Colorado in 2013. A new uranium mill, proposed by Energy Fuels, Inc., in Montrose County, would enhance development possibilities in the southwest part of the state.

The industrial minerals sector reflects the construction activity in Colorado and correlates directly with that sector. The production of construction aggregate, including crushed stone, sand, and gravel, had an estimated value of \$556 million in 2012. Early indications suggest an even higher value in this sector for 2013 and 2014, with flood recovery-related construction increasing materials demand.

## Renewables

Colorado's abundance of renewable energy resources includes wind, solar, hydroelectric, geothermal, and biomass resources. Rather than referring to these sources as "alternative" energy, it may be more appropriate to deem these sources "additional" energy. This turn of phrase, coined by former U.S. Secretary of Energy Samuel Bodman, recognizes that alternatives only exist if there is a surplus of the commodity from which to choose. Bodman reasoned that since there is no surplus of global energy supply and the global economy needs every unit of energy that can be produced, wind, solar, and the like are additions to the global supply.

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## Natural Resources and Mining

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These “additional” electricity resources accounted for 14% of Colorado’s net generation in 2011, an increase from the 10% generated from these sources in 2010. Most of the generation comes from wind (10.1%) and hydroelectric (3.6%) resources. Colorado’s windy plains, high mountains and rivers, active subsurface heat flow, and abundant sunshine give it one of the highest potentials for renewable energy growth in the United States. In terms of overall renewable energy technical potential, the U.S. Department of Energy’s National Renewable Energy Laboratory (NREL) ranked Colorado third nationally.

Colorado’s Renewable Energy Standard requires investor-owned electric utilities to provide 30% of

their generation from renewable energy resources by 2020, with 3% coming from distributed generation. This is one of the most ambitious renewable portfolio goals in the nation, and the Colorado Public Utilities Commission states that existing wind and solar installations have already achieved this electricity goal, mostly by purchases through Xcel Energy. Renewable energy credits are used to credit homeowners and utilities for renewable energy credits.

As of August 2013, residential electricity rates in Colorado were 12.57 cents per kilowatt hour (kWh), which is a 4.1% increase over the prior year. While Colorado’s residential rate just exceeds the national average at 12.51 cents per kWh, it

is the highest in the eight-state Mountain West Region, which averages 11.98 cents per kWh. Colorado commercial rates, which are 10.42 cents per kWh, are eclipsed by New Mexico and Arizona as the most costly in the region. The national average is 10.43 cents. Colorado’s industrial rate averages 7.72 cents, which tops the national average of 7.23 cents and trails only New Mexico as the highest rate in the region. Averaging across all consumer sectors, Colorado’s year-over-year electricity rate increase was 4.9% from August 2012 to 2013.

### COLORADO ELECTRIC POWER INDUSTRY GENERATION BY PRIMARY ENERGY SOURCE 2004–2011 (In Millions of Megawatt Hours)

Year	Coal	Natural Gas	Hydroelectric <sup>a</sup>	Wind	Solar	Biomass	Petroleum	Other <sup>b</sup>	Total
2004	35.8	10.7	1.0	0.2	0.000	0.035	0.014	0.002	47.9
2005	35.6	11.9	1.3	0.8	0.000	0.034	0.017	0.002	49.6
2006	36.3	11.9	1.6	0.9	0.000	0.031	0.021	0.003	50.7
2007	35.9	15.0	1.6	1.3	0.002	0.031	0.028	0.043	53.9
2008	34.8	13.5	1.8	3.2	0.018	0.045	0.019	0.033	53.4
2009	31.6	13.8	1.8	3.2	0.026	0.057	0.013	0.053	50.6
2010	34.6	11.1	1.5	3.5	0.042	0.060	0.017	0.070	50.7
2011	34.0	10.2	2.1	5.2	0.105	0.062	0.000	0.063	51.4

<sup>a</sup>Includes pumped storage.

<sup>b</sup>Includes blast furnace gas, propane gas, other manufactured and waste gases derived from fossil fuels, non-biogenic municipal solid waste, batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, tire-derived fuels, and miscellaneous technologies.

Source: U.S. Energy Information Administration.



## Wind Energy

Colorado ranks 11th nationally for overall wind energy potential. The U.S. Department of Energy estimates that installed wind power in Colorado grew 27.5% in 2012. Cumulative wind power generating capacity increased 496 MW by 2012 year-end to reach 2,301 MW. More significantly, cumulative capacity is up more than 1,300 MW from just two years ago. Colorado wind farms cumulatively produced almost 3.4 million Mwh of electricity in 2011.

Most of Colorado's wind stations operate in rural areas with limited economic development opportunities, providing local jobs to hard-pressed areas. While hard numbers regarding the economic impact of renewable energy sources are difficult to come by, the wind industry adds to local economies through new lease payments to landowners, local income from taxes, wages of wind farm employees (about 300 construction jobs per new project and operations crews of about 25 per farm), and sales and use taxes arising from spending by these workers. Two recent examples include the 50,000-acre Xcel Energy Limon I and Limon II facilities in Lincoln and Elbert counties. According to Xcel Energy, these wind farms are the lowest-cost wind energy sources in Colorado, making this energy now competitive with coal and natural gas.

Colorado also has a significant wind turbine manufacturing presence. According to the U.S. Bureau of Labor Statistics, Colorado's 2012 industry concentration in this manufacturing sector was 2.5 times the national average. Despite this, wind turbine manufacturing has been buffeted by adverse

global economic conditions, ongoing uncertainty regarding the permanence of the U.S. wind production tax credit, and corporate-wide restructuring at Denmark-based Vestas Wind Systems, which operates four manufacturing facilities in Brighton (two facilities), Windsor, and Pueblo. Although more than 600 Vestas employees in Colorado were laid off since the end of 2011, the company recently declared plans to hire hundreds of workers due to the rebounding wind energy industry.

## Solar Energy

Colorado is a leader in solar energy. The Colorado state capitol is the nation's first LEED Certified Capitol Building with its energy efficient renewable energy sources using solar and, in the future, geothermal energy. In late 2012, the City and County of Denver was the first municipality to be recognized as a "Solar Friendly Community" by the U.S. Department of Energy's SunShot Initiative for posting its solar permitting and inspection requirements online; offering low-cost, same-day permits; streamlining inspections; and providing a variety of educational materials about solar energy to residents.

In terms of cumulative installed solar electric capacity, through Q2 2013, Colorado ranked sixth nationally, trailing only (from largest to smallest) California, Arizona, New Jersey, Nevada, and North Carolina. Through the end of 2012, Colorado has 208 MW of installed capacity.



## Student Leadership and Community Engagement

The Office of Diversity Affairs, established in 2001, supports an inclusive learning environment for the diverse student body at the Leeds School of Business. The office focuses on the recruitment, retention, and graduation of underrepresented undergraduate students. In addition, the office is dedicated to fostering and maintaining partnerships with alumni and businesses through outreach efforts and programs.

### The Office of Diversity Affairs

- Provides academic programs to enhance excellence and professional opportunities.
- Creates an academic neighborhood to strengthen students' sense of belonging through peer mentoring, professional networking, leadership development, and faculty involvement.
- Cultivates undergraduate students' community involvement to promote diversity and inclusion through community outreach, volunteerism, and student engagement opportunities.
- Provides pre-collegiate experiences that support academic preparedness, exposure to business education, and the overall college experience at the University of Colorado Boulder.

### CONTACT US

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## Natural Resources and Mining

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Most of the solar installations in Colorado are driven by utility incentive programs. Xcel Energy has installed more than 11,000 solar photovoltaic (PV) systems in Colorado, and its Solar Rewards Program has paid more than a quarter million dollars in incentives to customers. In addition to utility-scale electricity, much of solar's input is from small-scale or distributed generation types of facilities, such as individual home solar projects that are prevalent throughout Colorado. Approximately 600 solar PV systems have been installed in the state.

### Hydroelectric Power

Colorado's hydroelectric power has been stable for many years. In 2011, 3.6% of the state's total electrical output came from 48 hydroelectric generating stations; more than 1,800 thousand Mwh of electricity were generated. Most of these stations are owned by the U.S. Bureau of Reclamation, but some are privately owned or operated by local mountain towns such as Aspen, Nederland, Ouray, and Telluride. This renewable resource provides a constant but seasonably variable source of

electricity. The industry employs several hundred individuals for operations and maintenance.

### Other "Additional" Energy Resources

Colorado is a growing hotbed of renewable energy technologies outside the traditional hydro, solar, and wind paradigm. For example, Solix Biofuels operates test facilities in Durango and Fort Collins. The company is working on efficiency improvements for biomass and algae energy. Realistically, large-scale algae production, which is being experimented with in other Western states, is still in the future. OPX technologies, based in Boulder, is working on another engineered microbe process licensed from the University of Colorado to refine biomass efficiencies. The firm was Colorado's Breakout Cleantech Company of the Year in 2011. The economic impact of all biomass is difficult to assess but waste-to-energy programs, such as the anaerobic digesters at metropolitan Denver wastewater treatment plants and landfills, produce approximately 57,000 Mwh of electricity. Waste Management landfills collect enough biogas now to have an appreciable amount of electricity generation added to the grid.

The State of Colorado has stepped up its support for cleantech activities in the state. House Bill 13-1001, the Advanced Industries Acceleration Act, provides for annual allocations of several million dollars per year for the next decade, including more than \$12 million in 2014 in grants supporting seven advanced industries that drive the Colorado economy. Among these are the energy and natural resources industries. Through this act, the Colorado Office of Economic Development will provide grants for clean technology projects based on the existing funding stream within the Clean Technology Discovery Evaluation Grant Program.

Finally, geothermal energy in Colorado has significant potential due to high heat flow areas in the state. Pagosa Springs uses geothermal heating in many of the town's buildings. No electricity generation is provided by geothermal at this time. Other cities that use direct heat include the hot springs resort in Glenwood Springs, which uses its geothermal steam for heating. Some resorts use steam for greenhouses and cabin heat. ❖

## Construction

### Residential

#### Single-Family Housing

Single-family permits peaked at more than 40,000 a year in 2004 and 2005, followed by four straight years of declines totaling 82% to the trough in 2009 when just 7,261 permits were reported. Propped up by federal homebuyer tax credits, 2010 saw a solid 21% increase, but this improvement stalled in 2011 as the tax credit program ended and permits declined marginally. Finally, in 2012, a sustained housing recovery took hold, and single-family permits jumped 45% for the year, with a total of 12,617 permits reported. This recovery continued in 2013.

However, an improving economy can be only partially credited for the housing market improvement in 2012 and 2013 as the monetary intervention by the U.S. Federal Reserve is a major contributing factor to the housing recovery. As a result of the Fed's quantitative easing (QE) policies to directly purchase each month \$85 billion in U.S. government and housing-backed securities, the average 30-year mortgage interest rate fell steadily from 5.2% in Q1 2011 to a historic low of 3.6% in Q1 in 2013.

It appears the housing market has become dependent on low interest rates. When Fed Chairman Ben Bernanke hinted in mid-2013 at tapering the QE policies, interest rates spiked and mortgage lending dropped sharply. This is particularly discouraging because Bernanke's comments only increased the 30-year mortgage rate to about 4.3%, still far below the historic 8.1% average for

the 1990s and the 6.4% average from 2001–2007, before the 2008 financial crisis and housing market collapse.

Government regulatory policies are also holding back the housing market recovery. Strict home loan underwriting policies currently suppress housing demand, with most lenders requiring higher down payments and sterling credit histories. Mortgage lenders anticipate further obstacles to financing home purchases as new federal

regulations are developed to comply with the requirements of Dodd-Frank financial reform.

Through July 2013 consumer confidence in the region continued a three-year trend of slow improvement, undoubtedly influenced by strong home price increases, including S&P/Case-Shiller's report of a double-digit increase in metro Denver in August 2013, year-over-year.

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### VALUE OF CONSTRUCTION IN COLORADO BY TYPE 2005–2014 (In Millions of Dollars)

Year	Residential	Nonresidential	Total Building	Nonbuilding	Total Construction
2005	\$8,803.4	\$4,221.2	\$13,024.6	\$1,787.8	\$14,812.4
2006	8,708.1	4,641.1	13,349.2	3,446.3	16,795.5
2007	7,417.0	5,259.5	12,676.5	2,003.6	14,680.1
2008	4,041.8	4,116.7	8,158.4	2,542.4	10,700.8
2009	2,501.3	3,126.2	5,627.4	1,648.4	7,275.8
2010	2,903.0	2,967.3	5,870.3	2,214.4	8,084.7
2011	3,363.1	3,932.1	7,295.2	2,289.2	9,584.4
2012 <sup>a</sup>	5,252.6	3,598.7	8,851.3	3,311.8	12,163.1
2013 <sup>b</sup>	5,940.0	3,400.0	9,340.0	3,800.0	13,140.0
2014 <sup>c</sup>	7,387.5	3,900.0	11,287.5	3,800.0	15,087.5

<sup>a</sup>Revised, <sup>b</sup>Estimated, <sup>c</sup>Forecast.

Sources: McGraw-Hill Construction Research and Analytics and the Colorado Business Economic Outlook Committee.

## Construction

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Foreclosures are no longer a drag on the market. The Colorado Division of Housing reported in early October that “foreclosures no longer are having the crippling effect on the economy as they did six or seven years ago, when the Denver area and the state often had among the highest foreclosure rates in the nation.” CoreLogic reported that only 0.7% of homes in the Denver MSA were in foreclosure in August 2013 compared with an average of 2.4% for the nation. Only Wyoming and Alaska had lower foreclosure rates.

### Outlook

The Fed has “walked back” previous comments that led economists to believe the QE policies

would be ending soon, and low mortgage interest rates are now likely to continue well into 2014.

The resale housing supply has actually been undersupplied during 2013. The 8,191 mid-year resale home listings represented just a 2.0-month supply. The last time demand exceeded supply to this extent was in 2000.

Rental occupancy rates have increased to a somewhat balanced level, but some submarkets are experiencing a shortage of rental housing. Continued in-migration is adding to a natural population increase. Foreclosures and short sales have forced previous homeowners into the rental market.

As a result, pressures are building for rental rate increases that would make home ownership a more attractive housing option for those who can qualify for a loan.

### Forecasts

The earlier decline in housing demand significantly impaired the supply capacity of the housing industry. Although homebuilders are opening new projects and new lot development is underway in several submarkets, builders are reporting that shortages of skilled labor are limiting their capacity to meet demand.

The year 2013 will see a solid increase of more than 30%, to 16,500 single-family permits in Colorado. Continued recovery is anticipated in 2014, with 20,000 single-family permits forecast.

Although housing construction costs have increased approximately 20% since 2008, the average permit value has increased only 6%. The committee attributes this disparity to a shift in consumer demand toward smaller homes. The forecast for calendar year 2013 is a 1.5% increase to a permit value of \$280,000 per unit, followed by an increase of slightly less than 2% in 2014, to \$285,000.

### Multifamily Housing

Activity continued upward in 2013, with permits at the highest level since 2002. Expect 12,000 units to be issued permits, a 12% gain from 2012. Starts were overwhelmingly concentrated in the northern Front Range metropolitan areas of Denver, Boulder, Fort Collins, and Greeley, accounting for more than 90% of units. Notably, new units were almost entirely apartments and not for-sale condominiums; industry professionals attribute this to greater liability exposure due to changes in construction defects laws.

Production of new apartments has lagged the growth in rental demand in northern Front Range metro areas, and those markets have continued to tighten. September flooding has already exacerbated the demand for rental units by damaging some of the existing housing stock. Boulder, Fort Collins, and Greeley all had apartment vacancy rates below 3% before the floods. Apartment vacancy rates in the Denver metro area are slightly above 4%. In Colorado Springs a large number of new units were completed in 2013, so rental conditions in that area are balanced, with the

### RESIDENTIAL BUILDING PERMITS BY TYPE 2005–2014

Year	Single Family	Multifamily	Total Housing Units
2005	40,140	5,751	45,891
2006	30,365	7,978	38,343
2007	20,516	8,938	29,454
2008	11,147	7,851	18,998
2009	7,261	2,094	9,355
2010	8,790	2,801	11,591
2011	8,723	4,779	13,502
2012 <sup>a</sup>	12,617	10,684	23,301
2013 <sup>b</sup>	16,500	12,000	28,500
2014 <sup>c</sup>	20,000	13,500	33,500

<sup>a</sup>Revised. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Sources: U.S. Census Bureau and the Colorado Business Economic Outlook Committee.



vacancy rate close to 6%. Conditions were softer in some other parts of the state, such as Pueblo and Grand Junction, which both had rental vacancy rates above 10%. Denver and other northern Front Range areas had year-over-year increases in rents of up to 11%, and concessions have nearly disappeared.

Developers have responded to the strong rental demand. Statewide, more than 20,000 units are in various stages of planning. Obstacles to financing multifamily developments have eased somewhat in the past two years, and credit availability is expected to continue to gradually improve.

Multifamily construction will increase again in 2014, but at a slower pace. Demographic and migration trends support demand for new apartments, but new construction may be reaching the maximum level of production that some markets can absorb. Normal lags between construction starts and occupancy have grown longer because skilled construction labor left during the recession, and nearly 19,000 units are currently under construction. In Colorado Springs, the development pipeline is essentially full, and it appears the Denver metro area could reach a similar point of saturation in the foreseeable future. The committee forecasts 13,500 multifamily permits for 2014. The value per unit is expected to increase, in part because of rising labor and materials costs. After declining two years, the average value per multifamily unit climbed more than 20% in 2013, to approximately \$110,000. The value per unit is expected to continue to increase in 2014, to more than \$120,000.

## Nonresidential Building

This sector of the construction industry tracks activity in new buildings, remodeling, and rehabilitation of existing structures. Included are offices, retail, and medical and industrial buildings, as well as institutional buildings such as colleges, churches, and schools, and government buildings. After years of strong growth, this subsector will decline in 2013. Groundbreaking for two major new projects will reverse the sector's direction and add about \$600 million to nonresidential permit activity in 2014.

Nonresidential construction starts will likely decrease nearly 5.5% in 2013, with \$3.4 billion generated. Medical construction again is the largest contributor to new starts, followed by new construction of office buildings. Nearly three-quarters of new office activity, or about \$2.8 billion, occurred in the Denver metropolitan area, a historically high proportion of Colorado activity. Denver continues to be a strong national commercial real estate investment target. Vacancy rates in downtown Denver have fallen 15 quarters in a row, to 16.3%, according to a Studley report. Continuing large office projects include the \$160 million Charles Schwab Corporate Campus, the Union Station Hotel, and the One Union Station Office Building. The outlook is more robust for the period just beyond this one-year forecast. Office rents are predicted to improve significantly (30%) over the next several years. Select areas such as LoDo, River North, the Ballpark District, and Southeast Denver should see further speculative

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The two-year program consists of the core MBA curriculum plus five real estate courses. In addition, three construction management classes in the CU-Boulder College of Engineering and Applied Science will be required. The track culminates with student participation in the Colorado NAIOP development competition in the spring semester. Applications are being accepted for the fall 2014 semester.

### FOR FURTHER INFORMATION

**Dr. Tom Thibodeau**, Academic Director  
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## Construction

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office-building construction during that period. Financial factors, employment growth, and proximity to transportation are all in place to support this development.

The \$95-million contract for the 13th Combat Aviation Brigade Barracks at Fort Carson added to sector figures. Federal budgetary chaos, however, has reduced funding that otherwise might have found its way to continued improvements in Colorado military facilities.

The overall expectation is for a surge of nonresidential building in 2014 led by two major new developments that will bring the 2014 total to \$3.9 billion, a gain of 15%. Expect to see the huge Gaylord Rockies Hotel and Conference Center (\$735 million) overcome legal challenges and potential political obstacles to start in 2014. Colorado State University will begin construction of its new \$236-million on-campus football stadium.

Other announced projects for 2014 include mixed-use developments in Boulder and in the Cherry Creek area, plus a variety of infill projects in downtown Denver. The Denver City Council will likely extend tax-increment funding to build a King Soopers at 20th Street and Chestnut Place, a downtown school, and underground parking at Denver Union Station. The committee does not expect to see the National Western Stock Show facilities start rehabilitation by the end of 2014.

Projects planned to start at the University of Colorado campuses may exceed \$300 million. State-wide, voters were asked to approve more than \$700 million of bonds for public schools. To the extent

that voters acquiesced, the pipeline of school projects was refilled. Higher revenues from increased oil and gas development and higher municipal tax collections from a generally improving economy should begin to increase institutional activity. Federal projects, like work at the Denver Federal Center or in downtown Denver, are not likely to start until 2015 or beyond.

### Nonbuilding Construction (Infrastructure)

Nonbuilding measures new construction in infrastructure projects. This sector tracks roads and highways, water and wastewater facilities, power plants, reservoirs, mass transit, and similar projects. Several massive projects have begun recently, which illustrates the problems of quantifying annual activity that involve very large, multiyear projects. Construction statistics frequently track the entire value of a project as it starts. For example, the billion-dollar Gold Line for the Regional Transportation District (RTD) boosted the total recorded in 2012, although the work will continue for four years. For this forecast, the committee recognizes the extraordinary level of activity as other new, large projects started in 2013 replace the statistically large numbers from the prior year. The situation should occur again in 2014, so this high level of nonbuilding construction will continue

**RTD's FastTracks continues to drive growth in this sector.**

for years, even if the tracking is skewed to the years within this forecast.

As of this writing in November 2013, a full assessment of the historic flood damage along the northern Front Range is not complete. Some of the reconstruction work has occurred in 2013, most in 2014, and still more will tail out into 2015.

Before the recent spurt of new work, nonbuilding activity exceeded \$3 billion only in 2006, when the three-year Comanche power plant project in Pueblo was initiated. The sector saw \$3.3 billion in 2012, and as 2013 wraps up, the committee expects an historic high of \$3.8 billion in new activity. The number of new starts in 2014 may be about the same, although this is likely a cautious forecast as repair work to flood-damaged highways, city streets, dams, and watercourses could increase the total by around another half-billion dollars. Keep in mind that many of these projects for RTD will continue for the next three years and longer. Work engaged by the Colorado Department of Transportation (CDOT) will follow a similar pattern.

RTD's FastTracks continues to drive growth in this sector. Work began on two segments in 2013 (the \$1 billion Gold Line to Arvada and the \$350 million completion of the I-225 line through Aurora), and 2014 will mark the commencement of work on the North Metro Line. This work is on top of the ongoing construction of the \$900 million East Line to Denver International Airport, which began in 2012. Construction on the East, Gold, and I-225 lines will continue into 2016.

CDOT spending is also driving growth in this sector. Through better coordination of project expenditures and available funding, the agency is investing an additional \$300 million per year over the next five years. Beginning in 2014, half of this money is being used to leverage local dollars and public-private dollars to fund additional transportation projects. The balance will fund other significant projects currently under way: the reconstruction and expansion of the Boulder Turnpike (a joint project with RTD) and the upcoming reconstruction of the U.S. 6 bridges over I-25, the South Platte River, and the Union Pacific Railroad.

The third major driver of infrastructure construction in 2014 is a result of the September floods. Initial estimates provided by infrastructure owners reveal that the overall scope will be quite large: CDOT (\$400 million); Larimer County (\$95 million); Boulder County (\$85 million); and Weld County (\$80 million). Once the repair and replacement costs for municipalities, water and sanitation districts, ditch companies, and others are added, total flood damage to civil infrastructure in Colorado (exclusive of buildings) could approach \$1 billion. Much of this construction, though certainly not all, is expected to begin in 2014.

More stringent regulations regarding water treatment facilities will form a strong base of activity for many municipal plants, even those not affected by flooding. Within the water/wastewater subsector, construction continues on major projects in metro Denver (Metro Wastewater's North Treatment Plant) and in southern Colorado (Southern Delivery System). The South Metro Water Supply

### CONSTRUCTION EMPLOYMENT 2005–2014 (In Thousands)

Year	Employment	Percentage Change
2005	160.0	5.8%
2006	167.8	4.9
2007	167.8	0.0
2008	161.8	-3.6
2009	131.3	-18.9
2010	115.1	-12.3
2011	112.5	-2.3
2012	115.8	2.9
2013 <sup>a</sup>	127.0	9.7
2014 <sup>b</sup>	138.0	8.7

<sup>a</sup>Estimated. <sup>b</sup>Forecast.

Sources: U.S. Department of Labor, Colorado Department of Labor and Employment, Bureau of Labor Statistics, and Colorado Business Economic Outlook Committee.

Authority's WISE Partnership projects could get under way in 2014, and Denver Water's Capital Improvement Projects (CIP) plan for 2014 anticipates continued growth over CIP expenditures in 2013.

Several major projects are likely beyond the forecast horizon of this outlook. The billion-dollar I-70 replacement through Globeville is not proceeding quickly enough to start before 2015, and an I-70 public-private partnership for HOV/HOT lanes into the mountains is years away.

The Clean Air–Clean Jobs Act will prop up activity in fossil fuels power plants, so little change is foreseen from 2012, and the trend should continue for at least two more years.

Some inflation concerns have materialized. Price hikes already have shown up, some by as much as 3% for materials and 2%–3.5% for labor.

Infrastructure projects starting up in 2014 will likely match or eclipse the already high level experienced in 2013; the scope of flood repair projects is the major unknown variable.

### Employment

Construction employment should increase by 11,200 jobs in 2013, a gain of 9.7%. Hiring will continue at a strong pace, 8.7%, in 2014. The 11,000 new jobs will take the employment count to 138,000. Frequent anecdotal comments from the field indicate that projects under way would be completed sooner, but for the lack of skilled labor. The Great Recession hit the construction industry particularly hard, which led to the early retirement of many workers and an exodus to other professions. Much of the informal (and to a great extent) unskilled labor has not returned. There are stories of subcontractors putting one project in abeyance while they work on other projects where the contracted labor is paid at a higher rate. ❖

## Manufacturing

**U.S.** economic activity in the Manufacturing Sector expanded in September 2013 for the fourth-consecutive month according to the latest Institute for Supply Management's Purchasing Managers Index (PMI). The PMI for September (56.2%) was the highest so far in 2013. Third quarter PMI averaged 55.8% and has averaged 52.4% over the last 12 months; readings above 50% indicate expansion. In September, 11 of the 18 manufacturing industries expanded. Of the component indexes, the new orders, production, employment, prices, exports, and imports indexes

indicated expansion while the backlog of orders index showed a modest contraction.

Manufacturing activity has also expanded at a global level. According to the September JPMorgan Global Manufacturing PMI, activity reached its best quarter in just over two years. The report notes that growth tended to be centered on the developed world with expansions in the United States, the United Kingdom, the eurozone, Japan, and Canada. The United States, the United Kingdom, and Canada were also among the few nations

to report employment growth. Indeed, other indicators such as the Deloitte Manufacturing Competitiveness Index reported increased competitiveness in several western, developed countries from 2010 to 2013 including the United States, Germany, Canada, and the United Kingdom. According to the JPMorgan report, growth in China, Brazil, and Indonesia stagnated in September, and growth contracted in India, Russia, and South Korea. While new export orders fueled an increase in output, the report notes there were negligible

### COLORADO MANUFACTURING EMPLOYMENT BY INDUSTRY 2005–2014 (In Thousands)

Industry	2005	2006	2007	2008	2009	2010	2011	2012 <sup>a</sup>	2013 <sup>b</sup>	2014 <sup>c</sup>
Food	17.1	17.3	17.5	18.3	18.4	18.5	19.4	19.3	19.8	20.0
Beverage and Tobacco	5.7	5.7	5.7	5.6	5.2	5.2	5.4	5.6	5.9	6.0
Printing and Related	8.0	7.8	7.6	7.2	6.1	5.6	5.3	5.3	5.3	5.3
Other Nondurables	<u>19.1</u>	<u>18.7</u>	<u>18.2</u>	<u>17.3</u>	<u>15.5</u>	<u>15.0</u>	<u>15.2</u>	<u>15.5</u>	<u>15.7</u>	<u>15.8</u>
Subtotal, Nondurable Goods	49.9	49.5	49.0	48.4	45.2	44.3	45.3	45.7	46.7	47.1
Nonmetallic Minerals	9.5	9.8	9.8	9.2	7.2	6.8	6.8	6.9	7.1	7.3
Fabricated Metals	14.9	15.0	15.4	15.3	13.1	12.5	13.3	13.9	14.7	14.9
Computer and Electronics	30.1	28.3	26.3	25.5	23.4	22.7	23.4	23.6	22.0	22.0
Transportation Equipment	10.7	10.3	10.2	9.5	9.2	8.8	8.9	8.8	8.7	8.7
Other Durables	<u>35.3</u>	<u>36.2</u>	<u>36.3</u>	<u>36.2</u>	<u>31.5</u>	<u>30.4</u>	<u>31.7</u>	<u>33.1</u>	<u>33.5</u>	<u>34.4</u>
Subtotal, Durable Goods	100.5	99.6	98.0	95.7	84.4	81.2	84.1	86.3	86.0	87.3
<b>Total, All Manufacturing</b>	<b>150.4</b>	<b>149.1</b>	<b>147.0</b>	<b>144.1</b>	<b>129.6</b>	<b>125.5</b>	<b>129.4</b>	<b>132.0</b>	<b>132.7</b>	<b>134.4</b>

<sup>a</sup>Revised. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Note: There was a reclassification of employees from the Computer and Electronics sector in Manufacturing to the Computer Systems and Design Services sector in Professional and Business Services in 2013.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.



gains in global staffing levels, following a trend of near-stagnation in the labor market.

Manufacturing activity at a regional level improved throughout the third quarter after slowing for much of the year and increased in October, albeit at a more moderate pace. The monthly manufacturing survey conducted by the Federal Reserve Bank of Kansas City noted that in the 10th district interruptions in governmental activity during the month affected business activities by delaying inspections and approval processes, limiting data availability, and increasing customer uncertainty. However, expectations for future activity remained at solid levels. While the production index has been positive since July, the employment index has had mixed results.

The Manufacturing Sector technically added 1,700 jobs in Colorado in 2013 compared with 2012. However, official statistics will reveal an increase of only 700 jobs due to the reclassification of about 1,000 employees from Manufacturing to the Professional and Business Services Sector.

Manufacturing in Colorado is a \$19.5 billion industry, representing about 8.1% of the value of all goods and services produced in the state. Colorado was home to about 5,300 manufacturing establishments employing roughly 132,000 workers in 2012, representing 5.8% of the total employment base in the state. Most of these companies are small businesses. Indeed, nearly 80% of the manufacturing companies employ fewer than 20 workers, whereas only about 30 companies have 500 employees or more. However, manufacturing companies tend to be larger on average than

in other industries as nearly 90% of companies in Colorado have fewer than 20 workers. These numbers only take into account those businesses with employees.

In addition, another 7,000 manufacturing businesses are classified as “nonemployer businesses,” the majority of which represent self-employed individuals. About one-quarter of these non-employer businesses fall into the miscellaneous manufacturing category, which includes a diverse range of products including medical equipment and supplies, jewelry, sporting goods, toys, and office supplies. Fabricated metal manufacturing, food manufacturing, apparel manufacturing, and printing and related support activities round out the five-largest nonemployer manufacturing industries. While these nonemployer businesses provide an important entrepreneurial base for the Manufacturing Sector in Colorado, it is important to note that the nonemployer businesses are not included in the employment statistics described in the sections that follow.

### **Nondurable Goods**

About 35% of the employment in the Manufacturing Sector is found in nondurable goods industries, which include the production of goods that generally last for less than one year. Nondurable goods employment increased by 2.2% in 2013 and is expected to post a smaller increase of 0.9% in 2014, averaging about 47,100 workers for the year.



## **Undergraduate Mentoring & Career Development**

The Mentoring & Career Development Office is the hub for undergraduate professional development, providing professional skills and experiences to support a smooth transition from college to career. The office prepares undergraduates for careers in business by providing professional skills, career exploration and preparation, industry experiences, and access to employer and alumni connections throughout the Leeds experience.

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**UNDERGRADUATE MENTORING & CAREER DEVELOPMENT**

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## Manufacturing

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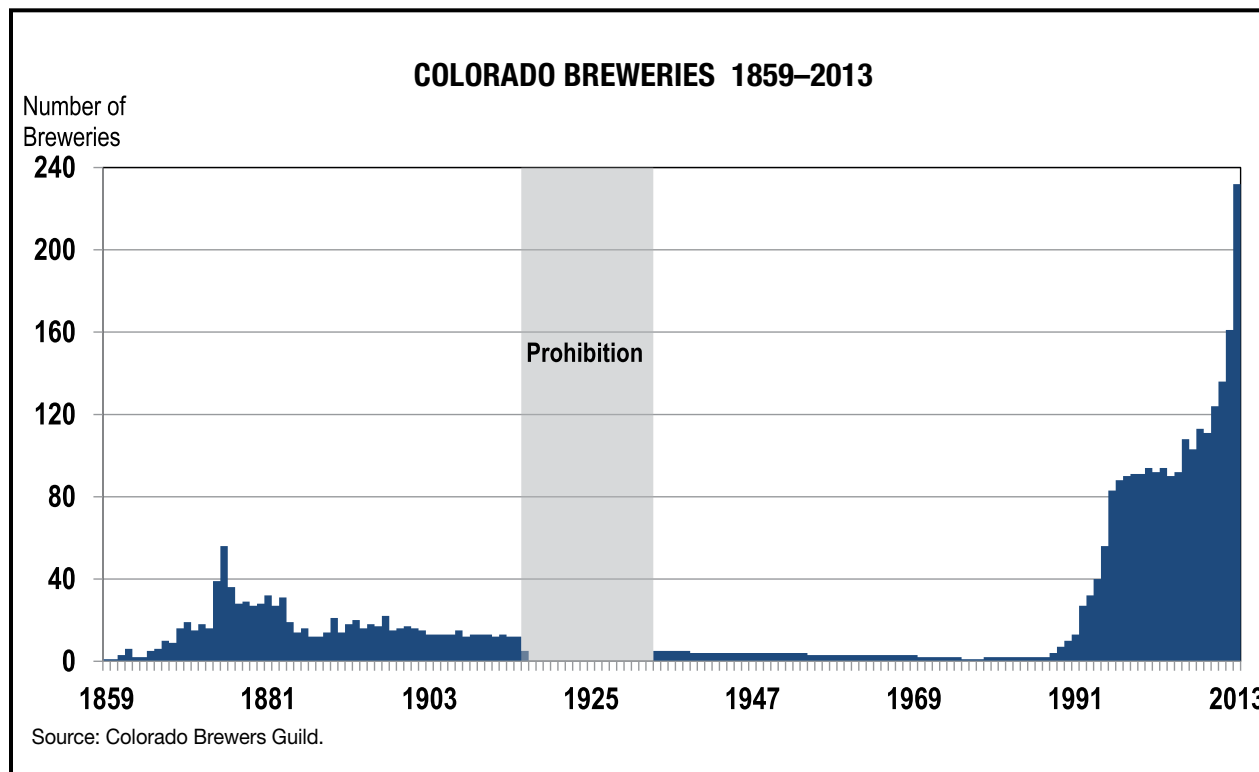
The largest nondurable goods subsector is food manufacturing. Colorado food manufacturers process meat, grains, sugar, milk, cheese and other dairy products, and produce candies, baked products, tortillas, burritos, coffee, and more. Colorado food exports totaled over \$1.2 billion in 2012 and are expected to grow in 2013. A return to positive growth in Europe and improving economies in Asia should propel exports of Colorado meat products. The improved outlook for exports, combined with more stable domestic growth, should

increase business activity in this subsector. Food manufacturing employment is expected to increase by 500 jobs, to 19,800 in 2013 and 20,000 in 2014.

Firms in the beverage subsector produce soft drinks, ice, bottled water, beer, wine, and liquor. Most of the subsector is located along the Front Range with three large breweries, one large soft drink manufacturer, and numerous microbreweries. The Western Slope hosts small wineries, mostly in Mesa County. Improvement in the economy should support more production, and the

continued popularity and strength in the micro-brewery subsector will drive employment growth in 2013 and 2014. Employment in the beverage subsector is expected to grow to 5,900 in 2013 and to 6,000 in 2014.

Traditional printing and publishing continues to decline in the advance of gains in e-media. The U.S. Bureau of Labor Statistics projects that employment in the printing industry will decline by 4% from 2010 through 2020. E-books captured 15% of all book units in 2011 and 20% in 2012.



Furthermore, e-books captured 11% of all revenues in 2011 and 15% in 2012. Traditional magazine publishing is also declining. The Pew Research Center reported major news magazines saw a 16% decline in newsstand sales in 2012. Daily circulation for newspapers declined 0.2% in 2012 due to a shift toward digital distribution. While advertising dollars declined 10.4% in magazines and 6.9% in newspapers, digital media advertising increased 16.6%.

However, regional shifts in economic and demographic market shares are expected to stave off additional declines in printing and publishing employment in Colorado for 2013 and 2014. Employment is anticipated to remain unchanged at 5,300 in 2013 and in 2014. It should be noted that the short-term stabilization is not believed to be a precursor of long-term growth in the industry. Additional job losses from multiplier effects can be expected in other sectors, including paper, packaging, transportation, and retail booksellers.

Employment in the other nondurable goods subsectors increased 1.3% in 2013. The subsector includes textiles, textile products, clothing, paper, petroleum and coal products, chemicals, and plastics and rubber products. Despite small employment decreases in textile products, paper, and petroleum and coal products, stability in chemical products and employment gains in plastics and rubber products helped the sector grow overall.

Several factors affected chemical manufacturing in 2013 that will continue to influence employment trends in 2014. There was downward pressure on employment in the last few years as

pharmaceutical and related biotechnology drug companies, which dominate employment in the subsector, have navigated a challenging regulatory environment, diminished venture capital, and industry-wide consolidation. Specifically, brand-name drug producers continue to contract. A bright spot in the pharmaceuticals industry is companies involved with manufacturing biosimilar or generic drugs have posted modest employment gains.

Despite contraction in pharmaceuticals, the chemicals subsector has benefited from rapid growth in cannabis-product manufacturers. While the employment base for this industry remains small, Colorado companies have benefited from changing attitudes in the United States toward marijuana-based products and constrained supply in the industry as only two states, Washington and Colorado, have legalized recreational use of the drug. Of note are reports from industrial property owners in the state that have commanded 30–40% premiums on space occupied by marijuana-based businesses. Furthermore, a U.S. Department of Justice ruling that medical marijuana cases in legalized states will not be prosecuted has boosted the industry. Cannabis products are also stimulating growth in several support industries, including legal services, laboratory services, security services, and ventilation systems, among others. In November, Colorado voters passed Proposition AA, effectively imposing a 25% tax on marijuana sales in the state.

Overall, the outlook for the other nondurable goods industries is positive and is expected to

## Durable Goods

Goods that last for more than one year

- Examples
- Automobiles
- Home Appliances
- Mobile Phones

## Nondurable Goods

Goods that have a lifetime of one year or less

- Examples
- Gasoline
- Food & Beverage
- Clothing

increase from 15,700 workers in 2013 to 15,800 workers in 2014.

## Durable Goods

Durable goods industries represent about 65% of the employment in the Manufacturing Sector. Durable goods manufacturing includes the production of goods lasting longer than one year, such as nonmetallic minerals, fabricated metals, computer and electronics, transportation equipment, and other durable goods. Despite growth in most of the durable goods subsectors, the reclassification of 1,000 Manufacturing employees to Professional and Business Services negatively affected the overall employment total. Durable goods employment is expected to increase 1.5% in 2014, from about 86,000 employees to 87,300 employees.

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## Manufacturing

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The nonmetallic minerals subsector employs about 7,000 workers in about 300 establishments in the state. These establishments are engaged in a diverse set of activities from pottery to sophisticated porcelain electrical products. Most of the state's jobs in the industry, however, are engaged in plumbing fixtures, glass products, and concrete and stone products. The level of construction and building

activity, therefore, heavily influences employment in this sector. Because such activity is likely to continue to expand, job growth will as well. Non-metallic mineral product manufacturing will add more than 200 jobs in 2013 and 200 jobs in 2014, reaching 7,300 positions.

The fabricated metals subsector is one of the larger manufacturing industries in Colorado in terms

of jobs, employing about 14,700 workers in 840 establishments. The industry makes a large array of products in the state, such as metal containers and structural components and other metal parts used in construction and industry. Overall economic growth has supported job gains in this subsector. However, weakened demand for exports due to the sluggish global economy has slowed employment gains in the sector. Employment is expected to average 14,900 in 2014, a modest increase of 200 jobs from 2013. A portion of the 800-job gain in 2013 was attributed to a couple of larger companies that were reclassified into the subsector from primary metal manufacturing.

The computer and electronic product subsector mostly involves highly specialized production of electronic instruments, semiconductors and electronic components, and computer and peripheral equipment. Due to the high value of its products and productive workforce, the industry also pays high wages, averaging close to 60% above overall manufacturing in the state. The sector employs about 22,000 individuals in Colorado in 420 business establishments.

In order to compete globally, computer and electronic product manufacturers need to have a highly productive workforce. Over time, the industry has produced more using fewer hours of labor. Based on national statistics, labor productivity in the industry increased close to 80% from 2000 to 2011 due to automation and other productivity enhancements. Despite nearly 300% growth in output over the same time, the subsector's jobs in the state dropped by half, from 46,000 to 23,000.



In 2013, Colorado's computer and electronic product manufacturing has been negatively affected by cutbacks in federal defense spending and a sluggish global economy, shedding an expected 600 jobs. In addition, the reclassification of a large employer out of computer and electronic product manufacturing to another sector will cause employment to fall by another 1,000 jobs. Looking ahead, offsetting factors will cause employment to remain essentially flat in 2014. While fewer defense contracts will continue to be a challenge for the industry, output is expected to grow as companies discover new markets in the increasingly digitized and technological global economy that is fueling continued demand for specialized computer and electronic components. The pickup should be enough to end job loss, but not large enough to generate outright gains in employment.

Large aerospace companies dominate the transportation equipment subsector, which includes the manufacture of everything from spacecraft, satellites, launch pads, and aircraft parts to electric vehicles and mountain bike frames. The subsector lost nearly 2,000 jobs from 2005 to 2010, but reached more stable employment in 2011. In 2013, employment is expected to decline by 100 jobs due to fewer government contracts awarded to firms in 2012.

Small companies may contribute job gains in the subsector. For example, small companies specializing in manufacturing high-quality mountain bikes are gaining in popularity in Colorado. Although businesses such as these make up a fraction of the subsector, aggregated they add minor employment

gains for Colorado. Growth among top firms in the subsector, especially aerospace firms, depends heavily on whether they can successfully add government contracts. In 2013, gains in government contracts were below average due to uncertainty triggered by federal budget cuts, leading to stagnant employment in the transportation equipment subsector at best. Forecasts suggest that in 2014, as gains in small transportation equipment manufacturing are offset by losses from the large manufacturers, employment in the subsector is expected to remain stable at 8,700 workers.

The other durable goods subsectors include wood products, primary metals, machinery, electrical equipment and appliances, furniture, and miscellaneous manufacturing. Four of the six other durable goods subsectors expanded in 2013 while machinery manufacturing remained stable and primary metals contracted modestly. Combined, other durable goods added 400 jobs with total employment reaching 33,500 employees. Growth is expected to pick up in 2014, with employment growing by 2.7%, to 34,400 employees.

**In 2013, gains in government contracts were below average due to uncertainty triggered by federal budget cuts, leading to stagnant employment in the transportation equipment subsector at best.**

The housing crash and sawmill closures since 2000 cut wood products manufacturing employment by 50% from 2006 to 2011. The subsector began rebounding from the housing slump in 2012 as the housing market improved. The rebound continued in 2013 and should endure in 2014, with employment growth of nearly 7% as increased housing sales, permits, and remodeling activity appears sustainable despite rising mortgage rates.

Colorado's primary metals industry employs a small number of individuals in the state. The state has about 50 establishments making various metal products using iron, steel, and aluminum. Much of the industry's sales are to businesses outside of Colorado. After rising steadily to meet the demand associated with a recovering economy between early 2010 and mid-2012, primary metals employment has since remained steady. However, due mainly to the reclassification of two employers in the industry to fabricated metals manufacturing, primary metals manufacturing will experience a decline of 200 jobs in 2013, averaging 2,300 for the year. Employment is expected to remain at this level in 2014 as national economic activity remains modest.

Machinery manufacturing is defined by products that apply mechanical force and includes wind turbines, jet engine turbine controls, compressors, and other manufacturers in the state. Employment in machinery manufacturing was volatile throughout 2013. Delay in renewing the federal renewable production tax credit had a significantly negative

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## Manufacturing

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impact on the wind industry after temporarily boosting employment in 2012. According to the American Wind Energy Association, wind orders in the United States declined precipitously in 2013, and the industry added just 1.6 megawatts of wind through the second quarter. The decline in activity was accompanied by layoffs in the state. The one-year extension of the tax credit is set to expire again by 2014 and, as a result, wind contracts have ramped up again as companies race to commence projects before the credit expires. However, the renewable production tax credit appears to have bipartisan support that bodes well for another extension. Additionally, Colorado will benefit from a large number of international wind contracts that will sustain employment in 2014.

The resurgence in wind activity in the latter half of 2013 has partially offset losses in the industry in the first half. In addition, strength in other parts of the subsector such as oil and gas support activities and aerospace contractors have contributed to stabilizing employment in 2013. Overall, employment is expected to remain constant compared with 2012, at about 11,100 employees. Planned expansions and continued hiring in the industry in 2014 will contribute to moderate gains in the subsector, adding about 200 employees for an average of 11,300 workers.

With roughly 100 establishments and 2,400 jobs, the electrical equipment, appliances, and components industry is a small subsector of total manufacturing in Colorado. Like other manufacturing in the state, businesses in the electrical equipment, appliances, and components subsector specialize in

the manufacture of very diverse products, such as wiring, cable and other communications equipment, lighting, and motors and generators.

The industry has experienced a small resurgence in the state since the end of the recession. The subsector continually shed jobs throughout the 2000 decade, and employment fell precipitously in 2009 when construction and other industrial activity came to a standstill. Since then, however, the sector continues to add jobs. Demand for electrical equipment has held up with the recovery of the housing market and other construction, and firms continue to find success competing in certain niche markets. Employment is expected to reach 2,600 workers in 2014, a gain of 200 jobs from the 2013 level.

Employment in furniture and related products manufacturing stabilized in 2012. This mature, cyclical subsector is highly dependent on housing starts, population, consumer demographics, and income growth. Colorado is home to smaller-scale furniture producers who typically offer more custom upholstery and furniture products and do not effectively compete for the price-conscious consumer. Industry growth is likely to depend

**Current conditions at the regional, national, and global levels are becoming more favorable, and the outlook for manufacturing in Colorado remains positive into 2014.**

more on new household formation in the mid-to-upper income brackets and trends toward buying local and eco-friendly products. Momentum in the subsector increased in 2013 with the addition of 100 jobs, a trend that should continue into 2014.

