FORTY-FIFTH ANNUAL

COLORADO

BUSINESS ECONOMIC OUTLOOK

2010

BBVA Compass

University of Colorado at Boulder
Colorado
LEEDS School of Business
BUSINESS RESEARCH DIVISION

FORTY-FIFTH ANNUAL

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Sponsored by the University of Colorado at Boulder, Leeds School of Business, and BBVA Compass

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BUSINESS RESEARCH DIVISION

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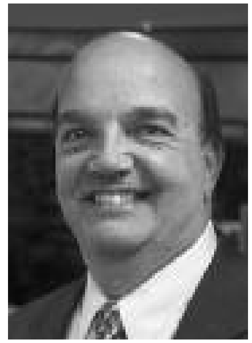


The Business Research Division (BRD) in the Leeds School of Business is proud to present our 45th annual Colorado Business Economic Outlook. The 2010 Colorado forecast is a product of partnerships that rely on research conducted by our students, staff, and members of the public and private sector.

This forecast analyzes changes that have taken place in all sectors of the economy during the past year, and looks at the events and activities that will shape the changes in our population, employment, and overall economy for the coming year. The information in the book is initially presented at the Forty-fifth Annual Outlook Forum in Denver, followed by as many as 50 forecast speeches that are held throughout the state during the year, ranging from presentations to industry organizations to the Kansas City Federal Reserve Board.

Methodology

We are fortunate to have more than 90 individuals from the business, education, and government communities who serve on 13 sector estimating groups. These groups meet at a formal kickoff meeting in September, where members discuss trends and issues that might affect economic growth during the upcoming year. During the second half of September and the month of October, the committees convene to apply this information to their industry-specific issues. From this series of meetings the sector write-ups and forecasts are prepared and submitted to the BRD in early 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 may 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 newsletter, the *Colorado Business Review*.

The Colorado Business Economic Outlook is unique in that it provides forecasts for each of the state's NAICS sectors. Additionally, the forecast is developed from a combination of detailed statistical analysis, extensive survey research, and expert opinion, providing insight that is particularly relevant to the short-term forecasting process.

Related Economic Research

The BRD's mission is to conduct quality, relevant, meaningful, and socially responsible business and economic research within the local, state, and regional economies for the purpose of expanding the knowledge base of the 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. Recent projects include the *Incentive Success! Plan*, the *Economic and Fiscal Impact of the Proposed Job Creation Program on the State of Colorado*, *Estimating the Value of Colorado Services Exports*, *A Summary of Film Incentives on the Colorado Economy and on Public Revenues*, the *Survey of Visitors to the Colorado Welcome Centers*, and the *Colorado Workforce Data Mining Project.*

The BRD compiles the Leeds Business Confidence Index (LBCI), a forward-looking index that gauges business leaders' opinions about national and state economic trends and how their industry will perform in the coming quarter. Panelists are invited to complete a brief online survey about next-quarter expectations about sales and profits, hiring, and capital expenditures. The survey results are then compiled into the LBCI. Additional information about participating on the panel and quarterly updates are available throughout the year at http://leeds.colorado.edu/lbci.

In addition, the BRD publishes the *Colorado Business Review* (*CBR*) and conducts contract research projects, including economic impact and marketing studies, and customer perception surveys. The *CBR* highlights research conducted by BRD staff, Leeds School faculty, and key business leaders. The *CBR* and project summaries can be found on the BRD website http://leeds.colorado.edu/brd/.

Project highlights are also discussed on the BRD's blog, Research and the Real World. Join the discussion at http://www.cuboulderblogs.com/brd/#. We welcome your comments.

Acknowledgments

We are humbled and thankful to have so many 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.

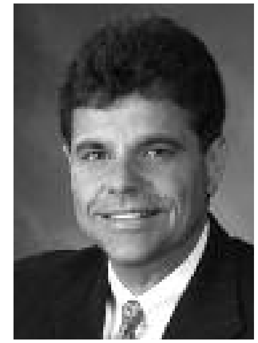
Finally, I would like to acknowledge the support of our primary sponsor, BBVA Compass, particularly Reneé Meaux. In addition, many Leeds School of Business and CU-Boulder personnel worked hard at preparing, presenting, and promoting this project. My sincerest thanks go to Gary Horvath, Managing Director; Brian Lewandowski, Research Analyst; Cindy DiPersio, Project Coordinator; Bonnie Beverly, Administrative Assistant; Lynn Reed, Graphic Designer; Kim Warner, Project Manager; and Noah Hahn, Cassidy Kinnaird, Sean Planchard, and Matt Wolfe, Student Research Assistants, for their help in assembling and presenting the 2010 Business Economic Outlook Forum.

The assistance provided by Sarah Behunek, Director of Alumni Relations/Communications in the Leeds School; Dean Pajevic, Assistant Director of Communications; Sarah Martens, Alumni Relations Coordinator; and Greg Swenson and Dirk Martin, both with the Office of News Services, is also greatly appreciated.

Colorado Economic Forecast for 2010

The sections that follow provide a summary of 2009, a forecast for 2010, and industry-specific data analysis and insight into the key factors influencing each of the sectors. We trust this information will prove useful in your business and policy decision-making process.

Richard L. Wobbekind, PhD
Associate Dean for MBA and Executive Programs
Executive Director, Business Research Division
Leeds School of Business
http://leeds.colorado.edu/brd



BBVA Compass is pleased to once again sponsor the Business Economic Outlook Forum. Through the ongoing efforts of the Leeds School of Business and the many committee members who share their industry experience, the outlook forum has been an invaluable information source for 45 years.

Our partnership with the University of Colorado at Boulder's Leeds School of Business dates back to 2002 and has allowed us to collaborate with the Business Research Division on a variety of initiatives aimed at helping local businesses monitor and respond to changing economic trends.

As part of BBVA Compass' commitment to economic research and to education, we are proud to include articles from the Business Research Division in our quarterly economic outlook publication, the *US Regional Watch.* In addition, we hosted the webcast of our third quarter results from the Leeds School of Business and had the opportunity to meet with students to discuss the national and global economy.

Thank you for your involvement in this program, and your support of the Leeds School of Business.

Rafael Bustillo
Denver President
BBVA Compass

Colorado Then and Now

In 1970, the population of the United States totaled 205 million, and approximately 2.2 million people resided in Colorado. Richard Nixon was president, and the country was introduced to lava lamps, smiley-face stickers, hot pants, pet rocks, and streakers. The Dow Jones peaked at 842, and the Denver Broncos finished last in AFC West in their first season in the NFL. Since then, the U.S. population has grown to more than 300 million, and Colorado's population is over 5 million. The Dow surged past 14,000 and dropped back below 8,000 in a matter of months. The United States has experienced periods of relative peace, along with wars in Asia, the Cold War, and now the war on terror. The state has endured floods and droughts, economic booms and busts, as well as ups and downs by its major sports teams.

The adjacent bar chart is a timeline of Colorado's annual employment changes by decade, beginning with the 1970s. Each bar represents the total number of net jobs added in Colorado in that decade, and within each bar is a sample of social, economic, educational, and political events that occurred during that time frame. These landmarks form the foundation of events that continue to influence our economy.

As can be seen by the height of the bars, the Colorado economy has experienced ups and downs over the past 40 years. During the 70s, the seeds were planted that eventually led to growth of the advanced technology industries and clusters in the 1990s. About one-quarter of the net jobs added were in the goods-producing sectors. Almost 500,000 net jobs were added during the 1970s.

Solid Expansion 1970–1979

497,000 JOBS ADDED

Colorado

1972–Coloradans reject hosting the 1976 Winter Olympics

1973–Eisenhower Tunnel opens

1974–Busing begins in Denver in an attempt to desegregate schools

1976–Flash flood in Big Thompson Canyon

1977–Colorado ski areas begin to install snowmaking equipment

1977–NREL starts operations in Golden

1978–USOC Headquarters moves to Colorado Springs

1978–End of three-year drought

National

1971–NASDAQ opens

1972–Dow-Jones passes 1,000

1973–OPEC oil embargo

1974–President Richard Nixon resigns

1976–American celebrates its bicentennial

1978–Airline degregulation

Boom and Bust 1980–1989

264,000 JOBS ADDED

Colorado

1983–Colorado Advanced Technology Institute created

Circa 1987–Peak of oil bust

Late 1980s–Savings & Loan crisis

National

1981–Birth of the IBM personal computer

1986–Congress passes a comprehensive tax reform law

1987–Black Friday stock market crash

Rapid Expansion 1990–1999

650,000 JOBS ADDED

Colorado

1990–Voters approve small-stakes gambling

1992–TABOR bill passes

1993–Colorado Rockies come to town; I-70 is completed through Glenwood Canyon

1994–RTD's light rail system begins

1995–Denver International Airport opens; CU officially presents a proposal to build a world-class academic health center

Circa 1998–Sun Microsystems and Level 3 Communications come to Broomfield; cluster trade associations are formed for photonics and the biosciences

1999–Pepsi Center officially opens; Black Canyon of the Gunnison is declared a national park

National

1990–Persian Gulf War begins

1993–NAFTA passed

1995-2000–Dot-com bubble

1998–Al Qaeda simultaneously bombs U.S. embassies in Tanzania and Kenya

1999–Unemployment at 4.2%, lowest level in 29 years

Heightened Volatility 2000–2009

117,900 JOBS ADDED

Colorado

2001–Economy begins to soften in March

2003–Second-consecutive year of negative job growth

2005–TABOR revenue limits temporarily suspended when Referendum C passed

2006–Employment reaches prerecession level

National

2001–World Trade Center attacked on 9/11

2003–Iraq war begins

2007–Subprime mortgage woes; Dow passes 14,000 for the first time

2008–Dow Jones drops below 6,550

2009–Unemployment rate surpassed 10.0%

The 80s were a much different story. The total number of jobs in the goods-producing sectors declined by about 20,000 jobs for the decade as a result of busts in the oil and gas and construction industries, volatility in the manufacturing sector, and the savings and loan crisis. Strong growth occurred in services sectors, trade, and government. Only 264,000 net jobs were added during the 80s, with more than 280,000 added in service-producing sectors.

The decade of the go-go 90s was a return to prosperity, with a gain of approximately 650,000 jobs. About 14% were added in the goods-producing sectors. Manufacturing expanded with the growth of the advanced technology cluster, and construction flourished in response to increased population. Roughly 1 million workers were added to census tallies during the decade.

The current decade shows the weakest job growth of the past four decades, with the addition of approximately 117,900 jobs. The employment downturn in 2003 marked the only time since 1939 (when records were first kept) that Colorado showed negative job growth in back-to-back years. It took almost five years, after reaching peak employment in 2001, for total state employment to reach prior levels. The goods-producing sectors declined during the decade by about 53,600 jobs, but 171,500 service-producing positions were added.

In addition to showing the patterns for jobs added in Colorado, this chart 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. ✜

U.S. Economic Outlook

Last year, as the Colorado Business Economic Outlook Committees and the Business Research Division (BRD) prepared the 2009 forecast, we recognized that the U.S. economy would be profoundly impacted by the slumping housing market, the collapse of the financial markets, overleveraged consumers, tight credit markets, volatile oil prices, and consumers' fear and confusion. We got that part right! What we did not fully anticipate at that time was the effect that the meltdown of the U.S. banking system and the ensuing liquidity crisis would have on the global economy.

It took years to create the national and global economic imbalances that destabilized the financial, housing, and credit markets. As 2009 passed, we have learned a hard lesson that these problems will not be eradicated quickly.

A year ago we reported that "optimistic economists believed that government stimuli and intervention would return the economy to positive real GDP growth in the last half of 2009." We also indicated that "those with a darker view of the situation believe negative growth will continue through the end of the year into 2010." Score one for the optimists! When the BRD research team met with the sector committees in September they were instructed to use real GDP growth of 1.8% for their 2010 projections. At the time of publication, we think that real GDP growth will be 2.2%, fully believing that a higher rate of growth is likely.

Total Output

The National Bureau of Economic Research (NBER) indicated that the U.S. officially entered the recession in December 2007. A strong second quarter offset negative growth in the other three quarters as 2008 real GDP growth ended the year at 0.4%.

After declines in the first two quarters of 2009, -6.4% and -0.7%, respectively, real GDP turned positive, 3.5%, in the third quarter. At the time of publication, the NBER has not announced the official end of the 2007 recession, although the market consensus is that it will likely be either the second or third quarter of 2009.

REAL GROSS DOMESTIC PRODUCT
2002–2010
(In Millions of Chained 2005 Dollars)

Economic Indicator	2002	2003	2004	2005	2006	2007	2008	2009[a]	2010[b]
Real GDP	$11,553.0	$11,840.7	$12,263.8	$12,638.4	$12,976.2	$13,254.1	$13,312.2	$12,989.0	$13,269.8
Percentage Change	*1.8%*	*2.5%*	*3.6%*	*3.1%*	*2.7%*	*2.1%*	*0.4%*	*-2.4%*	*2.2%*
Fixed Investment	$1,807.0	$1,871.6	$2,058.2	$2,172.2	$2,230.4	$2,146.2	$2,018.4	$1,649.3	$1,671.8
Percentage Change	*-1.4%*	*3.6%*	*10.0%*	*5.5%*	*2.7%*	*-3.8%*	*-5.1%*	*-18.3%*	*1.4%*
Personal Consumption	$8,021.9	$8,247.6	$8,532.7	$8,819.0	$9,073.5	$9,313.9	$9,290.9	$9,233.1	$9,314.2
Percentage Change	*2.7%*	*2.8%*	*3.5%*	*3.4%*	*2.9%*	*2.6%*	*-0.2%*	*-0.6%*	*0.9%*
Government Expenditures	$2,279.6	$2,330.5	$2,362.0	$2,369.9	$2,402.1	$2,443.1	$2,518.1	$2,569.8	$2,633.4
Percentage Change	*4.7%*	*2.2%*	*1.4%*	*0.3%*	*1.4%*	*1.7%*	*3.1%*	*2.1%*	*2.5%*
Net Exports	-$548.8	-$603.9	-$688.0	-$722.7	-$729.2	-$647.7	-$494.3	-$354.9	-$358.4

[a]Estimate.

[b]Forecast.

Source: Bureau of Economic Analysis, Economy.com, and Colorado Business Economic Outlook Committee.

First-half growth in 2010 will be in the range of 1.5%-2.0%, with continued improvement projected for the second half. Overall real GDP growth is expected to be 2.2% for the year.

GDP Components

The four major components of real GDP—consumer spending, gross private domestic investment, government expenditures, and net exports—are examined in the sections that follow. The discussion briefly highlights how each of these components will impact the performance of the GDP over the next year.

Consumer Spending

Consumer confidence, as measured by The Conference Board, peaked at 90.6 in December 2007 and plummeted to a record low 25.3 in February 2009. Since then, the monthly total has moved upward, vacillating between 40 and 55. Despite rising unemployment, which is a lagging indicator, frozen credit markets have begun to thaw, the equity markets have shown a +50% increase from their low point in March, foreclosures are still prevalent but improving in many areas, and consumers are reducing debt and increasing savings.

Only Texas and Washington, D.C. are projected to record positive job growth in 2010, which means that upward wage pressures will be limited to specialized areas. The unemployment rate will remain in double digits throughout much of the year. Consumption during 2009 has been driven by incentives and aggressive discounting. Auto sales will remain under 12 million units—well below the 16-17 million units that were sold annually between 2004 and 2007. The construction market is unlikely to rebound in 2010 as only 760,000 homes will be started, down from a high of 2.1 million in 2005. Losses in household wealth and a weak job market will prevent a strong rebound in retail sales. On a positive note, inflation will remain in check, at a rate below 2%. Overall personal consumption is expected to increase by 0.9%.

Gross Private Domestic Investment

Fixed investment includes investment in residential structures, as well as nonresidential structures, equipment, software, and changes in inventory. In 2009, about 78% of real investment was business-related. Nonresidential investment is expected to decline slightly in 2010, after a sharp drop of almost 18% in 2009. On the other hand, residential investment is projected to rise by about 8% in 2010.

Overall, fixed domestic investment will increase 1.4% in 2010.