Industries in the miscellaneous manufacturing subsector create a wide range of products not readily classified elsewhere, from tennis racquets and golf clubs to dolls and jewelry. This sector also includes medical device manufacturers in the state. Miscellaneous manufacturing has experienced modest employment growth over the past several years, and is expected to add about 100 jobs from 2012 to 2013. Employment will continue to increase in 2014 with the addition of 200 jobs for total average annual employment of 10,200.

### Summary

Following 10 years of employment losses from 2001 to 2010, the Manufacturing Sector has stabilized in the past few years. Definitional changes within the industry will result in only modest changes in employment after two consecutive years of employment growth. Most subsectors continued to expand in 2013. Employment is estimated to increase about 0.5% in 2013 with losses from a redefined employment base being narrowly outweighed by gains in most of the subsectors. The largest gains were in fabricated metals followed by electrical equipment and appliances, plastics and rubber products, and beverages manufacturing. Overall, nondurable goods increased 2.2% while durable goods decreased 0.3%.



Current conditions at the regional, national, and global levels are becoming more favorable, and the outlook for manufacturing in Colorado remains positive into 2014. Manufacturing employment in Colorado will expand 1.3% in 2014, gaining 1,700 jobs and reaching 134,400 employees. Durable goods industries, including nonmetallic minerals, fabricated metals, wood products, machinery manufacturing, electrical equipment and appliances, and miscellaneous manufacturing, will lead employment growth in 2014. Nondurable goods will also expand, although at a slower pace, with growth concentrated in food, beverages, chemicals, and plastics and rubber products.

A notable development in Colorado that could positively influence manufacturing in the future is the recent award of \$25 million to nine higher education institutions in the state to train workers for advanced manufacturing through the Colorado Helps Advanced Manufacturing Program (CHAMP). The CHAMP initiative, which will be led by Front Range Community College, will involve identifying and awarding credit based on current skills in the workforce, designing programs to meet competencies required by the state's manufacturers, and revamping delivery systems to consist of online, traditional, and hybrid courses.

According to work conducted by the Boston Consulting Group (BCG), the United States is in the midst of a manufacturing renaissance due to several key trends. First, the production-cost advantage enjoyed by China over the past decade is rapidly eroding. Second, the United States is becoming one of the lowest-cost countries for manufacturing in the developed world. BCG analyses project that by 2015 average manufacturing costs in Germany, Japan, France, Italy, and the United Kingdom will be 8–18% higher than those in the United States. The United States is expected to have an advantage in the cost of labor (adjusted for productivity), and energy and shipping costs. Third, U.S. companies continue to benefit from increases in productivity. BCG notes that the magnitude of job gains in the United States will depend on the degree to which the nation can increase its global competitiveness—a long-term challenge of which will be supplying skilled labor. However, the possibilities for Colorado are exciting as the state continues to promote a constructive regulatory environment, workforce development, sound infrastructure, research and development expertise, and technological innovations. ❖



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**Leeds School of Business**  
UNIVERSITY OF COLORADO BOULDER

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## Trade, Transportation, and Utilities

The Trade, Transportation, and Utilities Sector is the largest provider of jobs in Colorado. This industry includes wholesale trade, retail trade, utilities, warehousing, and multiple facets of transportation (air, truck, transit, rail, pipeline, etc.). Nearly 17.7% of Colorado workers are included in this industry. Improving wholesale and retail sales helped increase the number of jobs in the sector by 2.7% in 2013, to a total of 419,900. The sector is expected to grow another 2.2% in 2013, to a total 429,000 jobs.

### Wholesale Trade

Wholesale trade should see another year of solid growth in 2014. In Colorado this sector employs

almost 100,000 workers who, together with proprietors, earned \$8.9 billion in 2012. Many of the state's wholesale businesses are elements of large manufacturing firms. Merchant wholesalers, or firms that sell to retail outlets, account for nearly 85,000 of the sector's jobs. More than 50,000 of these are in companies selling durable goods, particularly computers, computer peripherals, and electronic equipment. The largest number of jobs among nondurable wholesalers is with businesses selling groceries and related products. The remaining wholesale employment is in business-to-business sellers, electronic marketers, and agents and brokers. Most wholesale jobs pay well; in 2012

average weekly earnings in the industry were 44% above those in the private sector as a whole.

Wholesale employment typically fluctuates widely with the business cycle. After losing more than 10,000 jobs during the downturn, Colorado's wholesale trade sector has rebounded with 2013 employment up 6,000 from its low in 2010. The sector is expected to add 2,500 jobs in 2013 and another 2,300 the following year.

### Retail Trade

The retail outlook has brightened over the last three years as the state economy emerged from the Great Recession with sales increases averaging almost 7% per year, a substantial real gain as the Denver-Boulder-Greeley CPIU rose only 2.5% annually. Growth was fueled by solid job gains, a robust housing market, and healthier household balance sheets. While 2014 should see further improvement, helped by low fuel prices and interest rates, prospects are clouded by a possible slowing of the housing recovery and uncertainty about the still somewhat fragile economic recovery.

The Colorado retail trade sector currently employs slightly more than a quarter million wage and salary workers and roughly 35,000 self-employed proprietors or family workers. It includes several national retail chains such as Walmart and Safeway, which are the state's largest employers. Retail jobs cover the full spectrum from entry-level positions for young people beginning their careers all the way up to managers who may oversee dozens of stores and include a large number of part-time positions. The composition of the workforce

### WHOLESALE TRADE EMPLOYMENT 2005–2014 (In Thousands)

Year	Wholesale Trade Durable Goods	Wholesale Trade Nondurable Goods	Other Wholesale	Total
2005	52.4	32.0	9.1	93.5
2006	53.4	32.9	10.1	96.4
2007	54.4	33.7	11.2	99.3
2008	54.8	33.4	11.9	100.1
2009	50.1	31.5	11.7	93.3
2010	48.6	30.7	11.5	90.8
2011	49.4	31.0	11.5	91.9
2012	50.5	31.7	12.1	94.3
2013 <sup>a</sup>	52.0	32.5	12.3	96.8
2014 <sup>b</sup>	53.3	33.1	12.7	99.1

<sup>a</sup>Estimated. <sup>b</sup>Forecast.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

results in a relatively low average salary. In 2012, the average annual wage was nearly \$28,000 compared with \$51,000 for all private-sector workers. Approximately 12,000 jobs have been added since 2010, bringing employment to its pre-recession peak. Over the past decade the pace of retail job growth has fallen short of that in the previous century as retail firms have consolidated, and many stores have closed. Some retailers have introduced productivity-enhancing changes, including supply chain efficiencies in major retailers or increasing use of self-checkouts in supermarkets.

Coloradans currently spend nearly \$75 billion annually at retail establishments. Food and beverage stores and motor vehicle and parts

establishments each account for about one-fifth of total sales. Current dollar sales volume is up almost 10% from the previous high reached in 2007; however, over this same period state population grew 9% and the Denver-Boulder-Greeley CPIU increased 14%. Sales through the first seven months of 2013 were up 3.9% from the previous year, somewhat slower than in the recent past. Building materials saw double-digit gains fueled by increased construction activity. Robust residential activity also contributed to a solid increase in the furniture and furnishings category. Motor vehicles sales, spurred by low financing costs and an aging vehicle fleet, also saw a healthy increase, although slower than in 2012. Electronics and appliance store sales declined again following a drop in sales

in 2012. This probably reflects a continuing shift toward online sales. Gas station sales volume also fell due to lower fuel prices. Food and beverage stores and general merchandise stores registered weak gains.

Consumer spending is always sensitive to conditions in the housing market. The home is the major asset in most families, and research on consumer spending suggests that the wealth effect from home values is larger than that from other assets. New home owners are also likely to purchase furnishings and fixtures. The strong housing markets in metro Denver and in the mountain areas has made Colorado consumers more willing to spend, as well as more able to finance such outlays. The S&P Case-Shiller home price index for Metro Denver reached an all-time high in July, rising 20% since February 2011, somewhat faster than the national index over the same period. However, recent increases in mortgage rates may dampen future gains.

Much of the strength in consumer spending is concentrated among more affluent households where the income gains have been greater. National data from the Census Bureau show that only the top 5% of earners saw a real mean income gain between 2008 and 2012. The median household income fell 5% nationally and 6% in Colorado. Wage growth fell sharply during the recession and has been slow to bounce back. Wealthier families also have more equities and their homes are more valuable so their gains from strength in the residential and stock

### TRADE, TRANSPORTATION, AND UTILITIES EMPLOYMENT 2005–2014 (In Thousands)

Year	Wholesale Trade	Retail Trade	Total Trade	Transportation and Warehousing	Utilities	Total TTU
2005	93.5	245.8	339.3	65.7	8.0	413.0
2006	96.4	248.3	344.7	66.6	8.0	419.3
2007	99.3	253.5	352.8	68.5	7.9	429.2
2008	100.1	252.6	352.7	68.3	8.2	429.2
2009	93.3	238.3	331.6	63.9	8.4	403.9
2010	90.8	236.9	327.7	61.8	8.2	397.7
2011	91.9	239.9	331.8	61.8	8.1	401.7
2012 <sup>a</sup>	94.3	243.7	338.0	62.8	8.0	408.8
2013 <sup>b</sup>	96.8	248.9	345.7	66.1	8.1	419.9
2014 <sup>c</sup>	99.1	254.4	353.5	67.4	8.1	429.0

<sup>a</sup>Revised. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Note: Components may not sum to total due to rounding.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

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## Trade, Transportation, and Utilities

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markets are greater. The top-heavy sales growth shows in the spending mix. For example, a report from Autodata for the first nine months of 2013 indicates that sales of luxury cars rose 12% over the previous year while those for small cars, such as the Ford Fiesta, increased 6%.

Colorado tourist spending was healthy in 2013. While activity in the winter plateaued, summer sales posted strong gains. Most of the state's mountain communities registered record or near-record sales tax receipts in the summer. Recent natural disasters will affect spending, with the overall effect mixed. Communities isolated by floods and fires will see losses, at least temporarily. However, damaged automobiles will need to be replaced, and rebuilding efforts will stimulate construction related spending. Insurance payments and disaster loans from government agencies will also spur outlays.

Early analyses of holiday sales raise concerns about the upcoming season. Shopper Trak, which measures store traffic and other key variables, predicts retail sales in November and December will rise 2.4% from the previous year, the smallest gain since 2009. Other forecasts are a bit rosier. The cautious outlook is driven by weak back-to-school sales and depressed consumer confidence. The still-sluggish recovery and concerns about the federal government's failure to deal with budget issues resulted in the Thompson-Reuters/University of Michigan consumer sentiment index for the nation hitting a 10-month low in October 2013. Strong spending in autos and home furnishings

### RETAIL SALES, 2005–2014 (In Billions of Dollars)

Year	Motor Vehicle and Parts	General Merchandise	Other Retail	Total Retail Trade Sales <sup>a</sup>	Percentage Change
2005	\$13.6	\$9.8	\$35.3	\$58.7	5.0%
2006	13.3	10.3	38.2	63.0	7.4
2007	14.1	11.0	42.2	67.3	6.8
2008	12.1	11.3	43.2	66.5	-1.2
2009	10.2	11.0	37.2	58.3	-12.3
2010	11.3	11.1	40.1	62.3	6.9
2011	13.0	11.7	42.2	66.7	7.1
2012	14.4	12.0	44.2	70.8	6.1
2013 <sup>b</sup>	15.5	12.3	45.8	73.8	4.2
2014 <sup>c</sup>	16.6	12.7	47.9	77.5	5.0

<sup>a</sup>Motor Vehicle and Parts and General Merchandise are the two largest Retail Trade categories. The total also includes gas stations, food/beverage, building materials/home improvement, furniture, clothing, electronics, and other retail stores. The total does not include food services.

<sup>b</sup>Estimated. <sup>c</sup>Forecast.

Sources: Colorado Department of Revenue and Colorado Business Economic Outlook Committee.

### RETAIL TRADE EMPLOYMENT, 2005–2014 (In Thousands)

Year	Motor Vehicle and Parts Dealers	Food and Beverage Stores	General Merchandise Stores	Other Retail	Total
2005	32.0	43.9	46.7	123.2	245.8
2006	31.5	44.1	47.6	125.1	248.3
2007	31.8	44.8	50.9	126.0	253.5
2008	31.2	45.9	51.6	123.9	252.6
2009	28.1	44.7	50.7	114.8	238.3
2010	27.9	45.0	50.0	114.0	236.9
2011	28.6	45.2	50.3	115.8	239.9
2012	29.8	45.7	50.3	117.9	243.7
2013 <sup>a</sup>	30.1	46.1	50.3	122.4	248.9
2014 <sup>b</sup>	30.4	46.6	50.7	126.7	254.4

<sup>a</sup>Estimated. <sup>b</sup>Forecast.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

may crowd out some holiday sales. Retailers have reacted to weak sales prospects by kicking off holiday-related promotions even earlier in 2013.

The outlook for 2014 is modestly optimistic. Both sales and employment should increase, although gains will fall short of those from 2010–12. Sales are expected to rise 5% in 2014, a slight improvement over growth in 2013. Auto sales will climb 7.5% and those of general merchandise stores between 2.5% and 3%. The retail sector is expected to add 5,500 jobs in 2014. Risks to this forecast lie in the overall performance of the economy. If job gains slow significantly or income growth fails to improve, spending will suffer. As 2014 is an election year, the risk of a negative shock from political actions also looms.

## Transportation and Warehousing

The Transportation and Warehousing Sector includes air, railroad, and water transportation; trucking; taxi service; urban transit; couriers; warehousing; and pipeline companies. These industries are expected to contribute 66,100 jobs in 2013, growing to 67,400 in 2014.

### Transportation

#### Colorado Air Transportation

Data from the Bureau of Transportation Statistics show that U.S.-based airlines carried more than 736 million passengers for the 12 months ending July 2013, an increase of less than 1% over the same period the previous year. Over the last 12

months, load factors have reached record levels in excess of 86%. The top 10 carriers (Delta Airlines, Southwest Airlines, United Airlines, American Airlines, US Airways, ExpressJet, JetBlue, SkyWest, Alaska, and AirTran) account for 80.6% of total enplanements. The U.S. airline industry continues to restructure. Mergers, such as the most recent between American Airlines and US Airways, are driving capacity discipline. Airlines are focusing on flying routes that are most profitable. Industry capacity growth has been driven by low-cost carriers, such as Spirit.

The airline industry is highly dependent on the economy. Economic activity affects air travel by business and leisure passengers, as well as air freight. Because many costs are fixed, the profitability of individual companies is determined by efficient operations and favorable fuel and labor costs. Small airlines can compete by serving local or regional routes with substantial economic growth.

The International Air Transport Association's (IATA) October 2013 Airline Business Confidence Survey reported expected profit growth moving into 2014, with a decline in input costs and structural improvements contributing to the positive forecast. This assumes an easing eurozone debt crisis, decreasing oil and fuel prices, improved load factors, and modest economic growth.

Colorado air transportation employment is estimated at 13,800 in 2013 after a revision. The sector is expected to increase by 1.4% in 2014.

## TRANSPORTATION AND WAREHOUSING EMPLOYMENT 2005–2014 (In Thousands)

Year	Truck Transportation	Couriers and Messengers	Warehousing and Storage	Air Transportation	Other Transportation	Total
2005	17.7	9.3	6.9	13.6	18.3	65.7
2006	18.5	9.4	7.2	13.3	18.2	66.6
2007	19.0	9.8	7.2	14.2	18.3	68.5
2008	18.6	9.6	6.8	14.6	18.7	68.3
2009	17.3	8.7	6.6	13.4	17.9	63.9
2010	17.1	8.5	6.2	12.5	17.5	61.8
2011	17.9	8.5	6.2	12.3	16.9	61.8
2012	18.7	8.7	6.3	12.7	16.4	62.8
2013 <sup>a</sup>	19.4	8.8	6.5	13.8	17.6	66.1
2014 <sup>b</sup>	19.9	8.8	6.6	14.0	18.1	67.4

<sup>a</sup>Estimated. <sup>b</sup>Forecast.

Note: Due to rounding, the sum of the sectors may not equal the total.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

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## Trade, Transportation, and Utilities

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Passenger traffic at Colorado Springs Airport (COS) is down 15.6% from the same time in 2012. Frontier's departure in early April 2013 has strongly influenced the decline in numbers. The airport ranks 97th in the nation.

### *Denver International Airport*

DIA is owned and operated by the City and County of Denver. The city's Department of Aviation employs approximately 1,000 people at the facility.

DIA served more than 53 million passengers in 2012, making it the busiest year in Denver aviation history. This record propelled DIA to rank as the 5th-busiest airport in North America and the 13th busiest in the world. Passenger traffic increased by 0.6% in 2012 compared to 2011. International passenger traffic was up in 2013, but was offset by domestic capacity reductions by Frontier Airlines.

DIA's largest carrier, United, accounts for nearly 40% of DIA's capacity, and the carrier provides nonstop service to more than 130 destinations



from Denver. Denver ranks as the fourth-largest hub in United's network, behind Houston, Chicago, and Newark. It is important to note that Denver is the second-largest hub in the carrier's network in terms of domestic destinations served, solidifying both Denver's local market strength and competitive advantage as a central point for transcontinental connecting passengers.

Southwest Airlines ranks as Denver's second-largest carrier accounting for 27% of capacity. DIA ranks as the fourth-largest station in the Southwest network, and Southwest now serves nearly 60 nonstop destinations from DIA. In March 2013, AirTran (a wholly owned subsidiary of Southwest) expanded its international network from Denver with the addition of service to Los Cabos, Mexico. To accommodate Southwest's growth in Denver, in September 2013 DIA began to add five new gates on Concourse C. Construction is expected to be completed in November 2014, at which point Southwest Airlines plans to relocate AirTran's existing gates on the A Concourse to the C Concourse.

Frontier Airlines ranks as DIA's third-largest carrier, accounting for 18% of capacity. In 2013, Frontier cut capacity at DIA by more than 17% as part of the carrier's transformation to an ultra low-cost carrier (ULCC) business model. DIA remains the largest station for Frontier, and the carrier provides service to more than 80 destinations nonstop from its Denver hub. This includes DIA's only service to Central America and the Caribbean. Frontier offers flights to Costa Rica (San Jose and Liberia) and Dominican Republic (Punta Cana), and will resume service to Jamaica

(Montego Bay) in December 2013. In early 2012, Republic Airways, the parent company of Frontier, stated its intention to sell Frontier, and in October 2013 the company announced that Indigo Partners will acquire Frontier in a transaction worth \$145 million. The transaction is expected to close by the end of December 2013. Indigo Partners, a private equity firm with a history of acquiring and investing in airlines, previously purchased Spirit Airlines and led Spirit's transformation into one of the industry's leading ULCCs. The firm also currently maintains ownership stakes in Volaris, a ULCC based in Mexico. Spirit and Volaris are among the newest and fastest-growing carriers to operate flights out of DIA.

In 2013, DIA added three new international destinations, bringing the total number of international destinations to 23. On June 6, 2013, United initiated daily nonstop service between Denver and Fort McMurray, Canada. Fort McMurray is located in the heart of Alberta's economically booming oil sands. The flight to Denver is the first and only flight to the United States from Fort McMurray. United also initiated daily nonstop service between Denver and Tokyo's Narita International Airport on June 10, 2013. The service operates daily on Boeing 787 aircraft and is the first nonstop service from Denver to Asia. Frontier will resume once-weekly nonstop service to Montego Bay, Jamaica, from Denver in December 2013. Additionally, Icelandair, which launched nonstop service between Denver and Reykjavik in May 2012 at a service level of four days per week, increased the frequency

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**COLORADO AIRPORT STATISTICS**  
**2007–2014**  
(In Thousands)

Passengers and Cargo	2007	2008	2009	2010	2011	2012	2013 <sup>a</sup>	2014 <sup>b</sup>
<b>Passengers (in thousands)<sup>c</sup></b>								
Denver International Airport (DEN)	49,863.4	51,245.3	50,167.4	51,985.0	52,849.0	53,156.3	52,358.9	52,620.7
Colorado Springs Municipal Airport (COS)	2,067.4	1,993.0	1,864.0	1,738.3	1,621.1	1,639.1	1,566.6	1,468.9
Grand Junction Regional (GJT)	340.9	425.2	457.7	443.7	444.2	439.3	441.0	448.2
Eagle County Regional Airport (EGE)	463.4	426.0	363.3	402.2	378.6	335.8	303.1	276.5
Aspen-Pitkin County Airport (ASE)	364.5	426.6	433.7	445.4	442.5	429.8	433.0	437.8
Yampa Valley Airport (HDN)	279.3	273.2	245.0	220.1	213.1	119.9	69.5	46.6
Durango-La Plata County Airport (DRO)	232.6	268.7	296.2	327.2	351.3	373.1	404.1	433.6
Montrose Regional Airport (MTJ)	185.1	171.8	184.4	193.2	174.5	150.6	136.6	128.4
Gunnison-Crested Butte Regional Airport (GUC)	85.2	72.1	84.3	74.6	73.0	62.4	55.2	49.3
Fort Collins-Loveland Municipal Airport (FNL)	56.6	62.2	62.2	71.3	90.0	69.6	73.9	78.1
Telluride Regional Airport (TEX)	32.9	26.7	13.5	18.5	22.0	15.7	13.7	11.5
Cortez Municipal Airport (CEZ)	20.4	16.8	15.4	12.7	14.0	15.1	14.4	14.0
San Luis Valley Regional/Bergman Field (ALS)	15.0	14.3	12.6	13.5	14.2	13.9	13.3	12.9
Pueblo Memorial Airport (PUB)	9.8	8.7	10.4	23.3	44.9	19.6	18.2	21.0
<b>Total Passengers</b>	<b>54,016.5</b>	<b>55,430.6</b>	<b>54,210.1</b>	<b>55,969.0</b>	<b>56,732.4</b>	<b>56,840.2</b>	<b>55,901.5</b>	<b>56,047.5</b>
<b>Cargo, Freight, and Air Mail (in millions of lbs.)</b>								
DIA Freight and Express	573.9	527.1	468.2	517.7	511.8	488.1	498.0	495.2
DIA Air Mail	15.5	26.4	26.6	37.5	35.4	33.7	37.3	44.6
<b>DIA Total</b>	<b>589.4</b>	<b>553.5</b>	<b>494.8</b>	<b>555.2</b>	<b>547.2</b>	<b>521.8</b>	<b>535.3</b>	<b>539.8</b>
Colorado Springs Cargo	27.0	24.0	23.0	22.3	21.7	23.8	20.9	20.8
Colorado Springs Air Mail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Colorado Springs Total</b>	<b>27.0</b>	<b>24.0</b>	<b>23.0</b>	<b>22.3</b>	<b>21.7</b>	<b>23.8</b>	<b>20.9</b>	<b>20.8</b>

<sup>a</sup>Estimated. <sup>b</sup>Forecast. <sup>c</sup>Passengers include enplanements and deplanements.

Sources: Denver International Airport, Colorado Springs Municipal Airport, Grand Junction Regional Airport, Federal Aviation Administration, and Colorado Business Economic Outlook Committee.

## Trade, Transportation, and Utilities

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to six days per week in summer 2013. It will again increase the frequency to daily starting in June 2014. Air Canada, Aeromexico, British Airways, and Lufthansa also offer nonstop international service from DIA. The expansion of nonstop flights to international destinations remains a high priority for DIA.

DIA continues work on the Hotel and Transit Center Project that includes the construction of a planned 519-room hotel and conference center, an RTD FasTracks commuter rail station, and improvements to the existing concourse baggage and train systems. In addition, the program will incorporate an open-air plaza, complete with new

concessions and leasable space that connects the development to the existing Jeppesen Terminal. The project is expected to be completed by 2016.

### Motor Freight Transportation and Warehousing

The trucking industry provides over-the-road transportation and delivery of a wide variety of commodities and cargo using motor vehicles. Of particular impact in 2013 was the new federal Hours-of-Service Regulations. This law limits the maximum average work week for truck drivers to 70 hours (down from 82) and requires truck drivers to take a 30-minute break during the first eight hours of a shift (but retains the current 11-hour

daily driving limit). Drivers who reach 70 hours are allowed to resume if they rest for 34 consecutive hours, including two nights of rest from 1-5 a.m. Truck transportation continued to rebound in 2013 as the economy improved and retail excelled. Truck transportation employment increased 4.7% in 2012, and is expected to end 2013 with 19,400 workers, a gain of 3.7%. Likewise, the total number of firms, total wages, and average wages all rose in 2012 and 2013. Growth is projected to continue in 2014, with an increase of 2.7%, or 500 jobs.

Other transportation providers, including couriers, which provide more local transport using cars and bikes, saw a 1.1% increase in 2012, and growth accelerated through the first half of 2013. Likewise, taxi and limousine service climbed 1.4% in 2012, with modest additional gains in 2013. The Denver Metro region may be impacted by the combined operation of Yellow Cab and Metro Taxi, which would control more than 60% of the taxi permits in metro Denver. Hearings have been scheduled for mid-to-late February 2014.

### Utilities

The 2013 spot prices for natural gas have increased slightly over 2012, peaking around the middle of the year and leveling out at the end of the summer. The continued exploration of domestic reserves has helped to stabilize the price. Price stabilization is expected to continue for the near future so long as major drilling and fracking legislations do not interrupt supply sources. Natural gas end-use consumption on a national average has remained

### COLORADO ELECTRIC POWER CONSUMPTION 2005–2014 (In Millions of Kilowatt Hours)

Year	Nonresidential	Residential	Total	Percentage Change
2005	31,917	16,436	48,353	3.5%
2006	32,782	16,952	49,734	2.9
2007	33,665	17,634	51,299	3.1
2008	34,422	17,720	52,142	1.6
2009	33,623	17,412	51,035	-2.1
2010	34,816	18,102	52,918	3.7
2011	35,181	18,277	53,458	1.0
2012	38,414	18,355	56,769	6.2
2013 <sup>a</sup>	38,452	18,482	56,934	0.3
2014 <sup>b</sup>	38,760	18,593	57,353	0.7

<sup>a</sup>Estimated. <sup>b</sup>Forecast.

Sources: Edison Electrical Institute Statistical Yearbook, Xcel Energy, and Colorado Business Economic Outlook Committee.

steady, with a peak January consumption coming in slightly higher than in January of 2012.

Electric rates increased slightly across most of the state. Renewable energy continues to be added to the generation portfolios as utilities comply with Colorado House Bill (HB) 1001, which requires that investor-owned utilities (IOU) provide 30% of their energy generation from renewable sources by 2020. Municipal utilities and electric cooperatives also participate in the renewable standards, but to a lesser degree than the IOUs. The primary source of renewable generation continues to be supplied by utility-scale wind resources, with distributed solar generation contributing less than 10% of the renewable requirements.

### COLORADO NATURAL GAS CONSUMPTION 2005–2014 (In Billions of Cubic Feet)

Year	Total Gas Consumption	Percentage Change
2005	470.3	6.8%
2006	450.8	-4.1
2007	504.8	12.0
2008	504.8	0.0
2009	523.7	3.7
2010	501.4	-4.3
2011	466.0	-7.1
2012	444.5	-4.6
2013 <sup>a</sup>	517.7	16.5
2014 <sup>b</sup>	501.0	-3.2

<sup>a</sup>Estimated. <sup>b</sup>Forecast.

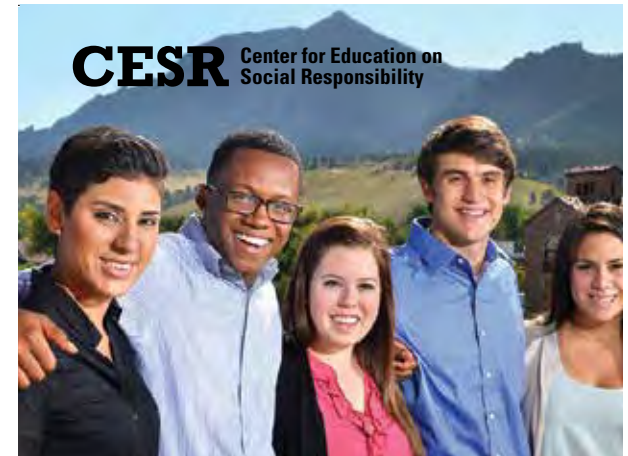
Source: Colorado Business Economic Outlook Committee.

Colorado utilities have continued with retirements of coal generating facilities to meet the mandates of the Clean Air-Clean Jobs Act. The replacement of these facilities will exert upward pressure on rates due to the high cost of replacement generation. The length of time required for construction, in addition to relatively low gas prices in the \$5 range, helped to mitigate rates.

Energy efficiency mandates continue to be a factor in flat electrical demand in Colorado, despite a recovering economy. Continued advances in efficient products for home and commercial use continue to offset the natural growth demand. In addition, more municipalities are mandating green standards in and among their communities.

Energy efficiency mandates also impact the demand for natural gas in Colorado. State-directed demand side management programs provide energy audits; rebates for new, energy efficiency appliances and heat-saving measures such as additional insulation and weather sealing; and free kits offered to consumers that contain items such as low-flow shower heads and weather stripping for windows. These mechanisms continue to push consumption down.

Colorado electricity consumption continued a stable trend in 2013, with residential and commercial consumption increasing by just 0.3%, to an estimated 56,934 million kWh in 2013. Natural gas consumption in Colorado increased by 16.5% to an estimated 517.7 BCF in 2013. ❖



## Building Social Consciousness Among Tomorrow's Leaders

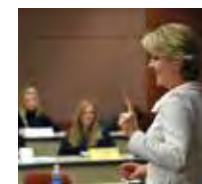
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Larissa Herda, CEO of tw telecom, has often been an executive visitor in CESR's *Leadership Challenges: Exercises in Moral Courage* course, and serves on the CESR Board.



## Information

### Overview

In 2013, growth in software publishing and film is erasing declines in traditional publishing. Employment in the Information sector is expected to remain flat in 2013, and decline modestly in 2014.

Companies in the Information Supersector communicate and deliver content in a variety of channels or media to diverse audiences. They facilitate daily information and cultural exchanges for personal and professional consumption. This industry is forecast to remain flat, at 69,700 jobs, in 2013 and decline, to 69,400 jobs, in 2014.

### Publishing

As the second-largest Information Sector, publishing employed just over 21,600 people in 921 establishments in 2012. The industry includes any firm that issues print or electronic copies of original works for which they own a copyright, excluding Internet firms. Products include software, newspapers, periodicals, books, directories, databases, calendars, and greeting cards. Consumers are demanding and the publishing industry is increasingly producing material in formats other than traditional print, such as audio, downloadable files, digital books, smartphone applications, and CD-ROM.

The rise of the Internet and its attendant social media explosion has had industry-changing implications for twentieth-century traditional publishers. With increasingly rapid changes in communications platforms and preferences come

industry convergence among traditional publishers and fragmentation with the rise of electronic blogs and forums. Consumers' preferences are relentlessly moving away from traditional print products toward electronic products and the Internet, rendering many business models for traditional publishers obsolete. Although the state and nation have emerged from recession and will continue to slowly recover, further consolidation and business failures are expected to persist among some publishing firms. Other publishing firms, however, particularly software and book publishers, have begun to embrace the electronic age and are thriving by providing Internet-related products.

The industry lost 37.9% of its jobs between 2001 and 2012, with more than 70% of those losses occurring in the software and newspaper publishing sectors. Book publishers have also shed 29.9% of their job base since 2001, but because Colorado's book publishing sector is very small, these declines represent only 3.3% of the jobs lost by the overall publishing industry. Employment in publishing (excluding Internet) is expected to continue to fall, decreasing 5.1% in 2013 and 2.4% in 2014.

### Newspaper Publishers

The newspaper publishing business model is in the midst of a long-run structural shift. The traditional model, which provided low-cost print information subsidized by advertisers, has been obsolete for several years. Both content and advertising are relentlessly moving online and are increasingly being accessed by mobile devices, such as smartphones and tablet computers.

The Internet has caused the dissemination of information to be increasingly fragmented and democratic. A new generation of bloggers hailing from the traditional journalism industry, private firms, nonprofit organizations, and the population at large have harnessed social media to provide diverse and targeted news, sometimes in real-time. Consumers have embraced the explosion of information on social media, demanding instant access to news on rapidly changing communication platforms. Traditional media outlets, including newspapers, televisions, and radio, continue to converge, sharing resources and information both in print and online.

Many analysts believe that innovations may have signaled the end of revenue losses for the industry. Newspapers with focused local content and those with a strong brand, such as the *Washington Post* and the *New York Times*, have begun to be viewed as worthwhile investments in the business community. Both Warren Buffet and Amazon's Jeff Bezos bought major newspapers in 2013.

After several years of decline, circulation revenue finally began to increase again in 2012, growing 5% nationwide. The increase was entirely a result of an explosion in revenue from either full or partial online paywalls. In addition, newspapers have begun to develop new revenue sources that harness their readership network and infrastructure to provide new services to their local business communities. Newspapers have gained revenue from helping local businesses market their products digitally and connecting businesses directly



to potential consumers. Newspapers have also reported revenue from commercial printing and delivery services.

Advertising revenue, however, continued to decline in 2012. Newspapers are beginning to be more creative with online advertising, offering innovative mobile applications to all, and incentives and online deals to only their community of subscribers.

Employment at traditional Colorado newspapers has been declining since 2005. Colorado newspapers employed 3,642 people in 150 establishments, down from 7,080 people in 181 establishments in 2005. Although revenue has begun to turn the corner, newspaper employment is expected to continue to fall in both 2013 and 2014.

### Book Publishers

The U.S. book publishing industry has traditionally been dominated by a handful of large firms, most of which are headquartered on the East Coast. The Internet is causing the industry to undergo significant change. With the rise of Google Books, the Kindle, and the Nook, along with cloud computing, consumers are increasingly demanding access to relatively lower cost digital books. In addition, traditional print books have begun to incorporate interactive features, including companion applications for mobile devices, such as smartphones and tablet computers.

Access to online markets has significantly reduced barriers to entry for authors' and small publishers' niche markets. Successful book publishing firms are marketing e-books for every type of

platform and have begun to develop a market for "enhanced" e-books that contain videos, interactive graphics, and links to other purchasable resources and services. According to the Pew Research Center, the number of Americans who read e-books continues to grow, exceeding 20% in 2012. The center also reports that those who read e-books indicate they are reading more than in the past, and they prefer to purchase rather than borrow books.

Jobs in these firms generally include editors, marketers, production staff, and general administrators. Most authors are freelance workers and

are classified in the services industry. Authors who publish their own books have an ever-increasing presence in Colorado, and are not represented in these figures. However, small book publishing firms have increasingly begun to collaborate with these authors.

As the trend toward digital publishing intensifies, fewer people will be employed by the traditional book publishing industry, with some of these jobs likely transferred to the software publishing industry. The book publishing industry employed 1,009 people in 2012, down 0.5% from 2011 and

### INFORMATION EMPLOYMENT 2005–2014 (In Thousands)

Year	Publishing	Telecommunications	Other	Total <sup>a</sup>
2005	29.0	29.3	18.6	76.9
2006	28.5	28.2	18.7	75.4
2007	27.9	30.2	18.3	76.4
2008	26.6	31.0	19.2	76.8
2009	24.1	31.8	18.8	74.7
2010	22.9	30.1	19.0	72.0
2011	22.5	29.6	19.7	71.8
2012	21.6	27.1	21.0	69.7
2013 <sup>b</sup>	20.5	27.3	21.9	69.7
2014 <sup>c</sup>	20.0	27.4	22.0	69.4

<sup>a</sup>Due to rounding, the sum of the individual sectors may not equal the total.

<sup>b</sup>Estimated. <sup>c</sup>Forecast.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

*continued on page 54*

## Information

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29.9% since 2001. Employment in Colorado's book publishing industry will continue to decline in 2013 and 2014, although it is expected to decrease at a slower rate in 2014.

### Directory Publishers

Colorado's directory publishers have decreased by 732 jobs, or 31.9%, since 2006. Consumers increasingly prefer using online directories that can be accessed remotely for free using smartphones and GPS devices, which has affected sales and advertising revenue. Employment in this industry fell significantly in 2012 and is expected to continue to tumble in 2013 and 2014.

### Software Publishing

Companies in the software publishing industry design/develop; provide documentation for; install; provide support services for; and distribute software. (Note: Some additional employment is likely captured in the closely related Custom Computer Programming Services sector in Professional and Business Services.) The software publishing industry is broad; its products include: security software; database, storage, and backup software; business analytics and enterprise software; operating systems and productivity software; design, editing, and rendering software; video games; and smartphone apps. In 2012, software publishing companies in Colorado totaled 397, with 12,340 employees. Overall, the software publishing sector has experienced a 10-year decline in employment, with some businesses consolidating, while others have simply gone out of business. With the evolution of computers, packaged and published

software is less commonplace now than it was 10 years ago. The trend is now writing software and apps for the cloud, which is primarily captured in Professional and Business Services.

Technology trends are supporting components of the software publishing sector, including a healthy video gaming industry, and growth in the use of mobile devices and the opportunity for value creation from small and inexpensive applications for these mobile devices. Additionally, cloud adoption and the application and data integration demanded by this transformation are growing rapidly, along with the need for internet security services. There is a continuing need for large firms to improve their efficiency by creating applications that help the firm more centrally organize and manage its operations, supply chain, and customer relations processes.

Part of the success is demonstrated by the strong startup community in Colorado. A report by the Ewing Marion Kauffman Foundation declared four Colorado cities among the nation's top 10 metro areas with the highest tech startup density: Boulder, Fort Collins-Loveland, Denver, and Colorado Springs. Many software publishing companies are small, and in fact, recent startups. Boulder's software startup community continues to grow, and Startup Colorado established chapters in Fort Collins and Colorado Springs. According to Built In Denver's *2012 Colorado Digital Startup Report*, 122 digital technology startups were launched in 2012, which translates into one startup every 72 hours. Startups require funding, and a general growth in all forms of access to capital is expected, with

positive results anticipated from the new crowd funding options.

One of the greatest challenges facing the industry is the talent pool shortage. Employment data and discussions with industry suggest modest growth in the state's software publishing sector in 2014. The modest growth rate is largely due to the fact that the industry continues to be unable to find qualified workers, which leaves many unfilled jobs. The lack of workers with science, technology, engineering, and mathematics (STEM) skills is recognized and has become a priority at the state level with the governor's STEM action plan underway. This gap has led to many innovative new educational/training opportunities, including CU's new bachelor of arts in computer science degree program in the College of Arts and Sciences and the STEM centers being built at both CU-Boulder and the University of Denver.

Employment growth depends on attracting and growing the needed workforce. The solution is multipronged with high-impact results believed to be achievable through initiatives that connect businesses to students directly to attract workers, as well as private software training focused on specific high-demand software skills like ruby or java (gSchool at Galvanize). Furthermore, if Colorado successfully grows a large qualified workforce it would not only satisfy local hiring demand, but it is believed that it would draw companies outside of Colorado.

## Telecommunications

The telecommunications industry has been deregulating since the breakup of AT&T three decades ago. The Telecommunications Act of 1996 opened local markets to other competitors. The legacy AT&T carriers have continued to be regulated, although those regulations have been loosened over the years. Deregulation and competition has spurred innovation and lower prices for consumers.

Colorado statute provides guidance for determining if there is effective competition for telecommunications service such that regulations can be further loosened. The Colorado Public Utilities Commission is currently considering further loosening of regulation for CenturyLink QC, the incumbent local exchange carrier that serves much of the state. Regulation of rural local exchange carriers will be evaluated in three years.

Telecommunications service revenue shows growth in Q2 2013, with two of the largest telecommunications companies, Comcast and Time Warner, achieving revenue increases of 7% and 10%, respectively. The future of telecommunications is improving with decades-old laws finally being updated.

Looking forward, greater population growth forecasted for the western United States is expected to enlarge the Colorado market for all telecommunications services, drawing more capital investment. In the short term, any local telecommunications growth will probably come from the remaining government commitments aimed at expanding

telecommunications infrastructure in rural communities. In 2012, this industry was comprised of 692 firms and 27,100 employees. Telecommunications industry employment in Colorado fell 8.4% in 2012. Losses moderated in 2013, declining 1.1% and aligning with the national trend.

## Broadband

Businesses are often the largest consumers of telecommunication services. Increased business activity and business investment stand to improve the sector's performance.

Second quarter 2013 status reports from the Broadband Technology Opportunities Program (BTOP), administered by the National Telecommunications and Information Administration of the Department of Commerce, indicate that the seven projects in Colorado are 46–100% complete, with the largest project of more than \$100 million 90% complete. The impact of BTOP in Colorado will continue into 2014.

The Broadband Initiatives Program (BIP), administered by the Rural Utilities Service of the Department of Agriculture, was awarded to seven projects in Colorado, saving or creating 119 jobs with grants totaling \$12.2 million and loans of \$13.4 million.

Advertising revenue from internet ads continue to decline with cost per click revenue for Google declining for the eighth-consecutive quarter since Q4 2011, with a mobile advertising annualized run rate of \$8 billion in 2012.



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MBA PROGRAM

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## Information

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### Telephone

Convergence with the IT industry is one of the major trends in the telecommunication industry according to Gartner research. Telecommunications companies are facing challenges to keep growth and profitability in fixed and mobile broadband investments, and to supplement network revenues with additional digital or value-added service revenues. Evidence in support of this trend is CenturyLink's purchase of Savvis in April 2011 and the purchase of Ciber, a global IT company by Savvis in July 2012.

Other funding to improve communication infrastructure in 2012 came from federal grants that were approved in late 2011 to expand emergency communication. The grants aim to allow rural areas to finance technology-enhancing public safety, such as the ability to precisely locate 911 calls.

### Television

U.S. cable television subscriptions declined to 56.7 million in 2012, down 2.9% from 58.4 in 2011. Nonetheless, total revenue generating units for all U.S. cable services rose to \$132.4 million, up 1.7% from \$130.2 million in 2011. North America saw a significant influx of ad spending, 10.2%, during Q3 2012 due to increased budgets, according to Kantar Media/CMAG. The U.S. cable market continues to face rising competition from Internet protocol television (IPTV), which is drawing TV subscribers away.

Ratings, which are important in maintaining advertising revenue, are increasingly connected

to online word-of-mouth promotion. A report by NM Incite and Nielson found that social media buzz boosted TV ratings significantly, especially in the 18–34 age demographic, where a 9% increase in buzz-raised ratings by 1%. To help maintain ratings, additional synchronized content is pushed via Internet and wireless to enrich the overall viewing experience and foster social engagement.

### Wireless

To boost the competition, construction, and growth of wireless facilities, the Federal Communications Commission (FCC) announced the first of the 2014 spectrum auctions will take place in January 2014. The resurgence of spectrum auctions is a result of Congress' approval of the Middle Class Tax Relief Job Creation Act of 2012, requiring the FCC to auction and license 65 MHz of spectrum by 2015. These upcoming auctions will allow for current government-owned and TV broadcaster-owned spectrum licenses to be sold to the bidder who will put them to a more efficient use. Dish Network has promised the FCC that it would place a minimum bid of \$1.56 billion after competitors Sprint and T-Mobile withdrew from the auction.

New mobile broadband applications have served as strong substitutes for communications service provider's (CSPs) traditional core business. Voice over IP and social networking services have replaced voice and short message service (SMS) offerings to a great degree. As a result, most CSPs are suffering revenue reductions and average revenue per unit reduction for voice and SMS services.

Verizon, AT&T, and T-Mobile have 4G LTE in the major metro areas of Colorado. Sprint plans to consolidate multiple network technologies into one new, seamless network by the end of 2013.

### The Year Ahead

In 2014, telecommunications employment will continue to increase modestly, with localized government projects to expand service to rural areas. With a few exceptions, capital investment is expected to remain low. In particular, the wired communications industry will continue to contract as more consumers meet their needs with bundled services from wireless providers, including voice, television, and Internet.

### Other

#### Film, Television, and Media

In May 2012, Colorado passed a law providing \$3 million in content creation incentives for fiscal year (FY) 2012–13. The law allows for production incentives, with a 20% rebate for films, television, commercials, video games, and other forms of content creation produced in Colorado. Since the incentive doubled, from 10% to 20%, the increase in inquiries and applications has been palpable. From the program's inception in May 2012 to September 2013, a total of \$3.8 million was awarded to productions to incentivize a total of \$35.4 million in proven production spend. Every dollar invested by the state in the rebate program produced a return of \$9.39. The program has created more than \$475,000 in revenue over and



above that awarded for the state and created 776 jobs for Coloradans.

In FY 2012–13, the new incentive program attracted three national Coors commercials, the “Prospectors” reality TV show for the Weather Channel, and Universal Sports, a major television network that relocated its headquarters from Los Angeles to Colorado. Once news spread in the industry of Colorado’s program, in FY 2013–14, the state attracted feature films—*Dear Eleanor*, directed by Kevin Connelly and starring Jessica Alba, as well as the action-packed international hit *Fast & Furious 7*, in addition to Hyundai car commercials and post-production work for five Discovery Channel television shows.

One issue that remains is the lack of a skilled crew base. Although the incentive has recently brought a couple feature films to Colorado, much of the state’s crew has been predominantly working on commercials, and they either have few or very old film/TV credits, which does not inspire confidence in producers. Once the creative decisions are resolved, producers look for two major factors in

deciding where to locate a movie shoot: incentives and skilled labor. If producers cannot find experienced local crew, not only do they incur the added expense of airfare, housing, transportation, per diems, and so forth, but local Coloradans will be overlooked for employment opportunities. However, thanks to recently incentivized production in the state, crews are gaining the necessary experience and education, so the outlook is positive that this will continue to improve. Anecdotally, producers who have worked here were so pleased that several have elected to return.

The Colorado Office of Film Television & Media (COFTM) aims to attract larger productions to the state and therefore, provide in-state crew with the training and experience needed to get the attention of producers. The challenge for 2014 is to increase COFTM’s annual budget so that the state can accommodate rebates for larger productions inquiring about filming in Colorado. For FY 2013–14, COFTM was allocated a mere \$800,000 by the state for incentives. By comparison, competing states, such as Michigan and New Mexico,

have annual budgets of \$50 million, and Georgia does not have an annual cap. Colorado is open for business and the word is out, but more funding is required to accommodate the influx of inquiries. The governor’s budget for FY 2014–15 was released in November 2013 and recommended an allocation of \$5 million for film incentives. This dramatic increase in funding reflects the success of the program thus far, and confidence is high that the legislature will uphold the governor’s recommended allocation. As long as the state keeps the incentives flowing, content creation will build to a significant Colorado business within the next few years.

#### Broadcasting (except Internet)

The broadcasting subsector includes television and radio broadcasting, as well as cable and other subscription programming. This subsector declined by 1.5% in 2012, but is adding jobs in 2013. Average wages, which are above average for the state, have had four-consecutive years of growth. ❖



## Financial Activities

The Financial Activities Supersector is comprised of two sectors that make up 6.3% of statewide employment: (1) Finance and Insurance, and (2) Real Estate and Rental and Leasing. Beginning in 2006, the Financial Activities industry lost 16,600 jobs, or 10.3% over five years before bottoming out in 2011. Financial Activities increased by 2,400 jobs (1.7%) in 2012, and growth continued in 2013, adding an estimated 4,600 jobs (3.1%). Growth in 2014 is expected to continue, albeit at a slower pace, adding 2,700 jobs (1.8%).