Government Expenditures

About 60% of total government expenditures are at the state and local level, 27% are allocated to national defense, and 13% to nondefense programs. Government spending is expected to climb 2.5% in 2010 as continuing efforts are made to offset the impact of the recession. The federal budget deficit is projected to reach unprecedented levels, in excess of $1.2 trillion in 2009 and $1.4 trillion in 2010.

Net Exports

The trade imbalance, as measured by net exports, is projected to remain flat in 2010. Demand for both exports and imports is expected to increase, due to improved credit markets and investment spending, the relative strength of segments of the Asian market, and a weaker dollar. On a positive note, trade volumes are up across most categories. It will be important to monitor volumes of goods and services. The United States typically runs a trade deficit in goods and a trade surplus in services.

Factors that will impact the overall trade balance are auto imports and exports, oil prices, and specific balances with China and NAFTA partners.

Net exports are expected to decline, from -$355 billion in 2009 to -$358 billion the following year. ✥

Colorado Economic Outlook

This section provides a brief historical perspective of key Colorado economic indicators, synthesizing Colorado's output, income, population, employment growth, and inflation. Along with the data provided in the section about the U.S. economy, this information strengthens the foundation for the sector by sector employment forecast in the remainder of the book.

Colorado Ranking—Key Indicators

The decade beginning in 2000 started out strong, but rapidly deteriorated. A total of about 94,300 jobs were added in 2000 and 2001, and a net of 23,600 jobs were added in the next eight years. The performance of key indicators has been in line with the below-potential growth of the nation and Colorado as illustrated by the following rankings, based on 2008 data (the most current at the time of publication):

State Ranking	2000	2008
Real state GDP growth	1st-tie	14th
Percentage change in personal income	1st	22nd
Percentage change in per capita income	2nd	40th
Value of per capita income	7th	12th
Percentage change in employment	3rd	11th
Percentage change in population	4th	5th

Population

During the decade beginning in 2000, the state's population has added more than 867,000 people, reaching 5 million in 2009. In 2010, it is expected that the state will add 88,548 people, bringing the total to nearly 5.2 million. Colorado's population

COMPONENTS OF COLORADO RESIDENT POPULATION, 2001–2010 (In Thousands)

Year	Births (Resident)	Deaths (Resident)	Natural Increase	Net Migration	Population Change	Total[a] Population
2001	66.5	27.9	38.6	91.4	130.0	4,456.4
2002	67.8	28.8	38.9	34.6	73.5	4,529.9
2003	69.0	29.0	40.1	25.8	65.8	4,595.8
2004	68.5	29.0	39.4	28.2	67.6	4,663.4
2005	69.0	29.1	39.9	27.9	67.9	4,731.3
2006	69.5	29.3	40.2	55.3	95.6	4,826.8
2007	70.8	29.7	41.1	51.2	92.3	4,919.2
2008	70.8	31.1	39.6	52.6	92.2	5,011.4
2009[b]	71.5	30.0	41.5	30.3	71.8	5,083.2
2010[c]	73.0	30.1	42.9	45.6	88.5	5,171.8

[a]Due to rounding, the sum of the individual components may not equal the total.

[b]Estimated.

[c]Forecast.

Source: State Demography Office and Colorado Business Economic Outlook Committee.

STATE AND NATIONAL ECONOMIC COMPARISON, 2001–2008

	2001	2002	2003	2004	2005	2006	2007	2008
Colorado								
Real GDP ($ billions, chained 2000 dollars)	174.8	175.5	176.5	180.6	188.4	193.4	197.3	203.0
Total Personal Income ($ billions)	156.5	157.8	160.0	168.6	179.7	194.4	205.5	212.3
Per Capita Personal Income ($)	35,305	35,032	35,160	36,649	38,539	40,912	42,444	42,985
Employment (thousands)	2,226.9	2,184.2	2,152.8	2,179.6	2,226.0	2,279.1	2,331.3	2,350.5
Unemployment Rate (percent)	3.8	5.7	6.1	5.6	5.1	4.4	3.9	4.9
LBCI Expectations for State Economy (Q4)	N/A	N/A	61.2	65.7	50.9	50.1	47.2	48.3
United States								
Real GDP ($ billions, chained 2005 dollars)	11,347.2	11,553.0	11,840.7	12,263.8	12,638.4	12,976.2	13,254.1	13,312.2
Total Personal Income ($ billions)	8,883.3	9,060.1	9,378.1	9,937.2	10,485.9	11,268.1	11,894.1	12,238.8
Per Capita Personal Income ($)	31,137	31,453	32,257	33,875	35,421	37,709	39,419	40,189
Employment (thousands)	131,826	130,341	129,999	131,435	133,703	136,086	137,598	137,066
Unemployment Rate (percent)	4.7	5.8	6.0	5.5	5.1	4.6	4.6	5.8
LBCI Expectations for National Economy (Q4)	N/A	N/A	65.2	65.2	39.6	43.8	38.8	42.8

Note: Figures are not inflation-adjusted.

Sources: Bureau of Labor Statistics, Bureau of Economic Analysis, Colorado Business Economic Outlook Committee, and LBCI (http://leeds.colorado.edu/LBCI).

will increase at a 1.7% rate, compared to a growth rate of about 0.9% nationally.

Increases and decreases in the Colorado population are determined by changes in the natural rate and net migration. The natural increase is the difference between resident births and deaths. Over the past decade, the natural rate has been fairly constant, registering modest increases in most years. For the decade beginning in 2000, the state's population grew by about 396,000 people as a result of the natural rate of increase. In 2010, the increase will be roughly 42,900 people.

At the same time, population is increasing because of net migration, which is the difference between in-migration and out-migration over the period of a year. Net migration for the decade beginning in 2000 is about 471,000 people. The projected total increase for 2010 is approximately 45,600. Colorado continues to be a place where people want to live. Despite the state's recent economic woes, net migration remains positive, unlike the downturn during the 1980s when there was negative out-migration for five consecutive years.

Inflation

The Denver-Boulder-Greeley CPI is the measure of inflation that is most commonly used for the state of Colorado. Since 2002, the Denver-Boulder-Greeley CPI has typically been at or below the U.S. CPI. Despite the potential for higher than usual inflation at some point in the future, inflation will remain low for 2010 as a function of slow appreciation in housing prices and an overall weak economy. The outlook for 2010 is for U.S. inflation to increase at a rate of 1.7%, with the rate for Colorado at 0.7%.

Leeds Business Confidence Index (LBCI)

Since 2003, the Business Research Division has produced a quarterly leading indicator that measures the expectations of Colorado business leaders. Looking back at the results for 2009, the forward-looking Leeds Business Confidence Index (LBCI) pointed to Q3 2009 as the turning point in the Colorado economy. It also indicated that the economy improved in 2009, but was not in expansionary mode. While optimism increased for sales, profits, and outlook for the economy, business leaders expressed concern about expansion in the form of capital expenditures and hiring. As can be seen in the subsequent sector write-ups, these concerns were shared by most committee members.

The LBCI has accurately tracked changes in economic performance relating to major events, such as the start of the Iraq War, the effects of Hurricane Katrina, and the events leading up to the current recession. 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 obtain survey results go to http://leeds.colorado.edu/lbci. ✜

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

Year	U.S. CPI	U.S. CPI Rate	Denver-Boulder-Greeley CPI	Denver-Boulder-Greeley CPI Rate[a]
2001	177.1	2.8%	181.3	4.7%
2002	179.9	1.6	184.8	1.9
2003	184.0	2.3	186.8	1.1
2004	188.9	2.7	187.0	0.1
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[b]	214.4	-0.4	209.1	-0.4
2010[c]	218.1	1.7	210.5	0.7

[a] A 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).

[b] Estimated.

[c] Forecast.

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

Colorado Labor Force and Employment

This marks the 45th sector by sector forecast and discussion of state employment presented by the Business Research Division (BRD). While an analysis of performance based on sales or output would be informative, this forecast is based on employment. Jobs drive the economy! This section lays the foundation for each of the NAICS supersectors by providing an overview of labor force and of 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 defines 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 5.1% to 3.9%. With continued population growth and the drop in wage and salary employment, Colorado's unemployment began to rise in 2008, with a sharp gain from 4.9% to 7.3% in 2009 and an increase of almost a full point in 2010, to 8.1%. Unemployment will likely continue to climb after total employment turns positive because job growth will not be sufficient to absorb those individuals returning to the workforce and new entrants. Despite the increase in employment, Colorado's unemployment rate will remain at least two points below the national level, which is projected to be in the 9.5%-10.5% range.

Beyond the numbers, the high unemployment level will have significant long-term unquantifiable social impacts.

Employment

From an employment perspective, the decade beginning in 2000 can best be described as the lost

COLORADO RESIDENT LABOR FORCE (Not Seasonally Adjusted), 2001–2010
(In Thousands)

Labor Force	2001	2002	2003	2004	2005	2006	2007	2008	2009[a]	2010[b]
Colorado Labor Force	2,395.3	2,442.7	2,492.3	2,535.4	2,580.8	2,642.7	2,686.4	2,730.4	2,698.6	2,766.9
Total Employment	2,303.5	2,304.1	2,339.5	2,393.0	2,448.2	2,527.0	2,582.5	2,596.3	2,502.0	2,542.8
Unemployed	91.8	138.6	152.8	142.5	132.6	115.8	103.9	134.1	196.6	224.1
Unemployment Rate	3.8%	5.7%	6.1%	5.6%	5.1%	4.4%	3.9%	4.9%	7.3%	8.1%

[a]Estimated.
[b]Forecast.
Note: There are slight differences between the LAUS data series and the CES employment data series used throughout the rest of this book.
Source: Colorado Department of Labor and Employment (LAUS data) and Colorado Business Economic Outlook Committee.

decade. During this period population increased by about 870,000, and 117,900 workers were added. New jobs totaled approximately 94,300 in 2000 and 2001, with a net gain of 23,600 positions for the subsequent eight years.

In 2010, the goods-producing sector will shed 13,300 workers. The largest losses will occur in Construction, a sector already decimated by unemployment as demand continues to decline. In addition, Manufacturing will show losses for the 10th-consecutive year, while the Natural Resources and Mining Supersector will post a slight decline.

On a positive note, the service-producing sectors will add a net of 10,100 jobs in 2010. Of these, the Educational and Health Supersector will gain about 6,600 workers, followed by Professional and Business Services with 6,500.

Nonfarm wage and salary employment for 2010 will decrease by 0.1%, reflecting a loss of 3,200 jobs. This represents only the eighth time since 1939 that Colorado has experienced negative employment growth. Unfortunately, three of those times occurred in during the decade that began in 2000.

Illustrating the shift from goods to services, in 1990, approximately 16.5% of all employees were in the goods-producing sectors (Natural Resources and Mining, Construction, and Manufacturing). By 2010, only 12.5% of Colorado workers will be employed in goods-producing industries. While benefits are associated with all types of jobs, concerns exist that Colorado is losing its competitive advantage in innovation and thought leadership. Goods-producing industries are often a critical result of innovation and typically have higher wages, a larger supply chain, and a greater multiplier effect than service industries. ✜

COLORADO NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT, 2001–2010
(In Thousands)

Sector	2001	2002	2003	2004	2005	2006	2007	2008	2009[a]	2010[b]
Natural Resources and Mining	12.9	12.9	13.2	14.4	17.2	21.1	25.2	28.4	25.6	25.1
Construction	167.7	160.4	149.9	151.3	160.0	167.8	167.8	161.8	137.0	128.0
Manufacturing	179.5	163.8	153.9	151.8	150.4	149.1	147.0	144.2	132.0	128.2
Trade, Transportation, and Utilities	423.0	412.1	404.5	406.6	413.0	419.3	429.2	429.3	413.2	415.9
Information	107.3	92.9	84.6	81.2	76.9	75.4	76.4	77.0	73.1	72.3
Financial Activities	148.3	149.5	154.1	154.6	158.5	160.4	159.5	155.6	146.5	143.6
Professional and Business Services	312.3	296.2	292.0	304.1	316.8	331.8	347.9	351.6	325.0	331.5
Educational and Health Services	200.8	208.5	213.0	218.5	224.6	231.2	240.4	250.6	256.9	263.5
Leisure and Hospitality	247.2	247.0	245.6	251.3	257.5	264.9	270.4	273.0	258.0	257.5
Other Services	83.8	85.6	85.9	87.4	88.5	90.8	92.9	94.9	93.5	94.1
Government	344.1	355.4	356.2	358.5	362.6	367.2	374.7	384.1	389.7	387.6
Total[c,d]	2,226.9	2,184.2	2,152.8	2,179.6	2,226.0	2,279.1	2,331.3	2,350.5	2,250.5	2,247.3

[a]Estimated.
[b]Forecast.
[c]Nonagricultural self-employed, unpaid family workers, and domestics are excluded from the total.
[d]Due to rounding, the sum of the individual sectors may not equal the total.
Source: Colorado Department of Labor and Employment (CES Data) and Colorado Business Economic Outlook Committee.

Agriculture Can't Hide from the Economic Recession

Agriculture, just like other sectors of the state's economy, felt the pain of the financial and economic blows dealt to the broader global and U.S. economies during 2009. Cash receipts for 2009 are expected to decrease to $6.8 billion as a result of generally lower livestock and grain prices. Even though total farm expenses are estimated to be lower in 2009, it won't be enough to offset declining revenues. Net farm income for 2009 will drop sharply, to $1 billion, a decrease of more than 28% from the 2008 record high of $1.4 billion.

Looking ahead to 2010, net farm income will continue to slide, dipping below the $1 billion level for the first time since 2006. Lower net farm income is anticipated primarily due to forecasted lower prices coupled with slightly higher expenses. For the most part, as goes the livestock industry, so goes Colorado's agriculture sector because the livestock complex traditionally accounts for as much as 60% of total "farm gate" cash receipts. Annual average prices for steers and heifers are expected to increase as much as $5 per hundredweight from the "bottoms" put in during 2009. Even so, because of the continuing shrinking herd size and fewer cattle being placed on feed, it is doubtful that cattle producers will experience much real growth until 2012. Crop prices are projected to be steady to down. Marginal increases in production costs may occur. Colorado's dairy herd will be further reduced in 2010, allowing for some rebound in milk prices, but only to prices that are at or near breakeven levels.

Going forward, "wild cards" that could affect agriculture include the price of oil and what happens to acres coming out of the Conservation Reserve Program (CRP). If oil prices continue to climb, ethanol prices are likely to be pulled upward. This would drive an increase in corn used for the production of ethanol, which will, in turn, will put upward pressure on corn prices. On the flip side, higher corn prices would adversely affect the bottom line of cattle feeding operations, and, in general, higher oil prices will result in higher fuel and fertilizer costs. Concerning CRP, increased wheat production and subsequently lower prices is a probable outcome if acres coming out of the program go back into wheat production as CRP contracts expire.

Record net farm incomes in 2007 and 2008 helped farmers and ranchers strengthen balance sheets, and, as a result, producers are in a stronger financial position to weather this economic storm. Colorado's agriculture sector is among the most diverse in the nation, and Colorado farmers and ranchers have proven to be quite resilient. Many farmers and ranchers are diversifying operations and seeking additional sources of revenue to sustain their businesses. Agritourism continues to expand in the state, with producers inviting the public onto their lands to experience pumpkin patches, corn mazes, bird watching, hunting, fishing, and other agriculture-related activities. Government payments for commodity programs, conservation, and disaster assistance also bolster farm income and are likely to total from $250 million to $275 million for both 2009 and 2010. Landowners are also capturing increased lease payments associated with the development of wind farms, predominantly on Colorado's Eastern Plains.

Colorado's agriculture sector is among the most diverse in the nation, and Colorado farmers and ranchers have proven to be quite resilient.

Land values dropped slightly in 2009 after being bid up significantly in recent years due to higher crop and livestock prices. The average value of all cropland fell by less than 1% in 2009, to $1,300 per acre. Pastureland and nonirrigated land were hit the hardest, each declining 5.6%, to $670 and $840 per acre, respectively. The value of irrigated cropland increased about 1.5%, to $3,150 per acre. Overall, farm real estate in Colorado, including all land and buildings, decreased by about 4%, to an average of $1,100 per acre. Land values will continue to face downward pressure in 2010.

Cattle and calves, the heavyweight of Colorado's agriculture industry, continue to slump with cash receipts projected to fall to $2.8 billion, marking four consecutive years of declining cash receipts. With fewer cattle being fed, over capacity of feed lots will be an issue and will likely result in the loss of feed lots across Colorado. Prices for steers and heifers should rebound to the $96-$98 per hundredweight range for calendar year 2010, an increase of about 5% from 2009. With world economies projected to show greater strength in

2010, demand in both the United States and around the world should increase. Nonetheless, herd size in the nation will continue to shrink.

Colorado's **dairy** industry expanded rapidly in 2007 and 2008, but imbalances in supply and demand were accentuated in 2009, with cash receipts tumbling by more than one-third, to $345 million. Oversupply of milk, sharp reductions in international trade of milk products, falling prices, tight credit markets, and the collapse of a bank forced several Colorado dairies to file bankruptcy or close completely. Milk prices will rebound somewhat in 2010, to the $13-$14 per hundredweight range, but that is still well off the roughly $17-$18 per hundredweight experienced in 2008 and will only put producers at or near breakeven levels. Although herd size will be down as much as 10%, to 117,000 head, milk production will not decrease proportionally as producers are likely to hold back the highest yielding cows.

The dark cloud hanging over **hog** production seems to be lifting. Since the onset of the H1N1 flu pandemic, which was commonly referred to as "swine flu" in the media, irrational behavior on the part of consumers and governments around the world led to a decline in pork consumption. However, consumer fears are subsiding as they come to understand that H1N1 flu cannot be contracted by consuming pork and pork products. Hog prices are set to rebound by as much as 10% in 2010, bringing cash receipts to a projected $170 million. Prices will remain well below 2008 levels, with any run-up in corn and/or soybean prices limiting upside profit potential. Additionally, well-funded efforts to bring about changes in production practices continue to pose a threat to hog producers.

Sheep and lamb prices could increase marginally in 2010, with cash receipts rising to $113 million. Chefs have recently shown greater interest in lamb; however, it will still suffer from low consumer demand. Producers will continue to experience losses from animal predators.

Wheat is following a historical trend, with acreage expected to be down in 2010 due to normal crop rotation. Regardless, the 2010 crop is off to a good start and more than two million acres are expected to be harvested, with yields estimated at 35-36 bushels per acre. Even with yields slightly lower than the 40 bushels per acre average of 2009, 70-75 million bushels will be harvested in 2010. Prices are also expected to be off the previous year's levels, down to $4.20 per bushel, and nearly 50% off the record highs of 2008. Still, cash receipts for wheat for 2010 are projected at more than $350 million.

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VALUE ADDED BY AGRICULTURAL SECTOR, COLORADO
2001–2010
(In Millions of Dollars)

Year	Livestock	Crops	Total Value of Production	Value of Services and Forestry[a]	Government Payments[b]	Gross Value of Farm Revenue
2001	$3,303.5	$1,446.6	$4,750.1	$584.3	$320.1	$5,654.5
2002	3,208.1	1,280.9	4,489.0	679.5	211.0	5,379.5
2003	3,465.7	1,295.9	4,761.6	572.7	319.9	5,654.2
2004	4,128.8	1,399.5	5,528.3	643.4	221.2	6,392.9
2005	4,088.1	1,515.2	5,603.3	732.7	382.0	6,718.0
2006	4,169.3	1,578.2	5,747.5	796.8	244.7	6,789.0
2007	4,323.1	2,128.6	6,451.7	823.2	197.4	7,472.3
2008	3,980.8	2,309.9	6,290.7	872.9	261.1	7,424.7
2009[c]	3,609.0	2,148.0	5,757.0	800.0	261.3	6,818.3
2010[d]	3,661.0	2,047.0	5,708.0	825.0	274.3	6,807.3

[a]Includes sales of forest products, custom feeding fees, custom harvest fees, and other farm income.

[b]Includes farm program payments directly to producers.

[c]Estimated.

[d]Forecast.

Source: Colorado Business Economic Outlook Agricultural Committee.

Agriculture

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With near record-high yields and one of the top three years for cash receipts, 2009 is projected to be a banner year for **corn**. Prices have proven to be among the most volatile of any crop in recent years; however, they should hold steady at around $4 per bushel into 2010, putting cash receipts at $485 million. Rising oil prices could potentially pull up ethanol prices and drive greater corn utilization. Colorado's five ethanol plants have capacity to utilize 55-60 million bushels of corn annually, and produce 140 million gallons of ethanol every year. At maximum capacity, these plants could easily use up nearly half of all corn produced in the state. Even though corn receipts are expected to be down in 2010, they will still be well above the levels posted from 1992-2007.

The downturn in the dairy industry is pulling down **hay** prices, especially for higher quality alfalfa hay. Decreased cattle numbers are also negatively affecting the hay market; however, the 2009 crop had good yields, and prices are expected to be on the upper end of the historical range. Acreage will remain stable in 2010, at 1.6 million acres, with slightly lower production and prices forecast, in the $125-$135 per ton range. Total cash receipts will decline from about $390 million in 2009 to $365 million in 2010.

Acreage of **sugar beets** has declined in recent years; however, strong world prices for sugar are expected to positively influence the industry in Colorado. Depending on the price of competing crops, sugar beet acreage could increase by up to 10% in 2010, with prices at a near record high of $44 per ton.

Potato growers generally experienced profitable prices throughout 2009, though lower than those received in 2008. Further declines in 2010 prices are expected as sufficiently large 2009 production levels in Colorado and other major potato producing regions will pressure prices downward. Concerns about decreasing aquifer levels in the San Luis Valley seem to have abated somewhat. The industry is also increasing acreage of newer varieties less susceptible to disease and boosting production of specialty potatoes. Even though trade of fresh potatoes to Mexico is limited to the 26 kilometers inside its border, the country continues to be a significant market for Colorado potatoes, with more than 1,000 loads exported annually.

Weather was certainly an issue for **onion** producers in 2009, especially along the Front Range. Onions were significantly affected by hail in the summer, resulting in lower production. Although acres and price are expected to remain steady in 2010, labor and disease issues will have some effect. Because of the weaker job market in 2009, growers were able to source more labor locally and lessen their dependence on securing laborers through the Federal H2A program.

COLORADO FARM INCOME AND PRODUCTION EXPENSES 2001–2010 (In Millions of Dollars)

Year	Gross Value of Farm Revenue	Total Farm Production Expenses	Net Farm Income
2001	$5,654.5	$4,365.2	$1,289.3
2002	5,379.5	4,705.1	674.4
2003	5,654.2	4,831.8	822.4
2004	6,392.9	5,120.0	1,272.9
2005	6,718.0	5,385.9	1,332.1
2006	6,789.0	5,860.8	928.2
2007	7,472.3	6,110.2	1,362.1
2008	7,424.7	6,036.0	1,388.7
2009[a]	6,818.3	5,800.0	1,018.3
2010[b]	6,807.3	5,860.0	947.3

[a]Estimated.

[b]Forecast.

Source: Colorado Business Economic Outlook Agricultural Committee.

The economic recession has taken its toll on the housing market, and fewer housing starts has resulted in fewer new lawns and landscaping. The **floriculture** and **greenhouse** industry, including **sod** production, will depend largely on the recovery of new home construction as the economy stabilizes.

After several years of decreasing **apple** production, the trend has leveled off, although acreage remains low. As orchards are being replaced with new trees, they are planted at a higher density and typically have higher yields. New popular varieties such as Honeycrisp may also help Colorado's struggling apple industry. **Peach** production will remain steady or increase slightly as some apple orchards are being replaced with peaches.

Barley production is expected to remain relatively steady in 2010 as brewers continue to contract for production to meet brewing needs. There are likely to be fewer **sorghum** acres in 2010, but with average yields, crop revenues will return to more normal averages than seen in previous years. **Dry bean** acreage has been declining, but more acres were planted in 2009 than in 2008. If corn prices remain strong in 2010, acres planted in beans could drop as much as 10%, but prices will remain comparable to 2009, at $32.50 per hundredweight. Prices for food-grade **sunflower** oil continue to be strong, and the price for all sunflowers is estimated at $18 per hundredweight for 2010. Sunflower acreage is expected to be lower in 2010 compared to the previous year; however, yields are expected to be higher. Cash receipts from **poultry** and **eggs** will remain steady in 2009 and 2010, at about $180 million— a 10% decrease from 2008 levels largely due to requirements for increased cage sizes.

Despite the downturn appearing to have significantly affected the near-term profitability of Colorado's farmers and ranchers, they continue to be optimistic about the future and their ability to achieve increasing profitability in the long term. After all, everyone who eats is involved in agriculture, and all projections call for the need to produce more food to feed an ever-increasing world population. ✣

Natural Resources and Mining

Colorado is an energy- and mineral-rich state. The U.S. Energy Information Agency (EIA) annually publishes lists of the top 100 natural gas and oil fields in the country. Colorado is home to all, or part of, *eight* of the largest natural gas fields in the nation and *three* of the largest oil fields. Colorado is the *ninth*-largest coal producer in the nation. The Henderson Mine is North America's *largest* primary producer of molybdenum. In addition to traditional energy resource development, the state is also striving to become one of the nation's leading renewable energy states with goals to achieve 20% renewable energy by 2020. This goal will include a portfolio mix of wind, solar, geothermal, and hydroelectric energy resources.

Revenues generated by Natural Resources and Mining development activity make it an important contributor to Colorado GDP. Indications are that this sector will show significantly lower growth for 2009 and 2010 because of moderation in both prices and demand resulting from the global economic slowdown.

After losing 2,800 jobs in 2009, the sector will shed 500 positions in 2010.

Oil, Gas, and Carbon Dioxide

Overview

Colorado and the Rocky Mountain Region have been hard hit by the dramatic collapse in oil and gas prices, ending a decades-long boom in the oil and gas industry. The economic downturn and gas discoveries in other parts of the country adversely affected capital investment in Colorado's oil and gas industry in 2009. Petroleum markets experienced extraordinary volatility in commodity prices during 2008 and 2009—a trend that is expected to

VALUE OF COLORADO NATURAL RESOURCES AND MINING
2001–2010
(In Millions of Dollars)

	Oil and Gas Extraction					Mining					
Year	Crude Oil	Natural Gas	Carbon Dioxide	Subtotal	Percentage Change	Coal	Minerals	Subtotal	Percentage Change	Total	Percentage Change
2001	$474	$3,109	$97	$3,680	5.4%	$502	$540	$1,042	0.8%	$4,722	4.4%
2002	478	2,232	98	2,808	-23.7	616	629	1,245	19.5	4,053	-14.2
2003	605	4,562	104	5,271	87.7	703	702	1,405	12.9	6,676	64.7
2004	862	5,923	129	6,914	31.2	796	951	1,747	24.3	8,661	29.7
2005	1,232	8,155	201	9,588	38.7	813	1,789	2,602	48.9	12,190	40.7
2006	1,410	7,391	543	9,343	-2.6	974	1,762	2,736	5.1	12,079	-0.9
2007	1,500	5,859	765	8,124	-13.0	1,075	1,886	2,961	8.2	11,085	-8.2
2008	2,285	9,999	461	12,745	56.9	887	1,821	2,708	-8.5	15,453	39.4
2009[a]	1,306	4,474	469	6,249	-51.1	830	1,021	1,851	-31.6	8,100	-47.6
2010[b]	1,883	4,793	470	7,146	14.4	906	1,131	2,037	10.0	9,183	13.4

[a]Estimated.

[b]Forecast.

Source: 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.

continue, although tempered somewhat, for the next year or two.

The total value of oil, gas, and carbon dioxide production in 2008 was $12.7 billion, a 57% increase from the 2007 value of $8.1 billion. This growth in the realized value of production in Colorado resulted almost entirely from an unprecedented rise in both crude oil and natural gas prices through the summer of 2008. The value of oil, gas, and carbon dioxide production for 2009 is expected to be more than $6.2 billion, or 51% off the 2008 peak value due to a collapse in commodity prices late Q3 2008. As economic recovery was slow during 2009 and is expected to remain sluggish throughout most of 2010, the value of Colorado's production is anticipated to be approximately $7.1 billion or 14% higher compared to 2009. This modest growth assumes gas production will not increase over 2009 levels because of low rig count and underlying declines in existing field production.

Oil

Crude oil prices hit record highs in July 2008 as the U.S. petroleum benchmark known as West Texas Intermediate (WTI) exceeded $145 per barrel. Strong global demand and low surplus production capacity contributed to this extraordinary increase in price. Since this peak, both demand and price declined in response to the current economic slowdown. In fact, the WTI lost two-thirds of its peak value when it fell under $38 per barrel by year-end 2008. This was an unprecedented price drop and one that affected most business sectors. Price recovery during the first three quarters of 2009 was strong and sustained, with the WTI price in the $66-$68 per barrel range for August and September. EIA forecasts WTI to average $70 per barrel through the 2009 winter (October-March) and then gradually rise to about $75 per barrel by December 2010 as U.S. and world economic conditions improve. Sustained economic growth in China and signs of a turnaround in other Asian countries continue to fuel expectations of a global recovery in world oil consumption. However, this increase is not expected to have much effect on the WTI price because oil inventories remain high as the Organization of the Petroleum Exporting Countries (OPEC) continues to increase production.

Historically, Colorado crude oil varies several dollars per barrel less than the WTI price. Thus, when WTI peaked at $145+ per barrel, the Colorado price peaked at about $128 per barrel during the same 2008 summer period. The Colorado Oil and Gas Conservation Commission reports that oil prices in Colorado averaged $49.04 per barrel for the first three quarters of 2009. This represents a remarkable 46% decline compared to the average price of $90.03 per barrel reported for 2008. Volatility in the financial markets and uncertainty in the economy have, at least temporarily, reduced demand and price. However, if Colorado oil prices continue to hold in the $60 per barrel range through the remainder of 2009, the average price will be $50 per barrel for the year. The average oil price in Colorado is expected to be about $70 per barrel for 2010 in anticipation of continued economic recovery and a WTI of $75 per barrel.

The dramatic price correction in crude oil prices in 2008 resulted in a significant moderation in the Colorado average retail price of automotive gasoline and considerable relief to the transportation sector. Gasoline prices in Colorado were $2.03 in July 2009, more than $1.50 per gallon lower than their peak of $3.56 in July 2008. The average price of gasoline for the first seven months of 2009 was $1.64 per gallon, $1.34 per gallon lower than the average of $2.98 for the same period in 2008. Gasoline prices for the remainder of 2009 are expected to remain fairly stable as they track the crude oil prices. Colorado prices do not respond as quickly as the national price corrections, primarily because of a lack of local refining capacity. Local prices will continue to vary seasonally in response to mandated fuel requirements.

Ethanol

The use of oxygenated motor gasoline is required during the winter months in the Denver-Boulder and Fort Collins areas. Although the Denver metropolitan area was the first area in the country to require the use of motor gasoline blended with ethanol to reduce carbon monoxide emissions, Colorado is relatively new to large-scale ethanol production. Colorado produces ethanol mostly from corn at small facilities in the northeastern part of the state. Colorado's smallest ethanol production plant is located at the Coors brewery in Golden, where waste beer is used to produce ethanol for fuel consumption.

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Natural Resources and Mining

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Natural Gas

Nationwide, about 52% of all households depend on natural gas as their primary heating fuel; this number climbs to more than 70% for the Midwest. EIA predicts that the average household in the Midwest using natural gas for heating can expect to pay 15% less in the winter of 2009-2010 than the previous winter. This projected decrease in average household expenditure results from an 11% decrease in prices and a decline in consumption of 4% based on the National Oceanic and Atmospheric Administration's (NOAA) forecast of warmer weather than last winter in the Midwest. Alternatively, NOAA is projecting a 4% colder winter in the West, which is expected to reduce some of these savings in home heating.

Colorado Interstate Gas (CIG) is a major transporter of natural gas in the Rocky Mountain Region and is the primary pipeline system transporting natural gas in eastern Colorado. CIG gas prices averaged $6.88 per MMBtu for 2008 compared to $5.00 for 2007. Gas price peaked at $9.46 per MMBtu in June 2008 then lost half this value by December, for an average of $4.37 per MMBtu. Continuing the decline, prices dropped below $3 per MMBtu in early 2009 (where they have remained), averaging $2.77 per MMBtu for the first three quarters of 2009. It is expected that an average price of $3.00 per MMBtu will hold through 2010.