Approximately 44% of the employees in the Finance and Insurance Sector work at credit intermediaries, such as banks, credit unions, and other consumer savings and lending organizations. About 37% of the workers are employed at insurance carriers. The remainder work at securities or investment firms or other miscellaneous finance-related firms.

The Real Estate and Rental and Leasing Sector includes real estate-related payroll jobs and companies that lease anything from real estate to equipment to formal wear.

### Finance and Insurance

The Finance and Insurance Sector reversed course in 2012, adding 1,700 jobs after five consecutive years of employment declines. Growth accelerated in 2013, with the sector adding 3,800 jobs. In 2014, Finance and Insurance employment will increase to 108,900, a gain of 2,100 jobs.

## Finance

### Financial Markets

The capital markets continue to roll along with a seemingly perfect Goldilocks balance. Interest rates remain relatively low and equities are within their 52-week high (the Dow reached an all-time high of 16,030.28 in intraday trading on November 18, 2013). However, that balance isn't natural. Both interest rates and equities continue to exhibit the illusionary balance of quantitative easing's training wheels.

### FINANCIAL ACTIVITIES EMPLOYMENT 2005–2014 (In Thousands)

Year	Finance and Insurance	Real Estate and Rental and Leasing	Total
2005	110.3	48.3	158.5
2006	111.4	49.1	160.4
2007	110.1	49.4	159.5
2008	107.4	48.2	155.6
2009	103.8	44.2	148.0
2010	101.7	42.6	144.3
2011	101.3	42.5	143.8
2012 <sup>a</sup>	103.0	43.2	146.2
2013 <sup>b</sup>	106.8	44.0	150.8
2014 <sup>c</sup>	108.9	44.5	153.5

<sup>a</sup>Revised. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Note: Due to rounding, the sum of the sectors may not equal the total.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

The first round of quantitative easing (QE) was announced on November 25, 2008, so by the time you read this QE policy will have been influencing the market for more than five years! As it currently stands, QE policy dictates that the Federal Reserve will purchase up to \$45 billion worth of longer-term Treasury securities in an attempt to suppress long-term interest rates and up to \$40 billion worth of agency mortgage-backed securities, effectively supporting the housing market. That is up to \$85 billion worth of securities hitting the Federal Reserve's balance sheet each month. For perspective, total mortgage originations in 2013 are estimated to be approximately \$145 billion per month. That makes QE the 10,000-pound gorilla in the market.

Needless to say, the Federal Reserve's heavy hand in the market is felt far and wide. The mere hint of an exit, a "tapering" of quantitative easing, sent the markets into a tizzy over the summer. Let's look at the 10-year treasury as it is a benchmark for the pricing of many loans, including home loans. On May 2, 2013, the yield on the 10-year treasury was 1.626%. In June, the taper talk spooked the treasury market and yields spiked significantly. By September 5, the yield on the 10-year had pushed to 3%, a rise of some 137 basis points. Even with the 10-year treasury trading around 2.60% at the time of this writing, it is nearly 100 basis points higher than it was at the start of the home-buying season. Such spikes are problematic for a financing dependent economy. This is reflected in the pending home sales data as June through September posted consecutive declines. The October 30 Federal Open

Market Committee (FMOC) statement specifically noted that housing had slowed. This, coupled with the distraction of Congressional debt limits and budget issues, shut the government down in October and served as a further economic drag. The nation now faces a similar prospect since Congress merely kicked the can into 2014, authorizing current spending levels only until January 15, 2014, and extending the debt-limit ceiling to February 7, 2014. The government shutdown was likely a factor in the sharp decline in Consumer Confidence in October when it plunged from a reading of 80.2 to 71.2, which is a far cry from the 100+

readings in the years preceding the financial crisis. At some point, the training wheels of quantitative easing must be removed for the economy to grow and move forward. Certainly it may lose its balance and fall, but that is how balance is actually learned such that real forward momentum can occur.

That said, if the equity indices are a barometer of economic health, then the United States is doing quite well, and Colorado companies are posting impressive returns. Looking at the returns on the major indices through October 2013, the Dow is

up more than 18%, the S&P is up more than 23%, and the NASDAQ is up nearly 30%. The Bloomberg Colorado Index, which walks the line between the broader market and the tech-heavy NASDAQ, is up nearly 26% through October.

The only global equity index that leaves the United States in the dust is Japan's NIKKEI. Japan has embarked on an aggressive version of QE named after their prime minister, Shinzo Abe, called Abenomics. This has helped propel the NIKKEI up nearly 38% through October.

Looking to 2014, the risks to the market would seem obvious. Stocks have posted lofty returns, and bond yields are dragging along the floor. Given the distortive role of QE and the fact that it has been influencing the markets for half a decade, there is an inherent fear of change to that policy. However, like a child learning to ride a bike, eventually the training wheels must come off, and the risk of falling must be realized. Part of that realization is that while the economy may get a skinned knee, taking off the training wheels of QE is a necessary progression. It will enable us to clearly see where there are imbalances and corrections can then be made. Moreover, the parental hand of the Federal Reserve cannot keep running behind the bicycle, keeping it steady. Bernanke is getting winded, and his heir apparent, Janet Yellen, may find that running behind the bicycle is becoming less effective relative to the effort (magnitude of balance sheet expansion). Ultimately, elected leaders will have to step up to make a full assessment of, and take action on, such issues as the budget,

### FINANCE AND INSURANCE EMPLOYMENT 2005–2014 (In Thousands)

Year	Credit Intermediation and Related Activities	Securities, Commodities, and Other Activities	Insurance Carriers and Related Activities	Other Finance and Insurance Activities	Total
2005	53.3	13.7	40.2	3.1	110.3
2006	53.7	14.6	40.0	3.1	111.4
2007	51.8	15.8	39.2	3.3	110.1
2008	48.6	16.6	38.9	3.3	107.4
2009	46.6	15.5	38.5	3.2	103.8
2010	45.9	15.1	37.7	3.0	101.7
2011	44.9	15.5	37.8	3.1	101.3
2012 <sup>a</sup>	45.6	15.6	38.5	3.3	103.0
2013 <sup>b</sup>	47.0	18.9	39.2	1.7	106.8
2014 <sup>c</sup>	47.8	19.3	40.0	1.8	108.9

<sup>a</sup>Revised. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Note: There was a reclassification of employees from the Other Finance and Insurance Activities sector to the Securities, Commodities, and Other Activities sector in 2013.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

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## Financial Activities

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tax policy, economic policy, and entitlements. However, given that those topics are political kryptonite, action is apt to be slow and reactive to feedback received from the capital markets—be it rising interest rates and/or stock market corrections.

Are further stock market gains possible? Stocks may not be cheap like they were in 2009, but they are not particularly overvalued when looking at such measures as the price-to-earnings ratio. However, there are exceptions to the rule as evidenced by a company like Tesla. At the time of this writing, it has a \$19 billion market cap, trades at 14 times

revenue and is losing money. Tesla's CEO, Elon Musk, who is brilliantly inventive, said recently that his company had "a higher valuation than we have any right to deserve." The same can be said for many of the social media companies. So while the broader market certainly has room to make further gains, it could easily get caught in a correction should some of the bubblier parts of the economy lose favor or otherwise face stress.

A possible source of that stress could come from interest rates. Since so many aspects of the U.S. economy are predicated on financing, when interest rates rise, asset valuations tend to experience a

degree of price correction. At present, the expectation is that the Federal Reserve will revisit the issue of tapering in the first quarter of 2014. Assuming that Congressional budgetary actions do not result in undue damage to the jobs and consumer confidence picture, it would be reasonable to expect a tapering program to begin in the latter part of Q1 and progress throughout the year. While higher interest rates could be disruptive, they are likely to be met by a host of yield hungry investors. This influx of buying will offset, to a degree, the scaling back of Fed purchases via QE and will serve to restrict the magnitude of the rise in interest rates. What levels will attract investors and place a ceiling on the rise, remains to be seen. Certainly investor interest grew as the yield on the 10-year treasury reached 3% in early September 2013. Looking for some historical context, in late 2008 the yield on the 10-year treasury was around 3.75% and in 2003 it was 4.25%.

Colorado is also increasingly becoming a hotbed of capital markets players. It was announced that Fidelity will be locating its Exchange Traded Funds Division in Denver. Redwood Trust, a large real estate investment trust (REIT), has been shifting operations to Denver from California, and the well-known discount brokerage, Charles Schwab, will be completing a 467,000-square-foot Lone Tree campus later in 2014. As long as the national economy can maintain an upward trajectory, Colorado would appear to be poised for above average growth.

### FINANCIAL MARKETS: STOCKS 2004–2013 YTD (Year-End Close)

Year	Value				Index (2004=100)			
	S&P 500	Dow Jones	NASDAQ	Bloomberg Colorado Index	S&P 500	Dow Jones	NASDAQ	Bloomberg Colorado
2004	1,211.9	10,783.0	2,175.4	278.9	100.0	100.0	100.0	100.0
2005	1,248.3	10,717.5	2,205.3	326.0	103.0	99.4	101.4	116.9
2006	1,418.3	12,463.2	2,415.3	382.5	117.0	115.6	111.0	137.1
2007	1,468.4	13,264.8	2,652.3	450.2	121.2	123.0	121.9	161.4
2008	903.3	8,776.4	1,577.0	220.5	74.5	81.4	72.5	79.1
2009	1,115.1	10,428.1	2,269.2	310.3	92.0	96.7	104.3	111.3
2010	1,257.6	11,577.5	2,652.9	468.4	103.8	107.4	121.9	167.9
2011	1,257.6	12,217.6	2,605.2	451.6	103.8	113.3	119.8	161.9
2012	1,426.2	13,104.1	3,019.5	467.5	117.7	121.5	138.8	167.6
2013 <sup>a</sup>	1,804.2	16,057.8	3,990.6	599.0	148.9	148.9	183.4	214.8

<sup>a</sup>Year-to-date value at market close on November 22, 2013.

Sources: Bloomberg, Colorado Business Economic Outlook Committee, and Yahoo! Finance.

## Commercial Banking

The future of Colorado banks is improving. Banks both nationally and in Colorado have continued to see improvements in rebuilding their capital structures. Loan portfolios have continued to improve as nonperforming loans declined but intense competition has limited interest income.

Decreases in problem loans on both a current and estimated future basis allow banks to recognize current profits that increase their capital structure. This is a noticeable difference from prior years when some banks in the middle of the crisis and early in the recovery had to reduce their balance sheets by any means, running off high-quality loans to meet ever-changing regulatory ratios. However, banks continue with capital challenges. In light of industry consolidation, the surviving bank in a merger and acquisition (M&A) transaction has to find the capital for the purchase to proceed.

There were no FDIC bank closures in Colorado in 2012 or 2013, representing a return to normalcy. Another sign of Colorado banks' improving financial health is their reduced dependency on brokered deposits.

Colorado banks face the following headwinds:

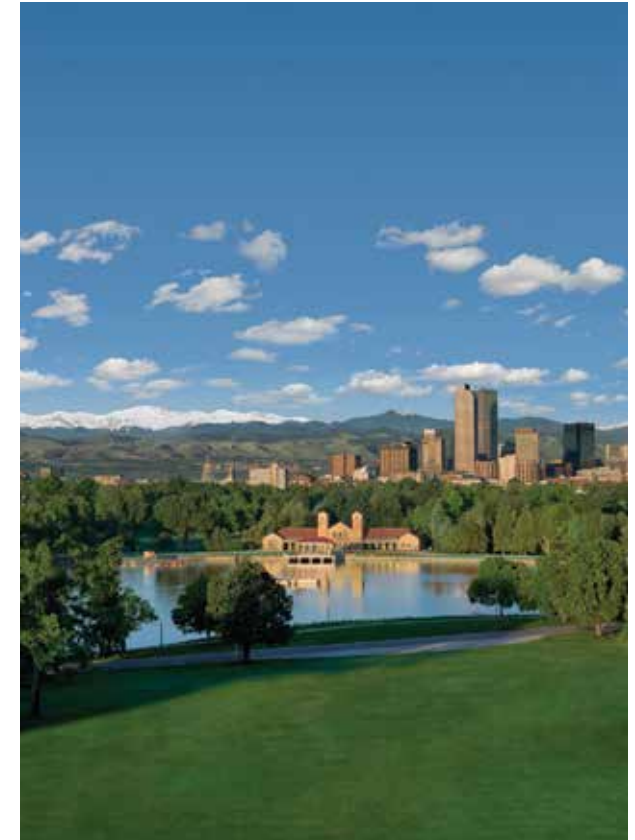
- Low loan interest margins will continue to limit earnings. While larger non-Colorado domiciled banks have other diversified revenue streams to help, most of Colorado's local community banks do not.
- While banks' financial ratios are improving, Colorado is likely still behind the national trend

given its high concentrations of community banks and their exposure to commercial real estate.

- Despite the recent upward trend in earnings and capital, banks are not likely to hire traditional business development officers or loan underwriters as they are more focused on selectively adding loan growth one quality customer at a time.
- Both Colorado and non-Colorado domiciled banks continue to hire and devote resources dedicated to the increased regulatory and compliance burdens, and to greater information technology (IT) needs. This will be a problem for local community banks as these new compliance burdens are expected to put them in a competitive cost disadvantage compared to the economies of scale their larger out-of-state competitors have. For all banks, however, the weight of federal regulation has greatly increased expense and opened new risks, such litigation based on the Dodd-Frank Act and its rules.

Finally, for many of Colorado's community banks that came through the crisis but must face these headwinds, they may need to choose between years of slow and painful growth, or be acquired by a better capitalized bank (often larger) with the compliance and IT resources to address today's burden.

Colorado's community banks have continued to experience limited options for raising new capital as required by regulators and that demand is accelerating. Regulatory pressures are escalating



compliance costs. Those greater costs need to be spread over a larger asset base to achieve the needed return on investment in order to attract capital. This needed larger asset size and the cost, difficulty, and even inability to raise capital are fueling consolidation among community banks nationwide and in Colorado. When faced with the need for greater size and challenges in raising capital, the only viable options for some community banks is to sell.

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## Financial Activities

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Colorado banks are facing structural headwinds. Many Colorado bankers have insisted that loan demand is weak, especially among the most credit worthy borrowers with equity to fund new ventures. While bank lenders to small business are busy, it often is a race among several to the lowest rate, which results in very little net new business. Often banks are trading business among themselves, frequently resulting in unprofitable loan pricing for the bank and great rates for the borrower. Colorado's banks are also expected to feel more of the pain because they rely heavily on traditional yield spread products and have less

ability to take loan underwriting risk (limited by commercial real estate exposure) or pursue other diversified revenue sources. Larger regional banks with operations in Colorado may fare better under this scenario. Fee income has declined greatly and will continue to do so, largely due to price fixing by the federal government in the formerly profitable line of debit and credit card interchange fees.

### Dodd-Frank 2012 Update

Passage of the Dodd-Frank Act created the Consumer Financial Protection Bureau and required

creation of 398 separate new rules, some of them enormously complex. By the time of this writing in November 2013, Dodd-Frank Act rulemaking had these results:

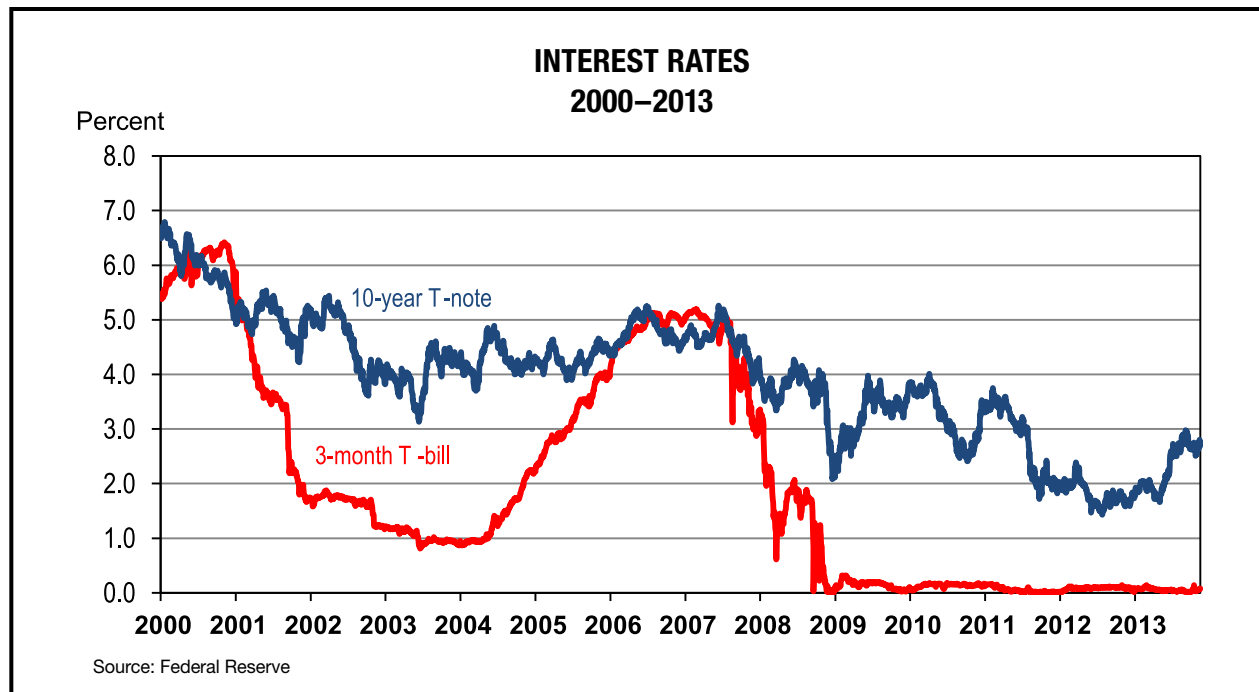
- 398 rules required
- 162 (40.7%) have been finalized
- 115 (28.9%) have not yet been proposed
- 121 (30.4%) have been adopted

Concern exists about the pace and complexity of potentially conflicting rules under the Dodd-Frank Act. For example, seven separate rules with substantial impact have been proposed covering real estate lending:

- Qualified Mortgages (QM)
- Qualified Residential Mortgages (QRM)
- Real Estate Settlement Procedures Act/Truth in Lending Act Reform (RESPA/TILA)
- Servicing
- Mortgage Loan Origination Compensation
- Appraisals
- Home Ownership and Equity Protection Act (HOEPA) Standards for High Cost Loans

### Qualified Mortgages

Implementation of the QM and other real estate rules stemming from the Dodd-Frank Act are set to go into effect in January 2014. While larger mortgage lenders may be prepared, it appears that mid-size and smaller institutions that rely on outside software vendors will not be able to comply





by then. Changes to QM throughout the last year (many sought by the industry) have forced restarts in software design, delaying the products on which some banks depend—and pushing back tedious work that banks must complete after receipt of the software, such as software customization, changes in internal policies and procedures, legal and compliance review, and staff training.

Software issues have raised concerns about compliance by the January deadline, and in an unforgiving regulatory environment, some banks appear to be opting to not make covered mortgage loans after the implementation date. Adding to that, the litigation risks imposed by new standards in the Dodd-Frank Act have added a new larger area of risk analysis that plays into whether some smaller banks will continue in mortgage lending.

Meanwhile, the industry continues to press for delay of the January deadline to allow time for banks to work out software, compliance and IT issues, and to better understand of litigation risks so that there is no disruption in mortgage lending. Without that delay some banks will exit the mortgage business. When some customers of those banks find an alternative lender at a larger institution, often all of the customer's business flows to the new lender, thereby increasing pressure on smaller institutions.

Customers likely to be most affected by banks exiting mortgage lending include: rural residents because many community banks in those locations might not continue mortgage lending, low income individuals who will not meet new standards in the mortgage rules, and small business owners who

disproportionately use home equity to finance their business.

### Basel III Update

While practically everyone believed the proposed Basel III capital requirements for banks would apply only to the largest global banks for which they were written, U.S. banking regulators in June 2012 shocked the industry by proposing the standards be applied to all banks in the nation. It was widely regarded as reducing available lending and driving up loan rates—injuring businesses, jobs, and consumers. Efforts in support of small businesses and jobs would have been thwarted by the adverse impact on borrowers and the economy. The banking industry spoke out harshly against the Basel III proposals, arguing they are unbalanced and damaging to businesses and jobs.

The resulting final rule saw great improvement that addressed the strongest of the industry's complaints. However, not all industry concerns resulted in changes. Basel III now appears to be an ongoing issue, with minor changes taking place through the next several years.

After the financial crisis, Colorado banks increased their capital to historic highs with total risk-based capital exceeding 16%. The Basel III proposals were crafted for large global banks, not community banks that are unique to the United States.

The original Basel III proposal changed the definition of capital, disallowing forms of capital blessed by Congress just two years earlier in



## Burrige Center for Finance

The Burrige Center supports the educational and research objectives of the Leeds School's Finance Division, developing and supporting programs, resources, and events that enhance the student experience.

### Center Highlights

- Financial Lab enables students to learn on the same computer systems used by finance professionals such as Bloomberg and more;
- Wall Street Trek brings finance students to New York City to visit Wall Street firms. Trips to other financial centers are planned, including Denver, Chicago, and San Francisco, where alumni and friends of the school support the Treks with site visits and alumni events;
- The Burrige Center's annual conference encourages interaction among students, faculty, and the financial community, sharing the latest in research and practice.

The Burrige Center plans to offer additional programs, including training for the CFA professional credential program and the CFA Research Challenge, as well as sponsoring/preparing more students in trading competitions, such as the Chicago Mercantile Exchange Challenge.

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BURRIGE CENTER FOR FINANCE

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## Financial Activities

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the Dodd-Frank Act. For community banks, this is very expensive, and the industry scored a significant win with the favorable changes in the final rule. Risk-weighting drives how banks lend, incenting banks to focus on certain loans and not others. Feared harsh results from the initial proposal were avoided with the broad changes in the final rules' risk-weights to determine required capital.

Lenders facing uncertain rules will be cautious and restrict lending until rules and resulting risks are clear, hurting customers as banks resist growth and expansion. It was believed that many smaller banks would exit residential real estate lending, a concern that continues in the residential mortgage market. Similar bad impacts could occur in community development lending, including the financing of affordable housing (loans, bonds).

### Credit Unions

Against a backdrop of modestly increasing economic growth, slow job gains, and shaky consumer confidence, Colorado credit unions reported first-half 2013 operating results that show improvement in nearly all key areas. Credit unions are seeing solid operating results with strong membership growth, higher loan growth, improved asset quality, strong earnings, and better capital ratios.

Overall, credit union memberships in Colorado increased by 32,000 in the first half of 2013, finishing at 1.52 million. This annualized 4.2% increase is higher than the 3.3% full-year 2012 gain and is the fastest percentage increase recorded in the state in nearly two decades (i.e., since the 4.7% increase

in 1996). The membership growth rate is substantially higher than the 1.7% population growth in the state as reported by the U.S. Census Bureau.

Total credit union assets in the Colorado's 94 credit unions increased by \$289 million, to \$17.4 billion, at mid-year 2013—a 3.4% annualized six-month gain.

In the first half of 2013 Colorado added jobs and saw a half-percentage point decline in the unemployment rate. Those improving labor markets, consequent higher incomes, and pent up demand for housing and autos led to fast growth in credit union loan portfolios. In fact, credit union loan portfolios grew at an annualized rate of 8.4% in the first half of the year, a substantial increase over the 4.9% growth in full-year 2012 and the fastest pace since 2008.

Job market gains have also translated to continuing improvement in credit union asset quality. Delinquencies declined from 0.70% of total loans at the start of 2013 to 0.63% at mid-year 2013. Net charge-offs also fell from 0.54% of average loans

in 2012 to an annualized 0.42% of average loans in the first half of 2013.

Earnings remained at healthy levels in the first half of the year, with credit union return on assets totaling 0.83% in the first half—nearly equal to the 0.88% 20-year average level. With modest asset growth and strong earnings, the average credit union capital-to-assets ratio increased from 10.9% at the start of 2013 to 11.1% by mid-year. The current capital buffer reported by Colorado credit unions is about one-half percentage point higher than the U.S. credit union average.

Overall, credit union operating results have continued to inch toward long-run norms. Continuing problems related to government budget issues suggest consumers will remain cautious and, by extension, the economic recovery will continue at a slow pace. In this context, credit union operating results will improve modestly in 2013 and into 2014, with healthy levels of lending, further improvements in asset quality, and solid earnings.

### Status and Outlook

These capital and regulatory forces further pressure industry consolidation. A number of transactions are being explored or arranged by the necessary legal, accounting, and investment capital consultants. They anticipate M&A activity in Colorado, where mid-to-smaller institutions are on the buy side. Larger banks are not anticipated to purchase many smaller institutions.

The current makeup of banks operating in Colorado consists of roughly 55% of deposits residing in the four largest banks. In this context, deposits

**Against a backdrop of modestly increasing economic growth, slow job gains, and shaky consumer confidence, Colorado credit unions reported first-half 2013 operating results that show improvement in nearly all key areas.**

can serve as a rough proxy for loans, too. Conversely, community banks with deposits less than \$100 million (last two categories combined on the chart on page 62) face a situation where those 67 banks with less than \$100 million (44% of all banks doing business in Colorado) collectively hold \$3.6 billion in deposits (3.4% of the industry total). Again, deposits can serve as a rough proxy for loans.

With mounting compliance and IT challenges, and ever-increasing regulatory burdens and litigation (and other) risks, significant pressure exists for smaller banks to find a niche where they can prosper or to become part of a larger organization. The dizzying pace of change in banking appears to continue unabated.

## Insurance

Despite numerous changes in all sectors, the insurance industry has experienced some economic bolstering during calendar year 2013. However, it tends to lag behind the economic indicators as policy premium adjustments are tied to insurance renewal dates. Because of this, the industry is not able to respond as promptly as other, more fluid business sectors. As the world and U.S. economies appear to have become more stable, the full effects of the Colorado economic recovery on the property and casualty (P&C) industry will soften due to the hail, fires, and flood losses the state experienced in 2013. The employee benefits side of the industry is beginning to feel the effects of the roll out of the Patient Protection and Affordable Care Act (ACA). The full effects may likely not be felt until 2016 or



beyond if additional deadlines within the legislation are delayed. The insurance sector as a whole is expected to experience employment growth, but most of it will be due to increased volume as Colorado's population continues to grow, and new government bureaucracies to support ACA are created.

Personal lines P&C has grown as the economic upturn has increased insurable property values, and consumers buy toys, new cars, and second/vacation homes in record numbers. Combined

with the organic and transplant growth in population in Colorado, this will cause the construction of more new housing, thus increasing the total dollars spent on premiums. This will also create the need for more employees to sell and service those policies.

The direct writers All State, State Farm, American Family, and Farmers Insurance continue to dominate the personal lines marketplace and are opening new agencies in Colorado on a continuous

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## Financial Activities

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basis. They are constantly recruiting locally and nationally for agents and service/support positions in Colorado.

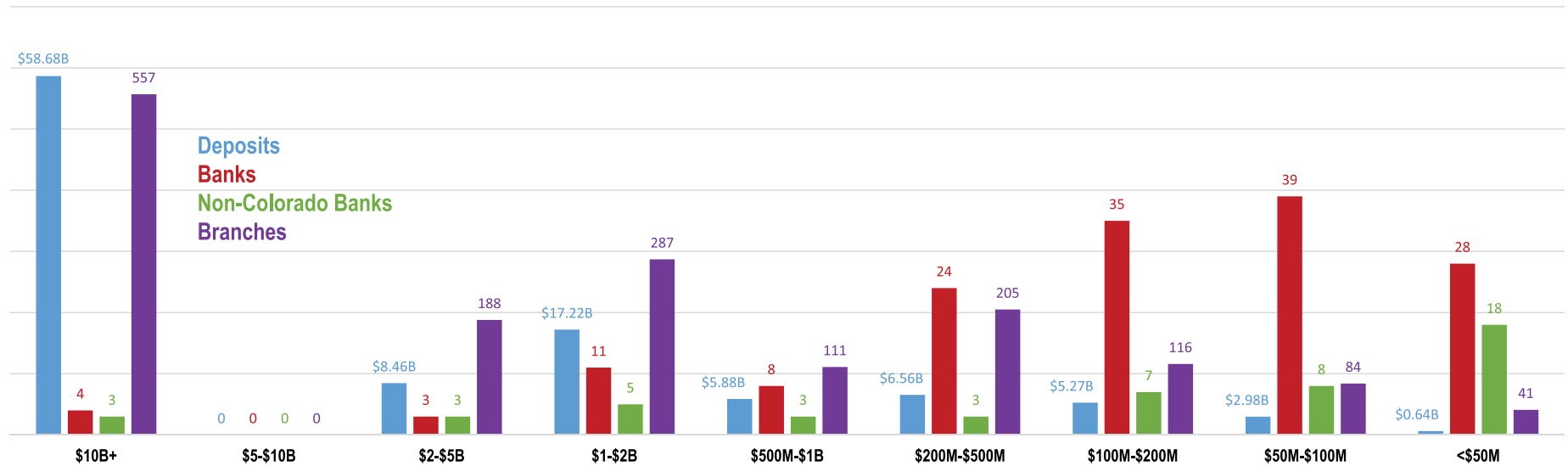
Commercial P&C has felt a temporary steadying in the market. Premiums are increasing mainly due to increases in property values, sales figures, and payroll, which are factors multiplied by the rate to establish the annual premium. In addition, there is a record number of new business startups, and an increasing number of businesses are being

attracted to Colorado by state and local economic development efforts. Coupled with the high incidents of hail, wind, fire, and flood claims, increased rates and growing premium volumes are predicted for the next several years.

Employment in the commercial insurance sector is on the upswing as the increase in new businesses leads to growth in the number of policies that will need to be serviced by the insurers. The largest Colorado-based commercial insurance company

and the state's largest writer of workers' compensation (WC) insurance, Pinnacle Assurance, has had relatively flat employment as it continues to plot its course for the future. Speculation still exists that it is on the path to become a private company. Pinnacle has taken steps to improve its financial position by terminating several unprofitable association and chamber of commerce programs. These actions, along with some staffing changes and rerating of several unprofitable industry segments,

### COLORADO BANK DIVERSITY



Note: 1st column: 4 banks (3 non-Colorado) with 55% of Colorado industry deposits. Last 2 columns (banks<\$100M) total 67 banks (44% of banks in Colorado) with 0.6% of Colorado industry deposits. Last 2 columns (banks<\$100M) total 67 banks (44% of banks in Colorado) with 0.6% of Colorado industry deposits. 50 of 152 banks (33%) are headquartered outside of Colorado. Total: 152 banks (50 non-Colorado), \$105.6B in deposits. Includes 102 banks headquartered in Colorado as well as 50 banks domiciled elsewhere, only deposits in Colorado counted. X axis is bank asset size categories.

Source: Colorado Bankers Association.



have led competitors to speculate that this could signal more changes coming from Pinnacol. This speculation has prompted competing WC carriers to enter or improve their position in the Colorado marketplace.

## Employee Benefits

This segment of the insurance industry has experienced the most unprecedented, volatile, and uncertain year in the industry's history. The implementation of the ACA, or Obamacare as it has come to be known, has had, and will continue to have, a profound effect on employers, consumers, and insurers. Even though several minor steps toward implementation were taken in the last several years, January 1, 2014, marks the date of actual implementation of this sweeping legislation. The most notable pieces of the legislation that are yet to be implemented are:

### 2014

- Individual mandate
- State-based exchanges for individuals and small groups
- Small employer tax credits available through the exchange
- Subsidies for qualifying individuals and households earning less than 400% off federal poverty level (FPL)
- Elimination of health underwriting and preexisting condition exclusion
- Age-based community rating, age-band compression, and elimination of SIC code rating

- 50+ size employers required to offer minimum essential coverage
- HIPPA nondiscrimination rules on wellness programs
- 90-day limit on waiting/probationary periods for coverage
- 30-hour definition as coverage eligible

### 2015

- Large employer reporting requirements commonly known as the employer mandate goes into effect. Delayed from original 2014 effective date.
- Definition of small group redefined as 1-100 (in most states)

### 2018

- 40% excise tax on high-cost “cadillac” plans
- Premium increases are predicted for group and individual health plans as legislated changes in underwriting, rating, and mandated coverages are implemented. Concerns have been expressed that the exchange will attract the aging and chronically ill segment of the population as the Cover Colorado Program for the uninsurable goes away. Industry experts fear that there will be fewer employer-sponsored plans, which will create a new segment of uninsured from the middle class. Low-income individuals and families qualify for state-based Medicaid or federal premium subsidies but the middle class will not have access to that assistance.

Industry experts also worry about the effects of steering the large number of previously uninsured into what is considered an inefficient and costly U.S. health care system. Employment in health care has not been able to keep pace with current demand. With 5,400 more physicians retiring each year than graduating from medical school, wait times and inefficiencies to accessing care will likely increase. The looming “provider shortage” has created opportunities for other solutions to provide medical services and advice. Numerous new access points for care have emerged in the state. Whether it is at a place of employment, grocery store, pharmacy, online, or on the phone, the implementation of ACA has increased the development of an entirely new and different delivery system for care.

The Colorado health care exchange called Connect for Health Colorado has been recognized as one of the best organized and a model for state-based exchanges. Created using a grant from the federal government, the exchange has hired and trained many employees to educate and to provide advice and enrollment assistance for individuals and employers. Going forward, the exchange must meet its enrollment goals in order to continue to be a self-sustaining entity and provide the current high level of services and assistance. Predictions are that all exchanges, both state-based and federal, will fall short of their enrollment goals for 2014. This will lead to a need for additional funding to be obtained from federal and state governments in order to keep the exchanges operating.

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## Financial Activities

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As brokers and consultants become more familiar with ACA, they cite some interesting scenarios. As part of the mandated individual coverage enrollment process, potential insureds must determine if they qualify for a premium subsidy. In order to do that, they must first confirm that they do not qualify for Medicaid. Individuals who earn less than 133% of the federal poverty level (FPL) may qualify for Medicaid. Individuals and households who earn less than 400% of the FPL may qualify for some level of federal premium subsidy to purchase coverage through the exchange. According to Susan E. Birch, executive director of Colorado Department of Health Care Policy and Finance, as of November 1, 2013, a total of 26,000 Coloradans had signed up for Medicaid since open enrollment began. An enrollment of 160,000 is expected by the close of the enrollment period. This increased enrollment will ultimately increase the amount of money required to fund Medicaid.

According to John Kurath of Warner Pacific, a general agency for employee benefits insurance, “trying to predict a health insurance industry economic and employment forecast is going to be very difficult when the industry has changed so dramatically.” Kurath believes “under employment” will significantly increase as employers limit weekly hours worked to fewer than 30, making those individuals ineligible for employer-sponsored health coverage. He also worries that “on shoring” will also grow significantly, especially in the tourism and ski industry. On-shoring is a newly defined employment strategy that is created when employers hire workers who are in the United

States on a valid work visa, but are not eligible for the exchanges or federal premium subsidies and, most likely, have some form of health care coverage through their home country.

### Life, Disability, and Accident

While this segment of the individual and group insurance marketplace has not been affected as much as health insurance, it has undergone change nonetheless. Premiums have been steady or slightly declining as our society becomes safer and people live longer. There has been a shift in coverage points as employers cut back on their employee benefit budget and reduce the number of these ancillary benefit offerings. This causes employees to purchase these coverages directly or on a voluntary, employee payroll deduction basis.

### Insurance Agents, Brokers and Consultants

An unprecedented number of insurance agency mergers and acquisitions occurred in 2013. Many agents and agencies have had to refocus or reinvent themselves in order to continue to deliver a high level of service to clients. The addition of value-added services, such as risk management, safety, loss control, and ergonomics on the P&C side, along with payroll, human resources consulting, and wellness in the employee benefit segment of the business, has driven hiring for many agencies in these nontraditional service areas. Along with these services, agencies have begun to bolster their expertise in partial self-funded medical plans and professional employer organizations as these represent areas of relative safe harbor from ACA for qualifying employers.

The ultimate effect for the insurance industry is rising premium revenues and modest gains in employment in specific industry segments. While some organizations grapple with the unknowns of sweeping ACA legislation, it has also forced a static industry to look for new revenue streams in order to continue profitable growth. The concerns that arise are for individuals and employers who will be faced with increasing insurance costs; mandates to offer coverage and/or benefits not previously offered; and exposure to new taxes, fees, and penalties that had not previously been assessed.

### Real Estate and Rental and Leasing

Real Estate and Rental and Leasing is expected to end 2013 with 800 more jobs and is projected to add 500 in 2014. Overall, this sector was impacted by marginal increases in employment and a more optimistic housing market compared to 2012.

#### Real Estate

##### Commercial Real Estate

Job growth is the #1 driver of commercial real estate (CRE) activity, noted real estate firm, Cassidy Turley, in a recent report. Denver ranked in the top 10 nonfarm job growth markets in the country, with 3% growth.

**Metro Denver** CRE has been in “full-speed-ahead” mode in 2013 claims Kevin McCabe, executive vice president and regional managing director, Newmark Grubb Knight Frank, Denver region. A recent MarketWatch report by Transwestern noted that Metro Denver’s CRE markets showed improvement through August 2013, with increased

lease rates and construction activity, and declining vacancy. Overall office vacancy declined to 16.5%, continuing a 14-quarter trend due to robust organic growth primarily in the central business district (CBD) and southeast suburban submarkets, while average lease rates rose to \$22.51 per square foot (psf). Overall industrial vacancy decreased to 6.6%, with 1.6 million square feet absorbed, driven mostly by large build-to-suits, and lease rates stood at \$5.09 psf. Overall retail vacancy decreased to 7.8%, the lowest since 2008, while year-to-date absorption was 666,000 square feet, and lease rates were mostly flat, at \$14.82 psf. Denver's strong demographics and market fundamentals are attracting business and retailers, such as Cabela's, H&M, Schwab, and Trader Joe's. Once again, expect speculative and build-to-suit projects in select metro locations driven by tightening supply and rising rents.

**Northern Colorado** (NoCo) is experiencing an active energy market, high-tech growth, resurgence of manufacturing, and a rejuvenated housing sector—key factors supporting local CRE performance. In 2012, Weld County accounted for an estimated 75% of all crude oil production. Similarly, according to the Milken Institute, Fort Collins-Loveland ranked fifth in the United States for high-tech GDP growth, noting increases in job growth. Housing permits are rising due to a limited supply of existing inventory, leading to price appreciation. In Q4 2012, the average cost of a home in NoCo rose between 3% and 21% year-over-year. Chris Doyle with The Group Inc. reported commercial vacancy rates for industrial, retail, and office, in December 2012 was 4%, 6%,

7%, respectively, in Fort Collins; 18%, 9%, 7% in Greeley, and 14%, 4%, 17% in Loveland. When compared to December 2011, vacancy rates in industrial, retail, and office were 5%, 7%, 9%, respectively, in Fort Collins; 7%, 1%, 8% in Greeley; and 16%, 5%, 11% in Loveland. Moody's Analytics predicts the NoCo economy will outperform the state and the nation. Expect CRE activity to remain vibrant in 2014.

**Southern Colorado's** economy is weathering the Department of Defense stagnation largely due to the importance of operations related to missile defense and the global positioning system. However, the future of the economy in Colorado Springs remains dependent on job growth, which has been flat over the past few years. Sierra Commercial Real Estate notes that Q3 2013 commercial vacancies and rents decreased as space was absorbed but plentiful supply continues to keep downward pressure on lease rates. Office vacancy declined to 15%, the lowest since 2008, from 16.9% in same period in 2012, and rents decreased to \$10.67 psf triple net from \$11.00 psf. The key for the office sector remains employment growth. Industrial vacancy declined to 9.4%, the lowest since 2007, while asking rents averaged \$6.22 psf, an increase compared to \$5.91 psf the same period the previous year. Retail has been making positive strides as large users like Bass Pro Shops and Walmart neighborhood grocery stores come on line. Vacancy rates of 11% are flat, and rents of \$11.68 psf declined from \$12.47 psf from a year ago. Expect slow gains in CRE activity for 2014.

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## CU Real Estate Center

Founded in 1999, the University of Colorado Real Estate Center's (CUREC) mission is to develop the next generation of real estate leaders through teaching, research, and industry engagement. Offering a very comprehensive program supporting undergraduates and MBAs, CUREC provides an education founded on academic research and practical applications. Mark your calendars for CUREC's Annual Real Estate Conference on March 5, 2014, at the Denver Marriott City Center.

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CU REAL ESTATE CENTER

## Financial Activities

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### REAL ESTATE AND RENTAL AND LEASING EMPLOYMENT 2005–2014 (In Thousands)

Year	Real Estate	Rental and Leasing	Total
2005	34.4	13.9	48.3
2006	35.1	14.0	49.1
2007	35.4	14.0	49.4
2008	34.3	13.9	48.2
2009	31.9	12.3	44.2
2010	31.2	11.4	42.6
2011	31.1	11.4	42.5
2012 <sup>a</sup>	31.5	11.7	43.2
2013 <sup>b</sup>	31.8	12.2	44.0
2014 <sup>c</sup>	32.2	12.3	44.5

<sup>a</sup>Revised. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Note: Due to rounding, the sum of the sectors may not equal the total.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

**Western Slope** and the southern communities, including Durango, have experienced a resurgence of residential activity, which belies the fact that the energy and gas sector has slowed in the area. Economic developers are working hard to promote and attract nonenergy related industries that support job growth and diversity. Through Q3 2012, the Heritage Title Company reports year-over-year

real estate transactions are up 7.6%, to 2,770, and total dollar volume is up 15.3%, to \$580 million. The median price of a Grand Junction area home has risen from \$160,000 in December 2012 to \$168,000 in September 2013. One reason for the activity is a slowly stabilizing economy, but also shrinking supply caused by a dramatic decrease in foreclosures and modest construction activity. More diverse job growth will spark CRE activity.

Since 2008, Colorado's Front Range and Western Slope have focused state and local resources on attracting higher-paying jobs and diverse industries, such as aerospace and high tech. The success of the CRE market depends on Colorado sustaining growth in its employment base as pointed out by Cassidy Turley. Expect further strengthening of real estate fundamentals in 2014.

### Residential Real Estate

Residential real estate markets across the nation advanced their recoveries during 2013. Colorado, which began the year on better-than-average footing, experienced widespread strengthening in both the for-sale and rental markets. Historically low mortgage rates, improved consumer confidence, and in-migration assisted in Colorado's residential market gains during 2013. For-sale markets experienced increased sales activity and price appreciation while the rental markets tightened further with low vacancy rates and rising average rents. Construction activity in both product types is gaining in intensity, although the Metro Denver market will likely experience increased vacancy rates in 2014 due to the 37,000 units underway

in Metro Denver alone. Residential real estate employment totals will increase in 2014 as new realtors enter the marketplace to take advantage of heightened activity and overall value gains. Apartment developers and management firms will add staff for lease-ups and to manage the thousands of units in the pipeline.

Despite the positive trends exhibited by market fundamentals, a handful of factors may decelerate overall growth, including recovery struggles related to recent floods and fires, increasing premiums for flood insurance, and rising mortgage rates.

### For-Sale Existing

U.S. existing home sales activity reached a four-year peak in August 2013 but declined 1.9% in September to a seasonally-adjusted annual rate of 5.29 million sales according to the National Association of Realtors. Still, the September pace was 10.7% stronger than a year earlier. Existing home sales, including single-family homes, townhomes, and condominiums, have increased on a year-over-year basis for 27 months. Limited inventory has kept upward pressure on prices in many U.S. markets. The supply or inventory of unsold homes on the market in September 2013 was 2.2 million, which was 1.8% higher than the prior year ago and represents a five-month supply at the current sales pace.

Freddie Mac reported the national average commitment rate for a 30-year conventional fixed-rate mortgage increased to 4.49% in September 2013 from 4.46% in August. The September average is at

the highest level since July 2011 (4.55%) and well above the September 2012 average (3.47%).

Population gains from in-migration affect the local residential real estate markets. According to a poll by Harris Interactive, Colorado is the fifth-most desirable state to live in, and Denver is the seventh-most desirable city. Colorado ranked high among baby boomers (fifth), women (fifth), and Americans over 68 years old (third). Another study by Forbes suggests that the Inland West, which includes Denver, Salt Lake City, and Boise, will be the fastest-growing region in the United States over the next decade. The region grew 21%, to 32.3 million people between 2003 and 2013.

The Colorado Association of Realtors third quarter report revealed steady, consistent improvement in most of Colorado's for-sale residential markets. Statewide home sales, including single-family detached and attached homes and condominiums, increased 19% from Q3 2012, to 28,287 units in Q3 2013. Homes prices continued to climb in 2013, increasing 9%, to \$260,000, for single-family detached homes and 10%, to \$171,000, for single-family attached and condominiums. Although inventory levels remain relatively low, new listings increased 15% on a quarter-over-quarter basis while average days on the market declined to a 4.5-month supply for single-family and a 3.8-month supply for attached product.

Data from RealtyTrac, which tracks distressed and nondistressed property sales, reported an increase in Colorado residential sales activity of 4.2% in September 2013 compared to the same month the

previous year. The statewide median sales price also increased 9.5%, to \$230,000 from September 2012 to September 2013 according to RealtyTrac. For comparison purposes, the national median price rose 5.8% over the same period, to \$174,000.

The Metro Denver region also experienced increased sales activity and price appreciation in 2013. MetroList data indicate a 21.7% year-to-date increase in homes sales through August 2013 and an 11.2% gain in the median single-family home price, to \$287,000. The median sales price for condominiums increased 15.2%, to \$160,000, as of August 2013. Despite year-over-year price appreciation gains, price appreciation appears to be decelerating in recent months.

Additional sources for home price appreciation trends include the S&P/Case-Shiller index and the National Association of Realtors, both of which confirm robust price appreciation for the Metro Denver region. According to the S&P/Case-Shiller Index, Metro Denver home values increased 10.1% from August 2012 to August 2013, which was a slightly more moderate pace than the nation's 12.8% gain. The 20-city composite index for August revealed a deceleration in many markets, including Denver. The National Association of Realtors reported year-to-date home price appreciation for the Boulder region (+7.5%) and Denver-Aurora region (+12.4%) compared to an 11.8% increase for the United States through Q2 2013.

Residential markets in several Colorado regions have been negatively impacted by recent fires and flooding, including Boulder, Colorado Springs,

and NoCo. Despite Mother Nature, these markets are experiencing strengthening market conditions overall due to increased sales and rising home prices.