Colorado is a top natural gas-producing state. EIA estimates that conventional and unconventional output from several Colorado basins accounts for more than 5% of annual U.S. natural gas production, making it the sixth-largest producing state. The industrial and residential sectors are the leading natural gas-consuming sectors in Colorado. About 75% of Colorado households use natural gas as their primary energy source for home

COLORADO PHYSICAL OUTPUT OF FOSSIL FUELS
2001–2010
(Base Year: 2001=100)

Year	Coal Index	Coal Millions of Short Tons	Crude Oil Index	Crude Oil Millions of Barrels	Natural Gas Index	Natural Gas Billions of Cubic Feet	Carbon Dioxide Index	Carbon Dioxide Billions of Cubic Feet
2001	100.0	33.4	100.0	20.0	100.0	811	100.0	304
2002	105.4	35.2	102.0	20.4	113.1	918	97.1	295
2003	107.2	35.8	107.0	21.4	123.7	1,003	101.4	308
2004	119.2	39.8	111.5	22.3	131.2	1,065	112.4	342
2005	113.2	37.8	114.5	22.9	137.9	1,118	118.9	362
2006	106.0	35.4	117.5	23.5	148.6	1,205	122.6	373
2007	108.1	36.1	115.0	23.0	150.7	1,222	123.4	375
2008	96.7	32.3	127.0	25.4	169.0	1,371	109.7	334
2009[a]	90.4	30.2	130.5	26.1	197.0	1,598	110.1	335
2010[b]	98.8	33.0	134.5	26.9	197.0	1,598	110.4	336

[a]Estimated.

[b]Forecast.

Source: 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.

heating, one of the highest shares in the United States. Colorado is a net exporter of natural gas—about two-fifths of its natural gas production is consumed in-state and the remainder is transported to California and to Midwest markets. To facilitate the distribution of reliable, clean-burning domestic natural gas from Rocky Mountain supply basins to the Midwest and markets further east, a new pipeline system known as the Rockies Express (REX) has been constructed. REX is a 1,679-mile natural gas pipeline system from Rio Blanco County, Colorado, to Monroe County, Ohio, and represents one of the largest natural gas pipelines constructed in North America and one of the most significant investments in the U.S. energy infrastructure in the last 25 years. The portion of the REX system known as Rockies Express–West went into service May 2008. This 42-inch diameter pipeline traverses 713 miles from Weld County, Colorado, to Audrain County, Missouri, and has an operational capacity of 1.5 billion cubic feet per day (Bcfd). REX–West connects with the eastern portion of the Rockies Express system, known as REX–East, where an additional 638 miles of pipeline extends from Audrain County, Missouri, to Monroe County, Ohio. Service began June 29, 2009, on the portion of the REX-East pipeline from Audrain County, Missouri, to the Lebanon Hub in Warren County, Ohio, with capacity up to 1.6 Bcfd of natural gas. Full in-service on REX-East to Clarington, Ohio, is targeted for late November 2009.

Historically, natural gas prices in Colorado and other Rocky Mountain states vary a few dollars per MMBtu less than the Henry Hub benchmark price

COLORADO NATURAL RESOURCES AND MINING EMPLOYMENT 2001–2010 (In Thousands)

Year	Total Natural Resources and Mining Employment	Percentage Change
2001	12.9	5.7%
2002	12.9	0.0
2003	13.2	2.3
2004	14.4	9.1
2005	17.2	19.4
2006	21.1	22.7
2007	25.2	19.4
2008	28.4	12.7
2009[a]	25.6	-9.9
2010[b]	25.1	-2.0

[a]Estimated.

[b]Forecast.

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

in Louisiana. This differential is often attributed to continued limitations in export capacity from the Rocky Mountain area. Generally speaking, the price gap tends to widen when pipeline disruptions, such as REX maintenance, reduce take-away capacity and leave gas stranded in local markets. Alternatively, the price gap tends to narrow when the hurricane season interrupts production supplies in the Gulf of Mexico. The average Henry Hub price for 2007 was $6.83 per MMBtu or $1.86 per MMBtu more than Colorado's gas price of $4.97 per MMBtu. The average Henry Hub price for 2008 was about $8.40 per MMBtu or $1.11 per MMBtu more than Colorado's gas price of $7.29 per MMBtu. The differential averaged $1.33 per MMBtu higher for Henry Hub during the first half 2009. However, this differential disappeared during Q3 2009 and is expected to remain under $1 per MMBtu for the remainder of 2009 based on EIA's projected Henry Hub annual average spot price of $3.63 per MMBtu. Based on the possibility of excess capacity in pipelines from the Rocky Mountains, the differential may not reappear until pipeline capacity is once again reached. EIA expects natural gas inventories to set a new record high at the end of this year's injection season (October 31, 2009), reaching more than 3.8 trillion cubic feet (Tcf) for the nation. The build-up in shale gas production in the Gulf Coast region and its proximity to Henry Hub relative to Rockies gas, as well as growing liquid natural gas supplies, are expected to limit sustained price increases.

Drilling

The Colorado Oil and Gas Conservation Commission approved 8,027 drilling permits in 2008, a 26% increase over the previous record high of 6,368 permits approved in 2007. The commission approved 4,018 permits in the first three quarters of 2009 and expects to finish the year with approximately 5,000 total permits approved or nearly a 38% drop from 2008. This decline breaks a 15-year growth in drilling activity in Colorado and is a direct response to the price collapse in late 2008 and corresponding laying down of many rigs not only in Colorado but nationwide. The weekly drilling rig count in Colorado has been falling precipitously since the beginning of 2009, from

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87 in January to 44-45 since May. In contrast, the average rig count was 114 in 2008 and 107 in 2007—more than double the current count. High-paying jobs have been lost as a result of the decline in drilling, well operations, and associated infrastructure required to support those operations.

Coal

Overview

Coal mining has been a commercial industry in Colorado for more than 145 years. Since 1864, over 1.4 billion tons of coal have been mined from the state. Annual coal production peaked in 2004, at 39.8 million tons, but has contracted 19% since then. Production fell to 32.3 million tons in 2008, down 10.5% from 36.1 million tons the previous year. Coal production declines are attributed to technological constraints at some mines and a slower market for Colorado coal sales. The demand for low-sulfur, high-heat content Colorado coal is decreasing as more power plants in the Midwest, south-central, and southeast United States come into compliance with air pollution controls. Power companies nationally are fuel-switching from coal to natural gas to offset critical carbon dioxide emissions.

Mines

Eleven coal mines are operating on the Western Slope, producing bituminous and subbituminous coal for electricity generation at power plants, and to a lesser extent, cement and manufacturing operations. Coal is produced in eight western Colorado counties, contributing to the local economies near the towns of Oak Creek, Craig, Meeker, Rangely, Loma, Paonia, Nucla, and Hesperus. In 2008, Routt County was the leading coal-producing county in the state, with more than 8 million tons (one-fourth of the state's total production) from the Peabody Energy Foidel Creek Mine.

VALUE OF COLORADO NONFUEL MINERALS AND URANIUM PRODUCTION 2001–2010 (In Millions of Dollars)

Year	Nonfuel Minerals	Uranium	Total
2001	$540	$0.0	$540
2002	629	0.0	629
2003	702	0.4	702
2004	949	2.0	951
2005	1,782	7.3	1,789
2006	1,762	0.0	1,762
2007	1,886	<1.0	1,886
2008	1,805	16.0	1,821
2009[a]	1,015	5.7	1,021
2010[b]	1,121	10.0	1,131

[a]Estimated.
[b]Forecast.
Source: U.S. Geological Survey, Mineral Survey Reports.

Production

Colorado ranks as the ninth-most productive coal-mining state, just behind Illinois and Indiana and ahead of New Mexico and Utah. On the basis of monthly coal production data, the Colorado Geological Survey projects that the state's total coal production will be 30.2 million tons by year-end 2009.

Value

The value of Colorado's coal production in 2008 was $887 million. The remainder is sold on the spot market for short-term sales. In 2009, coal prices dropped considerably. After peaking at $75 per ton in October 2008, the spot price for Colorado coal dropped to $39 per ton by September 2009. The price of coal follows the recession as a lagging indicator of the overall economy. Long-term contracts dictate the price for most coal sold in Colorado, and this price as of October 2009 was less than $30 per ton. Consequently, the total value of coal produced in 2009 will be somewhat lower than the previous year.

New Plants

Xcel Energy's new Comanche 3 coal-fired power plant near Pueblo is 97% complete. The plant is designed with state-of-the-art air pollution control equipment. Xcel reports that "The plant is the cleanest-burning coal plant [it has] ever built, and the two existing units will also be retrofitted with the most modern scrubbing technology." The plant is scheduled for completion and commercial operation by December 2009.

Employment

One bright spot in the industry is employment. As of July 2009, a total of 2,229 coal miners were employed at the state's coal mines (the highest number since 1985), an increase of 83 miners, or

3.9%, over the July 2008 figure. This growth is the result of several of the mines constructing new coal washing and preparation plants, and surface facilities. Over the past 10 years, coal-mining employment has climbed more than 33%.

Export Coal

Colorado's active coal mines are all located on the Western Slope; however, the customer base is mainly along the Front Range urban corridor and in states east of Colorado. More than 70% of the coal produced in Colorado is shipped by rail or trucked to 28 other states, with destinations as far as Massachusetts and Florida. States that use the most Colorado coal are Tennessee, Alabama, Texas, Kentucky, and Wisconsin. In addition to power generation, over 2.6 million tons of coal is shipped annually to industrial plants in Texas, Wisconsin, and Iowa for cement manufacturing and other industrial uses. Arizona and Utah consume about 3 million tons of Colorado coal annually for electric utilities and industrial plants. Colorado is considered one of the premier environmental compliance coal suppliers for the country.

Consumption and Generation

About 29% of the coal produced in Colorado is consumed in-state. Front Range power and industrial plants consume coal from both Colorado and Wyoming, with the majority from Wyoming. Colorado consumers use more than 21 million tons of coal annually. According to the EIA, coal electric power generation in Colorado remained stable between 2000 and 2007, but the market share of coal production shifted to other sources. This shows that consumers are driving demand for more energy, and that the marginal increase is being filled by other electricity sources, primarily natural gas.

Global

Despite coal's reputation for carbon dioxide emissions from power plants, the EIA projected in 2009 that coal consumption on a global level will still increase by 49% between 2009 and 2030. Annually, coal accounts for 27% of world's energy consumption. Worldwide, electricity generation consumes 62% of the coal produced. In the United States, coal-fired power plants represent 49% of the total energy market, but are projected to decrease to 47% by 2030, assuming that the nation can attain successful carbon capture at coal-burning power plants.

Minerals and Uranium

Most of the mining sector remained depressed in 2009 as commodity prices were down in the early part of the year, but rebounded somewhat as the year progressed. The Colorado Geological Survey estimates a total value of nonfuel mineral production for Colorado in 2008 of $1.8 billion, a 4% decrease from the record 2007 performance. Nonfuel mineral production and employment should begin to pick up in 2010 as economies recover worldwide and commodity prices rebound.

Of greatest impact to the Colorado mineral sector is the molybdenum market. Molybdenum is used in the production of steel to improve properties, such as strength and corrosion resistance. After reaching a peak $33.50 per pound in 2007, the

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COLORADO ELECTRIC POWER INDUSTRY GENERATION BY PRIMARY ENERGY SOURCE 2000–2007 (In Millions of Megawatt Hours)

Year	Coal	Natural Gas	Other	Total	Coal Percentage	Natural Gas Percentage
2000	35.4	7.2	1.6	44.2	80.1%	16.2%
2001	36.0	9.4	1.5	46.9	76.7	20.0
2002	35.4	9.0	1.2	45.6	77.6	19.8
2003	36.1	9.2	1.3	46.6	77.5	19.8
2004	35.8	10.7	1.3	47.9	74.9	22.5
2005	35.6	11.9	2.1	49.6	71.7	24.0
2006	36.3	11.9	2.5	50.7	71.5	23.5
2007	35.9	15.0	3.0	53.9	66.7	27.9

Source: Energy Information Administration.

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price dropped precipitously, to as low as $8 per pound in 2008. The price settled at around $12 per pound in November 2009.

The economic slowdown in construction across the state impacted the industries that supply natural materials for construction, such as cement, aggregate, and gypsum. The total value of nonfuel mineral production is expected to recover slightly in 2010.

Freeport-McMoRan Copper and Gold, Inc. operates the Henderson Mine in Clear Creek County—North America's largest primary producer of molybdenum. The mine and ore processing mill employ approximately 550 people. In 2008, the mine produced 28 million pounds of molybdenum, with an average value of $12 per pound, for a total of $336 million. No official projections are available for 2010 as the production target depends on the price of the commodity; however, the same production at the current price of $15.00 per pound represents a production value of $420 million.

Gold prices fluctuated through 2009, but generally rose from $820 per ounce in January to $1,100 per ounce in November. Production at the Cresson Mine in Teller County, owned by the Cripple Creek and Victor Gold Mining Company, fell slightly in 2009. The mine, which employs 365 workers, produced an estimated 210,000 ounces of gold in 2009. The company projects a similar level of production in 2010. Several other smaller gold mines in the state are in the process of opening to take advantage of the favorable gold price.

A spike in the price of uranium in 2007 generated a flurry of activity in the uranium industry. The economic slowdown made financing difficult for the small companies that do most of the exploration work, and the price of uranium dropped back to $50 per pound (from a high of $135 per pound), resulting in cessation of much of the activity in Colorado. Denison Mines produced its first uranium and associated vanadium in Colorado in 2008, with a value of approximately $16 million each. With the drop in uranium prices, production was cut back significantly in 2009.

Construction aggregates, which include crushed stone, gravel, and sand, totaled 22 million tons, with a value of $381 million in 2008. This is lower than production in 2007, mainly because of the slump in construction. The continued slowdown is reflected in an additional 30% drop in 2009.

Other geologic materials used in construction have been mostly down in 2009. Production of cement, gypsum (used for wallboard), and clay (for bricks) has slowed, again reflecting the general state of the construction industry. Companies anticipate a stable year in 2010, with slow recovery resuming after that.

Renewables

After growing 30% annually, the renewable energy industry reached a plateau in 2009 when it was adversely affected by the economic downturn. The New Energy Economy initiative is still strong and potential renewable energy growth is important for Colorado. Electric utility companies are still working toward reaching their 20% renewable energy portfolios.

In 2008, the U.S. wind energy industry installed 8,358 megawatts (MW) of new generating capacity, a 50% increase of wind-power generating capacity. By 2009, new growth diminished and financing of new projects trickled off. However, VestasWind Systems A/S, the world's largest maker of wind turbines, is constructing four plants in Colorado. Its blade factory is in Windsor. Currently, it is constructing an assembly and blade factory in Brighton and a tower factory in Pueblo, both to be in operation by mid-2010. Vestas reported a drop in profits in 2009 compared to the previous year, but is still hoping that a new program of nationwide rebates and tax credits will revive the market. Colorado ranks sixth in wind-generation capacity.

Interest in wind farms in southeast Colorado is growing, but financial backing is difficult. Tri-State and Duke Energy are working together to purchase electricity from a new proposed 51-MW wind farm to be built in Kit Carson County. No new transmission lines are necessary as Tri-State has an existing line between Limon and Burlington.

The federal government is planning to set aside 21,000 acres of land in the San Luis Valley (mostly Conejos County) as a solar energy study area. The San Luis Valley has more days of sunshine than anywhere else in Colorado. An 8.2-MW photovoltaic (PV) solar plant near Mosca, operated by SunEdison LLC, is the fourth-largest solar plant in the nation. SunPower Corp. is building a 17-MW plant nearby. Ascent Solar, of Thornton, is constructing a manufacturing facility to produce thin-film PV products from copper-indium-gallium- (di)selenide (CIGS) compounds. In October 2009, Ascent achieved 14% CIGS cell efficiency, an important milestone in solar technology.