Existing single-family home sales are up 20.1% through September 2013 on a year-to-date basis in Colorado Springs according to the Pikes Peak Association of Realtors. New listings have increased 13.6% over the same period. The average sales price for single-family homes climbed 7.5% on a year-to-date basis, to \$237,534. The condominium and townhome market experienced similar year-to-date conditions, with a 27.5% increase in sales, a 25.6% increase in new listings, and a 14.3% increase in the average sales price, to \$163,090.

A report from the Fort Collins Board of Realtors reveals four consecutive quarters of increases in market indicators, trending toward a return to "normal" market conditions. Single-family sales increased 15.4% on a year-to-date basis through September, followed by an 11.7% increase new listings. The average sales price for single-family homes increased 6.5%, to \$299,396, through the first three quarters of 2013. Condominiums and townhome sales were up 13.3% over the same time period, followed by a 5.6% increase in new listings. The average sales price for a condominium or townhome increased 11.4%, to \$178,370, through third quarter.

*continued on page 72*



## Financial Activities

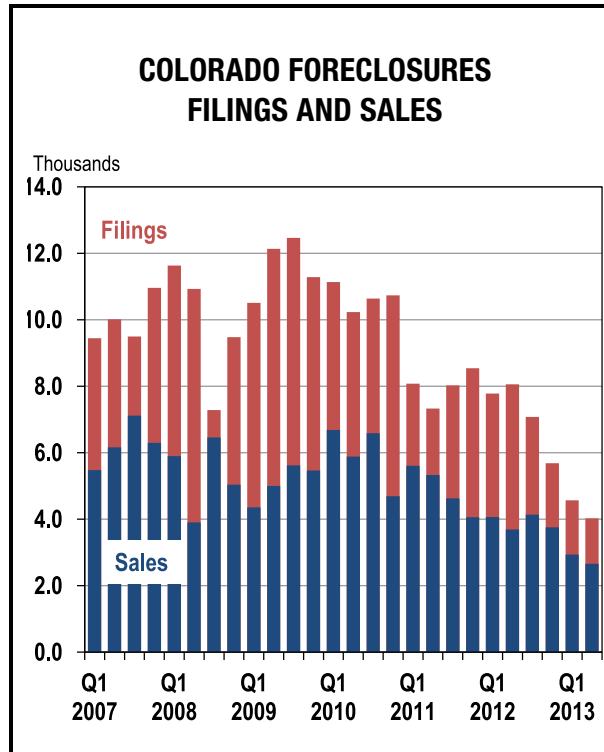
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Land Title tracks residential real estate trends in Colorado's mountain resorts, covering Eagle, Garfield, Grand, Pitkin, Routt, San Miguel, and Summit counties. Land Title's Q2 2013 report shows increased transaction activity in all seven counties but mixed year-over-year pricing results. The number of residential transactions in Q2 2013 increased 13.1% from the same quarter in 2012, excluding Routt County. The median residential sales price increased in Garfield County (+28.6%), Eagle County (+7.7%), and Grand County (+5.1%) from Q2 2012 to Q2 2013. Declines were posted in Pitkin (-15.4%), Routt (-8.7%), and Summit (-8.2%) counties. (Information was not available for San Miguel County.) The number of bank sales was down significantly in all counties except Pitkin, suggesting a reduction in bank-owned inventory and foreclosure activity.

### New Home Activity

U.S. home builders are optimistic and working through pent-up demand generated during several sluggish years. Homebuilders are sensitive to uncertainty in Washington and the potential for increased interest rates; however, interest rates remain at historically low levels and potential upward pressure is not expected to be drastic or immediate.

The National Association of Home Builders/Wells Fargo Sentiment Index slipped to 55 in October 2013 from 57 in the month prior, although current index levels are well above most monthly values since mid-2006. For example, the index value of 58 posted in August 2013 was the highest monthly posting since November 2005. On a regional



basis, the Midwest led with an index value of 64, compared to 60 in the West, 56 in the South, and 38 in the Northeast. The index measures current sales conditions, sales expectations for the next six months, and prospective buyer traffic.

At a state level, Colorado is outpacing the nation for residential permit activity. The U.S. Census Bureau estimates 18,625 building permits have been issued in Colorado through August 2013, of which 39% are for buildings with two or more units. Total permit activity in Colorado was up 23% in 2013 compared to the same eight-month

period in 2012. Permit activity for the nation was up 21% on a year-to-date basis.

Residential building permits in Metro Denver soared to the highest monthly level—1,646 permits issued in August—in more than six years. Single-family detached permit activity was up 27.9% on a year-to-date basis through August 2013 compared to a 63.8% increase in single-family attached units and a 64.1% gain in multifamily permits. Total permit activity in Metro Denver was up 41.5% on a year-to-date basis through August.

### Foreclosures

Foreclosure activity has declined at a national level in 2013. The National Association of Realtors reported that distressed homes, including both foreclosures and short sales, accounted for 14% of September 2013 sales compared to 24% the previous year. Foreclosures and short sales sold for an average discount of 16% and 12% below market value in September, respectively.

Colorado, and the Denver area in particular, have largely moved past the “foreclosure crisis” of the mid-2000s, and analysts expect further improvement. A recent report by CoreLogic found that in August 2013 Colorado was tied for the third-lowest foreclosure inventory as a percentage of all mortgaged homes. Moreover, the Denver metropolitan area had the lowest rate of foreclosure activity (percentage of homes in foreclosure) in August among the top 25 metropolitan areas in the United States.

The Colorado Division of Housing reported a 54.7% decline in statewide foreclosure filings



between August 2012 and August 2013. Public trustee data for the seven-county Metro Denver region revealed a considerable slowdown in activity, with a 48% year-to-date reduction in filings during the first half of 2013.

## Rental and Leasing

### Rental Market

The Colorado rental market experienced further tightening in 2013 as evidenced by low vacancy rates and rising rents. Colorado remains a popular state for relocation, particularly with 25 to 34 year olds, which supports demand for rental product. Rental markets in certain regions are seeing increased demand stemming from displaced residents due to recent floods and fires. The likelihood of rising mortgage rates will support demand for rental product, although mortgage rate increases are projected to be minor and not immediate. Home price appreciation will also support demand. The pipeline of multifamily units to be delivered in 2014 will likely negatively impact vacancy rates; however, rental rates will only moderate in appreciation.

Statewide multifamily market fundamentals continue to improve according to a joint report by the Colorado Division of Housing, Apartment Realty Advisors, and Pierce-Eislen. The average monthly rental rate increased 3.6%, from \$942 in Q2 2012 to \$976 in Q2 2013. Meanwhile, the

overall vacancy rate declined from 4.9% in June 2012 to 4.5% the same period a year later. The statewide report includes Metro Denver, Colorado Springs, Fort Collins-Loveland, Grand Junction, and Pueblo.

The average monthly rental rate in the Metro Denver region increased 6.3% in Q3 2013, to \$1,048 from \$986 in Q3 2012. Rental rates are still slightly below the peak in 2001 according to the Colorado Division of Housing and the Apartment Association of Metro Denver. The vacancy rate was relatively steady, at 4.4% in Q3 2013, despite recent project deliveries. Looking ahead, the extent of impact from recent and future project deliveries on the multifamily market remains to be seen but will likely increase the overall vacancy rate and moderate rental rate growth.

More than 37,000 units are either under construction or proposed in Metro Denver, which represents 11% of today's total apartment inventory and a 34% increase from the Q3 2012 pipeline. About 19% of the 37,000 units underway are located in Denver's CBD. Apartment Insights expects 9,000 units to be completed in 2014, which will be the most significant annual delivery in more than a decade. Q3 absorption reached the highest level in 12 quarters, at 1,723 units, led by activity in the CBD. Apartment Insights anticipates a softening in the overall vacancy rate in 2014 resulting from the unlikelihood of absorption reaching 9,000 units. Finally, Pierce-Eislen included Denver in its most

recent list of the 10-most active apartment markets, which collectively represented 44% of total U.S. activity.

Vacancy rates continued to decline in Colorado Springs, according to the Q2 2013 Colorado Springs Apartment Vacancy & Rent Study. The Q2 2013 vacancy rate of 5.4% fell from 6% in Q2 2012 and 6.4% from Q2 2011. Average rents have risen steadily over the past two years, increasing from \$759 in Q2 2011 to \$807 in Q2 2013. Rent discounts and concessions are down slightly, from 8.7% in Q1 2013 to 8.0% in Q2 2013. Apartment Insights reports a 73.1% increase units planned or under construction from Q3 2012 to Q3 2013, with the two-thirds of the current activity underway in the north submarket.

NoCo's apartment market fundamentals have been strong throughout 2013, exhibited by a 7.6% increase in average rent from Q3 2012 to \$991 in Q3 2013, along with a low Q3 vacancy rate of 2.9% for stabilized properties of more than 50 units. According to Apartment Insights, 3,847 units are either under construction or planned in NoCo as of Q3 2013. Pipeline activity is up 57.1% from the same quarter in 2012. More than half of the pipeline activity is occurring in the Fort Collins market, followed by lesser levels of activity in Loveland, Greeley, and Erie/Firestone/Frederick. ❖

## Professional and Business Services

### Overview

Colorado continues to demonstrate strategic advantages across the Professional and Business Services (PBS) industries and subsectors. These include the second-most college educated workforce in the country, a business- and entrepreneur-friendly environment, and a high-quality outdoor life that attracts young professionals, particularly those in their 20s and 30s. In fact, thanks to a tightening labor pool nationally in professional services, the starting salary for U.S. professionals is expected to rise 3.4% in 2014. Slightly larger increases are expected in the Denver area, according to Robert Half International, the staffing services company.

Recent news regarding PBS companies and employment is generally positive, although a few areas are potentially weak. Since PBS companies often provide services to other industries, developments in those client industries and the

consequent funding capabilities directly impact PBS employment.

The 2013 expectations for the PBS Sector were partially shaped by political and fiscal uncertainty that existed a year ago, and continued into 2013. Sector employment is expected to grow 4.9% in 2013 and 3.8% in 2014. Growth may be stronger if political and fiscal uncertainty subsides.

### Professional, Scientific, and Technical Services

This diverse sector provides a range of specialty and general services to businesses in Colorado. Importantly, the reluctance of companies and organizations to commit to in-house full-time hires has continued to support overall demand for many project-based professional consulting services.

As a result, the growth in demand for management consulting services and employment picked up in

2013. In fact, consulting firms have now relaxed the hiring freezes that characterized 2012 and are committing to new strategic hires beyond those meeting immediate client needs. Given this backdrop, the committee expects the level of hiring to gradually increase through 2014.

One of the traditionally strong subsectors of PBS has been the Professional, Scientific and Technical Services sector. Firms are often built on talent-based business models using specialized consultants, architects, lawyers, and engineers. One interesting project is the Niobrara Energy Park. This Weld County project site, engineered by CH2M Hill, a leader in this subsector, will be a \$4.2 billion renewable energy production and datacenter project that will combine clean fossil fuels, alternative energy, smart grid, energy storage, renewable energy research, direct current power, and cloud computing data centers. During construction, this project will add thousands of construction jobs, and will ultimately create many high-paying permanent jobs at full buildout. A secure and fully contained data center and self-generated energy production facility, it will be one of the world's major cloud computing data centers, capable of generating its own secure power. It will be located in a truly unique area with a fresh nontributary water supply, telecommunications, electricity, natural gas, and fiber grids—establishing a “digital Fort Knox” for the world's next generation of cloud computing.

In another positive development, DigitalGlobe, the world's leading satellite imaging operator, will be relocating its corporate headquarters from Longmont to Westminster in a move that will

### Did you know...

Colorado ranks first in the nation for its concentration of private **aerospace** employment. With support from eight major space contractors, more than 400 space-related companies and suppliers, and numerous laboratories, Colorado's aerospace industry grew by 19.3% in the past decade. The state is an industry leader, ranking third in NASA prime contracts, and is home to some of the nation's most notable aerospace projects.

Four space-related commands and three military bases provide critical support to the growth of the

state's aerospace business base. Colorado also serves as a hub for commercial spaceflight activity, mission operations, and launch services, and is a national center for geospatial technologies.

The aerospace sector provides a fertile environment for startups, which are instrumental in developing new applications of aerospace technologies. The state ranks as the third-largest recipient of SBIR grants, and more than half of Colorado's aerospace companies employ fewer than 10 people.

consolidate and expand its operations, adding as many as 500 employees. The Westminster location, which is expected to open in 2015, will consolidate four office locations in Colorado. DigitalGlobe completed a \$450 million acquisition of rival GeoEye, which had multiple facilities, including one in the Denver area. The company said it will maintain offices in Herndon, Virginia; Tampa, Florida; London; and Singapore. Colorado-based DigitalGlobe publicly sells nonclassified satellite imagery and has continued to grow its business with the U.S. government, its largest customer. With a year-over-year 47% revenue growth rate, it is clearly on an expansion track.

In response to the recent Front Range floods, DigitalGlobe activated a FirstLook event. Before and after high resolution satellite imagery of the affected areas was made available to first responders and government agencies (e.g., Federal Emergency Management Agency, the Red Cross, National Guard, etc.), which enabled more intelligent planning and far better situational awareness of the event.

Other companies in this sector continue to do well, particularly across the Front Range. Indicative of this growth, Hewlett Packard expects to fill 44 open positions in Colorado, with most in software engineering, system administration, and support analysis.

The aerospace industry in Colorado continues to provide jobs for PBS businesses. Governor Hickenlooper and the Office of Economic Development recently presented the results of a Brookings Institution study that estimated the number of

space economy workers in the state totals more than 66,000. Spaceport Colorado, which is planned for the Front Range Airport, could provide both research and industry opportunities. In 2013, Spaceport gained momentum with \$860,000 raised for feasibility studies and an agreement with Swiss Space Systems to use the facility for business expansion in the United States.

Sierra Nevada's Dream Chaser recently moved to Edwards Air Force Base in California for flight tests. Previously, the aircraft had been tested at Rocky Mountain Metropolitan Airport in Jefferson

County. Other large players in this sector include United Launch Alliance and Lockheed-Martin. The number of jobs is expected to grow in the space arena with the teaming of private companies, public companies, and government funds.

The Space Foundation Discovery Center celebrated its one-year anniversary in October. This education center, which fosters a science-based science, technology, engineering, and math (S-STEM) program, is a technology attraction for Colorado Springs. For higher education students, the

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### TOTAL PROFESSIONAL AND BUSINESS SERVICES SUPERSECTOR EMPLOYMENT 2005–2014 (In Thousands)

Year	Professional, Scientific, and Technical Services	Management of Companies and Enterprises	Administrative and Support and Waste Management and Remediation Services	Total <sup>a</sup>
2005	156.0	25.3	135.5	316.8
2006	162.8	27.2	141.9	331.8
2007	170.3	28.4	149.3	347.9
2008	176.7	28.9	146.4	351.9
2009	169.7	28.5	132.0	330.2
2010	167.2	29.0	133.3	329.4
2011	172.0	30.2	138.0	340.2
2012	178.3	31.8	145.4	355.5
2013 <sup>b</sup>	189.2	34.7	148.9	372.8
2014 <sup>c</sup>	198.1	35.4	153.5	387.0

<sup>a</sup>Due to rounding, the sum of the individual items may not equal the total. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

## Professional and Business Services

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Colorado Space Grant Program, funded by NASA, gives students access to courses, satellite programs, and interaction with scientists and engineers. Students get experience with projects such as CubeSat (a nano-satellite) and High Altitude Student Platform (HASP) payloads. Higher education programs involving aerospace extend to Pueblo Community College with the Gorsich Advance Technology Center and to the University of Northern Colorado with the RockSat-X launch program.

In 2013, the Colorado Office of Economic Development and International Trade created the Advanced Industry Export Grant Program to create synergy across education, government, and private-sector companies throughout the state. The mission includes fostering access to capital and providing grant funding. The industries covered by the program include aerospace, advanced manufacturing, bioscience, electronics, energy and natural resources, infrastructure engineering, and technology and information. In addition to funding, the program provides consulting and training resources.

The PBS Committee expects Professional, Scientific, and Technical Services growth of 6.1% in 2013 and 4.7% in 2014.

### Legal Services

Motivated by substantial structural change across Legal Services, some Colorado law firms are expanding across borders, collaborating with foreign counsel and forming intercontinental mergers. Globalization continues apace, not least due to the automation of legal processes, developments in data

security, and emerging technology tools. Additional impacts are expected from legal process outsourcing (LPO) firms that may be located anywhere in the world. In fact, many LPOs now operate online with overnight turnaround in many cases.

Overall, most legal firms are expecting flat to steady growth in demand for their services as the economy improves. According to Law Week Online, Colorado firms anticipate ongoing growth, attributing it to the improving economy and successful summer clerk programs. Law firms cited a need to expand to areas outside their core practice groups. Intellectual property, regulatory compliance, and immigration were cited by a number of firms as key growth areas. According to Robert Half, starting legal salaries are anticipated to rise 2.7% in 2014.

Since 1997, Legal Services has lost jobs in only one year; otherwise, it has exhibited steady job growth in spite of negative impacts. Since 2008, several large legal firms, with attorneys numbering in the thousands, have either seen large reductions in staff or have gone bankrupt. Supreme Court decisions that have ruled against large class-action suits have also negatively affected this profession. The *Denver Business Journal* (June 14, 2013) states that only four firms have more than 100 attorneys, with most firms employing 20–50. Only three of the Top 52 listed Colorado law firms indicate they are a branch of a very large firm in another state.

The PBS Committee expects Legal Services to grow 5.8% and 5.7% in 2013 and 2014, respectively.

### Architectural, Engineering, and Related Services

Several events affect the demand for architectural and engineering services. Numerous large projects that would have needed architectural and engineering design services were delayed or cancelled in 2013, including the cancellation of a planned General Electric solar plant. Federal spending on military and other projects is expected to remain steady on the construction side even though sequestration hit on January 2, 2013. Federal appropriations for highways and bridges remain steady with the latest transportation bill called MAP-21. However, this funding source sunsets in late 2014. With a 27-month life, it has not provided the long-term funding needed for sustained large multiyear projects. To complement MAP-21, the Colorado Department of Transportation (CDOT) has implemented the Responsible Acceleration of Maintenance and Partnership (RAMP) Program totaling \$1.5 billion over the next five years. This will provide multiyear funding for several large projects, including the widening of I-25 from Longmont to Fort Collins, pavement repairs to halt the deterioration of highways around the state, the bolstering of bridges and culverts, and rock-slide prevention. Engineers with specific highway and bridge design skills are becoming scarce locally. As a result, firms are increasingly looking outside of Colorado for talent.

The Black Forest fire and the September floods have also increased the demand for architects and engineers. They are needed to redesign the damaged infrastructure and buildings lost in both



**PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES SECTOR EMPLOYMENT**  
**2005–2014**  
**(In Thousands)**

Year	Legal Services	Architectural and Engineering Services	Computer Systems Design Services	Management, Scientific, and Technical Consulting Services	Other	Total <sup>a</sup>
2005	17.2	39.0	35.7	15.1	49.0	156.0
2006	17.4	41.1	37.1	16.0	51.2	162.8
2007	17.9	43.3	39.3	16.4	53.4	170.3
2008	18.1	44.8	41.3	17.4	55.1	176.7
2009	17.8	41.5	40.2	16.9	53.3	169.7
2010	17.8	39.0	40.0	17.6	52.8	167.2
2011	18.3	39.2	41.7	18.9	53.9	172.0
2012	18.7	40.5	43.9	19.9	55.3	178.3
2013 <sup>b</sup>	19.8	42.8	47.2	20.6	58.9	189.2
2014 <sup>c</sup>	20.9	45.1	48.2	21.2	62.7	198.1

<sup>a</sup>Due to rounding, the sum of the individual items may not equal the total. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Note: There was a reclassification of employees from the Computer and Electronics sector in Manufacturing to the Computer Systems and Design Services sector in Professional and Business Services in 2013.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

tragic events, which will help maintain the demand for engineering and architectural jobs through 2014. The need for redesign and rebuilding will affect government agency budgets in future years. With growth in population and jobs statewide, tax receipts have improved for public agencies. Outlays for roads, bridges, water, wastewater, and other public services are expected to increase as population grows.

Residential and commercial development has strengthened significantly

from 2012. Home builders are working at a frantic pace to keep up with demand. Site development firms are doubling and tripling their staffs to keep up. It was just a few years ago that firms in this part of the subsector were desperately reducing staff, getting absorbed by other firms, or going bankrupt.

Several large projects are ongoing or getting ready to start. The expansion of Denver International Airport and the Regional Transportation District's FasTracks projects are ongoing.

The Gaylord Hotel complex is now in the hands of new operators, Rida Development Corporation and Marriott International. This project is expected to commence construction sometime in 2014.

The issue of construction defects is expected to be rehashed in the 2014 General Assembly. Denver-area mayors and business leaders are planning to reintroduce measures that would reform current laws. Construction defects legislation in

2008 resulted in fewer residential and mixed commercial-residential multifamily buildings. The rate of new multifamily starts was 26% in 2007, dropping to 2% due, in large part, to this legislation. If construction defects reform does happen, it is anticipated that the need for design and construction of multifamily buildings will increase, along with transit-oriented development buildings that are located near public transit stations.

Architecture and Engineering Services is expected to grow 5.6% in 2013, then ease to 5.4% the following year.

### Computer Systems Design and Related Services

The Computer Systems Design subsector has benefited from increased investments in information security, social networks, and mobile and cloud computing. The ubiquity of smartphones and tablets drives a need for increasingly flexible computer networks and supporting services. As a result, the demand for highly skilled information technology (IT) workers is expected to grow.

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## Professional and Business Services

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Visa Inc. will add more than 400 new jobs over the next five years at its global technology center in Douglas County. These jobs in IT, financial services, and client support will pay an average of \$106,000 a year. This is roughly 180% of the average Douglas County salary according to the *Denver Business Journal*. In another coup for Douglas County, Hitachi Data Systems announced its intent to develop a new 200-worker hub there.

The PBS Committee expects growth of 2.1% in 2014. The Computer Systems Design of Related Services Sector will increase to 47,200 jobs in 2013 after a reclassification of workers

from the Computer and Electronics Sector to Manufacturing

### Management of Companies and Enterprises

One of the most diverse sectors, companies in the sector represent a wide variety of businesses and industries. Many of these firms are company headquarters, and Colorado has continued to make gains in this area. Future prospects appear bright as well. This sector also includes companies that manage other businesses. They include Vail Resorts, Echosphere (Dish Network), Johns

Manville, Comcast, Arrow Electronics, and MDC Holdings, among others. The sector represents about 2% of Colorado's economy and has generally recorded modest job growth.

Colorado-headquartered Vail Resorts recorded more than 7 million ski trips last season—growth of more than 13%—making it the busiest resort network in the nation. Vail Resorts' net income increased by almost 130% during the recently completed fiscal year on July 31, 2013. Looking ahead, Vail CEO Rob Katz said in October that he expects trends to continue as 2013–14 season-pass sales were already up over 23%.

Dish Network is currently working on a \$2.2 billion bid for the wireless frequencies owned by LightSquared Inc. This would bring Dish 35 megahertz of bandwidth for a wireless broadband network. If the company gets these frequencies, then the company can finally offer a unique four-service package of satellite TV, satellite Internet, mobile Internet, and mobile phone service.

Johns Manville has posted 22 jobs in Colorado, with targeted skills ranging from supply chain, R&D, IT, and account management.

Comcast has leased the Greenwood Village building that formerly housed TriZetto Corporation's headquarters, which will accommodate its growing business services unit. The company has plans to move 300 employees to the site. Additionally, Comcast has posted more than 190 jobs in Colorado, led by opportunities in sales, IT, and field operations.

### ADMINISTRATIVE AND SUPPORT AND WASTE MANAGEMENT AND REMEDIATION SERVICES SECTOR EMPLOYMENT 2005–2014 (In Thousands)

Year	Employment Services	Services to Buildings and Dwellings	Business Support Services	Other	Total <sup>a</sup>
2005	40.2	37.9	17.9	39.5	135.5
2006	42.6	39.0	19.8	40.5	141.9
2007	44.0	40.3	23.2	41.8	149.3
2008	40.1	40.6	25.4	40.3	146.4
2009	30.0	38.0	25.6	38.4	132.0
2010	33.7	36.8	25.5	37.3	133.3
2011	37.0	37.0	25.4	38.6	138.0
2012	40.7	38.1	27.2	39.4	145.4
2013 <sup>b</sup>	43.2	39.4	27.6	38.7	148.9
2014 <sup>c</sup>	46.2	41.9	27.8	37.6	153.5

<sup>a</sup>Due to rounding, the sum of the individual items may not equal the total. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

MDC Holdings has posted 21 jobs in Denver across a variety of home-building specialties. This is likely in response to increasing demand due, in part, to the recent flooding.

Not all companies are expanding at this time. Newmont Mining has reduced its Colorado workforce in response to the confluence of continued softening in gold prices, coupled with higher operating and production costs.

The committee is forecasting growth of 9.1% in 2013 and 1.9% in 2014.

### **Administrative and Support and Waste Management and Remediation Services**

While the September flooding resulted in a surge of business, it is not clear that substantial rebuilding will occur due to the lack of insurance coverage and other legal issues facing a significant percentage of property owners. As a sector, waste management companies did not and are not expected to make additional staff hires or equipment purchases due to the flooding. The growth forecasts for construction and consumer spending, combined with continued volatility and lower demand and prices on the global market for recyclable commodities, indicate lower than expected job growth in this industry sector.

The one area of growth among regional companies could come from communities implementing curbside recycling collection requirements; however, no statewide effort exists that would result in dramatic hiring or equipment purchases in 2014. That said, the sector can be expected to maintain

activity levels of the last two years (post 2009 recession slowdown). The committee projects growth of 2.4% and 3.1% in 2013 and 2014.

### **Employment Services**

It is well known that Americans are dropping out of the workforce. This trend is likely to continue, benefiting the Employment Services Sector as companies replace the full-time positions lost during the recession with more specialized part-time or contingent resources.

Labor statistics show the number of workers provided by temporary agencies has more than doubled since 1990. The Government Accountability Office reports that contingent workers, such as freelancers, contractors, consultants, and temporary workers, now account for about one-third of the workforce. This rise in the number of temporary and contract work shows that many employers are not willing to hire for the long run. This explains why the number of temps has jumped more than 50% nationally since the recession ended four years ago according to recent reporting by the Associated Press (AP).

McKinsey Quarterly reports that global competition, emerging skill shortages, and changing demographics will soon force companies to use their most highly paid talent more effectively. In the United States the skills gap could reach 1.5 million graduates by the end of the decade. Specialists will bring the expertise that generalists lack, often at a far lower cost, indicating that this trend will pick up speed as skill shortages take hold.

Staffing Industry Analysts state that employers spent \$1 billion in 2012 hiring workers for short-term projects through online labor exchanges such as oDesk and Elance. This is a gain of 67% from the year before according to reporting by the AP. An AP survey of 37 economists in May 2013 revealed that 75% believe the increased use of temps and contract workers represents a long-term shift.

Unemployment in Colorado's IT staffing and services market is at 3% according to a representative from one of the state's largest IT staffing firms. Frictional unemployment further reduces the state's actual involuntary unemployment percentage to just less than 1%, creating one of the tightest IT job markets in history. Managers from some of the state's largest employment agencies indicated an across-the-board shortage of qualified candidates and a shift in attitude with regard to a candidate's interest in changing jobs. Some candidates are entertaining multiple offers. To many highly skilled candidates, company culture and workplace flexibility are just as important as the overall compensation and benefits package.

Most of the employment services managers surveyed for this report see the Colorado job market expanding for highly skilled workers. These managers predict that lower level positions will continue to become more commoditized. Major challenges cited today include the shortage of qualified workers in IT, the uncertainty of health care reform, and stalled immigration reform. Starting in January 2014, the Patient Protection Affordable Care Act (ACA) requires employers with at least

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50 workers to offer affordable coverage or to pay a penalty. To stay under this limit some are considering outsourcing jobs to staffing specialists or temp agencies. By requiring employer coverage only for those who work at least 30 hours a week, the act appears to create an incentive for companies to do less with permanent workers and more with part-timers, who are the main focus of staffing agencies. The *Denver Post* reported that companies have up to 12 months to determine whether a person is full time and qualifies for health benefits—even if the employee does end up working full time. According to the ACA, employee contributions cannot exceed 9.5% of their annual salary, and employees working more than 1,300 hours in a year must be covered, which places a burden on employers. Since Massachusetts implemented its own requirement that companies provide health coverage to full-time workers, temp jobs increased six times faster than in the nation as a whole, said Jeffrey Silber, a staffing company stock analyst for BMO Capital Markets. Staffing agencies share prices have shot up, partly in response to the recovering economy and partly because of hopes for a surge in ACA business, industry analysts say.

Employers are closely watching federal immigration reform, trying to plan for changes it might bring. *USA Today* reported that U.S. Citizenship and Immigration Services (USCIS) currently issues only 65,000 H-1B visas nationwide each year, which means companies in scientific and technological work need to plan ahead. “In Boulder, there are a lot of employers who complain they can’t find the skilled workers they need,” said Brad J. Hendrick, immigration lawyer and member at

Caplan and Earnest LLC in Boulder. “They need people with IT and scientific backgrounds. All of this year’s H-1B visas were gone by April 5. We’ve got more applications than visas.” “The biggest issue for Colorado is the H-2B visa program,” said Ali Brodie, immigration attorney and associate at Greenberg Traug LLP, in the *Denver Business Journal*. “Businesses in the mountains especially rely on that program, for not just ski-area workers but also the housekeepers, waiters, and other workers who service hotels and lodges.” Ultimately, immigration issues are part of economic globalization. “Immigration addresses the concept of the global economy, of companies wanting to bring in talent from around the world,” Brodie said.

In this uncertain environment, the use of temps and contract workers is likely to continue to accelerate, resulting in Employment Services growth in Colorado of 6.1% in 2013 and 6.9% in 2014.

### Services to Buildings and Dwellings

This category grew steadily during the 1990s and even through the high-tech bust. The rental price of downtown Denver office space—led by LoDo buildings—is headed for a record in 2013 according to international real estate consulting firm Newmark Grubb Knight Frank. After falling to a recession average low in 2011 of \$20.23 per square foot, the price is projected to hit \$32 a square foot by the end of 2013. “The real estate fundamentals are very strong for Denver,” said Tim Swan, a managing director at CBRE, the world’s largest commercial real estate company. “After San Francisco and Seattle, Denver will have the strongest

job creation in the West for the foreseeable future,” Swan said. Toronto-based First Gulf Corp. said it will build a 21-story tower at 1401 Lawrence Street, with 290,000 square feet of office space and 7,500 square feet of retail space.

Just a couple of years ago, this subsector experienced job losses. Buildings were mothballed or support staffs were consolidated to serve multiple buildings in order to cut costs. Vacancy rates in both downtown and in the Tech Center are very low again as demonstrated by these increasing lease rates. Buildings are filling up again, and job growth in this subsector is increasing. Several new offices are under construction downtown and along I-25, which is expected to result in growth in jobs in the next couple of years.

The committee expects growth of 3.5% and 6.2% in 2013 and 2014, respectively.

### Summary

Highly skilled and educated PBS graduates are necessary for most of the subsectors to be able to successfully provide these critical services to their clients. High-school graduation rates and higher education costs pose a particular concern for these unique professions. PBS organizations need highly educated and flexible resources to sustain and possibly grow their workforces while replacing retiring baby boomers. Another concern is the impact of the ACA on industries served by PBS companies and the potential dampening effect on growth and employment. ❖

## Education and Health Services

The Education and Health Services Supersector includes private-sector education, as well as four health care and social assistance sectors including ambulatory care, nursing, hospitals, and social assistance. Nearly 88% of industry employment is made up of Health Care and Social Assistance, while slightly more than 12% is related to private education. Education and Health Care added 8,900 jobs in 2013, with growth of 3.2%. Growth in 2014 is projected at 2.8%, with employment expected to end the year around 298,800 jobs.

### Educational Services (Private)

Public education is detailed in the state and local government section of this book. Public elementary and secondary educators are in local government; public higher education is in state government.

In 2012, private-sector educational services consisted of 2,444 organizations. This includes educational institutions that can be classified as private not-for-profit, private for-profit, religious exempt, and private occupational, as well as private companies delivering training and development and other ancillary and support services. Employment numbers for the private education sector for 2013 point to growth of 300 jobs, totaling 35,200 for the year. The sector is projected to add nearly 400 additional jobs in 2014.

The education sector is typically countercyclical relative to the economy; the growth in this sector during the last two economic downturns supports this theory. For-profit education revenues are

expected to increase at a slower rate over the next five years.

### Concerns that May Limit Employment Growth

In spite of the aforementioned optimism, there are hurdles, including the following:

- Reported enrollments are down across the private college sector, with declines of 20%–40% being reported during 2012 and 2013.

—The *Denver Post* reported (October 17, 2012) that the University of Phoenix, one of the larger private-sector employers in Colorado, was closing 115 brick-and-mortar campuses nationwide and that 5 of those are in Colorado. These 5 are among their smallest campuses, and the closings will occur over time, with impacts spread over 2013 and 2014.

—In October 2013, the *Washington Business Journal* reported that Strayer Education Inc. saw enrollment at its for-profit schools continue to fall in the prior quarter. Strayer began reducing headcount by 20% and operating expenses by \$50 million in 2013, and is expected to close 20 schools in the Midwest through mid-2014.

- In 2011, the Babson Survey Research Group (BSRG) described the environment as a “disruptive” one, with pressure on higher education to cut costs, and thus decrease employment. Technology is widely believed to be the key to doing so. Online programs and other educational supporting software systems will play an important

role, providing efficiencies that will allow schools to grow while maintaining cost levels.

- Changes in federal regulations in 2010 created an uneven playing field, putting the for-profits at a disadvantage. The environment is one where “private-sector colleges and universities expect greater potential for negative impact from the new rulings, with one-third saying the new rulings will have a negative impact on their enrollments” (BSRG 2011).
- The uncertainty in the current environment is constraining most spending and decision making, limiting growth, and in some cases, continuing to put downward pressure on spending (Equity Research, *Education and Training*, BMO Capital Markets Corporation, September 2012).

While revenue growth in parts of this sector is expected to continue modestly, for-profit colleges will continue to face increasing cost challenges due to the economy and legislative pressures. Business can be expected to increasingly rely on technologies that provide efficiencies to keep costs and employment to a minimum. Overall employment will be up only modestly 2014.

### Description of the Private Education Sector

The state’s private postsecondary institutions account for approximately one-third of all postsecondary enrollments. The largest employers in the private education services subsector come from private postsecondary education. Among

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Colorado's largest private nonprofit schools are the University of Denver, Regis College, and Colorado College. The University of Phoenix remains the largest for-profit institution.

The for-profit sector has been the fastest-growing group in the education sector. Contributions to Colorado's employment growth have come from many schools. A total of 99 private accredited colleges are listed on the Colorado Department of Higher Education website, and 343 schools are registered with the Colorado Department of Private Occupational Schools. Colorado-based private accredited colleges include Jones International University, a 100% online university founded in Colorado. Private occupational schools include Denver-based Bel-Rea Institute.

Out-of-state organizations have campuses in Colorado and have made solid contributions to employment in Colorado. These include private accredited colleges such as Arizona-based University of Phoenix, which has multiple locations in Colorado, and Alta Colleges, Inc., which operates two colleges, Westwood College of Technology (two Denver campuses) and Westwood College of Aviation Technology, which offers aviation maintenance training programs at campuses in Denver. Among the private occupational schools are the Colorado holdings of Education Affiliates (a Maryland-based company), which includes the Denver School of Nursing (DSN) and Fortis Online.

Employment in the private education sector is driven by both business demand for continuing education programs and consumer demand for training that improves quality of life. In the

corporate and business sector, skill development of employees through learning curricula continues to play a critical role in developing competitive competencies of businesses, especially in the high-tech and consulting arenas. Corporations consider reinvestment in their employees a required business development function. Furthermore, certification within specific industries drives both corporate and consumer consumption of learning in order to remain competitive. In the recent environment, many schools have experienced declining enrollments and thus jobs, while DSN and Fortis have grown modestly.

Online learning delivery continues to be an integral component of every educational offering, even within the traditional K–12 sector. Colorado is home to para-education organizations such as Pearson Learning Technologies Group (LTG), located primarily in Colorado, which doubled in size in 2012, continued a strong hiring trend in 2013, and should see more growth in 2014. Other software businesses in the learning and education delivery sector in Colorado include Disney's Kerpoof and Knowledge Factor. As education companies such as these continue to create more content, learning technologies, and educational analytics opportunities, Colorado is positioned to be a strong player in eLearning.

Education is in the midst of significant transformation and reform. With more emphasis placed on educational accountability (both for students and educators), as well as multiple stakeholders calling for financial leveling, education finds itself under scrutiny. Most foresee technology as

the fastest and most scalable way to appropriately disrupt current academic models, and much transformation has already taken place due to education technology.

To that end, competency-based learning (CBL) will begin to see serious gains in the education industry in 2014. Already implemented and made famous by Western Governors University, the notion of personalized pacing through the educational experience is believed by the U.S. Department of Education to be poised as the new norm and will likely be the most common methodology for colleges and universities in a decade. As such, a number of experiments with this extremely different paradigm will be seen in 2014. However, most education experts believe that without education technology, CBL is not possible at scale.

As scholars such as Christensen, Johnson, and Horn explain, "By 2019, 50% of all high school classes will be taken online" (2008, *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns*). This kind of heavy reliance on technology both requires more strategic thought specific to pedagogy, as well as instructional design, but also provides tremendous opportunities for data-driven education. When this "big-data" can provide at-risk reports on behaviors such as dropped classes within a week of course starts, an understanding of how students learn best, and the development of courses that are tailored to student needs in real-time, personalized learning is very close becoming reality. Add to this more connection tools (such as Google Glasses), better learning technologies (like Head Magnet, a



software that helps a student remember), gamified content that allows for better metrics and motivation, and faster bandwidth, many believe that the next education revolution is just around the corner.

Another major, disruptive innovation that could drive cheaper education in a personalized fashion is the development of open educational resources (OER), with the most familiar being massive open online courses (MOOCs). These are bringing content from prestigious universities (Harvard, MIT, Stanford) through such for-profit businesses as Coursera, EdX, Udacity, and iTunes U. MOOCs are being discussed and strategized at almost every higher education institution, both private and public. The idea of tens, if not hundreds, of thousands of students taking online courses could prove to be a change agent as the next iteration of MOOCs is created. Some ideas for this new model include a global experience with a local flavor, which means the inclusion of local faculty, regardless of whether the course is created at Harvard or at a local university. The business model is not yet clear, nor is the possible impact on employment levels. Additionally, the certification of such courses for consideration as transfer credits by traditional universities has not been thought through. This is changing. DreamDegree.org, a nonprofit organization, has entered the market with a strategic open online course (SOOC), with credit recommendations made by the American Council on Education (ACE) and a business model that charges more than 65% less than what private colleges charge for lower-division courses. Most believe that if any college can truly crack the

\$10,000 baccalaureate degree (at scale), MOOCs must be a piece of the puzzle.

According to the *NMC Horizon Report: 2013 Higher Education Edition*,

The role of educators continues to change due to the vast resources that are accessible to students via the Internet. Institutions are now faced with a critical shift as students engage in more informal learning outside of the classroom, and are using always connected devices to surf the web, download apps, and read articles. Educating learners on how to decipher credible resources and aggregate content has become

imperative, and there is a need for university educators to fulfill the position of content guide.

In addition, campuses across the world are seeing students embracing portable devices such as tablets and smartphones, and campuses race to keep up with the bring-your-own device (BYOD) movement.

It is so easy for students to carry tablets from class to class, using them to seamlessly access their textbooks and other course materials as needed, that schools and universities are rethinking the need for computer labs, or even personal laptops.

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### COLORADO EDUCATION AND HEALTH SERVICES EMPLOYMENT 2005–2014 (In Thousands)

Year	Educational Services	Health Care and Social Assistance	Total
2005	27.5	197.1	224.6
2006	28.6	202.6	231.2
2007	29.6	210.9	240.4
2008	30.6	219.9	250.5
2009	31.3	226.0	257.2
2010	32.3	232.4	264.7
2011	33.6	239.9	273.5
2012 <sup>a</sup>	34.9	247.0	281.9
2013 <sup>b</sup>	35.2	255.6	290.8
2014 <sup>c</sup>	35.6	263.3	298.8

<sup>a</sup>Revised. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Note: Due to rounding, the sum of the individual sectors may not equal the total.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

## Education and Health Services

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The convergence of the post-recession economy, combined with an ever-increasing presence of learning curriculum through OECs and other online learning environments, and the expansion of the BYOD movement by students and campuses, creates a new paradigm for both public and private educational offerings. Agility and responsiveness to Generation C (Connection) in educational curricula that provide the best ROI to the student will likely be the winner in creating valuable personalized education.

Given Colorado's high-tech innovation community and its history and engagement in private education, the state has the potential to continue to expand its presence and play in the online digitization and gamification of education.

### Health Services

According to the Center for Nursing Services, the Health Care and Social Assistance Sector provides employment to 11% of Colorado employees. It is second only to retail in total jobs and generates an annual payroll of more than \$11 billion.

Despite the impact of the great recession on other industries, health care and social assistance employment continued to grow each year. Since 2003, the sector added nearly 68,000 jobs, and growth is expected to continue in 2014, with an additional 7,700 jobs (3%). The sector accounts for nearly one-in-nine jobs in Colorado. Continued growth in this sector is expected from four trends: an aging population; a population that increasingly

suffers from obesity and chronic diseases; growth in the number of persons eligible to receive health insurance as a result of state and federal expansions; and the realignment of the delivery systems.

### The Health Care Environment

Passage of the Patient Protection and Affordable Care Act (ACA) in 2010 created an environment of disruptive innovation in the health care sector. Many changes to the access, delivery, and financing systems are beginning to unfold. The workforce will be affected by the continued need for more professional workers, both those who provide direct-care services and those who work in information technology. Related to ACA provisions but with impetus from the aging population and redesign of the delivery system, employment will grow in mental health practitioners, "navigators" to help link patients to resources, and home care workers.

The Supreme Court ruled that Medicaid expansions could not be required and are a state decision. Colorado conducted a number of analyses and determined that expansion of Medicaid eligibility made economic sense for the state.

Implementation of the existing act is having broad implications to the U.S. workforce in several ways. Beginning in 2014, many sectors may be influenced by the number of persons who now retire as the economy becomes stronger, investment portfolios recover, and ACA guarantees issuance of health insurance to all applicants regardless of preexisting medical conditions. Another broad economic impact will be to employer labor costs for retail, hospitality, and seasonal workers as the ACA will

### HEALTH CARE AND SOCIAL ASSISTANCE EMPLOYMENT, 2005–2014 (In Thousands)

Year	Ambulatory Care	Hospitals	Nursing Care	Social Assistance	Total <sup>a</sup>
2005	80.7	49.1	35.1	32.3	197.1
2006	83.1	50.1	35.7	33.7	202.6
2007	86.7	52.0	36.5	35.7	210.9
2008	90.5	53.7	37.7	38.0	219.9
2009	93.3	54.9	39.1	38.7	226.0
2010	96.8	55.7	39.3	40.6	232.4
2011	101.1	56.5	40.3	42.0	239.9
2012	104.7	57.9	40.8	43.6	247.0
2013 <sup>b</sup>	108.3	59.6	41.9	45.8	255.6
2014 <sup>c</sup>	111.9	61.5	43.6	46.2	263.3

<sup>a</sup>Due to rounding, the sum of the individual items may not equal the total.

<sup>b</sup>Estimated. <sup>c</sup>Forecast.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

mandate “pay or play” insurance coverage for workers who work more than 30 hours per week. Many employers in these sectors have not provided health insurance coverage in the past. Due to this rule, two divergent scenarios may emerge: either employers will reduce hours for part-time workers and increase the number of persons employed, or they may offer insurance coverage to these workers and employ fewer persons as the cost of labor is now greater. The business impact varies to each company depending on the size of its workforce, its industry sector, the type of insurance it has (or has not) provided in the past.

Even before passage of the ACA, shortages in the health care workforce and increases in the demand for health care services were hallmarks of this sector report year after year. Changes in the skilled clinical workforce over the next decade will predominantly reflect these underlying demand factors more than any directives to workforce in the ACA legislation. The training timeline for new practitioners is slow and will not necessarily be more reactive to the newly eligible consumers in 2014. A mitigating factor to the smaller-than-forecasted decline in the number of skilled workers in the past five years has been the economic downturn, which has deferred retirement for professionals. Colorado will face a rapidly increasing demand for health care workers during the coming decade because the state’s population will expand by 1 million and there will be 389,000 more adults over 65.

## The Health Care Workforce

One way to define the health care workforce is by primary care practitioners. This workforce includes primary care physicians, physician assistants (PAs), and advanced practice nurses (APNs), such as nurse practitioners (NPs). They render direct care in noninstitutional settings. According to the Colorado Health Institute’s “Scopes of Practice,” of the licensed and active physicians in Colorado, it is estimated that in 2012 that around 3,262 physicians practice primary care in the state (29%), along with 995 NPs (65%) and 785 PAs (43%).

### Physicians

The Colorado Health Institute projects that Colorado will need approximately 83 to 141 new physicians, NPs, and PAs in 2016 to meet the increased primary care needs of nearly 510,000 Coloradans estimated to become newly insured through the ACA rules. A projection by the Graham Center in 2010 estimates that Colorado will require an additional 1,773 primary care physicians by 2030. The center also calculates that the current population to PCP ratio of 1,404:1 is lower than the national average of 1,463:1. Components of Colorado’s increased need for PCPs include 338 PCPs from increased utilization due to an aging population; 1,283 PCPs due to population growth in Colorado; and 152 PCPs due to the expansion of eligible persons due to the ACA (*State-level Projections of Primary Care Workforce, 2010–2030*, September 2013, Robert Graham Center, Washington, D.C.; and “Will Physician Supply Meet Demands of an

Increasing and Aging Population?” *Health Affairs*, April 2008).

Colorado, like most states, has an uneven distribution of primary care providers, who tend to be more plentiful in urban and resort areas. Approximately one-third of Colorado physicians are expected to reach retirement age in the next 10 years.

### Nurses

Registered nurses (RNs) work in a wide range of clinical settings and make up the largest professional degreed category in the health care sector. According to the Bureau of Labor Statistics (BLS), in the United States there is almost four times the number of RNs as physicians. While RNs are one of the occupations expected to have significant growth in the future, the current workforce is also aging. In 2008, approximately one-third of RNs were at or near retirement age (55 years of age or older). Forecasts of the timing and extent of an RN shortage vary, but recent national supply and demand analyses predict a deficiency beginning in 2018 that could grow to a shortage of about 260,000 RNs by 2025 (“The Recent Surge in Nurse Employment: Causes and Implications,” *Health Affairs*, June 2009). The Colorado Department of Labor and Employment projects a need for 18,990 additional registered nurses from 2008 to 2018. In spite of this predicted shortage, the recent recession appears to have caused a temporary reduction

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## Education and Health Services

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in the number of available RN vacancies, perhaps due to cuts to nursing staff and delayed retirements. Up to one-quarter of Colorado nurses said they planned to leave their current position or their profession in the next five years. Licensed practical nurses (LPNs) and RNs most frequently described insufficient wages, too much stress, and lack of respect as their reasons for leaving.