Solar technology is springing up all over the Front Range. One new development is the Solar Technology Acceleration Center in Aurora, which is building a 74-acre facility. Most recently, a German solar firm that makes solar inverters, SMA Solar Technology AG, committed to building a manufacturing plant in Denver. Solar inverters convert DC electricity from solar panels into AC that the electrical grid generates. The company plans to start production by mid-2010. The National Renewable Energy Laboratory (NREL) in Golden is currently working on thin film PV technology. First Solar, an Ohio-based company with a division in Greenwood Village, is working with thin film PV with potential applications for use in roofing materials.

Geothermal energy also has potential for development in Colorado. With 59 hot springs in the state, some have been developed for direct use for swimming pools, buildings, greenhouses, and aquaculture. Pagosa Springs has been using this technology for more than 30 years to heat public buildings. In 2009, Mt. Princeton Geothermal, LLC, a consortium of investors interested in electrical generation from deep geothermal resources, with the assistance of the Governor's Energy Office grant funding, drilled six geothermal gradient holes near Mt. Princeton Hot Springs, southwest of Buena Vista. Data collected from those holes will help determine the potential for a geothermal power plant in the Upper Arkansas Valley.

Pioneer Natural Resources is investigating the possibility of extracting heat from deep seated geologic formations near Trinidad, where the Colorado Geological Survey has mapped an area of high heat flow. A significant increase in geoexchange heat pump technology will also occur in 2010. The Denver Museum of Nature and Science received federal funding from the Department of Energy to install heat pumps in its heating and cooling system. A small but growing economic impact comes to the state from residential homeowners installing these viable systems.

Colorado's hydroelectric power has been stable for many years. In 2008, 2.9% of the state's total electrical output came from 48 hydroelectric generating stations. Aspen, Telluride, Durango, Ouray, Nederland, and other mountain towns and ski resorts supply much of their power needs from local hydroelectric stations. Small hydroelectric plants are being developed in several areas of the mountains, particularly around Carbondale. This renewable resource provides a constant but yearly variable source for electricity. The industry employs several hundred individuals for operations and maintenance. A significant amount of Boulder's electrical generation comes from hydroelectric.

Solar energy directly employs approximately 1,100 solar installers for residential construction.

Overall, the renewable industry in Colorado has an economic impact of several million dollars annually. The total number of people employed directly by these growth industries is still relatively small, in the range of 1,500. Many of those jobs are for research and manufacturing of new technologies that make this industry efficient and cost-effective. Government incentives and federal funding in stimulus packages may increase that number temporarily. NREL in Golden employs roughly 1,200 individuals, and stimulus funding and federal grants are helping that organization grow. Solar energy directly employs approximately 1,100 solar installers for residential construction. Wind, solar, and to a lesser extent biomass, add hundreds of jobs during construction phases but fewer people are needed for long-term maintenance.

On October 28, 2009, the Obama Administration announced that the federal government will invest $3.4 billion in stimulus funds to construct a "smart grid" system of electricity transmission lines. This is meant to improve the energy delivery system and enhance the use of renewable-energy sources. The effort is projected to create tens of thousands of new jobs nationally, while updating an antiquated system of power transmission lines. Boulder, Colorado is home of the first SmartGridCity in the nation for renewable energy transmission. The city received this award from Xcel Energy in 2008 for its implementation of electrical grids and connected hydroelectric generation stations. ✜

Construction

Observers and prognosticators in past recessions have often declared that the housing industry or commercial construction "will lead us out of this recession." Don't look for the Construction Sector to jump-start the state economy in 2009 or 2010. Residential building will bump along the bottom, nonresidential building is very slow and expected to decline further, and even infrastructure work will remain quiescent. As the recession started to bite deeply in 2008, large, multiyear projects already set in motion sustained activity in the industry well into 2009. The pullback is now under way. In Colorado, $2.8 billion in major projects will have wrapped up by the end of 2009, but something less than half that value will have broken ground to replace the prior pace of work.

Furthermore, the support for construction work does not come from fundamental consumer-driven needs. Of the new major projects, less than 5% of value is demanded by the private market, and nearly every major project is funded by either some level of government or by a nonprofit.

Residential

Single Family

As the national economic recession and the financial crisis deepened, total Colorado employment for September 2009 slid 4.7%, a loss of more than 110,000 jobs. It is believed that the shortfall may increase in upcoming labor revisions. With housing demand directly related to employment growth, the state's new housing industry has been decimated. Colorado will record only 7,000 single-family

VALUE OF CONSTRUCTION IN COLORADO BY TYPE
2001–2010
(In Millions of Dollars)

Year	Residential	Nonresidential	Total Building	Nonbuilding[a]	Total Construction
2001	$6,593.3	$3,500.0	$10,093.3	$1,686.6	$11,779.9
2002	6,357.3	2,787.4	9,144.7	2,161.5	11,306.2
2003	6,258.2	2,712.9	8,971.1	1,731.8	10,702.9
2004	8,050.3	3,291.4	11,341.7	1,753.8	13,095.5
2005	8,803.4	4,221.2	13,024.6	1,787.8	14,812.4
2006	7,770.0	4,310.2	12,080.2	2,967.1	15,047.3
2007	7,146.4	4,866.4	12,012.8	1,901.4	13,914.2
2008	4,277.5	4,134.2	8,411.7	2,371.0	10,782.7
2009[b]	2,077.0	3,200.0	5,277.0	1,700.0	6,977.0
2010[c]	2,472.8	2,500.0	4,972.8	1,550.0	6,522.8

[a]Data reflect permit for construction of Xcel power plant in Pueblo, a $1.3B project over four years.

[b]Estimated.

[c]Forecast.

Source: Department of Census; F.W. Dodge Company, Division of McGraw-Hill; the Colorado Contractors Association, and Colorado Business Economic Outlook Committee.

permits in 2009, which is a 37% decline from 2008 and an 83% drop from the peak year 2004. Demand for second homes in relatively small-volume resort area counties has also plummeted, so even they will experience sharp contractions in single-family permit activity.

To put this in context, in both 2004 and 2005, Colorado's annual new housing growth reached a 20-year high of more than 40,000 single-family permits. The new housing industry was devastated over the following three years as annual single-family permit totals plunged by nearly 10,000 each year. In 2008, only 11,147 permits were issued, a 73% decline from the peak year 2004.

A Congressional panel in October 2009 warned that a national overhang of potentially 12 million more foreclosures could mean a grim picture for years, influenced by weakness in the resale market. A private analysis noted that 7 million homes are set to liquidate, up from 1 million during the expansion year of 2005 (Amherst Securities Group, September 23, 2009).

The financial crisis and the multiyear decline in housing demand are also taking a toll on the supply capacity of the housing industry. Many large and small homebuilders in the state are now out of business. Some have simply failed due to lack of demand, while others were unable to finance new housing construction. Even regional and national homebuilders active in Colorado are in bankruptcy, have closed down operations in the state, or are operating in receivership. As a result, it will take years for the industry to rebuild the productive capacity necessary to meet the eventual return of housing demand.

RESIDENTIAL BUILDING PERMITS BY TYPE
2001–2010

Year	Single Family	Multifamily	Total Housing Units
2001	36,437	18,570	55,007
2002	34,993	12,878	47,871
2003	33,837	5,732	39,569
2004	40,753	5,746	46,499
2005	40,140	5,751	45,891
2006	33,000	7,978	40,978
2007	21,087	9,333	30,420
2008	11,147	7,851	18,998
2009[a]	7,000	2,000	9,000
2010[b]	8,000	2,800	10,800

[a]Estimated.
[b]Forecast.
Source: Department of Census and Colorado Business Economic Outlook Committee.

Most new home buyers must sell their existing home in order to move. As of mid-year 2009, there was a 5.7 month's supply of existing homes in the Denver area market, about double the level in a healthy, normal market. For homes over $1 million, supply levels were more than four years. Similar trends exist throughout the state. Until supply and demand for existing homes return to balanced levels, new housing activity will also remain depressed.

In 2010, weak demand will be further limited by continued chronic oversupply from a combination of distressed home sales by individuals who have suffered job losses or other economic setbacks, and by the need for lenders to move foreclosure properties. Although no significant improvement in demand conditions is anticipated for 2010, surviving homebuilders are beginning to make the painful choices necessary to supply more homes at lower price levels. As a result, a modest improvement of 8,000 single-family permits is forecast for 2010.

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Despite the devastating drop in demand, Colorado remains a desirable place to live, and the population of the state will continue to grow. Once employment growth recovers, new housing will again be required for an increasing population. When that happens, a dynamic housing industry will reemerge that will be leaner and better able to supply the demand for new and changing consumer housing preferences.

The housing downturn is now affecting upper price segments, as well as the lower end of the market. As a result, average new home permit values that were growing 6%-10% per year from 2002 to 2008 will slow to 2.5% for 2009, with an average value of $267,000. With low demand acting to limit material and labor cost increases, and with any improvement in demand likely to emerge first in lower price segments, only a modest 1.9% increase in permit value per unit, to $272,000, is forecast for 2010.

Multifamily

Multifamily permit activity plummeted in 2009 as condominium construction came to a virtual halt, and the expected resurgence in apartment construction failed to materialize. The total for the year is expected to be 2,000 units, the lowest level since the early 1990s. The sharp drop in 2009 followed three years of modest activity, with multifamily starts in the 8,000-9,000 range. Construction at these levels depended on a high proportion of condominiums among multifamily units and a modest

CONSTRUCTION EMPLOYMENT, COLORADO AND STATE TOTAL, 2001–2010
(In Thousands)
(Base Year: 2001=100)

	Construction			All Industries	
Year	Number	Index	Percentage Change	Index	Percentage Change
2001	167.7	100.0	2.5%	100.0	0.6%
2002	160.4	95.6	-4.4	98.1	-1.9
2003	149.9	89.4	-6.5	96.7	-1.4
2004	151.3	90.2	0.9	97.9	1.2
2005	160.0	95.4	5.8	100.0	2.1
2006	167.8	100.1	4.9	102.3	2.4
2007	167.8	100.1	0.0	104.7	2.3
2008	161.8	96.5	-3.6	105.6	0.8
2009[a]	137.0	81.7	-15.3	101.1	-4.3
2010[b]	128.0	76.3	-6.6	100.9	-0.1

[a]Estimated.
[b]Forecast.

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

rebound in rental apartment construction, neither of which was sustained in 2009.

The recent tightening of most rental markets in the state began to unravel in late 2008. By early 2009, the statewide vacancy rate was up to 8.5%, its highest level since Q3 2005. By mid-2009, most metro areas in the state posted vacancy rates hovering around 9%. With vacancies this high, developers and lenders have shelved or abandoned new projects. In addition, the weak economy has dampened household formation and increased the supply from the "shadow market" of single-family homes and condominiums for rent. This latter impact is likely to restrain apartment construction until the home sales market stabilizes and foreclosures return to prerecession levels.

The outlook for multifamily construction is not particularly encouraging. With the condominium sector unable to get off the mat in 2010 and with many apartment deals stalled, a major surge in multifamily production is unlikely. Development of large, conspicuous projects in downtown Denver, such as One Lincoln Park and The Spire, will not be repeated anytime soon. Even in areas of the state that seem overdue for apartment construction, production is hampered by a lack of financing and the difficulty of developing a feasible project. Multifamily activity in resort counties came to a standstill in 2009, and prospects for increased activity in most of these areas is slim, at least in the short run. On the other hand, the multifamily sector will get continued support from starts of Low Income Housing Tax Credit (LIHTC) projects, many of which were stalled but have recently been rescued with stimulus funds. Similarly, financing should come together on several apartment deals now in the pipeline. The net result should be a small increase, to 2,800 multifamily units, in 2010. With production at this meager level, vacancy rates should improve in the second half of 2010, setting the stage for a more sustained recovery in multifamily starts by 2011 or 2012.

The lack of multifamily construction in resort areas pulled the per unit value down to about $104,000 in 2009. Only a small increase in per unit value, to approximately $106,000, is expected in 2010 but the modest increase in activity should push the total value of multifamily construction up to just under $300 million.

Nonresidential Building Construction

The nonresidential sector weakened across the state throughout 2009, with construction value at approximately $3.2 billion, down about 23% from 2008. Further decline is anticipated in 2010, to $2.5 billion. To provide context, activity for the sector in 2007 was nearly $5 billion—roughly twice that anticipated for 2010.

This sector was particularly sensitive to the factors that led to the recession. An inability to obtain credit is often cited as a problem for businesses that want to purchase or build space, and commercial real estate lenders have been particularly impacted. Similar to the financial crisis that started with residential mortgage-backed securities, the market for commercial mortgage-backed securities has disappeared. That change will be long term and will alter commercial lending at a very fundamental level. Some of the largest commercial funding institutions are unable to repay debt and are facing bankruptcy, which opens the possibility of reorganization and further deterioration in the availability of new funds. An abnormally large number of commercial mortgages will reach their scheduled refinancing point within the next two years, resulting in owners seeking new loans. With property values down by 35%-50% from the peak (Moody's, First Credit Suisse), refinancing will become improbable for many owners without new infusions of equity. Owners of many large commercial properties, particularly in retail malls, will likely be unable to refinance debt in 2010, and foreclosures are expected to portend continuation of slow lending practices to the private development market.

High vacancy rates in office buildings are noted as a key concern, especially for landlords who are not offering concessions. The Q4 2009 Denver vacancy rate was expected to reach 18.9% and increase in 2010 to at least 21%. Comparatively, the maximum vacancy rate recorded in the 1980s was 27.4%, with an average of 14.9% for the period.

Vacancy rates should improve in the second half of 2010, setting the stage for a more sustained recovery in multifamily starts by 2011 or 2012.

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Every market within the state retrenched, including the resort areas, which had seen robust activity during most of the decade. All major projects that have not yet started for the Colorado resorts have been postponed or cancelled due to an inability to obtain financing. Large projects that were completed in 2009 were One Steamboat Place, Telluride's Capella, and Vail's Front Door. Several projects already under way will complete in Vail and Steamboat Springs in 2010, but no new significant projects started in 2009 nor are any forecast to begin in 2010.

Only a relatively few bright spots exist for private projects. ConocoPhillips has already recycled or repurposed 100 million pounds material from the demolition of the former Storage Technology site, and will proceed, albeit cautiously, with its $350 million Louisville Campus project in 2010 and 2011. IKEA announced that it will build a new $60 million retail store in southeast Denver, and The Children's Hospital announced plans to expand its facilities at Fitzsimons.

A good portion of activity in the sector during 2009 was from school construction, remodeling, and replacement funded by bonds in the prior general elections. Notable projects that wrapped up included high schools in Adams, Eagle, and Jefferson counties, and among the 2009 starts were large projects in Douglas County and Denver's Green Valley Ranch.

Nonresidential activity funded by federal stimulus projects or other federal sources appears to be a source of strength for 2010. The Veterans Administration is in the proposal stage of starting the new VA Hospital at Fitzsimons Medical Campus. The value of this project has been estimated at about $700 million, and a large portion of this is anticipated to be permitted in 2010. That project alone may account for more than 20% of sector activity. A renovation and addition to the VA Hospital in Grand Junction has been issued for proposal, and work should begin in 2010. Several General Services Administration projects that will total more than $500 million are in the planning or solicitation stages in the Denver area. Confidence in this level of activity is tempered by uncertainty because many of the projects have not been contracted or directed to proceed and therefore are subject to further budget negotiation and holdbacks. The State of Colorado expedited the award and the start of the Colorado Judicial Complex in Denver. Work on this $250 million project will continue through 2011.

Colorado Springs will see some continued construction at Fort Carson in spite of the cancellation of plans to redeploy the 4th Brigade to Colorado. Some new base housing has been funded, as well as new repair and maintenance buildings.

Companies that specialize in nonresidential construction report a limited pipeline for 2010. One commercial builder reported, "We probably held on to people longer than we should have."

Nonresidential activity funded by federal stimulus projects or other federal sources appears to be a source of strength for 2010.

Nonbuilding Construction

Transportation funding declined in 2009, and the 2010 outlook is equally pessimistic. Infrastructure budgets for Colorado governments, both state and local, are flat or declining. In addition, federal funds have been reduced, and state funds have dried up as a result of required expenditures in other areas of the state budget. The Colorado Department of Transportation (CDOT) budget dropped from $1.5 billion to approximately $1.0 billion in the state's fiscal year that straddles the calendar year outlook. This includes the $150 million from new taxes raised through the FASTER bill. A total of $100 million of unobligated stimulus (American Recovery and Reinvestment Act) projects will be constructed in 2010, including the $36 million I-25 Bridge at Alameda Avenue.