### Nurse Practitioners

This practitioner segment is the fastest-growing of the primary care provider occupations nationally, but like physicians and RNs, they are aging. Almost 40% of NPs are 55 or older. But nearly half of these practitioners received their advanced education in the last 10 years.



Independent prescribing (also called *prescriptive authority*) is the ability of advanced practice registered nurses (APRNs) to prescribe drugs, devices, adjunct health/medical services, durable medical goods, and other equipment and supplies. Independent prescribing does not require collaboration with a physician and is a key element of scope of practice for APRNs. Colorado requires 3,600 hours of post-graduate precepted prescribing experience before an APRN can independently prescribe. This is a much more restrictive requirement than most states and causes many of Colorado-educated APRNs to leave the state to practice in neighboring states.

Additionally, in 2010, the State of Colorado opted out of the Medicare requirement for supervision of certified registered nurse anesthetists (CRNAs) in rural parts of the state only. Legal challenges followed and both the district court and the court of appeals upheld the governor of Colorado's decision. In October 2013, the Colorado Supreme Court announced that it will hear a portion of the appeal brought by the Colorado Society of Anesthesiologists and the Colorado Medical Society that assert that physicians must provide on-site supervision. The Supreme Court said it would review the existing language of the Colorado Nurse Practice Act to see if the statute permits such an opt-out.

Given the disparity of the available workforce throughout the state of Colorado—particularly in urban and rural areas—an adverse decision on this issue and maintenance of the stringent requirement for APRN prescriptive authority would have



a major impact on the availability of health care services in rural parts of Colorado.

### Other Direct Care Providers

Besides nurses, the majority of other employment in the health care workforce is made up of direct care providers: namely medical assistants, nursing assistants, home health aides, and personal care aides. Nationally, these professions account for one of the largest and fastest-growing segments of the economy. The number of direct care workers is forecast to grow 35% by 2018. Provisions of the ACA include grants to states for training, recruitment, and retention of these providers, as well as new databases to track employment and other workforce issues.

A Personal Care Attendants Workforce Advisory Panel has been established to advise Congress about the needed numbers of workers, salary and benefits, and access to services.

According to the Paraprofessional Healthcare Institute, the Colorado direct care workforce was approximately 44,000 workers. In Colorado, from 2009 to 2019, demand for personal care aide and nursing aide positions is expected to increase by 44% and 22%, respectively. Direct care workers employed in home and community-based settings are a growing segment of Colorado's workforce in both size and significance.

In September 2013, the Obama administration announced that home care aides would, for the first time, be subject to the Fair Labor Standards Act and to the wage and hour law. This ruling takes

effect January 1, 2015, and requires that home care aides be paid minimum wage and overtime pay for any hours over 40. The delay until 2015 is to give families that use these attendants, as well as state Medicaid programs, time to prepare. Many believe that this will both increase the cost of care, result in fewer jobs for home care workers, and increase Medicaid and Medicare expenditures.

### Other Occupations

Other components of this health care employment group include the following occupations: psychiatric aides, occupational therapy assistants, physical therapist assistants, massage therapists, dental assistants, medical assistants, medical transcriptionists, pharmacy aides, veterinary assistants, and phlebotomists. Occupation estimates from the BLS indicate about 55,800 of these professionals, plus nursing aides, orderlies, and home care workers, were employed in Colorado in 2012, with a mean salary of \$29,600.

### Mental Health Workers

In the aftermath of the Aurora violence in 2013, Governor Hickenlooper and the General Assembly have placed significant resources (\$20 million) into the provision of expanded crisis and behavioral health services. An expansion of the workforce is expected.

*The Behavioral Healthcare Workforce in Colorado: A Status Report* was funded by the Colorado Health Foundation and published in 2010. As nearly 70% of Colorado's counties are rural, the same disparity of mental health service workers apply

to Colorado's rural counties as it does to physical health services. In order to meet the current unmet and future needs of the population, a large number of positions will need to be filled. A majority of jobs in the behavioral health care field require a masters' degree; graduate education and reimbursement models will play an important role in the expansion of services. The report suggests a need for improved data resources to better quantify the behavioral health care workforce.

### Hospitals and Community Health Clinics

More than half of Colorado's hospitals are in rural or "frontier" counties. In 13 of Colorado's counties, health care sector employment, mostly driven by hospitals, ranges from one in six jobs to one in four jobs.

Fifteen clinics in more than 130 locations in Colorado are designated as Federally Qualified Health Centers. In 2011, they served about 500,000 patients and anticipate serving even more when coverage expansion occurs in 2014. To serve these new patients, the clinics have announced that they will try to add about 5,000 new positions over the next four years to the current employment of 3,300 persons. Additionally, 45 Community Safety Net Clinics and 52 Rural Health Clinics that are locally and independently operated serve individuals covered by Colorado Medicaid or Medicare, or who are uninsured, which totals about 325,000 each year.

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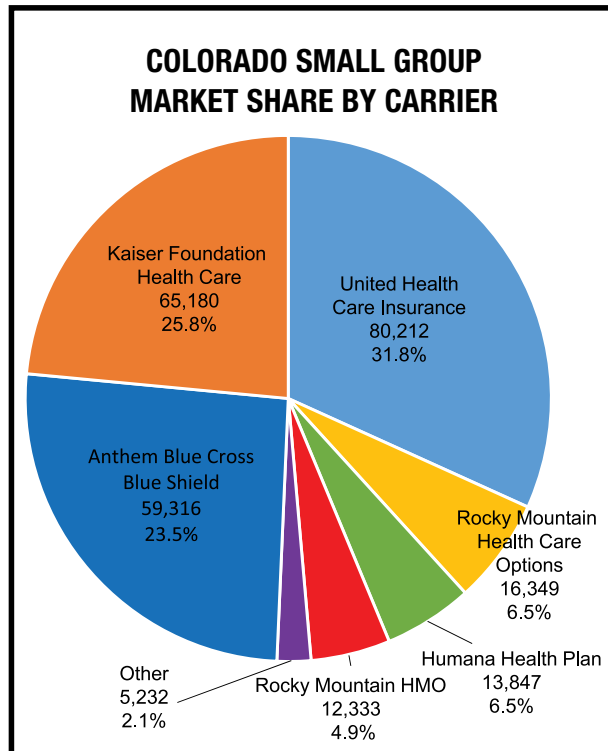


## Education and Health Services

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### Training the Future Workforce

Colorado has a number of professional schools for training health care providers, and two of the largest education providers are located in metropolitan Denver. The University of Colorado Denver (CU Denver) is an Academic Medical Center (AMC). AMCs offer training programs, research, and patient-care delivery options, such as inpatient and outpatient care services. Currently, the University of Colorado School of Medicine graduates approximately 140 medical students per year. In addition, CU Denver has schools for dental medicine, nursing, pharmacy, and public health.



Other professionals, including dietitians, dental hygienists, physical therapists, and physician assistants, are also trained at the Aurora campus. Regis University has schools of nursing, pharmacy, and physical therapy, and has health care ethics and health-science administration departments. Rocky Vista University College of Osteopathic Medicine opened its doors in Parker in 2008 and graduated its first class of about 38 physicians in 2012. The University of Denver is exploring the feasibility of opening a medical school, and an additional training venue by the university in an adjunct school in Colorado Springs is also contemplated. Two Colorado sites collectively graduate about 70 physician assistants each year: Red Rocks Community College and University of Colorado.

A large number of qualified nursing school applicants are turned away every year as the number and size of nursing programs do not keep pace with demand. In the 2008–09 academic year, Colorado’s nursing schools declined more than 3,500 qualified applications due to limited institutional capacity for clinical rotations.

Health care support occupations include such allied health jobs as radiology technologists, laboratory technicians, and respiratory technicians among others. Many of the persons trained in these fields are trained in Colorado community colleges. In fact, 6,860 (about 52%) of all associate degrees conferred in 2010–11 were health care related. The colleges are projecting growth of 34.5% in these occupations between 2010 and 2020.

### Effect of Rising Premiums on Wages and Employment

Despite concerns about the scope and impact of ACA on the country, premium increases cannot be discounted. Economic analysis by Harvard professors Katherine Baicker and Amitabh Chandra show how increasing premiums affect the labor market. These effects include reduced wages and an increased probability of part-time work (“The Labor Market Effects of Rising Health Insurance Premiums,” *Journal of Labor Economics*, 2006).

Health insurance premiums continue to increase faster than wages, impacting both the workers and the employers. Worker contributions increased 89.2% between 2003 and 2013, growing from \$2,412 to \$4,565, while employer contributions increased 77% during the same time, rising from \$6,657 to \$11,786 according to the Kaiser Family Foundation’s Employer’s Health Benefits 2013 Annual Survey that compares worker and employer contributions to premiums. The percentage of a premium’s cost in Colorado for an individual increased from 13.2% to 17.4% of the average single person’s income from 2003 to 2011, the most recent data available for Colorado (*State Trends in Premiums and Deductibles, 2003–2011: Eroding Protection and Rising Costs Underscore Need for Action*, the Commonwealth Fund, December 12, 2012).

### Colorado Small Group Market

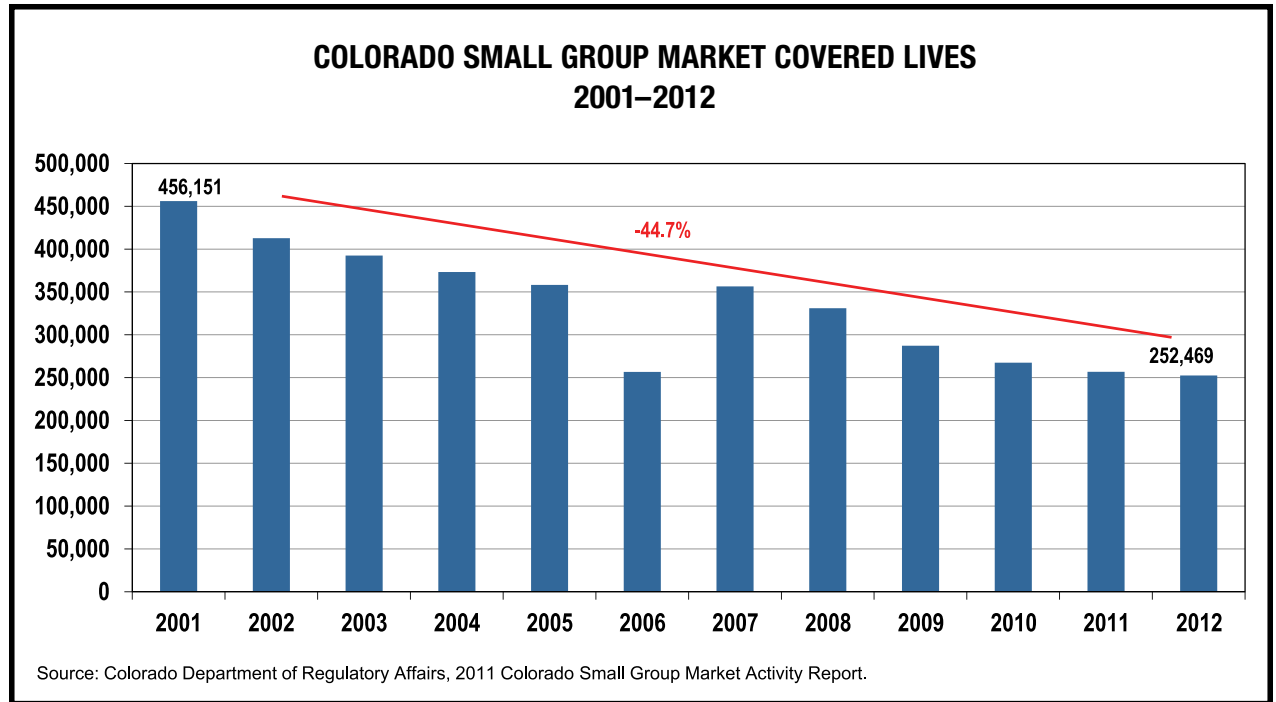
The number of employees participating in the small group (50 or fewer employees) market continues to decline in response to the impact of rising

health care costs. The 2013 Colorado Division of Insurance's annual survey of the small group market reports that the number of individuals (covered lives) able to receive health plan coverage through their small group employer has decreased 45% (456,151 to 252,469) since 2001.

The number of covered lives fell less than 2% from 2011, the slowest decrease than previous years. Surprisingly, the number of small group employers participating slightly increased from 2011 to 2012—the first increase seen since 2006. Small businesses that offer health insurance continue to reduce their health care costs by shifting to multi-option plans and increasing the employee portion of premium contributions. A larger number of small businesses with 6–50 employees offer insurance while the number of businesses with fewer than 5 employees that offer insurance continues to decline.

Six insurance carriers out of the current 14 small group carriers cover at least 12,000 lives. The top 3 carriers have an 81% market share or 205,000 covered lives, a 2-point percentage decrease over 2011. They are UnitedHealthCare Insurance (80,212 lives), Kaiser Foundation Health Plan (65,180 lives), and Anthem Blue Cross Blue Shield (59,316 lives).

Small group employers surveyed by the Colorado Division of Insurance suggest that 60% of small businesses shop for insurance every year and continue to see a decline in the number of affordable health care options. Small group employers rank price, benefits, and co-pays and deductibles as the most important features when selecting a carrier and plan design.



About 95,000 small group covered lives participated in wellness and prevention plans. Many of these programs focused on better nutrition, wellness education, health screenings, health coaching, and disease management. Very few carriers offered insurance premium discounts or cost-sharing arrangement modifications (e.g., changes to co-payments, deductibles, premiums) and instead proposed incentives such as product discounts, rebates, or gym memberships.

### Enrollment in Public Health Insurance Programs

Enrollment in Colorado's public health insurance programs—Medicaid and Child Health Plan Plus (CHP+)—increased 41% between FY 2007–08 and FY 2012–13. The Department of Health Care Policy and Financing projects that fiscal year FY 2013–14 enrollment in the two programs will reach more than 800,000 Coloradans.

Although ACA's expansion of Medicaid is a significant reason for the growth of enrollment in public health insurance, other factors include:

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## Education and Health Services

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- Economic expansion lower than the historic average keeps many from finding permanent or higher wage jobs that would raise their families' income above the Medicaid income level cap;
- There is an increase of federal, state, local, and community focus on enrolling Medicaid and CHP+ eligible Coloradans into these programs;
- The ongoing effects of past Colorado legislation, such as the 208 Commission (SB06-208) and the Colorado Health Care Affordability Act (HB09-1293), have, in part, led to increases in the number of adults and children eligible for Medicaid and CHP+.

### Health Care Reform: ACA

Federal health reform legislation was signed into law in 2010. Considerable confusion and political opposition to ACA remain.

One of the primary goals of the law is to reduce the number of uninsured people in the United States. The Colorado Health Institute (CHI) estimates that by 2016, Colorado's uninsured population will be reduced by 530,000. With health reform, CHI estimates that 6.5% of the Colorado population will remain uninsured compared to 16.3% without ACA.

### Mandates and Penalties

In June 2012, the Supreme Court ruled the *individual* mandate, which requires most people to have health insurance or pay a penalty, is constitutional. This means that starting in 2014 the Internal Revenue Service will levy a tax penalty on most people

who remain uninsured. The penalty will not apply to individuals who are not insured for three months or less, those whose incomes are less than the minimum to file income tax, or if the lowest plan option cost exceeds 8% of the household's adjusted gross income. In the first year (2014), the penalty for being uninsured is 1% of income, or \$95, whichever is higher.

Penalties for *employers* depend on the number of full-time employees, whether health insurance meets minimum standards and is offered to at least 95% of full time employees, and whether it is "affordable." *Affordable* is defined as a cost less than 9.5% of the employee's wages.

### Subsidies

Federally subsidized premiums are available to some small businesses and for individuals at or below 400% of the federal poverty level (\$45,960 for an individual or \$94,200 for a family of four). Subsidies are only available for plans purchased on the health insurance exchange, called Connect for Health Colorado.

### Medicaid Expansion

The Supreme Court also ruled that states would have the option, rather than the requirement, to expand Medicaid, a health insurance program for low income individuals and individuals with disabilities, to 138% of the federal poverty level (FPL). In 2013, the Colorado General Assembly passed legislation to pursue this expansion within the state, effective January 1, 2014. According to the ACA, the federal government will assume 100% of

the cost of the Medicaid expansion between 2014 and 2017. Thereafter, the federal contribution will be incrementally reduced down to 90% by 2020.

### Exchanges

The ACA authorized states to establish web-based insurance marketplaces, or exchanges. If the state opts out, then a federally facilitated exchange is available. Colorado opted to build its own state-based insurance marketplace, called Connect for Health Colorado. Individuals and small employers (up to 50 full-time employees) can now purchase coverage from the exchange for policies beginning January 1, 2014, or may obtain insurance offered in the outside market.

Plans offered in the state exchange must include a minimum set of health care services and products called essential health benefits (EHB). These EHB cover 10 categories of services. Insurers have the opportunity to limit scope and duration of these services but must eliminate annual or lifetime dollar limits.

The Small Business Health Options Program is referred to as the "SHOP Exchange." It is anticipated that a well-designed and implemented exchange will provide small group employers premium relief through pooling of small businesses buying power, portability of health coverage to reduce employee recruitment barriers, ease of comparative shopping, and the reduction of administering health benefits. Insurance plans and premiums for small businesses, released for 2014, appear to be competitive through both

Connect for Health Colorado and the traditional private market.

Significant investments, including in information technology, are occurring with the development of the Connect for Health Colorado Exchange. The State of Colorado received federal funding of nearly \$1 million in 2010 to facilitate the planning of the Colorado Exchange. The exchange was awarded a \$17.9 million grant in February 2012 from the U.S. Department of Health and Human Services to support planning activities, including the initial acquisition of technology services to begin building the online shopping portal. In August 2012, the exchange applied for and was awarded a second grant of \$43 million to support technology development, staff, and operations between October 2012 and July 2013. The exchange received additional \$166 million grant support to fund activities after July 2013 through the initial phase of operation. The exchange is required to be self-financing in 2015.

## Other Trends

### *Hospital Consolidation and Physician Practice Acquisitions*

The hospital industry is undergoing a number of changes in Colorado. Hospitals have consolidated ownership, such as the \$1.4 billion buy-out by the HCA-Health One Hospital system of the 40% stake owned by the Colorado Health Foundation. Mergers, under the form of operating agreements, have been concluded between the University of Colorado Hospital and Poudre Health System and Memorial Hospital in Colorado Springs. University

Health System and Centura Health both have acquired hospitals in neighboring states. Exempla St. Joseph Hospital and National Jewish formed a joint operating agreement. Hospitals in rural areas are courted by many health care systems in the state and by some for-profit systems from outside of Colorado.

Some of these changes have been linked to the ACA legislation. A key tenant of health reform is reducing growth in federal health care spending. Reductions will be in the form of lower payments as well as in changes in the way health care providers are paid. Furthermore, the Budget Control Act of 2011 will likely result in additional cuts to Medicare spending. Medicare is the largest payer for services provided by hospitals. It accounts for 35%–55% of revenue for most hospitals. Additional financial penalties from failing to reduce readmission rates or to adopt electronic records are looming. No payment will be made for poor outcomes, such as hospital acquired infections or certain medication errors.

One strategy is for hospitals to partner with physician and other clinical leadership to strengthen relationships and work together to target opportunities to improve clinical outcomes, and reduce wasteful costs. Hospitals are exploring ways to work with physicians, post-acute providers, and home health providers to improve the coordination of care patients receive after being discharged from the hospital. This includes implementing improved discharge planning processes designed to improve communication between providers; and prevent duplicative testing, avoidable visits to

hospital emergency departments, and unplanned readmissions to hospitals. Together, these efforts may ultimately result in improved patient care and reduced costs.

In some cases, physicians are becoming directly employed by hospitals. Hospitals have been acquiring physician practices in a manner reminiscent of the early 1990s. “I think there’s something old and something new about this kind of acquisition,” David Dranove, the Walter McEnerney Professor of Health Industry Management at Northwestern University’s Kellogg School of Management, said in an interview in 2012. Dranove is also a professor of management and strategy and director of the Center for Health Industry Market Economics. What’s old, he said, is the desire of tertiary medical centers to acquire satellite hospitals so as to increase their referrals from suburban areas. What’s new is the push from the federal government under the ACA to force health care facilities to create accountable care organizations (ACOs) for their communities. Under the federal legislation, ACOs are required to serve a large percentage of the low-income population. This requires greater coordination of care and managed costs. Smaller hospitals are trying to balance those costs against maintaining profitability (“NC Hospital Mergers Accelerating, Raising Concerns,” *North Carolina Health News*, April 29, 2013).

### *Construction*

While the rate of new construction has slowed somewhat in recent years, it continues to be bright spot in a sector that has struggled. Centura Health

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## Education and Health Services

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opened Castle Rock Adventist Health Campus, a 212,000-square-foot, full-service, acute care hospital located in Castle Rock. Additional expansion plans include a medical office building and extensive site development.

Banner Health announced construction of a new hospital in Fort Collins that is scheduled to open in 2015. The facility will include a two-story hospital featuring an emergency department, a 24-bed inpatient unit, labor and delivery rooms, medical imaging, women's services, surgical services, and lab services. The campus will also include an outpatient clinic and medical office building.

Construction projects in progress include Longmont United Hospital's medical center in Frederick, new cancer centers in Fort Collins (near Colorado State University) and in Lafayette (Exempla Good Samaritan Medical Center/Comprehensive Cancer Center), and a new major Kaiser multispecialty center in Lone Tree.

In 2013, the Anschutz/Fitzsimmons campus saw the completion of a new inpatient tower for the University of Colorado Hospital and the start of a second tower at Children's Hospital, nearly doubling the inpatient beds at each facility. Work on the \$580 million Veteran's Hospital is slated for completion in 2015, with projected employment of 2,000.

### Information Technology

Colorado has been investing in health information technology (HIT) and health information exchange (HIE) for more than seven years. This includes significant external dollars brought to

Colorado from the Agency for Healthcare Research and Quality (AHRQ) to demonstrate Point of Care Inquiry capabilities; the Federal Communications Commission (FCC) grant to expand broadband capacity across the state; and foundation and local funding develop local health information exchanges. In 2009, Governor Ritter designated the Colorado Regional Health Information Organization (CORHIO) as the state-level entity for coordinating and facilitating adoption of the exchange of patient specific, clinical information. He designated CORHIO as the entity to receive and invest more than \$10 million in American Recovery and Reinvestment Act (ARRA) funds so that all Coloradans benefit from HIT and HIE efforts.

In March 2013 *Becker's Hospital Review* reported that about 44.4% of U.S. acute care hospitals had a basic electronic health record (EHR) system in 2012 compared with 12.2% in 2009. Colorado was among the top three states with the highest rates of hospital EHR adoption, at 68.3%, just behind South Dakota, at 70.6%, and Rhode Island, at 68.8%.

An early goal for the CORHIO is that 85% of all primary care providers and community health centers will be "meaningful users" of electronic health records by 2014. This entails use of the electronic record and the exchange of information. A financial award is made to physicians who meet this "meaningful use standard" by the Medicare and Medicaid programs.

Nationally, only 18% of physicians in office-based practices report using an EHR. Estimated costs of an EHR are \$40,000–\$50,000 per year

per physician in the first year of adoption and \$10,000–\$20,000 annually thereafter. While these patterns are national, they appear to be reflective of Colorado as well.

### Conclusion

Controlling health care costs and finding value in health care will be of increasing interest for policy makers as state and national health reform represents a significant increase in coverage among uninsured Americans. Moreover, having health insurance does not guarantee that an individual will have access to needed health care. Recruitment and retention of the right composition of health care professionals is key in building an efficient and effective health care delivery system. Workforce recruitment will need to address personnel shortages in sectors defined by practice type as well as by geography in order to ensure adequate coverage. Steering new health care workers into high-need positions presents a special challenge. Potential shortages will require continually reassessing what level of health professional is best suited for particular tasks. It will be important to understand the proper and appropriate roles for the full spectrum of health care workers.

The Health Care and Social Assistance sector is expected to continue adding workers to meet this demand, with an increase of 8,600 (3.5%) employees in 2013 and 7,700 (3%) in 2014. ❖



## Leisure and Hospitality

### Overview

This report reviews trends in key sectors that are the primary economic drivers for tourism in Colorado: conventions and meetings, hotels, restaurants, gaming, the ski industry, and outdoor recreation. The analysis reviews the infrastructure, events, and marketing activities that have shaped the industry in 2013 and looks ahead to the challenges and opportunities that will steer future growth. The Leisure and Hospitality Supersector includes performing arts, entertainment, sports, recreation, accommodation, and food services used by Colorado residents, tourists, and business travelers.

The Leisure and Hospitality industry accounts for nearly one in eight jobs in Colorado. The industry was one of the first to add jobs following the recession, and 2013 marks four years of consecutive employment growth. Leisure and Hospitality added 10,000 jobs (3.6%) in 2013. The 2014 forecast calls for more than 7,500 additional jobs (2.6%), mostly in the Accommodation and Food Services sector.

### National Trends in the Tourism Industry

At the Travel and Tourism Research Association's annual Travel Outlook Forum held in October 2013, Adam Sacks, president of Tourism Economics, reported the U.S. consumer has some momentum as debt is down and assets are up. U.S. companies are in a position of strength with improved balance sheets, strong profits, and high capacity utilization. Investment and manufacturing output are recovering, and U.S. GDP growth

is accelerating. These factors directly or indirectly impact tourism, and the forum's forecast for 2014 shows travel will continue to recover, with slow steady growth and leisure person trips leading the way.

Other highlights include:

- Leisure trips represent 75% of U.S. trip volume. This segment recovered from the recession, resuming peak volume by 2010. The forecast for 2014 is for 1.63 billion trips, an increase of 1.9%.
- Business trips represent 25% of U.S. trip volume. This segment has recovered from the recession more slowly than the leisure segment, and is still below the pre-recession peak. The

forecast for 2014 is for 456 million trips, a gain of 1%.

- International arrivals continue to be strong, with a forecasted 71.8 million total arrivals in 2014, an increase of 4%.
- Domestic visitor spending will reach \$789 billion in 2014, and international visitor spending is forecasted at \$151 billion, representing a record \$940 billion.
- According to Smith Travel Research, hotel demand has set new records, and hotel rates continue to recover. The forecast for 2014 calls

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### LEISURE AND HOSPITALITY EMPLOYMENT 2005–2014 (In Thousands)

Year	Arts, Entertainment, and Recreation	Accommodation	Food Services	Total Accommodation and Food Services <sup>a</sup>	Total Leisure and Hospitality <sup>a</sup>
2005	43.3	39.8	174.4	214.2	257.5
2006	44.1	41.1	179.8	220.9	264.9
2007	44.6	41.7	184.1	225.8	270.4
2008	45.7	42.3	185.0	227.3	272.9
2009	44.6	39.9	178.0	217.9	262.4
2010	44.7	39.5	178.8	218.3	263.0
2011	45.6	41.0	184.8	225.8	271.4
2012	46.7	41.7	191.2	232.9	279.6
2013 <sup>b</sup>	47.3	43.0	199.3	242.3	289.6
2014 <sup>c</sup>	48.0	43.8	205.3	249.1	297.1

<sup>a</sup>Due to rounding, the sum of the individual items may not equal the total. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

## Leisure and Hospitality

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### NATIONAL OCCUPANCY AND AVERAGE ROOM RATE 2010–2014

	2010	2011	2012	2013 <sup>a</sup>	2014 <sup>b</sup>
Occupancy Rate	57.5	59.9	61.4	62.2	62.9
Percentage Change from Prior Year	5.4	4.2	2.5	1.4	1.1
Average Daily Rate	\$98.10	\$101.86	\$106.15	\$110.84	\$116.47
Percentage Change from Prior Year	0.0	3.8	4.2	4.4	5.1
Nominal Revenue per Available Room	\$56.41	\$61.02	\$65.17	\$68.99	\$73.30
Percentage Change from Prior Year	5.4	8.2	6.8	5.9	6.2

<sup>a</sup>Through May 2013. <sup>b</sup>Forecast.

Source: PricewaterhouseCoopers, June 2013.

for occupancy to increase 1.3%, average daily room rate (ADR) to increase 4.6%, and revenue per available room (RevPAR) to climb 6%.

- Other sectors will have slow and steady growth except the cruise sector, which is still recording dynamic growth.

### Tourism and Conventions in Denver 2013–14

Denver's tourism and convention industries are currently stable and successful. Every tourism indicator set a new record in 2012, and it appears that both 2013 and 2014 will continue to be very strong with new attractions, hotels, and exhibitions adding to Denver's tourism product. However, like much of the world's travel industry, increased competition and a fluctuating world economy can impact the industry's future, as well as unknown factors, such as natural disasters and the potential

impact from the full implementation of Amendment 64 (recreational marijuana).

### Tourism Highlights, 2012–14

- Denver set all new tourism records in 2012 with 13.6 million overnight visitors, up 3% over 13.2 million in 2011. The increase came from marketable visitors (up 9%) and business travelers (up 6%). Denver is a huge contributor to the success of Colorado's leisure tourism, with 40% of the state's visitors spending time in Denver during their trip (Longwoods 2012 Travel Study).
- Tourism spending in Denver also set a record in 2012 with \$3.6 billion spent by overnight visitors, a gain of 9% from \$3.3 billion in 2011. The increase was due to the higher number of marketable visitors and business travelers who spend more per day than other visitor segments. (*Marketable visitors* are those who could travel anywhere and are influenced by marketing and chose to visit Denver.) This was

the eighth-straight year Denver registered an increase in marketable visitors.

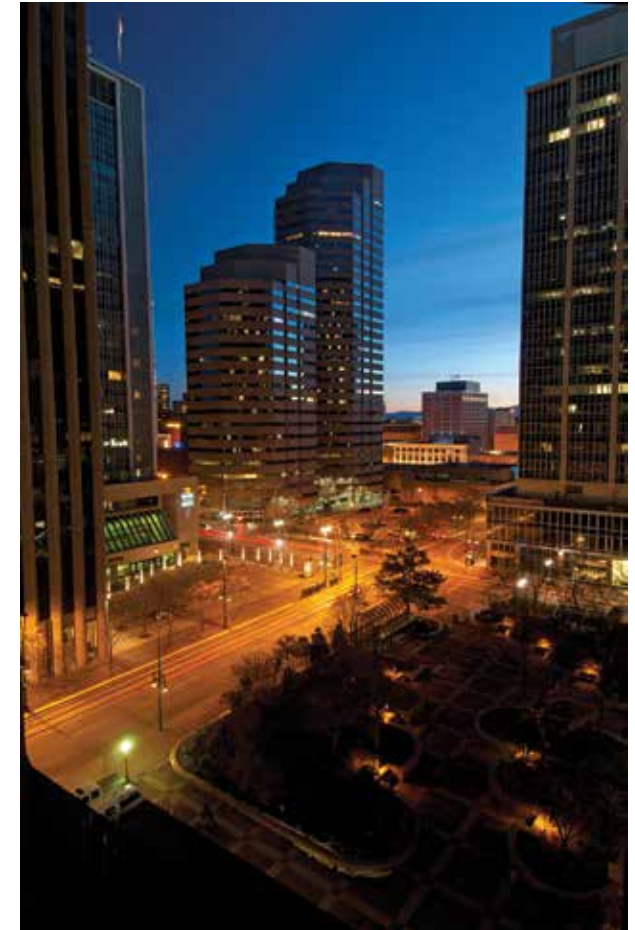
- Denver lodger's tax collections set a 100-year record collection of \$58.0 million in 2012, up 4.2% from 2011. VISIT DENVER received \$14.8 million in 2012, up 4.1% from 2011. Through August 2013, lodger's tax collections were up 9%.
- According to the September–November 2013 edition of Hotel Horizons by PKF Hospitality Research, Denver hotel occupancy is expected to increase by 1.9% by year-end, with a 7.3% increase in RevPAR. This is better than the national projection of a 5.9% gain. In 2014, Denver occupancy is estimated to rise 1% (slightly lower than the national increase of 1.9%), and RevPAR is expected to grow 7.7% (slightly higher than the national increase of 7.2%).
- Denver International Airport (DIA) had a record 53.2 million passengers in 2012. New nonstop flights to Europe via Icelandair and to Mexico City were added in 2012, along with a major new nonstop flight to Japan in June 2013. Passenger traffic at DIA fell 1.6%, from 40,162,163 passengers in 2012 to 39,529,845 passengers in 2013 year-to-date in September.
- Nonstop international passenger traffic at DIA continued to grow through September 2013, when traffic was up more than 14% compared to a year prior. Much of the growth can be attributed to the increase in capacity for Icelandair and United's new Denver to Tokyo daily nonstop flight.

- Denver continues to add to its hotel product. Downtown Denver opened 150 hotel rooms in 2012, and 532 rooms are scheduled to open in 2013. The following year, 765 rooms are set to open, and a 500-room Westin will open at DIA in 2015.
- Convention bookings for 2013 are up 4% over 2012, making 2013 comparable to 2011, one of the city's best convention years. Convention bookings are on pace to make 2014 even better, with a potential 4% increase over 2013.
- In 2013, VISIT DENVER launched a comprehensive feasibility study to examine all of the city's meeting facilities and devise a strategy to keep Denver competitive in this industry for the next 25 years.

### Challenges to Denver's Tourism Industry

Denver faces several challenges in the coming years that may have significant impacts on tourism and conventions.

- On January 1, 2014, Denver will become the first city in history to legalize the sale of recreational marijuana. Out-of-state visitors will be able to buy up to a quarter ounce of marijuana at an estimated 100 retail outlets in Denver. However, it will continue to be a violation to consume marijuana in public places, including streets, parks, hotels, and restaurants, and in vehicles. There is no history to indicate what type of impact, if any, this will have on tourism and conventions in Denver.
- Threats from natural disasters continue as evidenced by the national attention on the 2012 and 2013 wildfires and the September 2013 floods, which bypassed Denver but caused 10,000 people to be evacuated in nearby areas. The flood caused \$2 billion in damages and closed roads to major attractions, including Rocky Mountain National Park.
- Competition in the meeting industry is increasing at a rapid pace, creating a supply-demand imbalance that forces destinations to offer free or greatly reduced pricing for their convention centers in order to lure groups.
- There is also a growing trend for delegates to use online travel agencies like Expedia and Orbitz to book hotel rooms outside the official room block. This practice is called *attrition* and is causing meeting groups to reserve smaller room blocks, which, in turn, gives the impression that the group has a smaller economic impact than it does in reality.
- Issues continue with perceptions of safety, cleanliness, aggressive solicitation, and homelessness in downtown Denver in general and on the 16th Street Mall in particular. This can have a negative impact on tourism and convention bookings.
- Gasoline prices continued to fluctuate in 2013. Since Denver is one of the most isolated cities in North America, gasoline prices can have a major impact on tourism.
- Globalism has increased destination choices. Today, Denver not only competes with San



Diego for visitors, it competes with cruise ships and every far corner of the globe. There are more hotel rooms in the former isolated jungle destination of Angkor Wat, Cambodia, than there are in downtown Denver. Vacation time continues to shrink as Americans take

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## Leisure and Hospitality

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less vacation than any other major industrialized nation. Travel has become more difficult due to security, reduced flights, and new airline restrictions.

### Opportunities for Denver’s Tourism Industry

New projects in 2013 and 2014 could increase tourism and conventions to Denver.

- DIA is actively working to increase international air service. Denver currently enjoys nonstop service to numerous destinations in Canada and Mexico/Central America, as well as daily flights to London, England; Frankfurt, Germany; Tokyo, Japan; and Reykjavík, Iceland. There has been reported interest in direct flights to New Zealand, South America, and other European destinations.
- DIA remains the 5th-busiest airport in the United States and 13th-busiest in the world, with nearly 1,700 daily nonstops to more than 180 worldwide destinations. With three airlines

using DIA as a hub, the airport continues to see some of the lowest average air fares in the nation.

- DIA’s South Terminal Redevelopment Program will transform the airport into an intermodal transportation hub. When completed in 2016, the program’s three major elements—direct commuter rail access to downtown Denver’s Union Station, an on-site 500-room Westin Hotel (opening in 2015), and an outdoor plaza—will elevate DIA to one of the world’s premier airports.
- In May 2013, DIA was named one of the top 10 airports in the world and the No. 3 airport in North America by Skytrax, a worldwide leader in airport research services. DIA ranked ninth on the list of the “World’s Best Airports” with more than 50 million passengers per year, the largest category of passenger traffic. DIA was the only airport in the United States to make the top 10 global list.

- In mid-2014, Denver will open the restored historic 1895 Union Station with a new 120-room hotel, six restaurants, and shopping, all in a Beaux Arts transportation center that will ultimately have eight rail tracks serving everything from Amtrak to the new train to DIA.
- Starting on February 14, 2014, a new space will open in the Denver Museum of Nature & Science with “Maya: Hidden Worlds,” the largest exhibition about the ancient Maya to be displayed in the United States.
- In April 2014, Coors Field will open the largest outdoor rooftop terrace of any sports stadium in America, a massive 38,000-square-foot area with spectacular views of the ballpark, downtown Denver and the snowcapped Rocky Mountains. Called The Rooftop, the terrace will be served by the 5280 Craft Bar, which is exactly 5,280 feet above sea level—one mile high.

### DENVER METRO HOTEL ROOMS GROWTH 2005–2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013 <sup>a</sup>	2014 <sup>a</sup>
Rooms Available	37,407	38,191	39,276	39,997	40,320	41,006	41,768	42,206	43,398	43,881
Net Rooms Added	610	784	1,085	721	323	686	762	435	1192	483
Room Nights Available (thousands)	13,542	13,797	14,137	14,467	14,658	14,842	15,107	15,325	15,624	15,928
Supply Growth	0.7%	1.9%	2.5%	2.3%	1.3%	1.3%	1.8%	1.4%	2.0%	1.9%

<sup>a</sup>Forecast.

Source: Robert Benton, ISHC, Rocky Mountain Lodging Report.



## DENVER OCCUPANCY AND AVERAGE ROOM RATE 2008–2014

	2008	2009	2010	2011	2012	2013 <sup>a</sup>	2014 <sup>b</sup>
Occupancy Rate	62.8	57.7	62.7	65.2	67.0	68.2	68.9
Percentage Change from Prior Year	-3.9	-8.5	9.2	4.0	2.6	1.9	1.0
Average Daily Rate	\$105.92	\$93.22	\$94.24	\$97.52	\$100.47	\$105.82	\$112.88
Percentage Change from Prior Year	6.5	-12.0	1.1	3.5	3.0	5.3	6.7
Nominal Revenue per Available Room	\$66.56	\$53.58	\$59.13	\$63.62	\$67.27	\$72.21	\$77.76
Percentage Change from Prior Year	2.4	-19.5	10.4	7.6	5.7	7.3	7.7

<sup>a</sup>Through May 2013. <sup>b</sup>Forecast.

Source: PKF Hospitality Research LLC, June-August 2013.

- The West Rail Line, a 12.1-mile light rail transit corridor between Denver Union Station and Golden, opened in April 2013.
- Plans are underway to have a new free circulator bus that will depart from Union Station and travel up 19th Street to Broadway and return to the Station via Lincoln to 18th Street. It will operate much the same way as the 16th Street Mall shuttle operates. This will help make everything in downtown easier to reach by foot and shuttle, opening up free transportation to the hotels farther from the convention center. The circulator is scheduled to open in 2014.
- Blockbuster shows, including “Passport to Paris” at the Denver Art Museum, continue to attract cultural visitors to Denver. The new addition at the Denver Museum of Nature & Science, the new Hamilton Building at the Denver Art Museum, and the new History Colorado Center

are all capable of holding blockbuster exhibitions of national importance.

- The fourth SnowSports Industries America (SIA) Snow Show in 2013 reinforced Denver’s dominance as a center for winter sports. The wildly successful USA Pro Challenge (formerly the USA Pro Cycling Challenge) drew more than 1 million fans and generated nearly \$100 million of economic impact in 2013, its third year. Denver will host the men’s Lacrosse World Championships in July 2014.

### Denver Hotel Supply

Denver continues to develop small downtown hotels that add rooms, but not necessarily significant, room blocks for citywide conventions.

Recently opened (1,315 total rooms):

- A total of 863 hotel rooms opened in downtown Denver in 2010–11, including a 403-room

Embassy Suites, a 239-room Four Seasons; and a 221-room Hilton Garden Inn.

- A 150-room SpringHill Suites by Marriott opened at Metropolitan State University of Denver in August 2012.
- A 302-room Hampton Inn & Suites and Home-wood Suites opened in May 2013, one block from the convention center.

Under Construction (1,493 total rooms):

- A 230-room Marriott Renaissance Hotel will open in December 2013 in the historic Colorado National Bank building.
- A 112-room hotel will be built in Union Station and will be affiliated with The Oxford Hotel. The hotel will open in July 2014.

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- A 140-room Aloft Hotel is under construction in downtown Denver, one block from the convention center, and set to open in 2014.
- A dual-brand Hyatt Place/Hyatt House, with a combined 346 rooms, will open at 14th and Glenarm in 2015.
- A 165-room Art Hotel is under construction next to the Denver Art Museum set to open in 2014.
- Finally, in 2013 a 500-room Westin hotel broke ground at DIA and will open in 2015.

It has been reported that Aurora and Marriott are proceeding with the Gaylord project, pending financing, with 1,500 rooms and 400,000 square feet of meeting space.

### Denver's Convention Industry

In the past 25 years Denver has invested in infrastructure that has created a robust convention package with all the factors clients are looking for when selecting a destination: accessibility, facilities, affordability, safety, service, green, and destination appeal. However, due to recent and current economic conditions, as well as an oversupply in the convention center market with flat meeting demand, Denver will need to focus on the following issues in order to remain competitive in this lucrative market.

- Competition reached new heights in 2013 because of continued oversupply of convention centers and flat meeting demand. A number of new cities (e.g., Indianapolis, Nashville, and Austin) are entering the marketplace with recent center expansion and hotel development.

Planners now have more destination opportunities, thereby increasing the length of the rotation patterns and the number of years before a group might return to a city that has performed well in the past.

- For most associations and global corporations, international attendance is vital to their meeting success and long-term delegate growth. Terrorism, oil prices, conflicts in the Middle East, and U.S. visa policies can impact every city in the United States, especially noncoastal cities like Denver.
- PricewaterhouseCooper's (PwC) *Hospitality Directions U.S.* report states that the national lodging outlook anticipates growth in occupancy and ADR that will result in a 5.9% increase in RevPAR in 2013. Supply growth remains suppressed, and occupancy is expected to advance, to 62%, in 2013. ADR growth is expected to accelerate.
- By year-end 2013, Denver hotels are forecast to see a RevPAR increase of 7.3%. This is the result of an estimated increase in occupancy of 1.9% and a 5.3% gain in ADR. The 7.3% boost in Denver RevPAR is better than the national projected increase of 5.9%.
- Leading the way in 2013 RevPAR growth is the upper-priced segment of Denver. The properties in this category are forecast to achieve a 6.6% gain in ADR and see a 0.9% increase in occupancy, resulting in a 7.5% increase in RevPAR. Lower-priced hotels are projected to experience an ADR growth rate of 4.1%, along with a 3.1%

gain in occupancy, resulting in a 7.3% RevPAR increase.

- Looking to 2014, Denver RevPAR is expected to grow 7.7%. This is better than the rate of growth in 2013. Unlike 2013, prospects for RevPAR growth in the upper-priced segment (7.8%) are better than in the lower-priced segment (7.3%). Denver market occupancy levels are estimated at 68.2% and 68.9% during 2013 and 2014.
- It appears that 2013 will likely end as the fourth-best year for meetings in Denver; this is up slightly from 2012. Bookings for 2014 are currently pacing better by approximately 10% year-over-year, with the number of conventions up as well. The increase in 2014 puts the pace in the top five-best years in Denver's history.
- As the economy has started to rebound, groups are continuing to contract fewer rooms due to attrition and booking outside the block via the Internet. Citywide meeting planners are blocking fewer hotel rooms due to the aggressive attrition penalties enforced by hotels and "outside the block" Internet bookings by delegates.
- National competition for meeting business is fierce as more cities expand their convention centers, build new hotels, and offer competitive rates in an attempt to attract a meetings market that is stagnant and has seen no growth in a decade. Anaheim, Baltimore, San Diego, Los Angeles, San Jose, Miami, Nashville, and Boston are either planning or have center expansions underway. Philadelphia, Phoenix, and Indianapolis have opened new expansions in the last

18 months. There has also been a recent increase in 1,000-plus-room headquarter hotels, with properties being built in Dallas, San Antonio, San Diego, Indianapolis, Las Vegas, Houston, Boston, Austin, and Phoenix. These additions only heighten competition in an already inventory-heavy convention market.

- In 2013, a total of 81 groups used the Colorado Convention Center, 13% fewer than in 2012. However, the groups were larger in size, so there are slightly more room nights than in 2012 and about the same number of delegates. The total number of center and noncenter business in 2013 was 574 meetings, representing 379,925 delegates and generating \$660.8 million in direct economic impact.
- Future demand continues to look encouraging. Year-to-date 2013, hotel and nonconvention center groups booked into future years by VISIT DENVER added another 501 meetings with more than 278,265 delegates, contributing over \$478.8 million in direct economic impact to the city.
- In Metropoll, which includes both corporate and association meeting planners who organize large national meetings for 300 or more people, Denver moved from 14th-best convention destination in the nation four years ago to the 5th-best.
- The Watkins survey of 730 citywide participants, representing 650 unique companies and/or associations, is one of the most prestigious and respected meeting planner studies in the

nation. In the study, Denver ranked as the 4th-best convention city out of all 46 cities based on total scores for all questions. Denver was also one of only two cities to rank in the top 10 cities in all six study areas: hotels, great all around convention city, safe and secure, superior convention facilities, easy accessibility within the city, and superior convention and visitor bureau.

### **Destination Marketing Organizations across Colorado**

The destinations around Colorado are made up of micro-climates and micro-economies that are marketed by convention and visitor bureaus, chambers of commerce, and resort associations that are generally referred to as destination marketing organizations (DMOs). DMOs are located in communities throughout the state. Variables that impact tourism are diverse and relate to a variety of local implications, including weather, attractions (public and private), access, special events, local economies, and reliance on a strong statewide tourism campaign.

Among other sources, information from the DMOs was collected through the Colorado Association of Destination Marketing Organizations (CADMO). CADMO is a statewide membership association designed to foster the growth of the convention and tourism industry in Colorado by cooperating in the exchange of useful information

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between members, increasing awareness of legislative action, developing unifying public relations activities, providing valuable educational opportunities, and maintaining high standards of professionalism and expertise.