The anticipated result for 2010 is another reduction of at least 15% in the CDOT construction program for highways and bridges. Funding for the Pikes Peak Regional Transportation Authority in El Paso County is expected to drop approximately $10 million, or nearly 20%, due to a decline in sales tax collections.

Federal funding for surface transportation continues to be uncertain and potentially volatile. The six-year transportation legislation expired on September 30, 2009, and debate over reauthorization legislation is expected to extend well into next year. Over $8 billion of unobligated funds were rescinded by the federal government in October, including more than $100 million taken back from Colorado. Without a reauthorization in place at the end of 2009, budget maneuvers of extensions and continuing resolutions all but assure that federal funding levels for transportation in 2010 will remain flat or decline.

One major project with increased activity is the Regional Transportation District's FasTracks program. It will spend approximately $250 million on the West Corridor light rail line in 2010, up from about $100 million the previous year.

Anticipated spending on water projects is modest, but the Colorado Office of the State Engineer approved the Knoth and Broomfield reservoirs, totaling $80 million, in late 2009. Work can now begin on these projects. In addition, the Reuter-Hess Reservoir is currently under construction south of Denver in the Parker Water and Sanitation District, and is expected to be ready for water in 2012.

It is noted that statistics on construction activity often mask activity due to the timing of new permits, which are the figures that are tracked and reported, while work frequently extends beyond the year in which the permit was pulled. The massive new coal-fired plant in Pueblo saw activity over three years, and thus jobs and spending were spread out well beyond the year the building value was announced. The plant will come on line at the end of 2009, with construction activity wrapping up. Nothing significant is expected in 2010.

Employment

While construction activity and value were down substantially in 2008, many employers put off major workforce reductions. By 2009, resisting layoffs was no longer possible and deep cuts, which began in Q2, continued throughout the year. Average employment in construction for 2009 will be about 137,000 workers, down 15.3%, for a loss of 24,800 jobs from 2008. While the pace of layoffs will subside in 2010, additional workforce reductions, particularly in the first half of the year, are expected due to the limited increase in residential activity and the overall decline in new construction value. The average for 2010 is expected to fall to 128,000 workers, a much smaller loss than in 2009 but still representing another 6.6% decline (9,000 jobs). This will take the construction industry to its lowest job level of the new millennium, back to a level not seen since the late 1990s. ✜

Manufacturing

The global recession and the lack of credit drove Colorado manufacturing employment down by 8.5% in 2009, the steepest decline since the 8.7% drop reported in 2002. With the exception of a minor 0.8% increase in 2000, Colorado manufacturing employment has contracted every year this decade.

The quarterly Manufacturers Alliance/MAPI Survey on the Business Outlook for September 2009 declared that signs are finally emerging that point to brighter days ahead, although the recovery in manufacturing is likely to be marked with rough patches. The September 2009 composite index rose to 38 from a near-historic low of 24 reported in June. While many of the individual indexes remain at very low levels, the forward-looking indexes are at much higher levels, indicating that manufacturing activity is expected to increase in 2010. A supplemental component of the survey asked how senior financial executives view the strength of the recovery. While nearly 73% of the respondents said that business is improving, the employment situation may still prove problematic. According to the survey, 70% have no plans to increase their workforce, 18.3% expect further reductions, and only 8.3% anticipate hiring new employees.

Another widely cited index that attempts to forecast future manufacturing activity is the Purchasing Managers Index (PMI) compiled by the Institute for Supply Management. The PMI is a broad measure of expectations in business activity for the next 12 months among purchasing managers in the manufacturing sector. A reading over 50 predicts economic expansion. The PMI increased to 55.7 in October 2009, indicating the third straight month of growth and the highest reading since April 2006. Analysts say the increase was driven by gains in production and employment, with the production index increasing 7 points, to 63.3%, and the employment index growing nearly 7 points, to 53.1%. Indeed, October marked the first month of growth in manufacturing employment following 14 consecutive months of decline. In total, 11 manufacturing industries reported production growth during October, while only 2—nonmetallic mineral production and primary metals—indicated decreases.

The manufacturing survey by the Federal Reserve Bank of Kansas City, which includes Colorado and six Midwestern states, reveals that manufacturing activity moderated in October, but producers were more optimistic about future activity. Production increased at durable goods plants but fell for most nondurable goods producers, particularly food and chemicals. The majority of year-over-year factory indexes continued to rise in October, though from very negative levels. Most future factory activity indexes improved, with producers becoming increasingly optimistic.

These indexes point to potentially better conditions for Colorado's manufacturing sector. This is welcome news as manufacturing in Colorado is a $17.7 billion industry representing about 8.7% of the value of all goods and services produced in the state, based on real GDP. In 2008, Colorado was the home of more than 5,800 manufacturing companies employing about 144,200 workers. This workforce represents approximately 6.1% of the state's total employment base. Most of these manufacturing companies are small businesses. Nearly 80% of the manufacturing companies employ fewer than 20 workers, whereas only 32 companies have 500 employees or more. (These numbers take into account those manufacturing firms with employees; they do not include nonemployer businesses.)

October marked the first month of growth in manufacturing employment following 14 consecutive months of decline.

In addition, another 6,900 manufacturing businesses are classified as "nonemployer," which are generally self-employed individuals. These businesses provide an important entrepreneurial base for the manufacturing sector in Colorado. About one-quarter falls 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, printing and related support activities, apparel manufacturing, and wood product manufacturing round out the five largest nonemployer manufacturing industries.

Nondurable Goods

About one-third of manufacturing employment is in nondurable goods industries, which includes the production of goods that generally last for less than one year. Employment in this sector will fall 2.5%

in 2010, to about 43,300 people, after a steep 8.6% decline in 2009.

The largest nondurable goods industry is food manufacturing. Food exports grew 17.8%, to $968 million, in 2008, compared to $832 million in 2007. The gain occurred despite a global recession and a 9.9% increase in the trade-weighted value of the dollar from December 2007 to December 2008. Federal deficits are expected to drive the value of the dollar down in world markets in 2009 and 2010. In addition, exports should be helped by a recovering global economy that will advance other currencies vis-à-vis the dollar. Still, productivity gains and a weak domestic market are expected to offset some of the potential for increased employment that could be associated with expanding export activity. As a result, employment is expected to fall by 500 positions in 2009 and an additional 100 jobs in 2010, settling at 17,800.

Colorado's beverage industry produces soft drinks, ice, bottled water, beer, and wine. The industry is located principally on the Front Range, with three large breweries, one large soft drink manufacturer, and numerous microbreweries. Three Colorado craft breweries rank among the nation's 50 largest, according to the Brewers Association. New Belgium Brewery ranked 8th, Rock Bottom Brewery ranked 43rd, and Odell Brewing ranked 45th. Overall, Colorado is 5th in the nation for the number of breweries per capita. In addition, the Western Slope is home to small wineries, mostly in Mesa County. Efforts to control costs and increase productivity during the recession are expected to reduce employment by 500 in 2009. However, employment is expected to rebound slightly in 2010, expanding by 100 positions, to 5,300, as the economy returns to a growth position.

Biotechnology companies faced a challenging environment in 2009 due to reduced financing availability.

The printing and publishing industry continues to undergo revisions to its traditional business model. Three factors explain the industry's evolution. First, advances in the capabilities of software and laser printers have shifted traditional printing jobs to limited runs of customized materials. Second, increased competition among commercial printers for the reduced number of print jobs accelerated the need for technical innovation and increased efficiency. Third, the move away from print materials has decreased demand. These trends are expected to continue, and inefficient print shops will not be able to compete. As a result, current data indicate that the industry lost 41 firms in 2008. An extremely competitive environment and the need for new capital equipment investment will reduce the number of employees in the industry. The recession and slow recovery will aggravate the industry's business environment. The steepest job losses in nondurable goods will occur in the printing and publishing industry, with employment slashed by 1,200 jobs in 2009 and 400 jobs in 2010.

The other nondurable goods industries include textiles, apparel and leather goods; paper manufacturing; petroleum and coal products; chemicals; and plastics and rubber products. All of these other nondurable goods industries lost jobs in 2009. The chemical industry includes many biotechnology companies, which faced a challenging environment in 2009 due to reduced financing availability. Biotechnology companies, including Amgen, ARCA Biopharma Inc., OSI Pharmaceuticals Inc., Gilead Sciences, and Tapestry Pharmaceuticals, announced layoffs in 2009. Collectively, 2,000 nondurable goods jobs are expected to be lost in 2009, with 40% of these occurring in plastics and rubber products. An additional 700 job losses are anticipated in 2010.

Durable Goods

Opposite of nondurable goods, the Durable Goods Sector includes the production of goods that generally last longer than one year. About 87,600 people were employed in the durable goods industries in 2009, down 8.5% from 2008. Challenges continue for many of these industries, especially those that are tied to construction and computer manufacturing. On the plus side, companies producing components and final products for the energy industry are expected to grow with the emphasis on Colorado's new energy economy.

The nonmetallic minerals industry is comprised of diverse products, but outputs from the industry are closely tied to construction activity of all types—residential, commercial and industrial, and heavy

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COLORADO MANUFACTURING EMPLOYMENT BY INDUSTRY
2001–2010
(In Thousands)

Industry	2001	2002	2003	2004	2005	2006	2007	2008	2009[a]	2010[b]
Food	19.8	19.3	18.3	17.8	17.1	16.7	17.5	18.4	17.9	17.8
Beverage and Tobacco	6.0	5.9	5.8	5.9	5.7	5.7	5.7	5.7	5.2	5.3
Printing and Related	10.4	9.2	8.6	8.1	8.0	7.8	7.6	7.2	6.0	5.6
Other Nondurables	20.8	19.5	19.2	19.1	19.1	19.3	18.2	17.3	15.3	14.6
Subtotal, Nondurable Goods	57.0	53.9	51.9	50.8	49.9	49.5	49.0	48.6	44.4	43.3
Nonmetallic Minerals	10.4	9.8	9.1	9.1	9.5	9.8	9.8	9.2	7.2	6.9
Fabricated Metals	17.2	15.8	15.1	15.4	14.9	15.0	15.4	15.4	14.0	13.6
Computer and Electronics	45.2	38.1	33.6	31.6	30.1	28.3	26.3	25.5	24.0	23.0
Transportation Equipment	11.3	10.4	9.7	10.0	10.7	10.3	10.2	9.5	9.6	9.4
Other Durables	38.4	35.8	34.5	34.9	35.3	36.2	36.3	36.1	32.8	32.0
Subtotal, Durable Goods	122.5	109.9	102.0	101.0	100.5	99.6	98.0	95.7	87.6	84.9
Total, All Manufacturing	179.5	163.8	153.9	151.8	150.4	149.1	146.7	144.2	132.0	128.2

[a]Estimated.

[b]Forecast.

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

construction. This industry includes everything from pottery, plumbing fixtures, and glass products to brick and tile to concrete and stone products, as well as high-tech porcelain electrical products. Due to its strong ties to construction, the nonmetallic minerals industry lost about 2,000 jobs in 2009, even as the emergence of energy efficient building materials breathed new life into the industry. As the outlook for components of residential and commercial construction activity begins to improve and American Recovery and Reinvestment Act funds continue to flow into the state, the industry should contract by only an additional 300 jobs in 2010.

Output from the fabricated metals industry provides materials for many other industries, everything from steel beams for construction to component parts for a myriad of other products—virtually anything with metal content. Many of the firms in this category are small suppliers to producers of industrial machinery. Since employment in this sector fluctuates with demand from other industries, 2009 was a difficult year, and employment fell steeply as 1,400 positions were lost. Higher demand for fabricated metal products from industries such as energy and aerospace was not enough to stabilize the industry, and continued challenges in 2010 will lead to an additional loss of 400 jobs.

Colorado ranked third nationally in per capita high-tech employment for the third consecutive year, according to the annual *Cyberstates 2009* report by TechAmerica. This high concentration is critical because average wages for high-tech workers in Colorado are 97% higher than the overall private-sector average. Furthermore, Colorado had the nation's seventh-largest concentration of high-tech exports in 2008, according to the *Trade in the Cyberstates* report by TechAmerica. Although high-tech exports from Colorado declined 12% from 2007, they still totaled $2.9 billion in 2008 and accounted for 37.8% of the state's total export portfolio.

Despite these accolades, Colorado's largest durable goods industry, computer and electronic products, continues to shed jobs. After peaking at 46,000 employees in 2000, this sector will dwindle to an estimated 23,000 positions in 2010—a 50% decline in 10 years. Despite global projections calling for a growing presence of semiconductors and electronics in automobiles (e.g., digital entertainment, drive assist technologies, navigation, and telematics), employment in Colorado will continue to drop in 2009 and 2010 as electronic manufacturing services consolidate. Some recovery may begin in 2011, with supply chains shifting from lowest labor cost models to lowest total landed costs, which takes into account logistics, currency fluctuations, oil prices, and transportation. It is expected that more manufacturing plants in certain industries will be based in the regions where the products are sold. Overall, this sector is expected to contract by 1,500 jobs in 2009 and an additional 1,000 jobs in 2010.

The transportation equipment industry includes the manufacture of everything from aircraft parts to missiles and satellites to mountain bike frames. Declining federal defense spending, combined with a lack of increased space spending, is leading to mixed results in this industry. Ball Aerospace and Technologies Corp. was awarded a $9.7 million contract from the NASA Langley Research Center to assess and potentially recondition the Stratospheric Aerosol and Gas Experiment (SAGE III) spaceflight instrument. Furthermore, the company received a $13.4 million award to develop a second Space Test Program Standard Interface Vehicle spacecraft. Even as contracts begin, the completion of others means job cuts for some Colorado aerospace workers. For example, declining federal spending is expected to lead to the elimination of more than 80 positions with United Launch Alliance and reductions in the Lockheed Martin workforce. While these aerospace operations are classified across a variety of manufacturing and service industries, a significant portion of the employment is classified in transportation equipment. As a result, employment in this subsector will increase by a slight 100 workers in 2009, but slide by about 200 positions in 2010, bringing total transportation equipment employment to 9,400 in 2010.

The other durable goods industries include wood products, primary metals, machinery, electrical equipment and appliances, furniture, and miscellaneous manufacturing. This diverse group of industries is faced with varying demand issues, ranging from the decline in new home construction to the growing demands of the energy and healthcare industries.

Some recovery may begin in 2011, with supply chains shifting from lowest labor cost models to lowest total landed costs.

About 30% of the employment in other durable goods is found in the wood products and furniture and related products industries. These industries are expected to post the largest declines within other durable goods due to the drop in home construction and home sales, and conservative consumer spending levels. These industries will continue to contract in 2010, although at a slower rate.

Roughly 1,900 people are employed in the primary metals industry, which includes steel and aluminum refining, as well as the manufacture of metal alloys and superalloys. Output from the primary metals industry provides materials for many other industries, especially the fabricated metal industry. Another 10,200 people are employed in machinery manufacturing. These two industries posted minor contractions in 2009, but should stabilize in 2010. The main driver of industry trends includes companies in the renewable energy sector, ranging from Vestas Wind Systems and its suppliers producing wind turbine blades and nacelle structures to solar panel production by companies such as Ascent Solar Technologies and Abound Solar. In 2010, the Germany-based company SMA Solar Technology will open its first manufacturing plant

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outside of Germany in Denver. This will be the largest solar inverter production facility in the nation.

The miscellaneous manufacturing category is broad and includes several industries that are very important to Colorado's manufacturing base, such as medical and dental equipment and supplies, surgical instruments and appliances, and sporting goods production. Miscellaneous manufacturing employment will contract by about 500 positions through 2009 and 2010.

The net result of the various issues faced by the other durable goods sectors is a steep reduction of 3,300 positions in 2009, followed by a loss of an additional 800 positions in 2010. With other durable goods employment at approximately 32,000 in 2010, total durable goods manufacturing employment in Colorado will fall to 84,900.

Summary

Employment in the manufacturing industry declined at a 3.8% compound annual rate from 2000 to 2010, representing a loss of 60,700 jobs over the 10-year period. Colorado's 5,800 manufacturing establishments are expected to employ about 132,000 workers in 2009, an 8.5% decline in employment from 2008. Manufacturing employment will continue to shrink in 2010, but at a substantially slower pace, falling by an additional 2.9%, to 128,200.