### Mountain Resorts

One of the biggest growth segments in Colorado's mountain resorts has been the non-ski periods, including summer and the shoulder spring and fall seasons. Many of the mountain resorts recorded record retail sales tax revenue over the summer, exceeding pre-recession levels when spending patterns were stifled by the economy. Some communities saw a significant rebound in the real estate market, furthering retail sales from second homeowners.

In addition to some rebound in the economy, concerted planning and dollars spent on special events significantly contributed to increased sales. Large events, such as music, film, and food festivals, are big contributors, but smaller special events aimed at niche markets on off-weekends are also beginning to have a measurable economic impact. Group business represented through meetings and conventions also saw some healthy increases. Occupancy rates and RevPAR in mountain resort communities are strong. Assuming snow conditions cooperate for the 2013–14 ski season, 2014 visitation forecasts for mountain resort communities are positive.

### Mountain Lodging

The mountain lodging subsector of Leisure and Hospitality will see a 3%–5% gain in occupancy and a 4%–7% increase in rates for 2014. Demand has remained steady, with a slight increase in both the summer and winter peak periods. A good snow season could drive occupancy into pre-recession levels. Rates have lagged occupancy in the recovery; however, they are beginning to rise.

Now that product development in the mountain resort areas is at a standstill and projects completed in the last two years have been absorbed into inventory, particularly in the luxury segment, prices are starting to follow the increase in demand. The price spread between budget, mid-market, and luxury is starting to widen. The luxury segment will see the greatest gain in 2013 and 2014 with the other segments following their lead.

The summer of 2013 saw an increase in occupancy well beyond projected growth. Demand is growing as the recession begins to ease in Colorado and across the region. This steady growth is expected to expand in 2014.

### Other Tourism Communities in Colorado

Until the devastating impacts of Colorado's 2013 flood season and the unfortunate timing of the government shut down, most tourism communities across the state were reporting good numbers, with occupancy, room rates, and retail sales either up or flat compared to the previous year. These reflected an improved economy and a strong national and international tourism campaign

developed by the Colorado Tourism Office, "Come to Life."

Unfortunately, some communities, largely in the northeast region of Colorado, were significantly affected by the flood in September 2013, and some, such as Estes Park, experienced catastrophic closures and damages. The government shut down in October impacted those tourism communities in the state that are home to a national park or a monument. As a result of these two unforeseeable events, tourism numbers 2013 for many communities, especially those that were impacted by both events, will see a significant drop in tourism in the third and fourth quarters. Those impacts will continue in 2014 unless highways are repaired (not just passable, but visitor friendly) and crisis-recovery marketing campaigns are funded for severely impacted tourism locations. Promising progress has been made on road repairs, with the reopening of U.S. 36 to Estes Park and Rocky Mountain National Park in November, as well as U.S. 34 between Loveland and Estes Park.

### Opportunities and Challenges in 2014

Most tourism communities across Colorado are approaching 2014 with guarded optimism and are projecting slight increases in business indicators. On the positive side, the Colorado Tourism Office's "Come to Life" campaign continues to show very strong results among the traveling public, which should have an impact on visitation in 2014.

Many communities are looking forward to increased visitation from the international marketplace, resulting from new international flights



through DIA (specifically Japan) and some direct flights into regional airports. Three years of worldwide media coverage of the U.S. Pro Challenge will also create interest from international visitors.

Special events will continue to play a big role in overall visitation. Communities across Colorado are adding new and unique special events in 2014. For example, the Aurora Sports Festival in February 2014 is anticipating up to 2,000 competitors, and Boulder is hosting both the U.S. Cyclocross National Championships and the USA Cross Country Championships in 2014. Looking further ahead, major events, such as the 2015 World Alpine Ski Championships in Vail and Rocky Mountain National Park's 100-year anniversary in 2015, will have major impacts.

Many tourism communities also see the overall groups markets as a significant opportunity. Meetings, tour groups, youth sports and other sporting events, and social group markets are more resistant to unforeseeable weather challenges and can help fill off-season periods when leisure traffic declines.

Tourism communities continue to develop infrastructure, including hotels, attractions, and meeting space. For example, Alamosa will be adding a new Fairfield Inn in 2014, and the Wooley Classic Suites near DIA will also open in 2014. Estes Park is currently in the process of constructing a multipurpose event center on property at the fairgrounds. Colorado Springs looks forward to four new tourism developments as part of its City for Champions project, including a U.S. Olympic museum.

In terms of challenges heading into 2014, recovery from flood-damaged areas will continue, and fewer direct flights into many of the state's regional airports is causing some concern. Nationally, another concern is the ongoing "hassle factor" when traveling (e.g., security). There is also overall trepidation regarding the somewhat fragile domestic economy and overall economic health that impacts consumer confidence and ultimately dollars spent on travel. Potential future government shutdowns are also a concern as these have significant impacts on government group meetings that have already been scheduled. Finally, weather is always a factor, and given the last two summers in Colorado, there is growing awareness of potential fire hazards and floods.

### A Brief Look to 2014

Despite some of the devastating natural catastrophes that affected many of Colorado's tourism communities in 2013, tourism professionals have always been resilient and have developed effective strategies for meeting challenges and taking advantage of timely opportunities. Working locally with community leaders, regionally with other tourism destinations, and statewide in conjunction with the Colorado Tourism Office and tourism associations, it is expected that DMOs will continue to ratchet-up their marketing efforts to drive visitors to their destinations. Whether through strong social media messages, traditional advertising campaigns, crisis management, or the development of new events and niche markets, tourism communities across

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## Undergraduate Mentoring & Career Development

The Mentoring & Career Development Office is the hub for undergraduate professional development, providing professional skills and experiences to support a smooth transition from college to career. The office prepares undergraduates for careers in business by providing professional skills, career exploration and preparation, industry experiences, and access to employer and alumni connections throughout the Leeds experience.

### Mentoring

The mentoring office aspires to set the standard for integrating mentored learning experiences into business education, providing our students with the real-world skills, knowledge, and experience necessary to be early contributors and future business leaders.

We have four mentoring programs that are integrated into students' four years at Leeds: CoLab, Peer2Peer, Young Alumni Mentors, and the Professional Mentorship Program.

**MAKE A DIFFERENCE. BECOME A MENTOR!** Learn more about the benefits of mentor-mentee relationships, our programs, and apply to become a mentor on our website!

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**UNDERGRADUATE MENTORING & CAREER DEVELOPMENT**

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Colorado are presenting optimistic forecasts for 2014, and the state's DMOs will work diligently with all of their tourism partners to achieve those results.

### Casinos

Colorado's casino and gaming industry has had only marginal growth through late 2011 and 2012 due to the continuing economic recession, the residual impact of the 2008 casino-wide smoking ban, and a market saturation in the three gaming towns that has resulted in cannibalization of existing markets rather than growth of new gaming patrons. The Black Hawk and Central City markets

have seen slight growth, due to new casinos opening in Central City and Ameristar's Hotel and Spa. However, the Cripple Creek market has been flat since 2002, and the Wildwood Casino's opening in 2009 did not increase the Cripple Creek gaming market as originally anticipated. During calendar years (CY) 2008–10, the industry experienced an average of \$11 million in collective losses. During CY 2011, the industry saw a collective net profit of \$7.5 million, followed by a collective net profit of \$35.7 million in 2012, a jump primarily attributed to the Black Hawk market and the addition of hotel rooms, parking, and other amenities.

Since the industry is taxed on gross revenues rather than net revenues, it continues to honor its commitment to the recipients of gaming tax revenues, such as the state's historic preservation program and the community college network, which receive significant revenues. These gaming tax revenues help bolster their budgets and maintain their commitments to preserving Colorado landmarks, as well as assuring students a quality higher education. The gaming tax also continues to fund the entire tourism promotion budget for the Colorado Tourism Office, which was set by the Joint Budget Committee in 2012 to a fixed amount of \$15,000,000 annually rather than a graduated percentage previously.

For the fiscal year ending in June 2013, Colorado casino adjusted gross proceeds (AGP), which is defined as the amount wagered by bettors less payout from the casinos, were \$761.4 million and gaming taxes paid to the state were \$104.1 million. This reflects a slight increase of 0.23% in AGP over the fiscal year 2012 AGP of \$759.6 million and an increase of 2% in gaming taxes over the fiscal year 2012 taxes of \$102.1 million.

Black Hawk continues to dominate the Colorado casino sector with 18 casinos, approximately 8,600 gaming devices, and about 73% of the industry's AGP. Cripple Creek has 15 casinos, roughly 4,000 gaming devices, and 18% of AGP, while Central City has 7 casinos, 2,400 devices, and about 9% of AGP.

While the gaming industry experiences a continued recovery from the recession, it remains threatened by the Colorado legislature's continued

### COLORADO CASINOS CALENDAR YEAR 2005–2014

Year	Colorado Casinos Open	Colorado Devices (000s)	Adjusted Gross Proceeds <sup>a</sup> (In Millions)			
			Black Hawk	Central City	Cripple Creek	Total <sup>b</sup>
2005	47	16.4	531.9	72.6	151.0	755.5
2006	46	17.1	554.5	74.5	153.1	646.1
2007	43	16.8	581.4	79.8	155.0	816.1
2008	41	16.8	514.8	66.5	140.9	722.2
2009	40	16.1	530.0	64.3	140.4	734.7
2010	39	15.4	559.4	65.7	134.4	759.6
2011	39	14.7	550.8	67.8	131.4	750.1
2012	41	14.9	558.5	74.5	133.1	766.1
2013 <sup>c</sup>	41	15.0	561.5	72.6	132.5	766.6
2014 <sup>d</sup>	41	14.9	559.1	73.6	132.5	765.2

<sup>a</sup>AGP calculated on an annual basis, hence different from the state fiscal year. <sup>b</sup>Due to rounding, the sum of the individual AGPs may not equal the total. <sup>c</sup>Estimated. <sup>d</sup>Forecast. Sources: Colorado Division of Gaming and Colorado Business Economic Outlook Committee.

attempts to expand gaming to the Front Range of Colorado by authorizing video lottery terminals, keno machines, or instant racing machines at racetracks and other locations. The industry's annual polling on these types of gaming expansion continues to reflect that 75% of state voters oppose casinos located outside the historic towns of Black Hawk, Central City, and Cripple Creek. Looking forward, the Colorado gaming industry will monitor those states that recently approved some form of online gaming to determine if there is potential for an increased tax benefit for the state through online betting, albeit in a limited-stakes environment.

### Colorado Restaurant Industry Outlook

Driven by a gradually improving economy and elevated levels of pent-up demand among consumers, Colorado's restaurant industry is projected to register sales of more than \$9 billion in 2014.

Although the country is more than five years removed from the financial crash that caused the Great Recession, many of the jobs that were lost have yet to be recovered and the confidence of the U.S. consumer remains fragile.

In a nationwide survey of consumers conducted by the National Restaurant Association in September 2013, approximately 1 out of 10 adults described the state of the national economy as "excellent" or "good," while the remainder said it was "fair" or "poor." Even more troubling, this sentiment was essentially unchanged from the previous three years, despite the fact that the economy has slowly but steadily improved. The result has been an

almost unprecedented tightening of purse strings by many households, with consumer spending growing at rates well below what would be expected during a normal post-recession recovery.

There is no denying that challenges abound from the restaurant operators' perspective as well—most notably the upcoming implementation of health care reform. However, the good news for operators is that pent-up demand among consumers remains historically high, with nearly half adults saying they are not eating at restaurants as often as they would like. Contrast this with the stronger sales environment of the mid-2000s, when only 1 out of 4 adults expressed unfulfilled demand for restaurant services. It is clear that these underserved consumers have not abandoned restaurants, but rather are choosing their visits more carefully until their financial situation improves.

The key for restaurant operators is to successfully distinguish themselves from the competition and build sales in this challenging economic environment. This means focusing their efforts on the consumer segments that currently have both the means and desire to patronize the restaurant industry. By offering the right mix of food, service, and experience that appeal to this important demographic, restaurant operators can successfully turn first-time customers into repeat business.

Today's consumers are more in-tune with cutting-edge food trends than ever before in large part because of the popularity of TV cooking shows and culinary competitions. According to the National Restaurant Association's 2012 Restaurant Trends Survey, 9 out of 10 restaurant operators



agreed that customers are more knowledgeable and sophisticated about food and beverages than they used to be.

The National Restaurant Association teamed up with the American Culinary Federation for the seventh year to survey professional chefs on the latest food, cuisines, and culinary trends in restaurants. The "What's Hot" survey asked chefs to rate 198 individual food items, beverages, preparation methods, cuisines, and culinary themes as a "hot trend," "yesterday's news," or "perennial favorite" on restaurant menus in 2013. The survey found that local sourcing and children's nutrition will continue to be the hottest trends on restaurant menus in 2013. In fact, the top three items were unchanged from 2012—locally sourced meats and seafood, locally grown produce, and healthful kids' meals.

The remainder of the top 10 included environmental sustainability as a culinary theme, children's nutrition as a culinary theme, new cuts

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of meat (e.g., Denver steak, pork flat iron, teres major), hyperlocal sourcing (e.g., restaurant gardens), gluten-free cuisine, sustainable seafood, and whole-grain items in kids' meals.

Incorporating the latest menu trends can help operators keep menus fresh and attract new customers, but restaurant operators must also keep their regulars happy by continuing to offer their favorite dishes.

In the association's "What's Hot" survey, chefs were most likely to say that Italian cuisine was a

perennial favorite in full-service restaurants, followed closely by hamburgers and cheeseburgers, egg dishes, French toast, and fruit desserts (e.g., cobblers, crisps, tarts, pies).

On limited-service menus, soft drinks topped the list of perennial favorites, followed by poultry items, iced tea, french fries, and chicken sandwiches. Hamburgers and cheeseburgers (as one item) also made the list of top perennial favorites at limited-service restaurants—the only item to make the top 10 list in both segments.

## Parks and Outdoor Recreation

Colorado has a renowned outdoor recreation system that includes four premier national parks, five national monuments, a national historic site, and a national recreation area. Rocky Mountain National Park, Mesa Verde National Park, the Great Sand Dunes National Park and Preserve, and the Black Canyon of the Gunnison National Park anchor Colorado's outdoor recreation system, and receive more than 5 million visitors annually. In 2013, national park visits took a heavy hit due to historic floods and the government shutdown.

### COLORADO NATIONAL PARKS VISITS 2005–2014 (In Thousands)

Parks	2005	2006	2007	2008	2009	2010	2011	2012	2013 <sup>a</sup>	2014 <sup>b</sup>
Bent's Old Fort NHS	27.8	26.5	24.0	25.0	28.1	29.1	26.8	25.8	23.6	25.9
Sand Creek Massacre NHS <sup>c</sup>	—	--	--	--	--	4.1	3.9	4.4	3.8	4.4
Black Canyon of the Gunnison NP	180.8	160.5	219.6	160.2	171.5	176.3	168.3	192.6	179.1	191.3
Colorado NM	347.1	332.7	395.3	391.0	400.3	433.6	435.5	454.5	404.5	426.5
Curecanti NRA	882.8	936.4	964.6	1007.4	953.2	969.5	924.5	862.6	812.8	850.6
Dinosaur NM <sup>d</sup>	266.8	206.1	170.9	149.3	150.9	146.4	158.0	302.9	278.2	323.4
Florissant Fossil Beds NM	59.5	56.1	56.0	57.0	64.3	65.4	61.3	62.6	58.9	64.4
Great Sand Dunes NP	279.6	258.7	285.1	273.9	290.0	283.3	280.1	254.7	243.4	255.4
Hovenweep NM <sup>d</sup>	11.7	11.6	11.6	11.2	12.3	12.1	11.4	26.7	24.9	27.9
Mesa Verde NP	498.3	557.2	541.1	551.4	550.4	559.7	572.3	488.9	458.8	496.6
Rocky Mountain NP	<u>2,798.4</u>	<u>2,743.7</u>	<u>2,895.4</u>	<u>2,757.4</u>	<u>2,822.3</u>	<u>2,955.8</u>	<u>3,176.9</u>	<u>3,229.6</u>	<u>2,986.9</u>	<u>3,446.4</u>
Total Visitors to Parks and Sites <sup>e</sup>	5,352.8	5,289.3	5,563.5	5,383.8	5,443.0	5,635.3	5,819.1	5,905.2	5,475.0	6,112.8

<sup>a</sup>Estimated. <sup>b</sup>Forecast. <sup>c</sup>Sand Creek Massacre NHS was dedicated as an official park unit in April 2007. <sup>d</sup>Dinosaur NM and Hovenweep NM cross into Utah, but the number of visitors reported in this table is only for the Colorado portion of the parks. <sup>e</sup>Due to rounding, the sum of the individual items may not equal the total. Note: Yucca House National Monument does not report visitations, therefore it is not included. Definition: NHS = national historic site, NP = national park, NM = national monument, and NRA = national recreation area. Sources: National Park Service Visitor Use Statistics and Colorado Business Economic Outlook Committee.



During the October shutdown, the parks experienced an average 62% decline in visits compared to October 2012. Additionally, visits to Rocky Mountain National Park dropped more than 50% during September due to the floods that devastated the area. In 2013, visits to Colorado's national parks are estimated to be around 5.4 million, and an increase of 11.7%, to 6.1 million visitors, is forecast for 2014 based on normalized 2013 figures.

The state's outdoor recreation system also includes national forests and Bureau of Land Management lands; state, county, and city parks; and open-space areas. Historically, these areas have attracted more visitors than the state's national parks, bringing in more than 11 million visitors each year.

The outdoor recreation industry will experience significant growth mainly due to normalized visitation figures. As the economy recovers, the industry will also gain visitors from consumers' interests in finding affordable ways to spend their leisure time. Outdoor recreation is on track to experience moderate, positive growth in 2014.

## Skiing Industry

Colorado's ski areas recorded an estimated 11.4 million skier visits in the 2012–13 season, an increase of almost 4% from the 11.01 million visits in 2011–12. The 11.4-million mark, while an increase over the lackluster and dry 2011–12 season, is the third-lowest season total in the past decade. The 2012–13 season got off to a slow start with lack of good snow conditions and local skiers staying home. While storms in late December and late spring created a jump in visitation, it was not

enough to bring visits closer to the 12-million skier visit benchmark reached in 2005–06, 2006–07, 2007–08, and 2010–11.

According to the National Ski Areas Association, the United States recorded 56.6 million skier and snowboarder visits during the 2012–13 season. Thus, Colorado resorts accounted for more of these visits (20%) than any other state, with more than one in five skiers choosing to ski at a Colorado resort.

To enhance the skiing experience and draw more skiers, Colorado resorts continue their dedication to maintaining the highest standards in ski vacations with improvements and projects totaling millions of dollars for the 2013–14 season. From

### COLORADO SKIER VISITS 2004–2014 (In Millions)

Season	Total
2004-05	11.81
2005-06	12.53
2006-07	12.56
2007-08	12.54
2008-09	11.85
2009-10	11.85
2010-11	12.20
2011-12	11.01
2012-13 <sup>a</sup>	11.40
2013-14 <sup>b</sup>	11.90

<sup>a</sup>Revised. <sup>b</sup>Forecast.

Sources: Colorado Ski Country USA and Colorado Business Economic Outlook Committee.



Steamboat's multimillion dollar on-mountain lodge to Silverton's new overnight heli-trips, the investments are as diverse as the guests they serve. Skiers will find significant snowmaking and grooming additions, new restaurants and bars, snowcat tours, and luxury resort lodging renovations, all designed to maintain Colorado's reputation as the top destination for a world-class skiing and snowboarding experience.

Colorado's 2013–14 ski season got underway on October 13, 2013, when Arapahoe Basin was the first ski resort in the nation to open for the season. With the 2014 Sochi Winter Olympics creating extra excitement for the season and increased interest in the sport, all that is needed for a great ski season is good snow conditions to bring the local skiers back to the slopes. Assuming Mother Nature cooperates and provides plentiful snow, it is expected that skier visits will grow back toward the 12.0-million benchmark and record 11.9 million visits during the 2013–14 season. ❄️

## Other Services

The Other Services Supersector is comprised of establishments that provide services not specifically categorized elsewhere in the classification system. As a result, the three sectors in this category are highly fragmented and diverse. Car washes, beauty salons, religious organizations, funeral homes, grantmaking foundations, and labor unions are some examples of the type of industries in the supersector. In 2012, nearly 13,000 businesses were classified in Other Services. Industry growth is influenced by the demography of the population and disposable income. In 2012, total Other Services employment was 95,500, a 2% increase from the previous year. The supersector

is expected to end 2013 with 97,300 jobs and add another 2,000 in 2014, a 2.1% gain. The improvement is mainly attributable to the increase in demand for personal and repair services.

### Repair and Maintenance Services

The Repair and Maintenance Services Sector encompasses businesses that provide repair and maintenance services for automotive, commercial machinery, electronic equipment, and household goods. The sector has been slowly recovering since the last economic downturn. Recently, many companies that provide repair services are reporting small increases in revenue as more people choose

to fix their existing possessions rather than buy new. However, businesses within this sector continue to face competition from larger retail firms that offer the same services but are outside this category, like Best Buy and Walmart. The sector is expected to end 2013 with 22,300 total jobs, a slight increase from the previous year, and add 400 jobs in 2014. Growth is from the continual demand for repair services,

specifically, for personal electronic repair and automotive maintenance.

### Personal and Laundry Services

Industries in the Personal and Laundry Services Sector are vastly diverse. They include firms that provide services such as hair, nail, and skin care; death care (i.e., funeral homes and cemeteries); dry cleaning (including coin-operated); pet care (except veterinary); photofinishing; and parking lots. Industry growth is based on changes in population and income. The sector climbed 3.1% in 2012, with growth expected to continue in 2013 and 2014. The increase is from demand for personal services, such as pet amenities and salons. In addition, an aging population provides an expanding customer base for many of these services.

### Religious, Grantmaking, Civic, Professional, and Similar Organizations

The Religious, Grantmaking, Civic, Professional, and Similar Organizations Sector is the largest industry in Other Services, employing more than 50% of the supersector's workforce. The sector includes organizations that provide religious and grantmaking services, as well as social advocacy and political organizations. In 2012, the sector added 1,000 jobs, a 2% increase from the previous year, and is anticipated to end 2013 with 51,000 total jobs, a gain of 1.6% from the previous year. Growth of 500 jobs is expected in 2014. ❖

#### OTHER SERVICES EMPLOYMENT, 2005–2014 (In Thousands)

Year	Repair and Maintenance Services	Personal and Laundry Services	Religious, Grantmaking, Civic, Professional, and Similar Organizations	Total
2005	22.7	21.9	44.0	88.5
2006	22.6	22.3	45.9	90.8
2007	22.7	23.0	47.3	92.9
2008	22.7	23.6	48.6	94.8
2009	21.5	22.6	49.6	93.7
2010	21.4	22.2	48.9	92.4
2011	21.6	22.6	49.2	93.5
2012 <sup>a</sup>	22.0	23.3	50.2	95.5
2013 <sup>b</sup>	22.3	24.0	51.0	97.3
2014 <sup>c</sup>	22.7	25.1	51.5	99.3

<sup>a</sup>Revised. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Note: Due to rounding, the sum of the individual items may not equal the total.

Sources: Colorado Department of Labor and Employment, and Colorado Business Economic Outlook Committee.

## Government

The Government Supersector includes federal, state, and local workers and is the second-largest provider of jobs in Colorado, representing roughly one in six jobs. Government activities include a variety of services ranging from space research and technology to public safety, program administration, and education.

In 2012, total Government employment in Colorado was 395,100, representing 62% local government (including K-12 education), 24% state government (including higher education), and 14% federal government. Even though Government payrolls increased between 2005 and 2010, difficult budget conditions confronted the public sector in 2011. However, Government employment rose 0.6% in 2012 and is expected to increase 0.4%, to 396,600 in 2013 and then rise 1.1%, to 401,000, in 2014.

Employment in the state's Government sectors is driven by a variety of factors. Federal employment can be impacted by changes in the budgets of federal agencies, the political environment, and funding levels for institutions and laboratories. Recently, the combination of the ballooning federal deficit, spending cuts, and program consolidations, including the U.S. Postal Service, will impact federal employment growth. Furthermore, the threat of sequester is expected to have a negative impact for many of the state's largest federal government employers, particularly defense. State employment is driven by healthy growth in income and sales taxes, which are positively correlated. Moreover, stronger-than-expected revenues from corporate income taxes and capital gains could generate a budget surplus, which would allow the

state to maintain or even increase K-12 school funding. Counties and many special districts in the state depend heavily on property and sales tax collections. These districts continue to recover from the economic downturn after facing significant staff reductions. However, early indications suggest these revenue sources have stabilized with the economic recovery.

### Federal Government

Long-term simulations by the Government Accountability Office (GAO) continue to highlight the need to focus attention not only on the federal government's near-term budget outlook but also on its longer-term fiscal path. In the near term,

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### GOVERNMENT EMPLOYMENT IN COLORADO 2005–2014 (In Thousands)

Government Sector	2005	2006	2007	2008	2009	2010	2011	2012 <sup>a</sup>	2013 <sup>b</sup>	2014 <sup>c</sup>
Local General	109.9	112.8	115.4	118.9	119.2	117.9	116.5	118.2	118.5	120.0
Local Education	117.7	119.8	122.4	125.1	127.1	126.8	126.1	125.6	126.2	127.8
Total Local	227.6	232.6	237.8	244.0	246.3	244.7	242.6	243.8	244.7	247.8
State General	30.0	30.3	31.3	32.4	32.6	32.7	33.2	33.1	33.5	34.3
State Education	52.3	52.2	53.4	55.4	58.1	60.3	62.2	63.6	64.7	65.7
Total State	82.3	82.5	84.7	87.8	90.7	93.0	95.4	96.7	98.2	100.0
Total Federal	52.7	52.2	52.1	52.4	53.5	56.2	54.9	54.6	53.7	53.2
Total Government	362.6	367.2	374.7	384.1	390.5	393.8	392.9	395.1	396.6	401.0

<sup>a</sup>Revised. <sup>b</sup>Estimated. <sup>c</sup>Forecast.

Note: Due to rounding, the sum of the individual components of government may not equal the total.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

## Government

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deficits are expected to continue to decline from the recent historic highs as the economy recovers. However, long-term fiscal challenges will continue to persist. Many of the long-term drivers of the federal government's fiscal imbalance, such as the aging of the population, are beginning to affect the federal budget at a time when federal debt held by the public is already at historically high levels. Therefore, policy options may already be more constrained. The recent slowdown in the growth of federal health care spending per beneficiary is encouraging and, if sustained, could have a meaningful effect on the long-term outlook. However, given the aging of the population and the growth of enrollment in federal health care programs projected in the next two decades, slowing the growth in spending per beneficiary alone will not

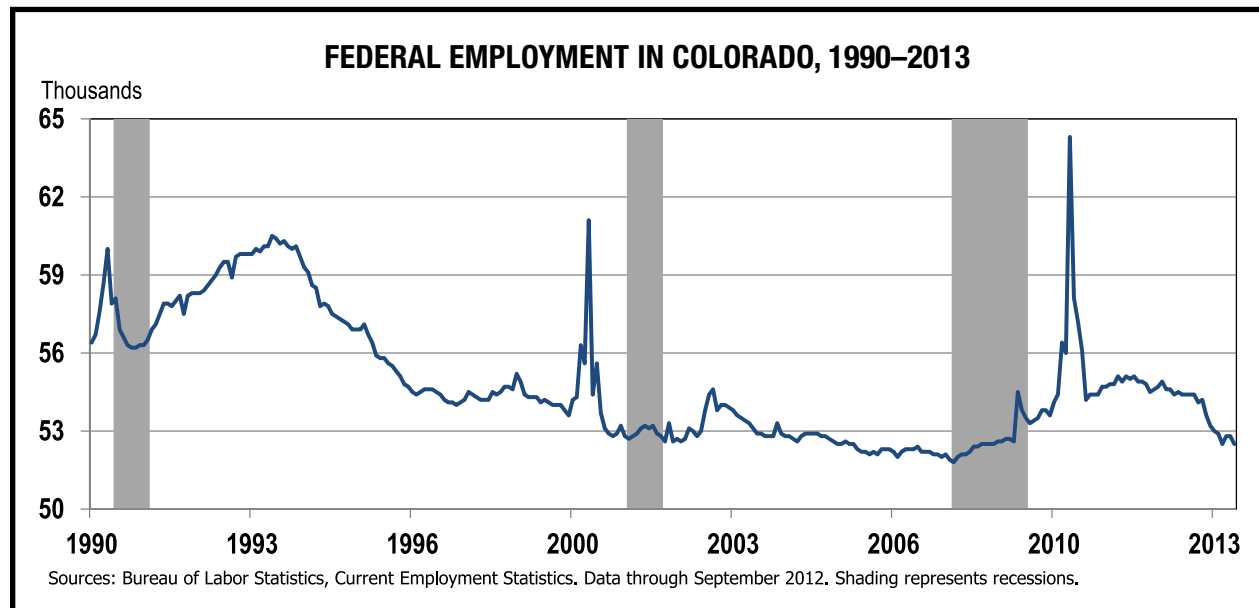
be enough to address the federal government's fiscal imbalance.

The federal government remains one of Colorado's largest employers. More than 54,000 civilian employees work at over 250 federal field offices and a diverse mix of Department of Defense (DOD) military installations employ more than 73,000 personnel from military, civilian, and contracts. The political environment, sequestration, and ongoing agency consolidations will hinder federal employment growth, reduce funding levels for institutions and laboratories, and shrink or eliminate many public programs and services. As a result, employment declines will continue in 2013 and in 2014, with a drop of 0.9%, ending the year with 53,200 jobs.

As of October 1, 2013, the 2011 Budget Control Act requires the federal government reduce spending by \$109.3 billion in fiscal year (FY) 2014—half from defense programs and half from nondefense spending. Even if sequestration is reversed, federal spending is likely to slow down and be closely monitored, at least in the near term.

Due to sequestration, the DOD—the largest federal agency in Colorado—is anticipating a 15% reduction in the military and civilian DOD workforce over the next decade. Although it is trying to absorb the cuts through retirements and attrition, the DOD may have to resort to reductions in workforce and buyouts. The DOD is not alone in trying to reconcile mission critical activities with appropriate staffing and resource levels. The U.S. Postal Service continues to fight shrinking revenues due to declining mail volumes. To compensate for the lack of resources, agencies are cutting back hours they are open to the public and reducing or eliminating some services.

Although not immune to sequestration, federally funded science and research centers located in the state continue to generate significant employment and economic impacts. Colorado has 30 federal laboratories, one of the highest concentrations of federally funded science and research centers in the nation. These laboratories contributed \$2.3 billion to Colorado's economy in 2012 and accounted for more than 15,680 direct and indirect jobs totaling \$787.2 million in wages and benefits. The labs also contribute greatly to the state's high-tech industries, stimulating significant tech-transfer opportunities among higher education and area companies





in critical areas such as renewable energy, space science, and natural resource management.

## State Government

State government employment in Colorado tends to follow strong trends with only gradual changes from one year to the next. Despite steep budget cuts during the economic downturn in 2008, state agencies avoided layoffs by using furloughs and postponing replacement of retired workers, a practice known as “vacancy savings.” Similarly, the rebound in state revenue that has accompanied Colorado’s economic recovery has not led to a surge in hiring by state agencies. Although the state ended FY 2012 with a \$574 million surplus, state employment grew just 1.4% in 2012.

Following a year of strong tax receipts, the state ended FY 2013 with a budget surplus of more than \$1 billion. Faced with the likelihood that some of the increased revenue may not be repeated in future years, policy makers have elected to reserve a large portion of the increased revenue for savings and one-time expenditures. This includes items such as construction and maintenance of state buildings and transfers to the State Education Fund (SEF). The SEF, which holds money to be used for spending on primary education, will receive a transfer of nearly \$1.1 billion at the end of the current fiscal year, according to current law. Even while taking measures to limit ongoing spending increases, the Colorado State Legislature increased appropriated full-time employment (FTE) by nearly 3% in the budget for FY 2014 after small decreases in the prior two years.

Appropriated FTE indicates the level of hiring that the legislature has authorized in each year’s budget, and changes in this number correlate closely with changes in actual state employment. Thus, the higher appropriation is expected to correlate with higher growth in state employment in the second half of 2013 and 2014.

State revenue growth is expected to moderate in FY 2014 due to the dynamics of capital gains and income tax that arose at the end of calendar year 2012. A substantial amount of personal income was “pulled forward” from 2013 into 2012 as individuals elected to realize capital gains and take bonuses ahead of tax increases that took effect on January 1, 2013. As a result, tax receipts are expected to be higher in FY 2013 than they would have been otherwise, which will constrain the year-over-year growth of state revenue in FY 2014. With more moderate growth in 2014, the state’s stable financial position and positive economic outlook are expected to result in moderate employment growth in that year.

When floods ravaged many parts of the state in September 2013, the state government led efforts to evaluate damage and begin the process of rebuilding critical infrastructure. In October 2013, the federal government announced that it would make available up to \$450 million of relief funds to repair Colorado’s highways and bridges. Although a substantial amount of federal assistance is expected in the state, most of this spending will be passed through to private companies for repair work. As a result, the impact on state hiring will be minimal.

Following years of consistent slow growth, state government employment, excluding higher education, is expected to increase 1.3%, with 33,500 jobs in 2013, after strong growth in state revenues the previous fiscal year. Growth of 2.2% is projected in 2014, to 34,300 jobs.

## Higher Education

Employment in Colorado’s higher education accounts for roughly two-thirds of the state’s total employment. These workers include administrative staff, instructors, support staff, and student work-study positions. Colorado’s higher education system includes 28 public institutions of higher education, over 335 private occupational schools, more than 103 degree-granting private colleges and religious training institutions, and 3 technical schools. Employment in these institutions is anticipated to increase 1.7% in 2013 and 1.6% in 2014.

In fall 2012, approximately 257,040 students enrolled in public institutions, representing a 0.4% decrease from the prior year. Higher education enrollment is a leading indicator of state higher education employment. It is expected to grow in 2014, though at a slower rate than in recent years. During the 2012 academic year, 49,781 degrees or certificates were awarded in Colorado institutions of higher education. Of degrees awarded, 48.1% were bachelor’s degrees, followed by 18.7% for certificates, 15.7% for associate degrees, 14.1% for master’s degrees, and 1.8% for doctorates or specialists.

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## Government

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According to the U.S. Census Bureau's 2012 American Community Survey, Colorado ranks second, behind Massachusetts, in the percentage of residents with a bachelor's degree. The survey results show 37.5% of Colorado residents have earned a bachelor's degree or higher.

The lower enrollment growth rate in higher education that is anticipated in 2013 is partially attributed to budgetary constraints as the federal budget makes reductions in the area of research funding and financial aid. These two types of programs generally account for the overwhelming majority of federal funding on campuses.

The University of Colorado, Colorado State University, the Colorado School of Mines, and other Colorado higher education institutions receive

research awards sponsored by the National Institutes of Health, the National Science Foundation, NASA, the U.S. Department of Agriculture, and the U.S. Department of Energy. The awards fund research in biotechnology, health care, energy, and aerospace. According to the Office of Management and Budget, such research grants are subject to an 8.2% reduction under sequestration beginning in federal FY 2013. This will put downward pressure on state higher education employment and enrollment numbers starting in 2013.

Additionally, several student financial assistance programs are affected by federal budget sequestration. Loan fees will increase in direct subsidized loan, direct unsubsidized loan, and PLUS loan programs. The Iraq-Afghanistan Service Grant Program and the Teacher Education Assistance

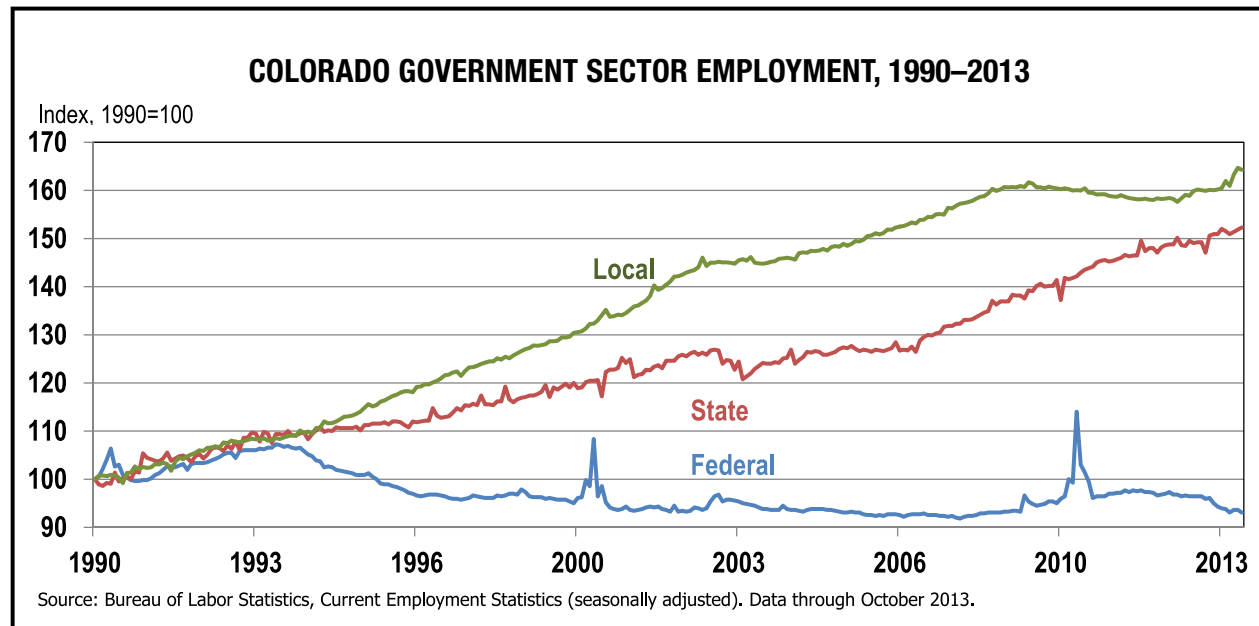
for College and Higher Education (TEACH) Grant Program will have a reduction in the award amount for any grant that is first disbursed during the time the sequester is in effect. As fewer low-income students will receive financial aid, some students will likely withdraw from universities while others will take out additional student loans.

## Local Government

### General

Local governments generally derive their revenues from property taxes, sales and use taxes, fees, and intergovernmental sources. More than 3,000 local governments in Colorado provide a variety of services through counties, school districts, special districts, cities, and towns. Their powers and duties are defined by state law and range in authority from overseeing K-12 education and maintaining park programs to providing public safety, judicial functions, and land use regulation.

State and federal governments transfer various revenues to local governments, such as state-collected highway revenues derived from gas tax and motor vehicle registration fees, which are transferred to counties and municipalities. A state-run lottery returns net proceeds back to parks and recreation districts for open space and recreation improvements. The most significant state-funded program, the School Finance Act, annually appropriates state revenues to public school districts. The majority of revenue available to local governments is collected locally in Colorado through local property and sales and use taxes. Although the availability



of federal and state grant funding continues to decline, Colorado local governments apply for grants if the program's purpose and conditions fit local government needs and priorities.

According to the National League of Cities, cities across the nation are slowly recovering from the recent recession but are still bracing for further financial uncertainty. In Colorado, upward trends have been stronger overall. According to the most recent update of the *State of Our Cities and Towns* prepared by the Colorado Municipal League, 53% of the municipalities surveyed felt their economy was "much better" or "somewhat better" in 2013, and 33% felt the economy was about the same. This improvement in the economy has translated into a more stable revenue picture for local governments in Colorado for 2013 and as they prepare for 2014.

Property tax collections are a primary source of revenue for counties and many special districts in Colorado. Changes to the assessed valuation of property can increase or decrease the revenues raised from each jurisdiction's property taxes. Discussions with various entities across the state indicate that property tax valuations continued to stabilize during 2013; however, the recovery in market values has varied significantly among taxing jurisdictions. This divergence means that some areas will see changes in overall assessed valuations during the next valuation cycle and some will not. Therefore, counties and special districts remain financially cautious as they move into 2014. This is especially true of any entity that relies on property tax as a major component of

its revenues. Indications at this time point to an increase in adding positions but only after ensuring that revenues will be sufficient to pay for the new staff on a long-term basis.

Combining the trends for all agency types, and barring any unexpected decline in local revenues, it is projected that local government employment in Colorado, excluding K-12 education, will increase 0.3% in 2013 and 1.3% in 2014.

### Education

Enrollment and funding are two key determinants of growth in local government educational services employment. The growth rate in the number of students is expected to be similar to recent years based on demographic and migration trends.

According to the Colorado Department of Education, statewide K-12 enrollment has increased every year since 1989 and grew 1.1% between the 2011–12 and 2012–13 school years. With this growth, public school pupils totaled 863,561 in the state. Colorado Legislative Council forecasts enrollment growth of 1.2% in both the 2013–14 and 2014–15 school years.

Online public school enrollment increased by 2.6% between the 2011-12 and 2012–13 school years, more than double the overall growth in public school students. Online school enrollment currently totals 16,638 students, about 1.9% of total public school students.

The cost pressures from the past few years are easing on school districts. Schools are funded by local school districts through property taxes and

the state general fund. The property tax base is expected to increase and the state general fund is on a much stronger footing.

In November 2013, Colorado voters voted against a \$950 million annual progressive individual income tax increase that would be used to fund K-12 education. This additional tax revenue would have provided the funding for Colorado SB13-213, which effectively created a new funding formula for pre-k-12 education in the state. Lawmakers will have until 2017 to pass a funding measure.

This local government employment forecast for 2014 is based on the current law funding formula.

On the local side of school funding, the recovering economy is helping to increase the property tax base. Values for residential and nonresidential properties are appreciating in value. In addition, there is renewed construction activity and more buildings are being built. This increase in the tax base will allow school districts to collect more property tax revenue.

Statewide, local government education employment will grow 1.3% in 2014, to 127,800 employees. ❖

## International Trade

### Export Performance in 2013

Colorado's merchandise and commodities exports experienced strong growth in 2013. For the first seven months of 2013, Colorado exports increased 8.7%, higher than the national export growth rate of 1.6%. Colorado exports are expected to strengthen slightly through the remainder of the year, to approximately 9%, or \$8.9 billion.

Despite growth rates that exceed the national average, Colorado still ranks only 36th among U.S. states in dollar value of merchandise and

commodities exports. Top exporting states are Texas, California, New York, Washington, and Illinois. In addition to being major U.S. ports, these states traditionally have been strong manufacturing states. Services, which make up a large proportion of Colorado's economy, are not reflected in this ranking. If services were included, Colorado is estimated to rank 25th among U.S. states in total value of exports.

North American Free Trade Agreement (NAFTA) partners Canada and Mexico remain Colorado's top two export markets. Exports to Canada saw modest growth of 6.4% in 2013 compared to growth of 30% in 2012. Exports to Mexico increased 4.5% in the first seven months of 2013 over the same period in 2012. China remains Colorado's third-largest export market, growing 3% in 2013, and exports to Japan, Colorado's fourth-largest export market, increased a modest 2.4% in the first seven months of 2013. Switzerland and the Netherlands, the top European markets for Colorado exports, experienced double-digit growth of 55% and 20%, respectively. Korea and Malaysia, two emerging export markets for Colorado companies, also had double-digit growth rates of 30% and 33%, respectively. Colorado exporters are also finding opportunities in Brazil in 2013, with exports climbing 66% over 2012.

Colorado's product and commodity export strengths in 2013 include electronics, beef, medical and surgical equipment, orthopedic appliances, and engines and motors. Electronic integrated circuits and automatic data processing equipment is the state's largest export product category and

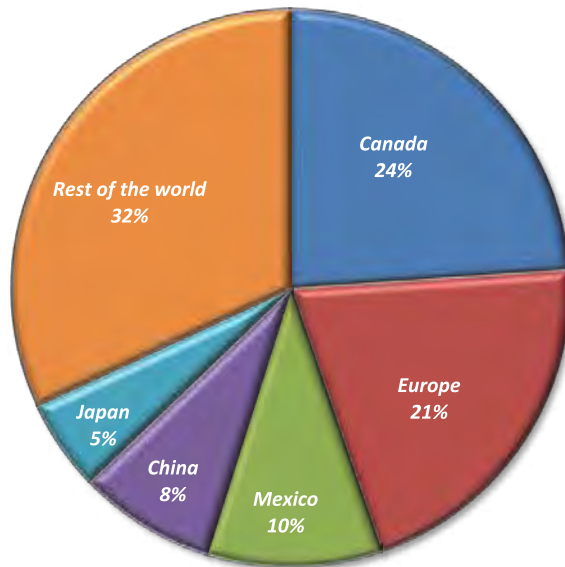
has rebounded 24% in 2013, making up approximately 8% of total Colorado exports. The largest export growth category was wheat and meslin, which increased 1,750%, to \$56 million. A total of \$34 million of this commodity was exported to China, reflecting the growing demand for foreign food sources. This growth is due to the increasing wariness of domestic sources of crops and the changing tastes and preferences away from traditional Chinese foods.

### World Trade and Global Output Forecast

Overall world output generally slowed in 2013 compared to 2012. Growth in world output fell from 3.2% in 2012 to a forecasted 2.9% for 2013. This slowdown was particularly acute in Europe where many economies saw recessionary conditions, while others only saw mild expansions. The German economy, for example, slowed to a growth rate of 0.9% in 2012 and 0.5% in 2013, down from 3.4% in 2011. The United States experienced tepid growth in 2013, with the International Monetary Funds (IMF) projecting 1.6% annual GDP growth, down from 2.8% in 2012. Emerging and developing economies were the primary engines of growth in the past two years, growing 4.9% in 2012 and 4.5% in 2013. These growth rates are similar to those recorded in the past half-dozen years.

In 2014, the committee expects to see nominally stronger U.S. and European growth, but a somewhat milder emerging economy growth rate, although these emerging economies will still grow faster than developed ones. The IMF's projected growth rate is 1% for the eurozone, 2% for the

**COLORADO EXPORT MARKETS  
JULY 2013 YTD**



Source: World Institute for Strategic Economic Research (WISERTrade).



United States, 5.1% for emerging economies, and 3.6% for the world. While forecasted to remain the fastest-growing major country, China is expected to grow at an annual rate of 7.3%, down from 7.6% in 2013, 7.7% in 2012, and 9.3% in 2011. The Japanese economy also remains sluggish, increasing 2% in both 2012 and 2013, and it is expected to grow 1.2% in 2014 (IMF World Economic Outlook, October 2013).