The decline in manufacturing employment in Colorado is not unique; this is a situation that has plagued the entire country. But the importance of manufacturing should not be overlooked. U.S. manufacturing contributes more than $1.6 trillion to U.S. GDP, and if it stood alone, it would rank as one of the top 10 largest economies in the world. Key components to the future health of the American economy include U.S. innovation and manufacturing. ✜

Trade, Transportation, and Utilities

The Trade, Transportation, and Utilities Supersector is the largest provider of jobs in Colorado. With less demand for transportation and lower wholesale and retail sales in 2009, firms cut jobs—by 3.8%, to 413,200. Sales are expected to improve with the economy in 2010, pushing employment up by 0.7%, to 415,900.

Trade

Wholesale

In 2008, Colorado's wholesale trade sector employed nearly 100,000 workers at the relatively high annual average wage of $67,000, which is more than 44% higher than the state average. State wholesale trade is dominated by merchant wholesalers (firms that sell to retail outlets). These firms employ 90% of all wholesale workers. Firms selling durable goods, particularly computers and peripherals and electronic equipment, account for 60% of the merchant wholesaler employers. The largest number of jobs among nondurable wholesalers is with businesses selling groceries and related products. The remaining wholesale jobs are with business-to-business sellers, electronic marketers, and agents and brokers.

WHOLESALE TRADE EMPLOYMENT
2001–2010
(In Thousands)

Year	Wholesale Trade Durable Goods	Wholesale Trade Nondurable Goods	Other Wholesale	Total
2001	60.4	33.9	5.5	99.8
2002	56.0	33.3	5.8	95.1
2003	52.7	32.3	7.1	92.1
2004	51.5	31.9	8.5	91.9
2005	52.4	32.0	9.1	93.5
2006	53.4	32.9	10.1	96.4
2007	54.3	33.8	11.2	99.3
2008	54.7	33.7	11.6	100.0
2009[a]	51.6	31.7	11.3	94.6
2010[b]	51.7	31.7	11.2	94.6

[a]Estimated.
[b]Forecast.
Source: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee

By September 2009, the state wholesale sector had lost more than 8,000 jobs, or 8% of the total, from its peak in the spring of 2008. Wholesale employment typically fluctuates widely with the business cycle. As the economy begins to improve, the sector will stop losing jobs and show small employment gains by the middle of 2010. The wholesale sector is expected to lose 5,400 jobs in 2009 and remain flat in 2010.

Retail

Retail trade employed more than one-quarter million workers or 10.8% of the state's total jobs in 2008. It includes all firms whose primary business is selling products to the public. The retail sector includes retail chains that are some of the state's largest employers and many small firms. Retail employees often work part-time, and overall wages in the sector are relatively low. The retail sector accounted for only 6.3% of Colorado's nonfarm earnings in 2008.

Although the economy appears to be stabilizing, consumers are cautious as credit remains tight, and the job market is still very weak. Consumers have pulled back across the income spectrum. Upper income households saw a sizable decrease in wealth due to lower home prices and declines in the value of financial investments. They have reduced spending on luxury goods and shifted some of their buying toward less expensive stores. Previously, low- and middle-income households borrowed heavily to take advantage of rising house prices and to supplement their constrained incomes. Additionally,

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Trade, Transportation, and Utilities

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RETAIL TRADE EMPLOYMENT
2001–2010
(In Thousands)

Year	Motor Vehicle and Parts Dealers	Food and Beverage Stores	General Merchandise Stores	Other Retail	Total
2001	32.7	44.2	43.4	125.4	245.7
2002	33.0	42.7	44.0	123.0	242.7
2003	32.4	42.2	44.2	120.7	239.5
2004	32.4	42.4	45.0	121.5	241.3
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	31.4	46.0	51.6	124.2	253.2
2009[a]	28.6	46.0	50.6	119.1	244.3
2010[b]	28.9	46.3	51.2	119.9	246.3

[a]Estimated.

[b]Forecast.

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

credit wells from home improvement loans have dried up, and homeowners are no longer able to cover their costs through refinancing these projects. The burden of this debt has mounted with falling real incomes and sliding home prices. The strongest sales are in discount stores, while luxury goods are among the weakest performers.

Recent national retail data suggest some improvement over the past year. August 2009 U.S. retail sales were strong, buoyed by the Cash-for-Clunkers Program. However, sales excluding autos recorded only a small gain. Auto sales dropped sharply when the subsidy program ended, but other sales ticked up in September. Same-store sales also sent an optimistic signal in September.

Colorado sales data through July 2009 did not register much strength. Total retail store sales, excluding restaurants, were down 16.3% year over year. Auto dealers, sellers of building materials, gas stations, and furniture and furnishings dealers report sales slid more than 20%. The decline in gas station sales largely reflects lower fuel prices. The large drops in the other areas are a result of sensitivity to poor housing sales (e.g., furniture and furnishings and building materials), or represent large discretionary outlays (e.g., auto dealers).

Colorado sales will improve somewhat by year-end 2009. August data are projected to show at least a temporary surge from the Cash-for-Clunkers Program. Income generated from the federal stimulus package and rising consumer confidence as the economy improves will lead to somewhat more favorable sales figures, particularly when compared to the weak sales in the last three months of 2008. A healthier housing market will also contribute to sales gains, especially in building materials and furniture and furnishings. The holiday season will be a less than jolly for most retailers. A study by Deloitte predicts U.S. holiday sales will be flat compared to the 2.4% decline posted in 2008. The U.S. National Retail Federation forecasts a 1% loss this year. Either outcome would make 2009 the second-worst holiday season since the Commerce Department began tracking retail sales in 1967. A survey of Colorado Springs shoppers by the Southern Colorado Economic Forum in the College of Business at the University of Colorado at Colorado Springs obtained information about Christmas shopping plans from individuals in several different subpopulations. More than half of respondents anticipate spending about the same as last Christmas, one-third plan to spend less, and only 7% expect to spend more. The survey also showed that those planning to spend less were most influenced by decreased income, lower investment income, and the need to pay off debt.

RETAIL SALES
2001–2010
(In Billions of Dollars)

Year	Motor Vehicle and Parts	General Merchandise	Other Retail	Total Retail Trade Sales[a]	Percentage Change
2001	$13.9	$7.9	$31.1	$52.9	1.3%
2002	13.5	8.2	31.2	52.9	0.0
2003	13.7	8.5	30.6	52.8	-0.2
2004	14.0	9.1	32.7	55.8	5.7
2005	13.6	9.8	35.3	58.7	5.2
2006	13.3	10.3	38.2	61.7	5.1
2007	14.1	11.0	42.2	67.3	9.1
2008	12.1	11.3	43.3	66.8	-0.7
2009[b]	10.3	11.2	37.3	58.8	-12.0
2010[c]	11.0	11.3	38.1	60.4	2.7

[a]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.

[b]Estimated.

[c]Forecast.

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

Gloomy holiday sales expectations have led some retailers to begin their Christmas promotions earlier despite the danger of crowding out other sales. Toys“R”Us and Sears both began their holiday sales programs in July. In addition, layaway payment options have returned in an effort to boost sales.

State retail sales for 2009 are forecast to decline 12% from 2008; however, the outlook for 2010 is somewhat brighter. With improved job growth, greater availability of consumer credit, and rising consumer confidence as the economy begins to grow, consumers will make some of the purchases that they postponed since 2008. A modest increase in sales of 2.7% is forecast for Colorado, with stronger growth in auto sales and building materials. However, the expected state sales in 2010 will be less than 2006-2008 sales.

Many analysts are predicting a fundamental shift in consumer spending, with the savings rate and consumption share of GDP returning to pre-housing boom levels. This would translate into a savings rate of around 6%, compared to less than 2% in 2007, and consumption’s share of GDP falling from more than 70% to less than 67%. Consumers may be more conservative in their spending habits for some time. It has been suggested that the experiences of the past two years could leave an imprint on household psyches similar to the effect of the depression of the 1930s on those who lived through it. Comparisons to the Great Depression may be overblown, but heavy debt loads and the inability to borrow extensively against home equity

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Trade, Transportation, and Utilities

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will preclude a quick return to spending patterns of the past several years.

Declining sales have resulted in layoffs, and many retail establishments have closed. CoStar Realty Information Inc. statistics show metro Denver's retail market vacancy rate rose in Q3 2009 to the highest rate in at least a decade, and the building of new shopping centers reduced sharply. Temporary holiday hiring will be very limited. A survey of major national retailers by the Hay Group found that 40% of stores surveyed expect to hire between 5% and 25% fewer temporary workers for the 2009 Christmas season compared to 2008. An estimated 64% of retailers will enter the holiday season with reduced staffing patterns. By September, Colorado's retail sector employment had declined by more than 12,000, or almost 5%, since the peak in early 2008. The retail sector is forecast to lose 8,900 jobs in 2009 and gain 2,000 in 2010.

Transportation and Warehousing

The Transportation and Warehousing Supersector includes air, railroad, and water transportation; trucking; taxi service; urban transit; couriers; warehousing; and pipelines companies. Jobs in these industries are expected to total 66,100 in 2009 and 66,700 in 2010. Significant losses in air transportation dropped job totals in 2009. Employment prospects should improve in 2010, with a rebounding economy.

Colorado Air Transportation

Colorado air transportation is a major contributor to the state's economy, both in terms of direct employment and transportation infrastructure.

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TRANSPORTATION AND WAREHOUSING EMPLOYMENT
2001–2010
(In Thousands)

Year	Truck Transportation	Couriers and Messengers	Warehousing and Storage	Air Transportation	Other Transportation	Total
2001	17.3	10.4	9.0	16.1	16.7	69.5
2002	16.9	9.7	8.7	14.2	16.7	66.2
2003	16.5	9.7	8.0	13.7	17.1	65.0
2004	16.9	9.4	7.4	14.1	17.7	65.5
2005	17.8	9.3	7.0	13.6	18.0	65.7
2006	18.4	9.4	7.2	13.3	18.3	66.6
2007	19.0	9.7	7.0	14.2	18.6	68.5
2008	18.6	9.7	6.8	14.6	18.7	68.4
2009[a]	18.0	9.3	6.6	13.4	18.8	66.1
2010[b]	18.4	9.5	6.6	13.2	19.0	66.7

[a]Estimated.

[b]Forecast.

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

COLORADO AIRPORT STATISTICS
2002–2010
(In Thousands)

Passengers (In Thousands)[a]	2002	2003	2004	2005	2006	2007	2008	2009[b]	2010[c]
Denver International Airport (DIA)	35,651.9	37,505.1	42,393.8	43,387.4	47,327.0	49,863.4	51,245.3	49,810.5	50,806.7
Colorado Springs Airport (COS)	2,136.4	2,023.3	2,069.5	2,061.7	1,995.5	2,087.8	1,993.0	1,822.1	1,711.2
Aspen/Pitkin County Airport (ASE)	376.7	379.8	368.5	387.9	403.3	364.4	426.8	435.5	440.2
Eagle County Regional Airport (EGE)	339.5	336.7	338.3	426.5	434.1	463.4	425.7	445.4	464.8
Walker Field Airport - Grand Junction (GJT)	250.9	255.2	288.1	319.4	319.0	340.9	425.2	433.4	445.8
Yampa Valley Regional Airport (HDN)	214.0	204.8	240.6	259.5	262.9	279.3	273.2	286.4	299.6
Durango-La Plata County Airport (DRO)	204.4	172.4	194.2	203.5	227.0	232.6	268.8	286.4	304.0
Montrose Regional Airport (MTJ)	141.6	138.8	144.9	157.3	164.6	185.1	171.7	180.2	188.5
Gunnison-Crested Butte Regional Airport (GUC)	81.9	75.4	76.8	89.7	96.1	85.2	72.1	72.5	73.0
Fort Collins-Loveland Municipal Airport (FNL)	N/A	20.6	63.9	69.3	65.7	56.6	62.2	67.4	72.6
Telluride Regional Airport (TEX)	35.0	30.8	37.0	36.3	32.9	32.9	26.7	25.7	24.6
Cortez Municipal Airport (CEZ)	12.3	13.5	15.7	16.4	18.5	20.4	16.8	17.7	18.7
San Luis Valley Regional/Bergman Field (ALS)	7.8	7.7	10.4	10.9	14.4	15.0	14.3	15.7	17.2
Pueblo Memorial Airport (PUB)	7.0	7.8	9.0	8.1	9.9	9.8	8.7	8.9	9.2
Total Passengers	39,459.4	41,171.9	46,250.7	47,433.9	51,370.9	54,036.8	55,430.3	53,907.8	54,876.1
Cargo, Freight, and Air Mail (In Millions Lbs.)									
DIA Freight and Express	636.3	610.1	621.0	615.0	580.2	573.9	527.1	498.7	498.7
DIA Air Mail	95.6	107.4	78.8	67.6	41.4	15.5	26.4	20.7	0.0
DIA Total	731.9	717.5	699.8	682.6	621.6	589.4	553.5	519.4	498.7
Colorado Springs Freight and Cargo	40.6	36.3	35.5	33.1	32.6	27.0	24.0	21.1	17.9
Colorado Springs Air Mail	3.0	1.1	1.0	0.3	0.0	0.0	0.0	0.0	0.0
Colorado Springs Total	43.6	37.4	36.5	33.4	32.6	27.0	24.0	21.1	17.9

[a]Passengers include enplanements and deplanements.

[b]Estimated.

[c]Forecast.

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

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Colorado Springs Municipal Airport's enplanements and deplanements are expected to drop to 1,822.1 million, down 8.6% from 2008. The airport's downward passenger trend is expected to follow that of the nation, with a loss of approximately 6.1% in 2010. Cargo, freight, and air mail is projected to be down substantially in 2009 (-12.1%).

Grand Junction's Walker Field passenger traffic is estimated to climb 11.2% in 2009 and 2.5% in 2010. The airport is ranked 174th in the nation in the number of passengers—425,200 in 2008.

Based on Federal Aviation Administration statistics for calendar year 2008, the airports at Aspen/Pitkin County (ranked 172nd in the country), Eagle County (ranked 173rd), Durango/La Plata County (ranked 205th), and Yampa Valley (ranked 204th), grew throughout 2008 and 2009. These airports at Colorado's major ski resorts account for more than 1.6 million commercial airline passengers, which is 2.8% of the state's total passengers. The remaining seven Colorado commercial airports serve another 372,700 passengers, or 0.7% of the state's total passengers.

Denver International Airport

With more than 51.2 million passengers in 2008, Denver International Airport (DIA) was the fifth-busiest airport in the United States and the 10th-busiest in the world. Passenger traffic at DIA was up 2.8% in 2008 over 2007. Despite record traffic in July and August 2009, which reversed a downward trend that began in December 2008, DIA's passenger total through September was down 2.5% from the same period last year. Passenger traffic is expected to decrease to just under 50 million passengers in 2009, but rebound in 2010. In 2009, DIA's cargo, freight, and air mail will be down nearly 15%.

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. United Airlines, DIA's major carrier, currently handles about one-third of the airport's passengers. United provides nonstop service to more than 100 destinations from Denver, the second-largest hub in the airline's network. Frontier Airlines, which serves more than 50 destinations nonstop from Denver, is the second-largest carrier at DIA and carries approximately 25% of the airport's passengers. With roughly 14% of the total passenger traffic, Southwest Airlines is DIA's third-largest carrier and continues to expand in Denver.

Nearly 30 other airlines, including regional carriers, also serve DIA. Other low-cost carriers, in addition to Frontier and Southwest, are AirTran and JetBlue. Due to strong airline competition, DIA has some of the lowest fares among major U.S. airports. The U.S. Department of Transportation reported that the average one-way fare from Denver in Q1 2009 was $141.

Frontier Airlines emerged from bankruptcy protection in 2009, and the airline was purchased by Republic Airways. With this consolidation comes the loss of an estimated 300 maintenance and support jobs, and 400 flight operation jobs in Colorado.