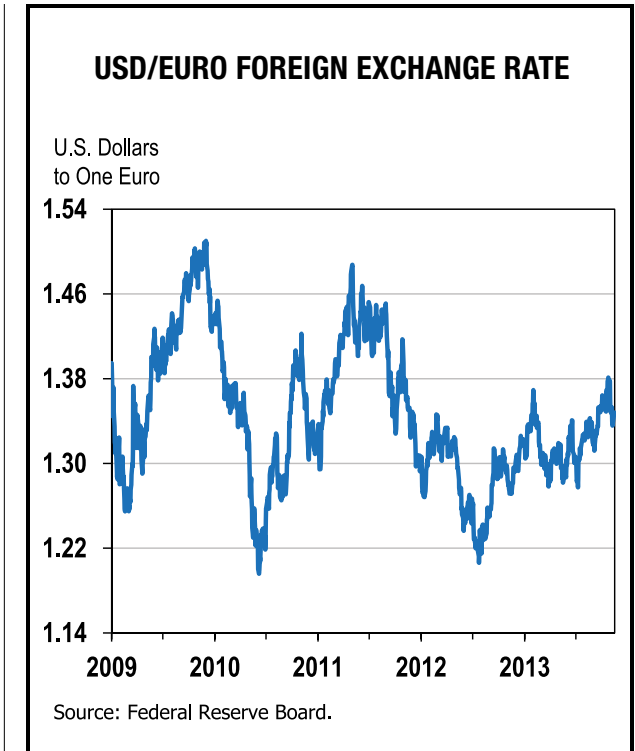
While GDP growth rate forecasts for 2014 are generally unimpressive, world trade volumes are expected to pick up substantially over 2012 and 2013. With trade volume increases of just 2.7% in 2012 and 2.9% in 2013, the forecast of 4.9% growth in 2014 is encouraging. This increase in trade volume is expected in both the advanced and emerging economies.

The European sovereign debt and banking crisis appears to have ameliorated. The crisis has dampened global trade in the past several years and has contributed to lower consumer confidence in Europe. The core economies are now showing some signs of recovery, but it is expected that structural and regulatory barriers will inhibit a rapid recovery. While recessions are ending, unemployment remains extremely high in the southern-tier countries (Italy 12.2%, Spain 26.2%, and Greece 27.9%) and is high in other key economies, such as Germany (6.9%), France (11%), and the United Kingdom (7.7%). Growing populist movements threaten economic and political stability, which could be enough to force European leaders to loosen the fiscal austerity.

While the advanced countries are still facing recession or slow growth, developing Asia will continue to act as a key economic engine. Along with China's continued expansion, India and the ASEAN five (Indonesia, Malaysia, Philippines, Thailand, and Vietnam) are expected to grow in the low- to mid- 5% range. However, as has been the case in the past with such high growth levels, inflationary pressures continue to mount in several of these countries, leading to policies that aim to cool overheating and to limit growth. India is currently experiencing inflation above 9%, and Indonesia is above 8%. China is being hit hard by increasing wage rates, creating opportunities for other low-cost producers in Asia, which, in turn, may result in more opportunities for savvy Colorado exporters.

The risk of increased trade friction with China remains a real possibility. Should barriers to trade increase, the result will be both lower imports and exports between the United States and China. China is leading discussions of another trade agreement with 15 other Asian nations (the Regional Comprehensive Economic Partnership, or RCEP), but most of the increased trade resulting from that agreement are in areas that the United States has little engagement.

The value of the U.S. dollar also affects the imports and exports of the United States and of Colorado. A weak dollar encourages more exports and fewer imports. The September 2013 trade-weighted value of the U.S. dollar was at 101.85, which is very near the 1997 benchmark of 100 and about where it was when the financial crisis began with the collapse of



Lehman Brothers in September 2008. Since then, the value increased in late 2008 and early 2009 by about 15%, but began retreating as the first round of quantitative easing kicked in and the revival of investor confidence in the U.S. economy began. Since then, it has fluctuated in a narrow band of plus or minus 5%. As long as the United States can avoid crisis and raise the debt ceiling, it can be expected that the flight to U.S. bonds will continue, and the dollar will remain close to its current strength, offsetting the downward pressure exerted

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## International Trade

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### VALUE OF COLORADO EXPORTS 2005–2014 (In Millions of Dollars)

Year	Total Exports	Percentage Change
2005	\$6,773.3	1.7%
2006	7,954.7	17.4
2007	7,352.2	-7.6
2008	7,712.6	4.9
2009	5,867.2	-23.9
2010	6,726.7	14.6
2011	7,332.5	9.0
2012	8,167.3	7.0
2013 <sup>a</sup>	8,902.3	9.0
2014 <sup>b</sup>	9,792.5	10.0

<sup>a</sup>Estimate. <sup>b</sup>Forecast.

Sources: World Institute for Strategic Economic Research (WISERTrade) and Colorado Business Economic Outlook Committee.

by quantitative easing. A weaker dollar should help with continued export gains, and the recent trend has been in that direction. The euro/USD exchange rate reflects a continued strengthening of the euro since its low in mid-2012 as fear of further bank bailouts in Europe recedes.

At the time of this writing in November 2013, the U.S. Congress had passed a temporary funding bill and increased the debt ceiling sufficiently to last until February 2014. Should Congress fail to find a more permanent solution, and again resort to continuing legislation, the U.S. economy may see some loss of GDP growth. It is believed that consumer

confidence has been weakened by the 2013 budget crisis, and there is no reason to expect that future repeat performances will not have the same effect. Another detriment would be a failure to increase the debt ceiling, with an attendant bond payment default. There can be no credible accurate forecasts of the fallout of such an event; however, it is the opinion of most economists that a global credit crunch would follow, resulting in severe retrenchments, declines in GDP, and significant drops in global trade volume. The value of the dollar would likely fall significantly. While that would help exporters, the decline in overall demand worldwide may more than offset the advantage of a cheaper dollar. While some hope for a prioritization of U.S. government debt might avoid actual default, the practical effect of failure to make other government payments would likely have the same effect as a default. The federal government plays an integral role in facilitating international trade, which leads to growth and prosperity in the United States. It is imperative that the federal government operates at full capacity in order to enable the 50 states to continue trading, which will lead to innovation, higher productivity, and rising incomes all around.

### Colorado Export Forecast

Colorado manufactured exports and commodities are projected to grow 10% in 2014, to \$9.8 billion in sales. According to the U.S. Department of Commerce's formula of one job created/retained for every \$165,000 in export sales, this equates to approximately 60,000 jobs dependent on manufactured and commodities exports in the state of

Colorado. Contributing to growth in 2014 will be the value of the U.S. dollar that is expected to remain weaker than the strengthening euro, which will reduce the price of Colorado goods compared to similar goods produced in other countries. Soft export demand from Europe will be partly offset by rising growth in exports to developing countries. U.S. trade policies are expected to continue to play a role in influencing trade in the coming year. The Obama administration is expected to participate in more talks on the Trans Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP). The TPP is in the final stages of negotiations. If negotiations conclude, the administration has agreed to fast-track the implementation of the agreement, which would result in an expansion of trade opportunities for Colorado through further reductions in tariffs and other barriers to trade with 11 other key trading partners that represent about 40% of total global trade.

### Colorado Import Forecast

In 2012, Colorado's imports were up 7.7% over 2011, totaling \$12.6 billion. Key drivers behind 2012 growth were imports from Canada and Mexico, which grew 15% and 60%, respectively. Approximately 44%, or \$5.5 billion, of Colorado's total imports in 2012 were derived from oil and gas, and computer and electronic products, both of which showed modest growth from 2011 reported values. Year-to-date 2013 data portray imports growing at a much slower rate than that of 2012 imports, making them on track to reach 3% growth by year-end. The lower level of import

growth can be attributed to a 14%, or \$228 million, reduction in imported oil and gas compared to 2012, which is being influenced by Colorado's increased self-supply within the sector. Key factors to consider in 2014 include the 2.5% gain in consumer spending growth as projected in the *IHS Global Insight* report. Increased consumption in 2014 will have a positive direct impact on the

volume of goods and services purchased abroad and will also produce a positive indirect impact on domestic products requiring foreign materials. Another consideration concerning 2014 import volume is the possible growth in manufacturing in the United States. In the past decade, vertical specialization has encouraged the outsourcing of various stages of the production process (primarily

labor intensive activities) to foreign countries with lower labor cost. Heading into 2014, labor and energy costs within emerging markets are rising, which greatly reduces the cost advantage of outsourcing. If this trend continues, an increase in manufacturing activity within the United States is expected, which will reduce the volume of finished goods imported while increasing the volume of imported raw materials.

### TOP 20 COLORADO EXPORTS 2011–2013 YTD (In Millions of Dollars)

Description	2011	2012	July 2013 YTD
Industrial Machinery, Including Computers	\$1,131	\$1,563	\$834
Optic, Photo Etc, Medic Or Surgical Instrments Etc	1,309	1,424	883
Electric Machinery Etc; Sound Equip; Tv Equip; Pts	1,109	1,144	674
Meat And Edible Meat Offal	799	888	527
Photographic Or Cinematographic Goods	261	281	177
Articles Of Iron Or Steel	172	212	102
Mineral Fuel, Oil Etc.; Bitumin Subst; Mineral Wax	159	211	155
Raw Hides And Skins (No Furskins) And Leather	229	208	138
Aircraft, Spacecraft, And Parts Thereof	216	179	164
Plastics And Articles Thereof	184	174	102
Organic Chemicals	142	152	132
Ores, Slag And Ash	149	137	94
Pharmaceutical Products	92	132	59
Vehicles, Except Railway Or Tramway, And Parts Etc	124	116	78
Aluminum And Articles Thereof	130	108	64
Miscellaneous Chemical Products	65	79	47
Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.	76	61	42
Leather Art; Saddlery Etc; Handbags Etc; Gut Art	45	59	38
Dairy Prods; Birds Eggs; Honey; Ed Animal Pr Nesoi	66	59	43
Printed Books, Newspapers Etc; Manuscripts Etc	49	54	31
Total Top 20 Commodities	6,504	7,241	4,385
All Others	<u>828</u>	<u>927</u>	<u>613</u>
Total All Commodities	\$7,332	\$8,167	\$4,998

Source: World Institute for Strategic Economic Research (WISERTrade).

### Growing Opportunities for Colorado Exporters: Free Trade Agreements

Free trade agreements (FTAs) have proven to be one of the best ways to open foreign markets to U.S. exporters by reducing barriers to exports, protecting U.S. interests, and enhancing the rule of law in the FTA partner country. The reduction of trade barriers and the creation of a more stable and transparent trading and investment environment make it easier and cheaper for U.S. companies to export their products and services to trading partner markets. In 2012, 43% of U.S. exports went to FTA partner countries, with exports to those countries growing at a faster rate than exports to the rest of the world (6% versus 4%). That same year, 41% of Colorado's exports went to FTA partner countries. Exports to those countries grew by 23% versus only 11% to the rest of the world.

Over the last 20 years, the United States has negotiated 13 FTAs with 19 countries. While the first FTA the United States entered into was with Israel in

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## International Trade

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### MAJOR DESTINATIONS FOR COLORADO EXPORTS OF MANUFACTURED GOODS, MINERALS, AND AGRICULTURAL PRODUCTS 2009–2012 (In Millions of Dollars)

Country	2009	2010	2011	2012	2012 Percentage of Total
Canada	\$1,772	\$1,659	\$1,541	\$2,001	24.5%
Mexico	584	590	755	849	10.4
China	440	558	635	676	8.3
Japan	276	318	393	427	5.2
Switzerland	159	186	241	245	3.5
Netherlands	175	331	316	280	3.4
Korea, Republic Of	122	201	226	266	3.3
Malaysia	179	175	208	224	3.0
Hong Kong	121	139	174	234	2.9
Germany	220	321	314	282	2.7
Brazil	81	124	106	172	2.5
United Kingdom	142	213	247	205	2.3
Philippines	151	211	222	191	2.1
Taiwan	108	156	181	144	2.1
Australia	129	161	179	172	1.9
France	94	121	142	155	1.8
Belgium	146	141	131	137	1.7
India	95	102	119	119	1.5
Saudi Arabia	41	38	33	45	1.1
Singapore	<u>88</u>	<u>100</u>	<u>105</u>	<u>92</u>	<u>1.1</u>
Total Top 20 Countries	5,123	5,844	6,269	6,916	61.0
All Other Countries	<u>745</u>	<u>882</u>	<u>1,063</u>	<u>1,252</u>	<u>15.2</u>
Total All Countries	\$5,867	\$6,726	\$7,332	\$8,167	100.0%

1985, it was NAFTA, with Canada and Mexico, that caught the public's attention. From 1994 until the present, the United States has entered into additional FTAs with Australia, Bahrain, Chile, Colombia, DR-CAFTA (Dominican Republic, Guatemala, Honduras, El Salvador, Nicaragua, and Costa Rica), Jordan, Korea, Morocco, Oman, Panama, Peru, Singapore, and Vietnam. The number of U.S. FTA's is relatively low compared to many other strong trading partners, especially Mexico, which has the highest number of FTAs in the world. The World Trade Organization recognizes 575 trade agreements between countries and regions of the world.

#### The 20th Anniversary of NAFTA

As the first comprehensive trade agreement of its type, NAFTA set a valuable example of the benefits of trade liberalization and laid the foundation for the United States as it forayed into other free trade agreements. With the signing of NAFTA, the world's largest free trade area was formed. Now, as NAFTA approaches its 20th anniversary, the agreement's impact on U.S. workers, businesses, farmers, and consumers can be examined. Since the implementation of NAFTA began on January 1, 1994, U.S. trade with Canada and Mexico has increased exponentially, reaching more than a \$1 trillion in two-way trade in 2012. Colorado trade with these two countries has more than tripled from 1994 through 2012, reaching \$8.3 billion in cross-border transactions in 2012. The two countries buy more than one-third of Colorado merchandise.

Sources: Foreign Trade Division of the U.S. Census Bureau and World Institute for Strategic Economic Research (WISERTrade).



Trade with Canada and Mexico supports nearly 14 million U.S. jobs and more than 43,000 jobs in Colorado. It has been a boon to the competitiveness of manufacturers and a bonanza for U.S. farmers and ranchers, helping U.S. agricultural exports to Canada and Mexico more than triple. With new market access and clearer rules afforded by NAFTA, service exports are also on the rise. Canada and Mexico make up the top export destinations for Colorado small and medium-size enterprises.

Due to the geographical proximity of the three NAFTA countries and the global supply chain relationships, Canadian and Mexican imports contain a high U.S. content. Mexican exports to the United States have 40% U.S. content and Canadian goods have 23% U.S. content. NAFTA has been a boon to the competitiveness of manufacturers and a bonanza for U.S. farmers and ranchers, helping U.S. agricultural exports to Canada and Mexico more than triple.

NAFTA has succeeded in boosting cross-border trade and economic growth, and promoted competitive prices for consumers. It has enhanced the competitiveness of North American industry in a rapidly changing global economy and paved the way for the United States to build on this foundation.

### The Trans-Pacific Partnership (TPP)

The TPP is a proposed free trade agreement currently under negotiation between 12 countries: Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the United

States, and Vietnam. The TPP is designed to be a “high-standard” agreement aimed at addressing trade issues in the twenty-first century.

Essentially, the TPP would establish a framework of common trade regulations and create a reduction in trade barriers among participating countries from the fastest-growing region in the world—Asia-Pacific. The multilateral agreement offers an excellent opportunity for exporters to take advantage of the reduced tariffs and increased ease of trade to facilitate U.S. and Colorado exports to the region. Through this agreement, Colorado would be able to more effectively

support its goal of retaining and creating high-quality jobs by increasing local exports to the robust economies of the Asia-Pacific region.

The TPP will benefit Colorado exporting companies in a number of areas. First, the partnership would significantly expand market access for Colorado exporters. The Asia-Pacific region accounts for 40% of the global population and offers dynamic economies with emerging middle classes and growing purchasing power. Taken as a whole, the region is the largest market in the world for U.S. exports and is a significant consumer of

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## AGRICULTURAL EXPORTS FROM THE STATE OF COLORADO FISCAL YEARS 2010–2014 (In Millions of Dollars)

Product	2010	2011	2012	2013 <sup>a</sup>	2014 <sup>b</sup>
Live Animals	\$1.0	\$1.0	\$0.7	\$0.6	\$0.6
Meat and Products	824.0	923.0	923.0	970.0	1,036.0
Wheat and Grains	369.0	513.0	330.0	380.0	370.0
Hides and Furs	189.0	230.0	210.0	236.0	236.0
Dairy Products	49.0	81.0	89.0	100.0	97.0
Fruits and Vegetables	13.0	17.0	32.0	37.0	39.0
Processed Foods	57.0	75.0	96.0	125.0	127.0
Wood Products	12.0	16.0	14.0	25.0	26.0
Misc. Seeds/Plants	<u>20.0</u>	<u>16.0</u>	<u>17.0</u>	<u>17.0</u>	<u>16.0</u>
<b>Total</b>	<b>\$1,386.0</b>	<b>\$1,774.0</b>	<b>\$1,713.0</b>	<b>\$1,891.0</b>	<b>\$1,948.0</b>

<sup>a</sup>Estimated 2012 projection based on Global Trade Information Services YTD Trends.

<sup>b</sup>2013 Forecast based on USDA ERS Outlook for U.S. Agricultural Trade.

Sources: Export statistics from World Trade Atlas and USDA export data (all based on U.S. Census Records), and Colorado Business Economic Outlook Committee.

## International Trade

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Colorado agricultural exports. The agreement would result in a more level playing field for Colorado companies to conduct international trade.

Second, Colorado's commerce is increasingly intertwined and dependent on Asia-Pacific markets. Colorado exported \$5.6 billion in goods to Asia-Pacific countries in 2012, up almost 14% from 2011, solidifying the Asian-Pacific region as a vital trade destination for Colorado's goods and services. The top five exports to the region are industrial machinery and computers, meat, electric machinery and equipment, optical and medical instruments, and mineral fuels.

Third, the TPP would boost Colorado's small and medium-size enterprises (SMEs). Historically, Colorado SMEs have generated more than one-quarter of the state's total exports of merchandise. Small and medium-size businesses, which often lack the additional resources to pursue international trade, benefit the most from the tariff-elimination and the heightened transparency requirements of free trade agreements. The TPP will help grow this key component of Colorado's economy.

Finally, the TPP calls for strong intellectual property protection—a cornerstone of the United States' and Colorado's intellectual property (IP)-intensive industries. Protecting IP is vital in ensuring safe export of Colorado's innovative goods and services. This protection and the trade benefits the agreement will bring will encourage further research and development investment into local companies and research labs. The TPP will provide

### COLORADO'S TOP AGRICULTURAL EXPORTS REGIONAL DESTINATIONS 2010–2012 (In Millions of Dollars)

Region	Exports		
	2010	2011	2012
Canada	\$302.4	\$374.5	\$423.6
Mexico	260.9	329.9	308.1
Japan	178.3	218.3	236.6
Korea	97.3	128.2	150.4
China	86.3	127.5	129.6

Sources: Wiser Trade Atlas and USDA Export data (all based on the U.S. Census records of exports).

strong and fair IP protection that is crucial to the expansion of the state's economy.

### The Transatlantic Trade and Investment Partnership (TTIP)

The TTIP is a trade agreement that is presently being negotiated between the United States and the European Union. The accord aims at removing trade barriers in a wide range of economic sectors to make it easier to buy and sell goods and services between the United States and the European Union. In addition to cutting tariffs across all sectors, the United States and the European Union want to tackle barriers behind the customs borders, such as differences in technical regulations, standards, and approval procedures. Also, the TTIP will look at opening both markets for services, investment, and public procurement.

The TTIP is still in an early stage of development as negotiations between the United States and the European Union began in July 2013. Given the initial gulf between U.S. and E.U. trade interests, and given that the signing of the TTP is a higher priority for the United States, it will likely be a few years before any such agreement is signed. That said, some U.S. and E.U. government officials are optimistic that an agreement could be reached in as quickly as 2015.

When the agreement is signed, it is expected to increase the GDP of both markets by 1% and have a significant impact on all 50 states. Currently, the United States and the European Union are the two largest economies in the world, with a combined value of around \$30 trillion. U.S.-E.U. trade is worth \$2.5 billion per day, which represents one-third of all world trade. According to a study commissioned by the Bertelsmann Foundation, the Atlantic Council, and the British Embassy in Washington, the pact could boost U.S. employment by more than 740,000 jobs, and the average American household stands to gain around \$865 every year as a result of lower prices and higher average wages. Furthermore, the study predicts that all states will increase net exports, averaging 33% per state.

In 2012, the European Union purchased Colorado commodities worth \$1.4 billion (16% of total commodity exports) and services worth \$3.8 billion (33% of service exports) in 2011. The same study referenced above predicts that a U.S.-E.U. accord could boost Colorado's exports to Europe by 20.1% and add as many as 13,180 jobs.

Specifically, the pact is expected to boost Colorado's automotive, chemical, electrical machinery and metal commodity exports. Motor vehicle exports are predicted to increase by \$301 million, chemical product exports are forecasted to rise by \$180 million, and electrical machinery exports are expected to increase by \$153 million. Colorado's business services industry is anticipated to create more than 2,700 new jobs, the state's manufacturing industry is forecasted to create nearly 340 new jobs, and the Financial Services industry is expected to create over 315 new jobs.

## Agricultural Exports

### Colorado's 2012 Agricultural Export Performance

In 2012, Colorado's agricultural exports totaled \$1.7 billion, down \$61 million (3.5%) compared to 2011, due in part to the impact the drought had on the wheat and grain industry. Top-performing agricultural exports included increases in meat products (up over \$98 million), processed foods (up \$17 million), dairy products (up \$8 million), and feed products (up \$17 million). In 2012, Colorado experienced reduced exports of wheat (-\$184 million), hides (-\$20.7 million), and millet (-\$7.2 million).

Colorado's top five markets purchased 73% of Colorado's total agricultural exports in 2012, up from 64% in 2011. Canadian imports of Colorado agricultural products increased in all sectors, from meats to processed foods. Canadian beef imports continue to present the greatest share of Colorado

agricultural exports, exceeding 78% of total agricultural exports in 2012, similar to the previous two years.

Mexico was Colorado's second-largest agricultural export market, despite reduced imports in 2012. Exports of Colorado beef to Mexico fell by \$29 million in 2012. Japan's increased imports were driven by beef in 2012, and are continuing to grow in 2013. In February 2013, Japan expanded access to Colorado and U.S. beef, resulting in an increase of 34% (\$46 million) in beef exports in the first seven months of 2013. Beef represents more than 91% of Colorado's total agricultural exports to Japan in 2013. Korea increased access to Colorado and U.S. beef in 2011, and it continues to be a growth market for Colorado beef, up an additional 9% (\$7 million) in 2012 for a total increase of 45% (\$16 million) since 2010. China's primary agricultural import from Colorado continues to be hides, increasing to \$106 million in 2012, representing over 86% of all agricultural imports from Colorado.

**Current negotiations are underway to reopen Russia, Indonesia, and Saudi Arabia for U.S. beef.**

### Colorado's 2013–14 Agricultural Export Forecast

In 2013, Colorado's agricultural exports are projected to increase 10.4%, to \$1.9 billion. Increased 2013 exports will be led by beef and wheat exports, as well as increased hide exports. All primary sectors are projected to experience export growth. The forecast for 2014 exports projects growth of \$57 million, to nearly \$2 billion for Colorado.

Several global issues will affect Colorado's ability to achieve the 2014 forecasted agricultural export volumes. While Colorado's wheat harvest in 2013 was impacted by the drought, the 2014 crop will benefit from the 2013 rains. Projected wheat exports are dependent on an average crop harvest and marketing in the second half of 2014.

Colorado's beef industry will be affected by both trade barriers and new trade agreements. Beef exports in 2013 were boosted by expanded access in Japan and Hong Kong, as well as continued increases from the opening of the Korean market with the Korean Free Trade Agreement. The Chinese market for U.S. beef, which has been closed, could open in 2014. In recent years China has grown to be the largest importer of beef in the world. Obtaining access for U.S. beef in that market is a key priority for the Colorado beef industry. Current negotiations are underway to reopen Russia, Indonesia, and Saudi Arabia for U.S. beef. The United States has negotiated European access for U.S. beef utilizing a lactic acid wash

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## International Trade

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in the processing. Exports to the European Union could be restricted by existing quotas, further illustrating the need for a successful negotiation of the TTIP to eliminate such barriers.

Colorado has also continued to advocate for the opening of Mexico to Colorado and U.S. fresh potatoes. Industry projections indicate that with the anticipated increased access for Colorado and U.S. potatoes in Mexico, the state and industry could benefit from a four-fold increase in fresh potato exports.

## Service Exports

The United States continues to lead the world as the premier producer and exporter of services. Based on the economic makeup of Colorado, the Brookings Institute regards the state as a leader in service exports, estimating that 2012 service exports from the state totaled \$12.4 billion, up 5.1% over estimated 2011 volumes. Leading categories of service exports include travel and tourism (\$3.4 billion), royalties (\$2.6 billion), information

and telecom services (\$1.0 billion), financial services (\$931 million), and engineering services (\$485 million). Service exports are more difficult to track by state; however, based on Brookings Institute estimates and using the Department of Commerce's export formula for job creation/retention, nearly 70,000 jobs depend on service exports in Colorado.

## International Visitors

According to the United Nations World Tourism Organization (UNWTO), growth rates worldwide are starting to slow but solid growth in tourism is forecast. It is expected that travel volume globally will reach 1.8 billion international arrivals by 2030.

The U.S. Department of Commerce's National Travel and Tourism Office (NTTO) forecasts a 4% increase in international visitor volume to the United States in 2014. Overseas inbound travel growth to the nation continues to be stronger than total arrivals as overseas is anticipated to grow 5.3% in 2014. NTTO's forecast shows growth of

24.5% between 2012 and 2014. During this period, travel from China is projected to rise 215%; from Brazil, 67%; and from South Korea, 41% (benefiting from visa waiver).

The Colorado Tourism Office's (CTO) International Promotions Program markets the state to international visitors through trade, consumer, and media relations. The program's goal is to attract a steady increase of international visitors to Colorado to experience the state's year-round travel product. The CTO currently has international marketing representatives in Germany, the United Kingdom, France, Mexico, Canada, and Japan. With promotional efforts and the addition of nonstop flights to Iceland and Mexico in 2012, and to Japan in 2013, the CTO expects solid growth in international visitors in 2014.

## International Students in Colorado

During the 2012–13 academic year, Colorado institutions of higher education reported enrolling 8,983 international students, an increase of 6.4% over the previous academic year, according to the Institute of International Education's annual *Open Doors Report on International Educational Exchange*. This number reflects degree-seeking students only; it does not include students studying English language or other short-term programs.

The state's rate of increase from the previous year continued the upward trend and reflected an increase in international students enrolled in U.S. higher education institutions as a whole. The state's growth rate was slightly lower than the national trend of a 9.8% increase in international

### INTERNATIONAL STUDENT ENROLLMENT AT SELECT COLORADO INSTITUTIONS

Institution	2009-10	2010-11	2011-12	2012-13	Percentage Change
University of Colorado Boulder	1,360	1,553	1,681	1,910	13.6%
University of Denver	1,081	1,250	1,430	1,590	11.2
Colorado State University	1,127	1,216	1,352	1,598	18.2
University of Colorado Denver	734	940	1,116	1,348	20.8
Colorado School of Mines	523	570	652	660	1.2

Sources: Institute of International Education and Colorado School of Mines.



students enrolled in U.S. higher education institutions.

While the most international students were enrolled by the University of Colorado Boulder, the University of Denver, Colorado State University, the University of Colorado Denver, and the University of Northern Colorado, all of Colorado’s public institutions and many private institutions reported enrolling international students.

The leading countries of origin for international students in Colorado were China (25.4% of total), Saudi Arabia (15.9%), India (9.4%), and South Korea (4.1%). International students’ expenditures in Colorado totaled an estimated \$280.9 million for 2012–13 according to an economic impact analysis conducted annually by the organization NAFSA: Association of International Educators. This figure takes into account tuition, fees, and living expenses and subtracts U.S. support provided to students.

Many of Colorado public and private institutions of higher education are working together to recruit more international students under the state’s StudyColorado initiative, which has as its goal to market Colorado as an education destination for international students. Numbers of international students in Colorado are expected to continue to rise due to StudyColorado’s efforts, as well as overall trends in student mobility and individual efforts by the institutions.

The number of Colorado students studying abroad has continued to climb as well, with students eager



to prepare themselves for the increasingly globalized, knowledge-based economy that is coming to characterize the state. In 2011–12 (data for students studying abroad lags other data by a year), 5,005 students enrolled in Colorado institutions opted to study outside the United States. This represents a 5.5% increase over the prior academic year, compared to a 3.4% gain for the United States as a whole. ❖

## Summary

Job growth accelerated in Colorado in 2013, with the state adding 66,900 jobs, a gain of 2.9%. In June 2013, the state surpassed the previous peak employment reached in May 2008. The consensus of the 2014 Colorado Business Economic Outlook estimating committees is that employment growth will continue in 2014, with the state adding 61,300 new jobs.

Over the past 10 years, goods-producing industries lost a net 27,200 jobs, while services-producing industries gained 251,600 jobs. Both goods- and services-producing sectors are anticipated to add workers in 2014.

The three goods-producing sectors will increase their employment base in 2014.

**Construction**—Perhaps one of the greatest casualties of the recession, this industry is exhibiting strong year-over-year growth in permits, values, and employment. Total value of Construction is estimated to rise 14.8% in 2014, to \$15.1 billion. The largest increase is attributable to residential construction, which will grow to more than \$1.4 billion in 2014. Total housing permits are expected to rise to 33,500, with 17.5% growth marked by year-over-year gains in both single-family and multifamily units. Employment will increase by 11,000 jobs, or 8.7%, in 2014.

**Manufacturing**—Following a decade of decline, Manufacturing employment is expected to increase for the fourth-consecutive year, ending 2013 with 700 more jobs (+0.5%) and 2014 with 1,700 more jobs (+1.3%). This growth will be mostly in the Durable Goods sector.

**Natural Resources and Mining**—Colorado has abundant natural resources, ranging from coal and natural gas to molybdenum and uranium. In 2013, Natural Resources and Mining employment declined by 200 jobs, or 0.7%. The value of production is anticipated to increase in 2014 for oil, natural gas, carbon dioxide, coal, minerals, and uranium. This will translate to modest employment growth, increasing 3.3%, to 31,100.

The outlook for services employment shows growth in all sectors but Information in both 2013 and 2014:

**Education and Health Services**—Private education and health care services are expected to add 8,000 jobs in 2014, demonstrating resilience both during and after the recession. Most of the growth

### COLORADO ESTIMATED EMPLOYMENT LEVELS 2003–2014 (In Thousands)

Sector	2003-2013 <sup>a</sup>	2012 <sup>b</sup>	2013 <sup>a</sup>	2014 <sup>c</sup>
Natural Resources and Mining	16.9	2.4	-0.2	1.0
Construction	-22.9	3.3	11.2	11.0
<u>Manufacturing</u>	<u>-21.2</u>	<u>2.6</u>	<u>0.7</u>	<u>1.7</u>
<i>Total Goods Producing</i>	-27.2	8.3	11.7	13.7
Trade, Transportation, and Utilities	15.4	7.1	11.1	9.1
Information	-14.9	-2.1	0.0	-0.3
Financial Activities	-3.3	2.4	4.6	2.7
Professional and Business Services	80.8	15.3	17.3	14.2
Education and Health Services	77.8	8.4	8.9	8.0
Leisure and Hospitality	44.0	8.2	10.0	7.5
Other Services	11.4	2.0	1.8	2.0
<u>Government</u>	<u>40.4</u>	<u>2.2</u>	<u>1.5</u>	<u>4.4</u>
<i>Total Services Producing</i>	<u>251.6</u>	<u>43.5</u>	<u>55.2</u>	<u>47.6</u>
<b>Total Jobs Created</b>	<b>224.4</b>	<b>51.8</b>	<b>66.9</b>	<b>61.3</b>

<sup>a</sup>Estimated. <sup>b</sup>Revised. <sup>c</sup>Forecast.

Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committees.

has been in health care, driven by population growth and demographic shifts.

**Professional and Business Services**—Employment in this sector will increase by 14,200 jobs in 2014, building on gains in the Professional, Scientific, and Technical Services subsectors related to Colorado’s high-tech industries and research institutions. Growth in the sector may be stronger if political and fiscal uncertainty subsides.

**Trade, Transportation, and Utilities**—TTU employment is anticipated to increase by 9,100 in 2014, due to growth in wholesale and retail trade. Transportation and Warehousing employment increased in 2013, and Utilities recorded no net change. It is projected that Denver International Airport will record more than 52 million passengers in both 2013 and 2014. Retail sales are anticipated to rise 5% in 2014, following 4.2% growth in 2013.

**Leisure and Hospitality**—Despite a number of setbacks in 2013 (e.g., fires, floods, drought), the Leisure and Hospitality industry added 10,000 jobs. The 2014 forecast calls for 7,500 additional jobs, mostly in the Accommodation and Food Services sector. This forecast rests on a number of assumptions, including average snowfall and reasonable gasoline prices.

**Government**—Government is expected to add jobs in 2013 and 2014, but not at all levels. Federal government is expected to shed jobs in 2013 and 2014, continuing a trend that coincided with economic recovery in 2010. Sequestration will impact both direct federal jobs, as well as federal contractors. State and local government are adding

jobs, with a portion of the increase related to education. Population continues to grow, pressuring the public education system to accommodate a growing student number of students.

**Financial Activities**—The Financial Activities Sector began rebounding in 2012, adding 2,400 jobs. Despite some employment declines related to reductions in mortgage refinancing, the sector is still expected to add 4,600 jobs in 2013 and 2,700 jobs in 2014, with most activity concentrated in banking and other finance and insurance activities. Increased regulation and tepid loan demand will continue to impact the industry.

**Information**—A best-case scenario is that the Information Sector will remain flat in 2013, and post a modest decline in 2014. In 2013, growth in telecom, software publishing, and film outweighed losses in traditional publishing. It is anticipated the many of the losses related to the telecom merger between CenturyLink and Qwest have already been absorbed in the Denver Metro region.

The following observations summarize the thoughts of committee members for 2014:

#### National and International

- The ongoing debt ceiling debate creates uncertainty for the markets.
- Barring a fiscal crisis, U.S. GDP growth will accelerate, to 2.9%, in 2014.
- Fed policy will likely begin “tapering” as the economy improves, which may have some slowing implications for the housing market.

- Soft export demand from Europe will be partly offset by rising growth in exports to developing countries.
- The federal deficit will mark a third-consecutive year of decline, dropping to roughly \$740 billion.
- Inflation will continue in check for another year, and interest rates will remain well below historic averages.

#### Colorado

- Employment growth will place Colorado in the top five states in 2014.
- Weather fluctuations will continue to cause volatility for agriculture production, as well as tourism.
- Home prices will continue to improve in Colorado as inventory is absorbed, foreclosures abate, and more home owners elevate from being underwater in their mortgages.
- In terms of population, Colorado is the seventh-fastest growing state in the nation in percentage terms and the ninth-fastest in absolute terms. The state will continue to be a popular place to live, with projected population growth of 1.7%.
- Colorado will sustain a sub-7% unemployment rate.

With Colorado’s skilled workforce; high-tech, diversified economy; relatively low cost of doing business; global economic access; and exceptional quality of life, the state is poised for long-term economic growth. ❖

## Around the Region

The western region of the United States is comprised of Colorado and its neighboring states of Arizona, Kansas, Montana, Nebraska, New Mexico, Utah, and Wyoming. This section compares economic activity in 2013 in these states and their top metropolitan statistical areas (MSAs) as measured by total employment, employment growth, unemployment rate, average annual pay, and GDP.

Every state in the region has shown positive employment growth year-to-date as well as

positive 10-year growth. In August 2013, Colorado, Utah, Montana, and Arizona experienced the largest increases with year-over-year growth of 2.5%, 2.4%, 2.1%, and 2%, respectively. New Mexico, Wyoming, Kansas, and Nebraska recorded slightly slower growth in the region. Regarding MSAs, Salt Lake City, Denver, and Cheyenne led the region with year-over-year growth of 3.6%, 3.2%, and 3.1%, respectively, in August 2013. Phoenix-Mesa-Glendale and Albuquerque followed close behind, with growth of 2.2% and 1.8%, respectively.

Lincoln, Kansas City, and Wichita each recorded growth under 1%.

Regionally, changes in employment growth rates are due, in large part, to developments in certain industries. New Mexico and Kansas have both benefited from strong energy production. In addition, Kansas has had strong growth in Professional and Business Services, and Education and Health Services. In Nebraska, significant industry growth is anticipated in services, notably Transportation and Financial Activities. Nebraska and Wyoming

REGIONAL STATES								
August 2013 Total Employment (In Thousands)	<b>292.2</b> Wyoming	<b>449.5</b> Montana	<b>813.4</b> New Mexico	<b>970.8</b> Nebraska	<b>1,284.2</b> Utah	<b>1,372.6</b> Kansas	<b>2,371.6</b> Colorado	<b>2,513.5</b> Arizona
Employment CAGR August 2003–August 2013	<b>0.5%</b> New Mexico	<b>0.5%</b> Kansas	<b>0.7%</b> Nebraska	<b>0.9%</b> Arizona	<b>1.0%</b> Colorado	<b>1.2%</b> Montana	<b>1.5%</b> Wyoming	<b>1.8%</b> Utah
Employment Percentage Change August 2012–August 2013	<b>0.9%</b> Nebraska	<b>1.1%</b> Kansas	<b>1.1%</b> Wyoming	<b>1.4%</b> New Mexico	<b>2.0%</b> Arizona	<b>2.1%</b> Montana	<b>2.4%</b> Utah	<b>2.5%</b> Colorado
August 2013 Unemployment Rate	<b>8.3%</b> Arizona	<b>7.0%</b> Colorado	<b>6.8%</b> New Mexico	<b>5.9%</b> Kansas	<b>5.3%</b> Montana	<b>4.7%</b> Utah	<b>4.6%</b> Wyoming	<b>4.2%</b> Nebraska
2012 Average Annual Pay	<b>\$37,096</b> Montana	<b>\$39,268</b> Nebraska	<b>\$40,698</b> New Mexico	<b>\$41,118</b> Kansas	<b>\$41,301</b> Utah	<b>\$44,580</b> Wyoming	<b>\$45,593</b> Arizona	<b>\$50,563</b> Colorado
2012 GDP (Millions of Current Dollars)	<b>\$38,422</b> Wyoming	<b>\$40,422</b> Montana	<b>\$80,600</b> New Mexico	<b>\$99,557</b> Nebraska	<b>\$130,486</b> Utah	<b>\$138,953</b> Kansas	<b>\$266,891</b> Arizona	<b>\$274,048</b> Colorado
Real GDP Percentage Change 2011–2012	<b>0.2%</b> Wyoming	<b>0.2%</b> New Mexico	<b>1.4%</b> Kansas	<b>1.5%</b> Nebraska	<b>2.1%</b> Colorado	<b>2.1%</b> Montana	<b>2.6%</b> Arizona	<b>3.4%</b> Utah

Sources: Bureau of Economic Analysis, Colorado Department of Labor and Employment, and Bureau of Labor Statistics (CES, QCEW and LAUS data). Unless noted, all data are seasonally adjusted.



have large farm sectors that will be positively impacted by higher livestock prices and negatively affected by lower crop prices. Employment growth in Nebraska is being impeded by the expected declines in the federal government sector. New Mexico's strained banking sector has negatively impacted the availability of capital.

As the region continues its recovery along with the rest of the nation, every state enjoyed positive GDP growth from 2012 to 2013. Utah led the region

with 3.4% change in real GDP, and Arizona, Montana, Colorado, Nebraska, and Kansas followed with 2.6%, 2.1%, 2.1%, 1.5%, and 1.4%, respectively. Wyoming and New Mexico, each with 0.2%, lagged behind the rest of the region.

Salt Lake City, Phoenix-Mesa-Glendale, Denver, and Kansas City MSAs led the region with 4.1%, 3.2%, 2.5%, and 2.5% increases in real GDP, respectively. Cheyenne (2.4%) and Lincoln (2.2%) followed close behind.

In 2012, Colorado's \$50,563 average annual earnings exceeded all others in the region, including Arizona, with \$45,593. Denver-Aurora-Broomfield have maintained their top place, with above-average annual pay levels exceeding \$56,000. This far surpasses other MSAs in the region, which fall within the \$39,000–\$47,000 range. ❖

REGIONAL METROPOLITAN STATISTICAL AREAS (MSA)								
August 2013 Total Employment (In Thousands)	<b>46.3</b> Cheyenne	<b>178.8</b> Lincoln	<b>287.4</b> Wichita	<b>372.5</b> Albuquerque	<b>665.6</b> Salt Lake City	<b>1,007.6</b> Kansas City	<b>1,288.5</b> Denver-Aurora- Broomfield	<b>1,803.6</b> Phoenix-Mesa- Glendale
Employment CAGR August 2003–August 2013	<b>0.2%</b> Albuquerque	<b>0.3%</b> Wichita	<b>0.5%</b> Kansas City	<b>0.8%</b> Lincoln	<b>1.1%</b> Phoenix-Mesa- Glendale	<b>1.1%</b> Denver-Aurora- Broomfield	<b>1.4%</b> Cheyenne	<b>1.8%</b> Salt Lake City
Employment Percentage Change August 2012–August 2013	<b>0.7%</b> Wichita	<b>0.7%</b> Kansas City	<b>0.8%</b> Lincoln	<b>1.8%</b> Albuquerque	<b>2.2%</b> Phoenix-Mesa- Glendale	<b>3.1%</b> Cheyenne	<b>3.2%</b> Denver-Aurora- Broomfield	<b>3.6%</b> Salt Lake City
August 2013 Unemployment Rate (Not Seasonally Adjusted)	<b>7.4%</b> Phoenix-Mesa- Glendale	<b>7.2%</b> Kansas City	<b>6.9%</b> Albuquerque	<b>6.8%</b> Wichita	<b>6.5%</b> Denver-Aurora- Broomfield	<b>4.5%</b> Salt Lake City	<b>4.4%</b> Cheyenne	<b>3.3%</b> Lincoln
2012 Average Annual Pay	<b>\$39,013</b> Lincoln	<b>\$41,906</b> Cheyenne	<b>\$41,977</b> Albuquerque	<b>\$42,916</b> Wichita	<b>\$45,964</b> Salt Lake City	<b>\$47,346</b> Kansas City	<b>\$47,801</b> Phoenix-Mesa- Glendale	<b>\$56,048</b> Denver-Aurora- Broomfield
2012 GDP (Millions of Current Dollars)	<b>\$5,408</b> Cheyenne	<b>\$15,904</b> Lincoln	<b>\$29,644</b> Wichita	<b>\$38,784</b> Albuquerque	<b>\$72,072</b> Salt Lake City	<b>\$113,090</b> Kansas City	<b>\$167,886</b> Denver-Aurora- Broomfield	<b>\$201,653</b> Phoenix-Mesa- Glendale
Real GDP Percentage Change 2011–2012	<b>0.8%</b> Albuquerque	<b>1.4%</b> Wichita	<b>2.2%</b> Lincoln	<b>2.4%</b> Cheyenne	<b>2.5%</b> Denver-Aurora- Broomfield	<b>2.5%</b> Kansas City	<b>3.2%</b> Phoenix-Mesa- Glendale	<b>4.1%</b> Salt Lake City

Sources: Bureau of Economic Analysis, Colorado Department of Labor and Employment, and Bureau of Labor Statistics (CES, QCEW and LAUS data). Unless noted, all data are seasonally adjusted.

## Around the State

### COLORADO METROPOLITAN STATISTICAL AREAS (MSA)

#### August 2013 Total Employment (In Thousands)

<b>58.2</b>	<b>60.7</b>	<b>86.6</b>	<b>142.9</b>	<b>173.6</b>	<b>254.5</b>	<b>1,288.5</b>
Pueblo	Grand Junction	Greeley	Fort Collins-Loveland	Boulder	Colorado Springs	Denver-Aurora-Broomfield

#### Employment CAGR August 2003–August 2013

<b>0.4%</b>	<b>0.5%</b>	<b>1.1%</b>	<b>1.1%</b>	<b>1.3%</b>	<b>1.3%</b>	<b>1.8%</b>
Colorado Springs	Pueblo	Denver-Aurora-Broomfield	Boulder	Fort Collins-Loveland	Grand Junction	Greeley

#### Employment Percentage Change August 2012–August 2013

<b>0.3%</b>	<b>1.1%</b>	<b>1.2%</b>	<b>2.1%</b>	<b>2.1%</b>	<b>2.4%</b>	<b>3.2%</b>
Pueblo	Colorado Springs	Grand Junction	Fort Collins-Loveland	Greeley	Boulder	Denver-Aurora-Broomfield

#### August 2013 Unemployment Rate (Not Seasonally Adjusted)

<b>9.7%</b>	<b>8.0%</b>	<b>7.9%</b>	<b>7.1%</b>	<b>6.5%</b>	<b>5.3%</b>	<b>5.1%</b>
Pueblo	Colorado Springs	Grand Junction	Greeley	Denver-Aurora-Broomfield	Fort Collins-Loveland	Boulder

#### 2012 Average Annual Pay

<b>\$37,257</b>	<b>\$39,821</b>	<b>\$42,022</b>	<b>\$43,027</b>	<b>\$44,294</b>	<b>\$56,048</b>	<b>\$56,929</b>
Pueblo	Grand Junction	Greeley	Fort Collins-Loveland	Colorado Springs	Denver-Aurora-Broomfield	Boulder

#### 2012 GDP (Millions of Current Dollars)

<b>\$4,392</b>	<b>\$5,185</b>	<b>\$7,969</b>	<b>\$12,425</b>	<b>\$20,332</b>	<b>\$28,029</b>	<b>\$167,886</b>
Pueblo	Grand Junction	Greeley	Fort Collins-Loveland	Boulder	Colorado Springs	Denver-Aurora-Broomfield

#### Real GDP Percentage Change 2011–2012

<b>-0.2%</b>	<b>1.3%</b>	<b>1.6%</b>	<b>2.5%</b>	<b>2.6%</b>	<b>3.7%</b>	<b>3.7%</b>
Grand Junction	Colorado Springs	Pueblo	Denver-Aurora-Broomfield	Fort Collins-Loveland	Greeley	Boulder

Sources: Bureau of Economic Analysis, Colorado Department of Labor and Employment, and Bureau of Labor Statistics (CES, QCEW and LAUS data). Unless noted, all data are seasonally adjusted.

### Boulder County

The Boulder area continues to receive national recognition for its business climate and lifestyle. In 2013, Boulder was recognized as a top city for tech startups and innovation by a number of publications including the *Wall Street Journal*, *Entrepreneur*, *Business Insider*, and *Inc.* The area was also recognized as one of the best places for Business and Careers, and Best Cities for Jobs (*Forbes*), Smartest Cities in America/Top 25 Brainiest Metros (*Lumosity/The Atlantic Cities*), and #2 Best Place to Live (*Livability.com*).

Boulder County has a diverse economy supported by a high concentration of businesses in a number of emerging industries, visionary entrepreneurs, highly educated workforce, a world-class research university, and several federal labs. The area's economy has continued to outperform the state and national economy in many areas. While this trend is expected to continue in 2014, impacts from a major flood in September 2013, a partial shutdown of the federal government in October 2013, and uncertainty related to federal funding for research may have a negative effect.

Severe flooding in September affected several areas of Boulder County, and the damage is still being assessed. The impact of the flood on tourism and the local real estate market will become more apparent over the next several months. Financial institution deposits may also be affected as institutions, businesses, and individuals dip into savings to cover flood-related repairs.

Any significant reduction in federal research funding will negatively affect the area's federally funded research institutions and the many businesses that depend on federal research contracts, Small Business Innovation Research (SBIR) grants, and other funding programs to develop and refine new technologies.

**Population, Employment, and Wages**—Boulder County has experienced above-average population and employment growth and below-average unemployment over the past several years.

Between 2010 and 2012, the population in Boulder County increased by 3.6% compared to a state population increase of 3.1% and an increase of 1.7% for the United States. Year-to-year total nonfarm employment rose 3.1% between August 2012 and 2013 compared to an increase of 1.1%

for Colorado and 1.4% for the United States. In August 2013, the Boulder County unemployment rate was 5.1% compared to state unemployment of 6.7% and a national rate of 7.3% (not seasonally adjusted). The area's large concentration of jobs in sectors with higher-than-average wages contributes to above-average incomes for area residents. The median household income for Boulder County residents was \$66,989 in 2012 compared to \$56,765 for Colorado residents and a national median of \$51,371.

**Real Estate**—In 2013, commercial vacancy rates in Boulder County's main employment centers continued to improve in most categories, and residential sales and average home values increased throughout the area.

Year-to-year comparisons of the office vacancy rate for the Boulder-Longmont market show a decrease from 13.2% in Q2 2012 to 9.8% in Q2 2013. During the same period, the industrial vacancy rate in the area fell from 11.3% to 10.6%, and the retail vacancy rate rose from 8.5% to 9.2%. The number of single-family homes sold in Boulder County for the 12 months ending in August 2013 was 14.5% higher than the same period in 2012. The Federal Housing Finance Agency house price index for Boulder County increased 6.1% from midyear 2012 to 2013. During the same period, the house price index for Colorado increased 9.3%, and the national index rose 7.2%.

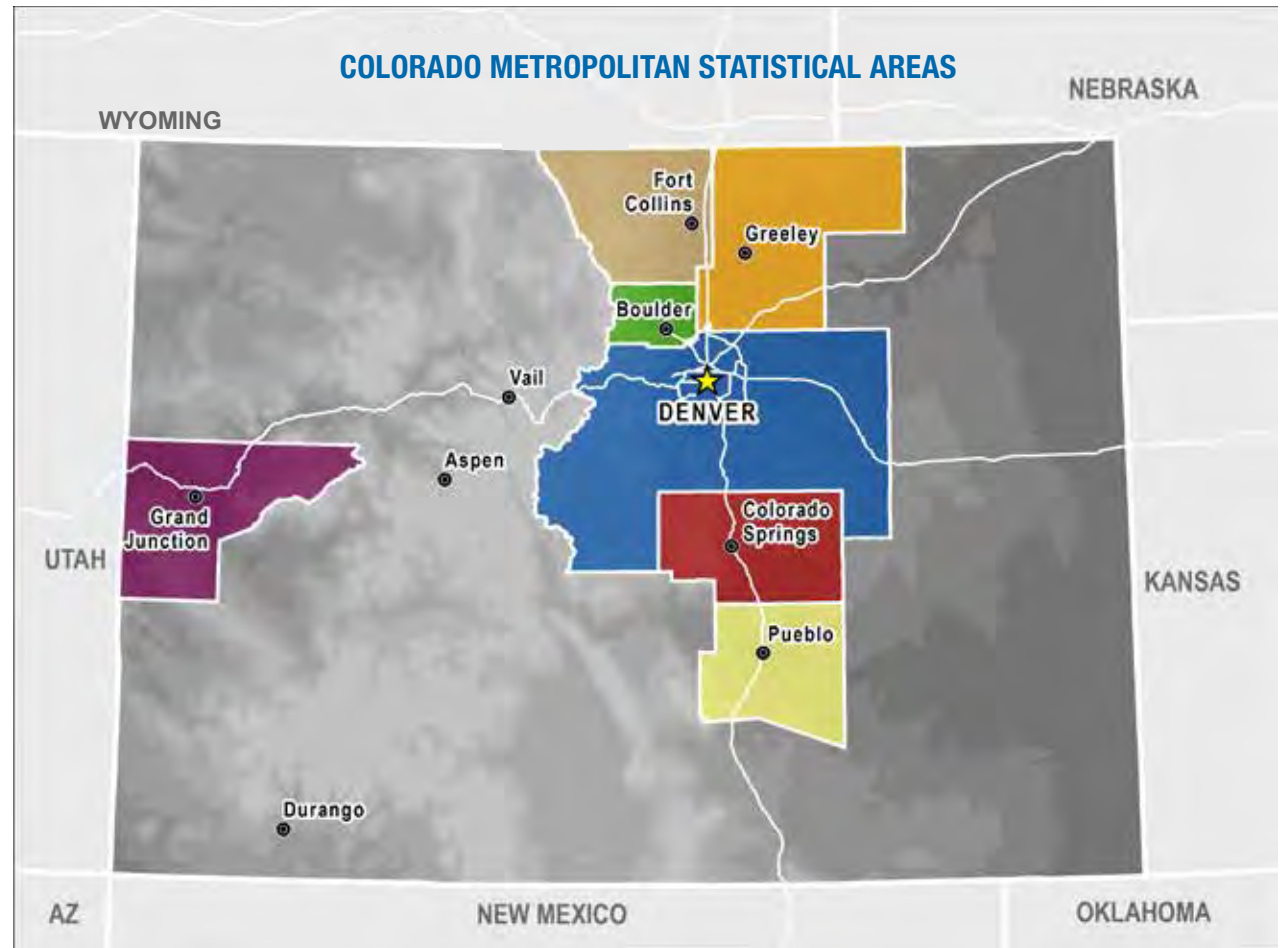
**Financial Services and Venture Capital Investment**—Boulder County represents a significant and growing share of the state's

financial institution deposits and venture capital investment.

As of June 30, 2013, Boulder County had 33 FDIC-insured financial institutions with 112 offices and \$7.3 billion in deposits, representing 7% of the state total. From midyear 2012 to midyear 2013, deposits in Boulder County institutions rose \$543 million or 8% compared to an increase of

6.1% during the same period for deposits held in Colorado institutions. Deposit growth from 2012 to 2013 was significantly higher than from midyear 2011 to 2012, when deposits in Boulder County institutions increased by \$121 million, or 1.8%, and deposits in Colorado institutions increased 3.3%.

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## Around the State

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The high concentration of advanced technology and entrepreneurial activity in the Boulder area continues to help fuel continued venture capital investment in Boulder County companies. According to the PricewaterhouseCooper/Venture Economics/NVCA MoneyTree Report, more than \$710 million in venture capital funding was received by Boulder County companies in the past three years, representing 41% of the state total. In the first three quarters of 2013, companies located in Boulder County received nearly \$113 million in venture capital funding, or 35% of the total invested in Colorado companies.

**Leading Industries**—The Boulder County economy continues to benefit from a high concentration of companies and employment in growing industries including aerospace, biotechnology, clean tech, information technology, natural and organic products, outdoor products, and recreation and tourism.

**Aerospace**—Several aerospace companies, including Ball Aerospace, are headquartered in Boulder County, and the area has a high concentration of aerospace employment. The University of Colorado Boulder, a member of the Universities Space Research Program, offers nationally recognized aerospace academic programs and receives major funding from NASA. Several federally funded labs in the area conduct research in space; among those are the Laboratory for Atmospheric and Space Physics (LASP), the National Oceanic and Atmospheric Administration (NOAA), and the University Corporation for Atmospheric Research (UCAR).

**Biotechnology**—Boulder County has a high concentration of companies and employment in the biotechnology, pharmaceuticals, and medical devices industry clusters. Major employers include Covidien, Amgen, and Array BioPharma. The University of Colorado Boulder has a distinguished record in biotechnology research that has attracted major research funding and generated numerous startups. The university is home to the Biofrontiers Institute, a program headed by Nobel laureate Dr. Tom Cech, designed to facilitate interdisciplinary research and expand Colorado's leadership in biotechnology.

**Cleantech**—Growth in the renewable energy and energy research industry continues in Boulder County and is supported by federally funded research facilities in the area, including the National Renewable Energy Laboratory (NREL), and university programs which include the University of Colorado Renewable and Sustainable Energy Initiative (RASEI). Boulder Wind Power, GE Energy Control Solutions, juwi Solar, juwi Wind, Siemens, and Tendril Networks are among those Boulder County business in the industry.

**Information Technology**—Boulder County has a long history of involvement in the information technology cluster and a high concentration of employment in software, data storage, and web-based services. Major employers include IBM, Seagate, Intrado, Google, HP, Microsoft, Rally Software, and Markit On Demand. The Boulder area, which is also home to the successful mentorship and seed-funding program TechStars, remains one of the hottest markets for tech startups.

**Natural and Organic Products**—Many leaders in the natural and organic products cluster got their start in Boulder, and the area remains important in the growth of the industry. Area companies include Boulder Brands, Celestial Seasonings, Rudi's Organic Bakery, Justin's Nut Butter, Eco-Products, EVOL Foods, and Pangea Organics. New natural and organic products companies continue to be launched in the Boulder area.

**Outdoor Products and Recreation**—Widely recognized as a center for the growing outdoor recreation industry, Boulder is home to the Outdoor Industry Association and the International Mountain Bicycling Association. The Boulder area has a high concentration of manufacturers, distributors, retailers, marketing and media companies, and medical and other services providers focused on the industry. Local companies include American Rec, GoLite, Newton Running, Pearl Izumi, Sea to Summit, and Spyder Active Sports.

**Tourism**—The Boulder area is a popular destination that receives national media attention for its recreational and cultural amenities, and impressive array of shopping and dining choices. Boulder has recently been recognized by National Geographic.com (one of America's Top Adventure Towns), *Bon Appetit* (America's Foodiest Town), *Outdoor* magazine (#1 Sports Town), Gallup-Healthways (Nation's Happiest and Healthiest City), and *Bicycling* magazine (one of the Best Bike Cities). Boulder will also be the site of the 2014 Cyclocross National Championships.



## Kit Carson County

The Kit Carson economy in 2013 remains somewhat static compared to 2012. The drought continues to diminish crop results. Yields of irrigated crops were below average as were dry land. The economy continues to rely on agriculture. Tourism is a very distant second; nonetheless, it continues to provide the area with somewhat less reliance on agriculture. The year 2013 has been an excellent one for tourism as the lodging tax is up approximately 3%. The Colorado Welcome Center in Burlington continues to be the second-highest entry point into Colorado via vehicle.

At present, moisture is more than adequate to accommodate all of the acres of dryland wheat that have been planted.

Overall, farmers' financial condition remains good. In 2010 and 2011, excellent yields were produced, and commodity prices were exceptional. In 2012 and again in 2013, yields were poor; however, strong results in 2010 and 2011 enabled farmers to establish an excellent working capital.

The biggest concerns for agriculture are adequate moisture and good commodity prices. Commodity prices have been dropping dramatically, with corn off a minimum of 40% and wheat down around 25%. The good news is that some of the prices being paid to suppliers by farmers have declined in 2013.

Population trends show a slight increase in Burlington and a decline in Kit Carson County.

**Employment**—In 2012, total average nonfarm employment in Kit Carson County was 2,972. The average hourly wage was \$16.40, the average weekly wage was \$656, and the annual average wage was \$34,112. This is considerably lower than the average annual wage in Colorado, \$53,664. Farm and sole proprietor employment represents significant employment in the county, accounting for approximately 38% of total employment not in the nonfarm wage and salary tally. The Kit Carson County unemployment rate is 4%, much lower than the state or national average.

As of August 2013, the civilian labor force in Kit Carson County was 4,407. The number employed was 4,229. The availability of workers continues to be a problem for not only Kit Carson County but for most of eastern Colorado. Income for workers in this area has remained basically static.



Major industry employment in Kit Carson County includes:

- Wholesale Trade, 28 establishments, 340 employees
- Agriculture, Forestry, Fishing and Hunting: 31 establishments, 327 employees
- Education Services: 6 and 322
- Accommodation and Food Services: 25 and 303
- Public Administration: 25 and 277
- Health Care and Social Assistance: 20 and 271
- Manufacturing: 10 and 144
- Finance and Insurance: 20 and 113

The real estate market has continued to increase modestly on a yearly basis. The collapse in the housing market that occurred throughout the United States never materialized in the Kit Carson area. Real estate prices have remained good to excellent over the past 12 years. Low interest rates have allowed more individuals to qualify for loans to secure housing. Affordable housing is in very short supply. There is a waiting list for rental housing, and it is not uncommon to pay \$850 a month for a two-bedroom home. All indications point to the housing market remaining strong, particularly in Burlington.

Bank deposits are at record levels. Total deposits in Burlington as of June 30, 2013, were \$189 million.

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## Around the State

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### La Plata County

The Office of Business and Economic Research (OBER) at the School of Business at Fort Lewis College measures and reports on economic activity in La Plata County. The La Plata County economy is highly seasonal and is related to tourism's impact on the local economy and construction. Although there is significant winter tourism associated with winter sports, most La Plata County tourism occurs during the summer. This summer concentration of tourism causes a third quarter seasonal upswing in economic indicators, including retail sales and employment, each year.

The presence of Fort Lewis College, Walmart, Mercury Systems, Mercy Medical Center, and oil and natural gas extraction in La Plata County provides

some stability to the local economy, particularly in labor markets. The local economy had been steadily becoming less volatile over the past 20 years—until the Great Recession of 2007–2009. The impact of the student population has deteriorated since 2002, when the student body peaked at 4,347 students. Fall 2013 enrollment is 4,028 students, with strong growth over the past two years. Over the past 10 years, there has been a push to attract new and dynamic private companies, or “growth companies,” to La Plata, Archuleta, and Montezuma counties, which has attracted higher skilled jobs to the area.

**Employment and Unemployment**—For the 12 months August 2011 to August 2012, the La Plata County seasonally adjusted unemployment rate continued to decline, falling 1.2 percentage points

from the same period a year earlier. It remains close to 1.5% below the Colorado rate and 2% below the national rate.

In August 2013, the La Plata county seasonally adjusted labor force was 30,643, or about 1.6% higher than the same period a year earlier. Seasonally adjusted labor force growth has been positive since March 2012. However, the employment-population ratio in La Plata County has yet to return to pre-recession levels and is currently about 7.1% below its 2007 high.

**Income**—Per capita income in La Plata County has improved over the last few years in both absolute terms and relative to Colorado per capita personal income. Personal per capita income in 2012 (most recent statistic available) was \$41,944 in the county, an increase of 3.1% compared to the prior year. It remains the highest in the Region 9 Economic Development District counties of Archuleta, Dolores, La Plata, Montezuma, and San Juan. Additionally, while state wages have increased an average of 2.4% in the 2001–2012 period, La Plata County total wages have risen an average of 4% over the same period. Although the county's average income is 17% below the state average, the gap is shrinking. This rise in income coincides with increasingly diverse producers in the region.

Since 2005 seasonally adjusted quarterly total income growth in La Plata has been mostly positive. In Q1 2013, total income was about 6.5% above pre-recession levels, not adjusted for inflation.



In 2012, the largest share of private income was attributed to Health, accounting for about 18.6% of total income, followed by Construction and Retail, with 12.8% and 10.7%, respectively. For the five-year period 2006–2012, shares of sector income have remained fairly constant with the exception of Natural Resources and Mining, and Education and Health Services, which gained about 2% and 1.7% of income share, respectively. Construction posted the largest decline, losing 4% of income share. Natural Resources and Mining, and Construction are frequently used to gauge overall economic activity in the area.

Federal, state, and local government income as a share of total (private and public) county income has remained nearly constant, at 25% over the past 10 years. Local government accounts for 18%, followed by state and federal income shares of 5% and 2.2%, respectively.

Since the beginning of the recession growth in federal, state and local government income has been negative about 50% of the time. It should be noted that this was before the America Recovery and Reinvestment Act redistributed federal funding to state and local governments. State government income growth in Q1 2013 was positive after being negative for the previous three years.

**Tourism**—Although the economy has become more diverse, tourism continues to play a large role in La Plata County: Retail, and Accommodation and Food combined account for almost 17.5% of private income. Data through the September 2012 reveal the impact the recession has had on the regional economy. Seasonally adjusted visitor

annual growth to Mesa Verde National Park from September 2012 to September 2013 fell 1.8%. Although the park is in Montezuma County, many tourists who visit the park stay in La Plata County during their time in the area. Similarly, seasonally adjusted airline enplanements were down 8.3% from the previous year. Train passengers on the Durango & Silverton Narrow Gauge Railroad slid 6.1%, seasonally adjusted, over the same period. The OBER Tourism Index shows overall long-term tourism trends up about 7% from the beginning of the recession in December 2007, but fires in the area and slowing national economic growth in 2012 helped spur a decline in tourism over from early 2012 onward. On the other hand, retail taxes, seasonally adjusted, have been growing robustly since the beginning of 2013.

**Real Estate and Banking**—Like many Colorado resort communities, La Plata County's economy is closely tied to real estate. Using Q2 as representative of the overall housing market, the 2012 median inflation-adjusted home price in La Plata County stabilized at about \$300,000, and in the year through Q3 2013 it is up an average of 1.6%. Growth in the number of home sales over the past couple of years has been robust, generally posting double-digit rates. Moreover, days on the market have contracted considerably over the past two to three years. The number of foreclosures fell 20% from the fall of 2012 compared to 2013.

OBER tracks bank deposits at four local and regional banks. Between 2009 and 2011, bank assets, defined as net loans and leases, recorded negative growth; however, since 2012 assets have

grown an average of 7.3%. Similarly, liabilities and total deposits have increased an average of 9.3% between Q1 2012 and Q2 2013.

**Recent and Future Trends**—The fires in 2012 had a slightly negative impact on the local economy, particularly the tourism industry, but the La Plata County economy has rebounded well from this negative shock. The labor market is continuing to experience positive trends, and OBER expects continued economic improvements. Anecdotally, the spirits of most local business owners is improving, and optimism has been continuing to build. Rising demand for construction and in real estate will slowly provide a foundation for relatively solid growth. OBER also foresees continued levels of underemployment, which is not unlike other resort communities that rely on seasonal construction jobs and low-value added service jobs.

Oil and gas revenues have softened somewhat over the past couple of years, which adds some uncertainty to local county extraction taxes. However, other flows of revenues have been quite strong.

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## Around the State

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### Mesa County ■

In 2012, the Mesa County's population was estimated at 147,848 (2012 Population Estimates, U.S. Census Bureau). The county seat is Grand Junction, and the Grand Junction Metropolitan Statistical Area (MSA) comprises Mesa County. Mesa County is still experiencing a slow economic recovery; unemployment is higher than the state and national averages. Home sale prices are slowly improving. Currently, the labor force and number of jobs available are also slowly increasing. The average unemployment rate in 2013 for Mesa County was 8.5%.

**Regional Hub**—Mesa County continues to be a regional hub for health care, education, and retail. In 2013, St. Mary's Hospital announced a \$40 million expansion. St. Mary's is the only level I trauma center in western Colorado and eastern Utah. St. Mary's is expanding its services for bariatric and trauma rehabilitation care. The Colorado Healthcare Marketplace took effect in October 2013. The health care and social assistance industry accounts for 15.1% of Mesa County's overall employment, with a 30-40% projected increase in personal care aides, home health aides, and medical secretaries, according to data from Economic Modeling Specialists International.

Retail sales in Mesa County dropped slightly in 2013. One reason for this drop is that other locations in western Colorado are expanding their retail offerings. City of Grand Junction sales and use tax revenues have decreased 3.3% from 2012, with the city collecting \$36 million compared to \$37.3 million in 2012.

Tourism is another driving force of Mesa County's economy. In 2013, Mesa County saw record numbers of attendees at some large events, including the Colorado Mountain Wine Fest and the Palisade Peach Fest. Tourism is a big industry in Mesa County, in large part due to the natural amenities with a wide variety of wineries, vineyards, agritours, biking, hiking, camping, and fishing activities in the Grand Valley. However, overall lodging tax revenues are down 2% in 2013 compared to 2012.

In 2013, a few local business expansions took place in Mesa County. WestStar Aviation announced expansion plans for a new hanger and paint facility to handle larger planes. Once completed, the company plans to hire 150 new employees over the next five years. Other smaller expansions include a few new restaurants. Loki Outerwear, a local outdoor gear company, moved its retail location to downtown Grand Junction for more visibility. Also in 2013, Mesa County began construction on two new large truck stops just off I-70 to support the heavy trucking traffic in the county.

**Taxes**—In late 2012, the Mesa County Board of County Commissioners adopted a resolution allowing new or expanding businesses to apply for a waiver of up to 100% of the county's portion of business personal property taxes for up to 10 years.

**Employment**—According to the Colorado Department of Labor and Employment, Mesa County labor force decreased 1.3%, from 78,952 in 2012 to 77,940 in 2013. Mesa County saw a decrease in the unemployment rate from 9.1% in 2012 to 7.9% in 2013. The highest level of

unemployment was 9.2% in January 2013. The estimated average labor force in 2013 for Grand Junction MSA was 78,117.

**Wages**—Average annual wages decreased 2% in Q1 2013, to \$38,478, compared to Q1 2012. This will impact businesses as they will need to contemplate an increase in wages in order to compete for a qualified and skilled workforce.

**Construction**—City of Grand Junction building permit valuation is up \$30 million from 2012, which represents a 48% increase. New construction permits that were issued by the City of Grand Junction in 2013 are also up 45% over 2012. Residential planning clearances through the City of Grand Junction are also up 11.3% compared to 2012. Mesa County saw a significant number of infrastructure projects in 2013, with major road improvements on U.S. Highways 6 and 50 and the I-70 Business Loop. Some future infrastructure projects are also planned at Horizon Drive and North Avenue.

**Real Estate**—Mesa County saw housing sale prices slowly increase in 2013, from \$175,000 in February to a high of \$191,000 in June. The rest of 2013 was positive compared to the previous year, with a current average home price of \$186,000. According to Advanced Title Company, real estate sales have increased about 8% in 2013 relative to the same period in 2012. Local real estate recovery is lagging 18-24 months behind state and national levels. Further progress in the local real estate market has been somewhat stymied by high unemployment in Mesa County. A favorable trend is the decline in foreclosure filings and subsequent



sales. Locally, it is expected that modest gains will continue with increases in sales and homebuilding and a substantive reduction in refinancing activity. Grand Junction also experienced high rental vacancy rates in 2013, averaging 11.2% compared to 7.4% in 2012, and a lower average rent than 2012, \$572 per month.

**Food and Beverage Manufacturing**—Mesa County has seen an increase in activity within the food and beverage manufacturing industry. With a new microbrew bottling facility, the first Rocky Mountain hops processing plant, as well as innovations and automation in agricultural food processing, this industry is experiencing large expansions on the Western Slope. Mesa County is known for its peach orchards and winemaking but in 2013 the production of food-grade lavender and pelletized hops for beer making increased. Employment in this field is growing at an average rate of 2% per year, from 668 in 2013 to an expected 680 in 2014.

**Energy**—Energy and energy services industries continue to be a critical piece of Mesa County's economy. In 2013, activity in natural gas increased slightly with a new proposal for an extraction operation in Mesa County, and the oil and gas industry improved compared to 2012 in terms of activity, and slightly higher wages and employment. Companies within the industry spent a little more than in 2012 and anticipate spending more in 2014. With the discovery of a few new deep wells, these programs will increase activity, and many companies plan to pick up more rigs. The industry anticipates a slight increase in employment in 2014. A few companies are projecting a

15% increase in activity for 2014, while others are estimating a more conservative projection of stable employment.

Research and development of innovations to extract oil and gas out of shale oil in the Mancos and Niobrara formations continues. Companies are also working on technologies to extract oil from oil shale. This industry has had to learn to become more efficient and decrease costs with innovations and efficiencies in water management, high efficiency rigs, drilling, and hydraulic fracturing. Based on the need to decrease costs, the industry has learned to manage their resources more effectively with reducing, reusing, and recycling the water used; decreasing the amount of water hauling to well sites; and getting water via pipeline. State and federal government regulations may increase the cost of doing business, and those costs may end up getting passed on to the consumer. The industry is also concerned that if the Sage Grouse is included on the endangered species list, it will have a significant impact on industry activity. Setback regulations and a proposal to ban hydraulic fracturing within Colorado will also significantly impact the entire industry. As activity increases, wage growth will occur. The industry expects a 2-6% increase in wages depending on activity levels in 2014.

**Aviation and Aerospace**—The aviation and aerospace industries employ more than 500 employees in Mesa County (data from Equifax). In 2013, the Grand Junction City Council agreed to continue to offer an aircraft sales tax exemption for all companies in the industry within the

city limits. With WestStar Aviation expanding and increasing its employment, it is expected that industry subcontractor employment will also grow. The aerospace industry is expanding, and locally, companies are planning for a gain in employment in 2014. Aerospace projections by both Boeing and Airbus show increases in vehicle production schedules, and other air-framers also anticipate growth. Wages will most likely increase but job growth may not mirror industry growth. Technology must be applied as there are significant increases in foreign competition and extreme industry pressures to provide regressive pricing. Innovations in additive manufacturing and 3D printing are having a positive effect on the aerospace industry. Currently, there is a national trend in the aerospace industry for more offshore sourcing.

**Summary**—Overall, Mesa County expects employment growth in the construction, aviation, aerospace, health care, and food and beverage manufacturing industries. These gains will help decrease the high unemployment rate and potentially attract new businesses and new investments, and help to expand existing local businesses in Mesa County.

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### Northern Colorado ■

Don't hold your breath waiting for a significant growth spurt in Northern Colorado. The recovery both nationally and locally is firmly established, and it has revealed itself for what it is: solid, steady, and unspectacular.

According to the Colorado Department of Labor and Employment (CDLE), Larimer County's employment totals hovered just below 143,000 June–August 2013. This is about 3,000 more jobs (2.1%) than the year before. The county's August 2013 unemployment rate stood at 5.2%, down 1.1% from the year before.

The story is similar in Weld County. The June–August employment growth in 2013 for the county was 1,500 jobs (1.7%), about half of what was added one year earlier in 2011. Weld County's unemployment rate was 7.1% in August, about 1.4% less than 12 months earlier.

The lower unemployment rates are a welcome relief to job seekers. Yet, Larimer and Weld counties combined have more than 8,000 more unemployed workers than in August 2007 (the Great Recession began in December 2007).

With unemployment rates well above average, regional worker earnings are stagnant. In Q1 2013, CDLE data show Larimer and Weld County workers each averaging about \$825 in weekly wages. After adjusting for inflation, Larimer County average worker wages are unchanged from five years prior; Weld County workers have seen a \$40 increase (5%) in weekly earnings over the same time period.

The important takeaway is that although the labor market is improving, not enough jobs are being added to substantially reduce the number of unemployed or improve wages. This is certainly not the type of recovery anyone was hoping for.

Over the past 12 months the two counties have grown in very different ways. In Larimer County, nearly all of the private-sector job gains were in Professional and Business Services, and Education and Health Services, maintaining the trend over the past three years. In Weld County, most of the jobs were added in Mining and Construction (primarily oil field development) and Trade, Transportation, and Utilities.

The housing markets in the two counties continue their resurgence from the substantial decline they suffered during the recession. Larimer and Weld counties have seen year-to-year increases in the Office of Federal Housing Enterprise Oversight (OFHEO) House Price Index for the past seven and six quarters, respectively.

Overall, the data show that both county economies were doing reasonably well through August 2013. However, things changed dramatically starting the week of September 9 when the rain started to fall as monsoonal air from the south collided with a slow-moving cold front in the mountains to the west of Larimer County.

**September Floods have Altered Northern Colorado's Economic Outlook**—The significant rainfall (more than 20 inches fell in Boulder County) led to substantial flooding across the northern Front Range. Boulder, Larimer, and Weld

counties were particularly hard hit, with buildings, homes, bridges, and roadways destroyed across the region. This disaster has changed both the human and economic course of Northern Colorado.

With respect to human losses, the floods tragically claimed at least eight lives. They also destroyed more than 1,500 homes, with thousands more damaged. Countless families suffered significant economic and psychological losses.

Most of the affected homes are not covered by flood insurance, meaning that many families will end up paying for losses out of their own pockets. Although spending on lumber, carpeting, and appliances will positively impact some economic sectors in Colorado, others will see less activity. For example, if a family needs to spend \$7,000 to shore up their house's foundation, this money is no longer available for purchasing items such as guitars, camping gear, and movie tickets.

Business and property owners were also hard hit. In the canyons, floodwaters washed away motels, cabins, bars, and restaurants. In other places, retail and commercial establishments suffered extensive damage. Farther east, farmers lost their crops, and oil wells were damaged or shut down.

All of this means a drop in business output, which negatively affects the region's economic and fiscal situation. Although some of this lost activity will be made up by expansion in other sectors, not all will. Contractions in the tourism and agricultural sectors will be coupled by reductions in employment, real household income, and tax revenue collected by the state and local municipalities. Perhaps

the greatest problem facing tourism is that the two most traveled roads to Estes Park and Rocky Mountain National Park have suffered significant damage. Temporary fixes were made, and both roads reopened in November.

This has many important implications. First, jobs and income in Estes Park will be lost as businesses will struggle with low visitor counts. Second, this will affect the town's public finances that rely heavily on retail sales tax revenues generated by tourism expenditures.

Lasting economic consequences of disaster events are reflected in post-disaster migration behavior. Severely damaged areas typically experience short-term reductions in population size with evacuation of at-risk residents. If recovery efforts are stalled, the loss in population size is longer lasting. Sizable fractions of dislocated populations never return to their homes, and rates of out-migration increase as households seek safety and employment opportunities elsewhere.

### **Rebuilding Efforts will Stimulate the Economy**

—The floods have changed Colorado in many negative ways, but as the recovery process unfolds new economic activity will be created. This activity will cover a wide variety of areas, including:

- Clean up and salvage activities
- Environmental damage mitigation
- Water treatment and management system repair
- Home construction and rebuilding



- Road construction and rebuilding (estimated at \$475 million)
  - Surveying
  - Engineering and design
  - Construction
- Commercial building and rehabilitation

To the extent to which new money is injected into the state, either from the federal government, charitable organizations, or insurance companies, the floods can actually serve as a stimulus to the

economy. Conversely, money internal to the state will simply be redistributed from one sector or activity to another or one household to another, which does not create new economic activity.

As an example of the stimulus effect of disaster recovery, the Federal Highway Administration has pledged emergency assistance to help repair and replace damaged roadways and bridges. This is

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new money to the state that will be used for hiring construction workers and civil engineers.

Similarly, insurance payments to homeowners will allow them to hire carpenters, masons, and electricians. These workers, so beleaguered by the housing market bust, will once again see their skills and talents in great demand.

**2014 Outlook: Too Hard to Call**—The devastation of the September flood makes it difficult to forecast the regional economy for 2014. Although many sectors that have driven Larimer County's recent growth escaped relatively unscathed, the problems in Estes Park will be felt on a much wider scale. Reduced tourism will affect not only the town itself, but the gateway communities of Loveland and Fort Collins as well. While U.S. 34 has reopened to local residents, it is in no shape to handle summer vacationers.

Weld County is also feeling the effects of the disaster. Housing losses in the county ranked second only to Boulder. Thousands of acres of crops were damaged as were numerous oil wells and storage facilities. While repairs will help stimulate these sectors, output losses were substantial.

## Pueblo County

**Introduction**—Of the 14 Colorado planning and management regions, Region 7 is the only one that consists of a single county, Pueblo. With a land area of 2,400 square miles, Pueblo County ranks 13th-largest of Colorado's 64 counties. Of the planning and management regions, it ranks the smallest in geographic size. In terms of total population, Region 7 is the 5th-largest of the 14 regions, according to the 2010 census. The 2000 census recorded 141,472 Pueblo County residents, growing to 159,063 in 2010—a 1.2% compound annual growth rate—and ranking 8th among the regions. Pueblo County has an estimated 2012 population of 160,545.

**Jobs and the Economy**—On the basis of August 2013 data, Pueblo County's unemployment rate (not seasonally adjusted) stood at 9.7%, compared to 10.1% a year earlier. Total nonfarm wage and salary employment (seasonally adjusted) in the county totaled 67,390 in August 2013, the same level as a year earlier.

Examining the trends of job growth by business sector reveals several interesting developments. The major industry sector showing the largest percentage job gain for September 2013 relative to September 2012 was Manufacturing (7.3%), followed by Professional and Business Services (7%) and Construction (6.2%). The startup of the Vestas wind turbine tower manufacturing facility in Pueblo in 2007 initially led to growth in manufacturing jobs during that period; however, layoffs in early 2012 put a damper on that growth. The 2013 outlook has Vestas exceeding its original

hiring estimates, and the plant is nearing production capacity. Evraz-NA, the parent company of Rocky Mountain Steel Mills, has seen a 9.8% gain in employment for Q3 2012 compared a year earlier. The plant currently employs more than 1,200 workers and is Pueblo's largest manufacturing employer. Total manufacturing employment grew by 300 jobs during 2013 relative to the corresponding month in 2012. The Pueblo Chemical Depot has initiated plans to hire hundreds of additional employees as it completes the testing phase of that project and enters into the final production process.

**Housing**—New residential construction in Pueblo has seen remained on par in 2013. Through September 30, 2013, new single-family dwelling permits in Pueblo County stood at 136, compared to 172 for the same period in 2012. However, a government-funded program to construct low- to moderate-income homes on the City of Pueblo's east side accounts for 43 of the 2012 year-to-date units. If these units are not counted, market-based housing starts for the first nine months of 2013 are nearly comparable to the previous year's figure. Multifamily activity has been negligible for the past several years. Permits have totaled approximately \$25 million in new housing starts.

Pueblo has a very low housing cost relative to many other Colorado communities. Median sales price for existing Pueblo single-family homes is \$120,909 according to Q2 2012 data compiled by the Colorado Association of Realtors. This is 60.5% of the corresponding Colorado statewide value of \$200,000, and 9.1% of the Telluride figure



of \$1.3 million. Apartment rents are similarly low, with an overall median of \$545 according to the Colorado Division of Housing's multifamily vacancy survey for Q2 of the year. For Q2 2011, the median value was \$483.

**New Projects**—Several large-scale public sector projects have contributed to the favorable job picture of the Construction Sector for 2012. Probably most notable of these is the \$52 million Pueblo County Judicial Building. Groundbreaking for the five-story, 173,000-square-foot facility occurred on February 1, 2012, and is slated for completion in 2014. Many downtown Pueblo merchants are



enthusiastic about the secondary economic benefits of the project. Construction peaked during summer 2012, with more than 400 workers on site.

In April 2012, Rocla Concrete Ties, a facility that manufactures concrete railroad ties, announced that it will be relocating its manufacturing operations to Pueblo from Denver to make space for RTD's expanded light rail network. Rocla also has manufacturing facilities in Texas and Delaware. The project came online in 2012 and has already announced an expansion of an additional 50 jobs.

Construction started in the summer of 2013 for Pueblo's newest manufacturer, pewag, an Austrian maker of tire chains. The plant initially plans to employ 55 workers when its 55,000-square-foot Pueblo facility is completed in 2014.

Other companies locating to the Pueblo region include Westwind Wood Specialties, creating 91 jobs, and Dubworks LLC, creating 25 jobs. Both of these companies work in the cabinet-making sector. Other announcements include the resurrection of a Pueblo tradition, Walters Brewery, which will initially hire 12 people. The Pueblo market has also seen signs of rebounding from the recession from other companies that are announcing local expansions, including several at the Airport Industrial Park with growth of more than 109 jobs.

Great plans are in store for Pueblo's Historic Arkansas Riverwalk Project (HARP). In 2012, according to the Pueblo *Chieftain* newspaper, the State Economic Development Commission approved the City of Pueblo's ambitious plan to construct more than \$100 million in additions

over the next 15 years. The state agency also allowed HARP to use up to \$45 million in state sales tax collections under the approved timetable—triple the original approved amount. Phase One of the project, beginning in 2014, calls for expansion of the Pueblo Convention Center and location of a second hotel in the HARP vicinity. Expansion of the Convention Center will include a multi-use arena for the first-ever Professional Bull Riding University bull-riding school. Phase Two, commencing in 2018, entails improvements to the Riverwalk, including construction of a Gateway Center. Phase Three, slated to begin in 2025, proposes building a swim complex and indoor water park. A future expansion of the HARP channel is also envisioned. Associated with the project is the development of retail and other commercial space and a possible apartment complex. Pueblo and Aurora are beneficiaries of the state's recently enacted regional tourism grants, which help finance tourism-related projects.

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### Southern Colorado

**Employment and Wages**—The Quarterly Census of Employment and Wages (QCEW) for El Paso County indicates total jobs increased by just over 1%, or 2,414, in 2012. This is the second year of job growth after three years of job losses that occurred from 2008 through 2010. Even with two years of gains, employment in 2012 stood at 237,683 or 9,440 jobs below the peak in 2007.

Fifteen of 21 industry sectors saw job gains in 2012. The most significant gains were in Health Care (1,067); Accommodation and Food Services (383); Construction (380); Other Services (298); Manufacturing (253); and Arts, Entertainment, and Recreation (204). The strong showing in the Health Care Sector represented 47.5% of total job gains in the county. Job losses occurred in 6 sectors, including Professional and Technical Services (812) and Educational Services (123).

The job market is improving ever so slowly. The unemployment rate at the end of 2012 stood at 8.7%. The rate edged down since then, standing at 8% at the end of August 2013. Several factors in the local economy, including strength in residential construction, the general real estate market, health care, and auto sales, point toward an improving unemployment rate in the short term. However, the uncertainty surrounding sequestration, furloughs, and further reductions in the military budget cloud the forecast.

The military presence and military employment have been bright spots in the local economy for years but are being affected by sequestration of

the federal budget. The U.S. Air Force Academy reported payroll reductions of \$80 million and reduced purchases of construction and supplies totaling \$43 million for its 2012 fiscal year. Other air force bases in the region have reported reductions in expenditures. Fort Carson's 2012 economic impact analysis estimates there will be 5,800 fewer civilian and military employees on the base in 2012 compared to the prior year. Collectively, the military is expected to provide 6,106 fewer jobs in fiscal year 2013. Sequestration, if not resolved, will continue to erode military- and defense-related private-sector employment in the region over the next several years.

Average QCEW wages increased 2.2% in El Paso County, from \$43,628 in 2011 to \$44,564 in 2012. Wage growth was particularly strong in Mining (up \$156,728, to \$236,912), Utilities (up \$22,204, to \$103,584), Manufacturing (up \$3,640, to \$61,880), Wholesale Trade (up \$1,768, to \$58,968), Finance and Insurance (up \$3,120, to \$56,680), Real Estate and Rental and Leasing (up \$1,352, to \$35,152), and Management of Companies and Enterprises (up \$6,864, to \$91,364). The large increase in Mining wages is likely an aberration caused by oil and gas drilling in the county. The drilling concluded after low-quality oil and gas formations were found in the test wells. The Southern Colorado Economic Forum expects wages in Mining to decline to more normal levels in 2013. The average wage in the county is 11.8% below the state average of \$50,544.

Income generation has been lackluster in the community. However, per capita personal income

increased 5.25%, to \$39,994, in 2011 over the 2010 level of \$37,999. The forum forecasts per capita personal income would increase to \$40,794 in El Paso County in 2012. This would be 4.5% below U.S. per capita personal income and 9.6% below Colorado per capita personal income.

### Residential Construction and Commercial Real Estate Activity

Residential building continued its strong rebound that started in the second half of 2011. During the 12 months from July 2012 through June 2013, a total of 2,836 single-family permits were issued in El Paso County. This is an increase of 916 permits (47.7%) compared to the 1,920 permits issued the same period a year earlier. At the current pace, the forum expects 3,000 single-family permits will be issued in 2013. The forum anticipates the housing recovery, along with ongoing rebuilding in Mountain Shadows and Black Forest, will generate a total of 3,300 permits in 2014.

Multifamily permits are expected to top 600 for the third-consecutive year. Interest in multifamily projects is being propelled by the low 6.4% vacancy rate and an average countywide rent of \$780 per month. Through June 2013, permits for 25 projects and 348 units were pulled. Multifamily unit values are averaging \$130,785 through August 2013. This is up 4.5% from an average multifamily unit value of \$125,123 over the same time in the previous year. Multifamily permits are expected to hit 625 units in 2013 with a forecast for another 650 units in 2014.

Home sales have been strong in 2013. Buyers are taking advantage of historically low mortgage rates and attractive prices. The average sales price of a home is expected to increase to \$257,770 in the Pikes Peak region in 2013, a 6% gain from \$243,180 in 2012. The median price of a single-family home is expected to grow to \$222,300 in 2013 compared to \$209,700 in 2012. Despite increasing almost a full percent in the early summer of 2013, near-record low mortgage interest rates should continue to help improve the housing market through 2013. Sales are expected to reach 11,000 homes in 2013 and 12,000 homes in the following year.

The increase in residential real estate activity helped to reduce the foreclosure rate. Foreclosures decreased 2.8% in 2012, to 3,364. This is the

third-consecutive year foreclosures declined in El Paso County. Through June 2013, foreclosures totaled 1,049. This compares very well with 1,777 foreclosures for the same period in 2012. The forum projects foreclosures will total 2,100 and 1,700 in 2013 and 2014, respectively.

Turner Commercial Research reports mixed signals in the commercial real estate market. Commercial vacancy rates improved to 13.7% compared to 14.9% the prior year. However, triple net lease rates dropped to \$10.23 a square foot compared to \$10.27 a year ago. Hoff & Leigh reports a similar overall vacancy rate of 13.2% with an average asking rate of \$11.07 per square foot. This is an improvement from June 2012 when the asking rent was \$11.04 and vacancy rates averaged 14.4%.

According to Hoff & Leigh, asking rents for office space vary from \$9.18 per square foot in the southwest section of the city to \$14.75 in the east. Evidence suggests landlords remain willing to negotiate leases and the actual lease rate may be 25–40% below the advertised rates. However, these discounts will continue to diminish as long as the vacancy rate continues to decline. Vacancy rates are the highest in the central part of Colorado Springs, at 21.6%, and lowest in the west, at 3.3%.

The industrial vacancy rate decreased to 9.1% in June 2013 from 9.8% in June 2012. Average rents increased from \$6.09 in June 2012 to \$6.30 in June 2013, according to Turner Commercial Research. Hoff & Leigh reports the lowest asking rates are in the south of the city, at \$5.53 per square foot and the highest rate at \$8.35 in the north of the city. Vacancy rates are highest, at 13.4%, in the downtown section of the city and lowest, at 4.9%, in the eastern sections of the city.

Shopping center vacancy rates increased from 12% at the end of June 2012 to 12.3% in June 2013. Average rents increased about \$0.20 per square foot, from \$12.46 at the end of June 2012 to \$12.66 in June 2013, according to Turner Commercial Research. Hoff & Leigh reports second quarter vacancy rates are highest in the southeast area of Colorado Springs (21.4%) and lowest in Monument (3.3%), southwest (3.3%), and west (3.8%) areas of the local market. As in 2012, Hoff & Leigh reports that 70% of the total retail



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vacancy is located in the central and southeast sub markets of the city. These city areas are ripe for redevelopment.

**Wholesale and Retail**—Retail sales in El Paso County increased 4%, or \$600 million, to \$14.5 billion in 2012. A strong showing in motor vehicle sales and parts helped propel this increase. Electronic appliances, furniture and home furnishings; clothing accessories, health and personal care, hobby, books and music; and food and beverages sales all increased. In contrast, retail trade sales declined in general merchandise, building materials, and nonstore retailers. Employment in the retail trade sector increased by 78 jobs, from 29,218 in 2011 to 29,296 in 2012 (0.27%). Wages increased \$676, to \$27,196 (2.5%) The City of Colorado Springs benefits from strong and growing taxable retail sales since more than 50% of the city's budget come from these collections. City sales and use tax collections increased a healthy 5.6%, or \$6.9 million, from \$121.8 million in 2011, to \$128.7 million in 2012. Sales and use tax collections are expected to increase 7% in 2013 and another 5.5% in 2014.

A number of factors will affect retail sales in 2014. The region's dependency on the military will affect retail sales. Sequestration is expected to reduce employment and incomes in the area, which will hinder retail growth in 2014. On the other hand, the rebuilding and restocking of homes in Mountain Shadows will continue into 2014. This economic activity will be boosted by rebuilding and restocking efforts in the Black Forest burn

area. These rebuilding activities will help offset any reductions in federal spending in the region.

After declining for three consecutive years, wholesale sales increased for the first time since 2008. Wholesale sales in El Paso County increased 10.7% in 2012, to \$3.94 billion from \$3.56 billion in 2011. Wholesale trade employment in El Paso County increased modestly, from 4,700 in 2011 to 4,746 in 2012. Wage growth for employees in Wholesale Trade increased an average of \$1,768, to \$58,968 from \$57,200 in 2011.

### Where Is the Southern Colorado Economy Heading?

—As of August 2013, prospects for the economy are significantly better than they were the previous year. While the federal budget deficit continues to hover near \$1 trillion, it has stabilized. The Congressional Budget Office estimated that federal tax revenue rose 6% in 2012 and is expected to increase 11% in 2013. This reflects both an increase in tax rates on high income individuals and existing tax rates applied to higher income levels for individuals and corporations.

The local economy and the effects of sequestration are a concern. The Department of Defense is looking at annual budget cuts of approximately \$50 to \$60 billion a year from its planned funding through 2021. It is reasonable to assume the local military installations will see a reduction in their expenditure allocations. In addition to reduced military expenditures, the Budget Control Act calls for a matching reductions in “soft” expenditures by the federal government, ranging from student loans and small business loans to disaster relief.

The downside of a healthier economy is that interest rates will rise—a reflection of a healthy economy. Improved economic conditions in the local economy can be seen in most measures of economic activity. Retail sales are expected to grow as much as 7%. Residential building permits are anticipated to increase approximately 10% in 2014, to about 3,300 units. Job growth is estimated to be about 2% (5,000 jobs). Personal income should rise 4.5%. Commercial construction is expected to increase 20% in 2014. The only direct restraint to stronger growth in the local economy appears to be relatively slow growth in higher-wage jobs. An indirect constraint on growth is low passenger activity at the Colorado Springs Municipal Airport.

Considering all things, including sequestration, a rebounding global economy, and stronger growth in El Paso County, the forum expects the gross metropolitan product to grow 2.2% in 2013 and 2.8% in 2014. ❖



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