DIA recently completed a three-month concrete-rehabilitation project on Runway 17L/35R. Construction also is underway on a facility to house the airport's new multifunctional snow removal equipment. Another capital project includes a 1.6-megawatt (MW) solar project, which is expected to be finished by the end of 2009 and will provide enough electricity to power the airport's fuel storage and distribution system. Among the other projects that appear to be on hold are updating the airport's Master Plan and planning for the South Terminal Redevelopment Project, which will include a FasTracks station and a 500-room hotel at Jeppesen Terminal. DIA has been profitable every year since it opened in 1995. Each year, DIA shares its revenue with the airport's signatory airlines.

Motor Freight Transportation and Warehousing

The trucking industry nationally is comprised mostly of independent or small carriers. In 2008, the industry was hurt by unprecedented fuel increases. As commodity prices began to fall, the financial crises began and the nation headed into a deep recession, which impacted consumer spending. The result was less demand for consumer and producer goods, and thus less demand for the movement of such goods. While employment is expected to be down in 2009, the 2010 outlook is somewhat more favorable given the resurgence of the consumer.

Utilities

Fluctuating commodity prices, including natural gas and coal, have resulted in more volatile natural

COLORADO NATURAL GAS CONSUMPTION 2001–2010 (In Billions of Cubic Feet)

Year	Total Gas Consumption	Percentage Change
2001	463.2	25.9%
2002	459.4	-0.8
2003	436.3	-5.0
2004	440.4	0.9
2005	470.3	6.8
2006	450.8	-4.1
2007	504.8	12.0
2008	499.5	-1.0
2009[a]	460.2	-7.9
2010[b]	481.9	4.7

[a]Estimated.
[b]Forecast.
Source: Colorado Business Economic Outlook Committee.

COLORADO ELECTRIC POWER CONSUMPTION 2001–2010 (In Millions of Kilowatt Hours)

Year	Nonresidential	Residential	Total	Percentage Change
2001	29,766	14,470	44,236	2.8%
2002	30,512	15,425	45,937	3.8
2003	30,770	15,725	46,495	1.2
2004	31,192	15,532	46,724	0.5
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	2.4
2008	33,773	17,599	51,372	0.1
2009[a]	32,550	17,239	49,789	-3.1
2010[b]	33,961	17,563	51,524	3.5

[a]Estimated.
[b]Forecast.
Source: *Edison Electrical Institute Statistical Yearbook,* Xcel Energy, and Colorado Business Economic Outlook Committee.

gas and electric rates in 2009. The growth and evolution of the renewable resource market, in conjunction with increased demand-side management and the completion of a large coal-fired, base-load generating facility, should help stabilize the market.

Environmental conservation remains a major legislative issue, with more attention falling on energy rebates and increases in renewable standards. A number of solar dockets are on the agenda for the spring 2010 legislative session. Utilities are working to meet the renewable energy standard set by the state and upheld by the Public Utilities Commission, including higher percentages of on-site solar and renewable energy credit requirements, and a reduction in greenhouse gas emissions.

Utilities are continuing to increase their renewable portfolio with additional solar and wind-generating facilities. Across the state, plans for 15 new solar panel factories were announced in 2009. On the Eastern Plains, Duke Energy Corp. is currently planning a 51-MW wind farm that will supply power to Tri-State Generation, the state's second-largest energy company. Colorado has been noted as a place of interest for geothermal research, and several grants were awarded through the Department of Energy to further understand the state's potential in this area. Colorado currently has generation in wind, central and on-site solar, biomass, and hydro resources. Utilities are offering more programs and rebates to entice customers to reduce load and operate more efficiently.

Significant technological advancements have occurred in the utilities industry in 2009. Xcel Energy has completed construction and launched the nation's first-ever SmartGridCity in Boulder. It allows Xcel Energy to switch power through fully automated substations, reroute power around bottlenecked lines, detect power outages, and

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proactively identify outage risks. The real-time monitoring capabilities of the electric grid will allow the company to predict equipment failure, watch for voltage irregularities, and make necessary repairs to the system before an outage occurs. Overall, the progress of the SmartGridCity pilot will allow for more efficient, cost-saving operations, which will affect the entire industry.

Tough economic conditions and increased nationwide natural gas production dropped natural gas prices both nationally and locally. With a cutback in drilling and increased pipeline capacity, Colorado natural gas prices converged with national price levels. Colorado retail natural gas and electricity consumers have benefited as wholesale natural gas prices have fallen, averaging under $3.00 in 2009 compared to nearly $7.00 in 2008. Natural gas prices in the state are expected to continue to move with national hub prices now that the Colorado market is more fully integrated into the national pipeline system. See the Natural Resources and Mining section for greater detail.

The recession and cooler temperatures resulted in a slight decline in electricity consumption from 2008. Colorado electricity consumption fell from 51,372 million kWh in 2008 to an estimated 49,789 million kWh in 2009, a decrease of approximately 3%. However, a rebounding economy will increase demand in 2010, to 51,524 million kWh, a gain of 3.5%.

The demand for electricity is expected to continue to grow in the long term, albeit at a lower than historic level thanks to the combination of increases in distributed generation, renewable resources, and demand-side management. Colorado utilities will continue to respond to government and public concerns as they provide clean, reliable power. ✜

TRADE, TRANSPORTATION, AND UTILITIES EMPLOYMENT
2001–2010
(In Thousands)

Year	Wholesale Trade	Retail Trade	Total Trade	Transportation and Warehousing	Utilities	Total TTU
2001	99.8	245.7	345.5	69.5	8.0	423.0
2002	95.1	242.7	337.8	66.2	8.1	412.1
2003	92.1	239.5	331.6	65.0	7.9	404.5
2004	91.9	241.3	333.2	65.5	7.9	406.6
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	100.0	253.2	353.2	68.4	8.2	429.3
2009[a]	94.6	244.3	338.9	66.1	8.2	413.2
2010[b]	94.6	246.3	340.9	66.7	8.3	415.9

[a]Estimated.

[b]Forecast.

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

Information

Overview

The Information Supersector is comprised of companies that communicate and deliver content in a variety of channels or media to diverse audiences. They facilitate the daily informational and cultural exchanges for personal and professional consumption. In this decade, the Information Supersector has recorded employment growth only twice—in 2000 and 2007. Information will lose 3,900 jobs in 2009, a decline of 5.1%, and an additional 800 jobs in 2010, or 1.1%.

Publishing

As the second-largest Information Sector, Publishing employed 26,800 people in 1,128 establishments in 2008. The industry includes any firm that issues print or electronic copies of original works for which they own a copyright (excluding Internet). The industry's products include newspapers, periodicals, books, directories, databases, calendars, greeting cards, and software. The publishing industry is increasingly producing material in formats other than traditional print, such as audio, downloadable files, digitized books, and CD-ROM.

The rise of the Internet and its attendant new social media explosion has had industry-changing implications for traditional twentieth-century publishers. With the increasingly rapid change in communications platforms and preferences comes industry fragmentation. Consumer's preferences are relentlessly moving away from traditional print products toward electronic products and the Internet. The foreseeable future will find print advertising budgets continuing to be slashed and content continuing to move online. Because the recession has only intensified these trends, further consolidation and business failures will continue to occur even as the recession loses its hold on the economy. Employment in the publishing industry (excluding Internet) is expected to decrease 7.8% in 2009 and 3.2% in 2010.

Newspaper Publishers

The recession has accelerated the dilemma faced by newspapers in Colorado and nationwide. Newspaper readers are accustomed to receiving low-cost information subsidized by advertisers. Circulation of print editions and local advertising revenue are

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COLORADO GROSS DOMESTIC PRODUCT: CONTRIBUTION OF INFORMATION SUPERSECTOR
2001–2008
(In Millions of Chained 2000 Dollars)

Sector	2001	2002	2003	2004	2005	2006	2007	2008
Information Sector Total	$17,836	$17,892	$18,039	$19,071	$20,389	$21,665	$22,781	$24,428
Publishing	3,698	3,720	3,967	4,410	4,867	4,539	4,466	n/a
Motion Picture/Sound Recording	724	236	218	175	172	184	188	n/a
Broadcasting/Telecommunications	12,517	13,067	12,971	13,446	14,171	15,710	16,582	n/a
Information/Data Processing Services	892	913	916	1,062	1,188	1,320	1,694	n/a
Colorado Total Real GDP (All Industries)	174,763	175,484	176,525	180,595	188,353	193,398	197,303	203,024
Information as Percentage of Colorado Total	10.2%	10.2%	10.2%	10.6%	10.8%	11.2%	11.5%	12.0%

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

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diminishing each year as people increasingly turn to the Internet for news and to post and respond to classified advertisements. The economic downturn has accelerated this trend, with businesses and consumers substantially reducing spending on traditional advertising. This suggests that the traditional newspaper's business model has become obsolete. Industry observers suggest that a consortium of journalist bloggers have already begun to replace them, especially in larger markets.

Colorado newspapers have suffered considerable strain. The *Rocky Mountain News* shut its doors just shy of 150 years in business in early 2009. The *Denver Post* has been shedding jobs over the last few years, but is taking advantage of market stress by providing print services for other hard-hit newspapers along the Front Range. The Fort Collins *Coloradoan* now farms its printing out to the *Post*. Additional consolidation has occurred with the *Boulder Daily Camera* and the *Colorado Daily*. Papers have pared back circulation to less profitable customers and are increasing their presence on the Internet.

Newspapers and television are attempting to respond to new media trends, specifically social media, by interacting on blogs, Facebook, and Twitter in an attempt to reach audiences that are increasingly getting their news online. While the movement to social media is taking place, it is not clear what the revenue model will be. Industry experts are at a loss to identify new financial and business models to support these struggling news media. Some investigative journalism that spans all media is already happening, and it is being backed through charitable investment from philanthropic supporters in select markets, but that has not yet extended to Colorado. To make the consortium viable, it might be supported by a business "nerve center" of sales people and business representatives.

Convergence may be another viable model whereby television stations join forces with newspapers, sharing their content across broadcast, online, and print media. This, too, is already happening to a certain extent, but a successful formalized business model does not seem to have been identified.

Employment at Colorado newspapers has been declining since 2005. Colorado newspapers employed 5,850 people in 2008 in 186 establishments, down from 7,080 people in 2005. Newspaper employment continued to decrease in 2009 and is expected to continue doing so, though at a much slower rate, in 2010.

Book Publishers

The U.S. book publishing industry has traditionally been dominated by a handful of large firms, most of which are headquartered in New York City. The Internet is causing the industry to undergo significant change. A case in point is Denver's 104-year-old A.B. Hirschfeld Press, Inc., which shuttered its doors in early 2009.

Social Media

Social media, often conjuring names like Twitter, Facebook, and Blogspot, has become much more than reconnecting with friends and sharing personal restaurant critiques—the industry has been adopted en masse at the corporate level. Social media is also going hyper-local with businesses using blogs, Facebook, and Twitter to amplify local products and services. Essentially, companies are adopting these platforms as replacements for traditional advertising platforms, such as newspapers, radio, and television.

Companies are using social media to measure customer satisfaction, as well as a branding and communication tool. They are able to monitor in real time what people are saying about the company, products, and services. Using media-bending stunts, Crispin Porter, for example, relied on the audience to take pictures and blog about the Mini Cooper, thus organically sending the message on the new product line.

Internet and social media startups have some observers comparing the Boulder area with a mini-Silicon Valley. Companies such a OneRiot (a real-time search engine) or TribeVibe (Twitter aggregators) are riding the wave of the social media movement. The establishment of TechStars, which provides seed capital and mentorships to startups, adds further weight to the Valley comparison. Since its establishment several years ago, TechStars has provided funding and guidance to almost 40 technology startups, including SocialThing (recently acquired by AOL), Foodzie (artisan food producers), and BrightKite (merged with Limbo). These Internet startups also exhibit a growing influence on the communications and business culture in the area. ✜

Barriers to entry for an author's or small publisher's niche market have increasingly diminished. Google Books is one example of the growing online availability of free or inexpensive digitized books. New electronic products, such as e-readers Kindle and the Nook, and iPhone applications, have made it increasingly easy for readers to comfortably enjoy digitized books. In addition, 2009 saw an increased presence in libraries and bookstores of "book on demand" machines, which can print, collate, cover, and bind a book in only a few minutes and for a relatively minor cost.

Book publishers in Colorado tend to be fairly small firms that specialize in certain subject areas. Book publishing establishments totaled 208 in Colorado in 2008. Employment in these firms has fallen every year since 2001, from 1,439 jobs in 2001 to 1,124 jobs in 2008. Positions 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 the figures above.) Employment in Colorado's book publishing industry will decrease in both 2009 and 2010.

Periodical Publishers

Colorado's periodical publishers employed close to 2,800 people in 271 establishments during 2008, down slightly from 2007 and 2006 levels. After falling steadily between 2001 and 2004, employment stabilized in 2005 and increased slightly in 2006. Employment in this sector is expected to continue to contract in 2009 and 2010.

Directory Publishers

Colorado's directory publishers, including DexMedia, one of the largest directory publishers in the nation, appear to be faring better than other sectors of the publishing industry. Although advertising revenue has enjoyed healthy growth for several years, the trend away from print directories toward Internet directories and the recession has affected advertising sales. After losing 92 jobs in 2008, employment will fall again in 2009 and 2010.

Software Publishing

Companies in the software publishing industry design, provide documentation of, install, provide support services for, and distribute software. The developed economies of the world now rely on computer and information technology to operate and grow. Much of the recent development in this sector has concentrated on small and inexpensive online applications, such as those produced for iPhones. Nationwide, employment in the software publishing industry has considerable promise in the long run as technology continues to drive efficiencies in the industry. In Colorado, however, employment has decreased every year since 2001. The software publishing sector, the largest sector in Colorado's publishing industry, employed 12,260 people in 472 firms during 2008. Employment is expected to slump 7.7%, or by 940 jobs, in 2009 and remain flat in 2010.

Mergers continue to consolidate the software development space. In Colorado, Oracle's acquisition of Sun/StorageTek added to Colorado offices of Hyperion and BEA acquired in 2007 and 2008, along with JD Edwards in 2005. Sun announced continued layoffs at the Broomfield campus of approximately 200 jobs. The domestic software development space continues to feel the impact of global outsourcing, open source software, and a move toward hosted services from installed products. On a positive note, the industry may benefit from focusing on the New Energy Economy, similar to how the industry services other clusters.

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Information Technology Cluster

Information technology (IT) touches every industry. It has been one source of productivity gains for companies looking to cut costs and capitalize on efficiencies. With the decline in software publishing, many computer and information scientists have leveraged their skills in companies in other industries. Based on occupational employment statistics, Colorado IT jobs, which earn higher than average wages, increased 6.4% from May 2007 to May 2008, to 88,250 employees. The cluster grew by only 3.2% nationally. ✤

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In 2008 and 2009, a tightening of capital markets led to the demise of many investor-funded, capital-limited firms that were weakened by reduced sales in the downturn. In 2010, the software publishing is poised to lead parts of the economic recovery, given the sector's impacts of productivity. The driving force of software innovation emanates from the ever-expanding and free delivery mechanism—the Internet. Mobile, social, security, software-as-service, and cloud computing bright spots are fueled by this innovation in infrastructure. As of late 2009, capital availability appeared to be loosening for financially healthy firms. In addition, a small bloom of entrepreneurial start-ups kicked off during the recession should result in a flattening of job loss. Many of these firms can be seen at the monthly Boulder/Denver New Technology Meetup, as well as Colorado Green Technology Meetups.

Telecommunications

Despite the economic vagaries that dominated 2009, most telecommunications companies in Colorado appear financially stable due to measures to reduce employment and investment costs. The prospects for expansion and hiring in the industry are at best relatively distant. Companies are conserving cash and cutting expenses, including capital outlays and employment. With this reluctance to increase capital investment, as well as the continuing trend to reduce payroll, expectations that the telecom industry will somehow lead a charge out of the current recession are probably misplaced.

Year-end employment in telecommunications will be down 3.2% in 2009, and employment is expected to slide another 0.7% in 2010. New private investment remains stagnant.

Many telecom companies have remained financially sound given cost and investment cutting measures. Qwest reported a 10% decline in the number of employees in 2009. Qwest, Comcast, and tw telecom (formerly Time Warner Telecom) showed positive earnings in Q2 2009. Level 3, however, continued to show a net loss while remaining cash flow neutral.

Capital investment in telecom is almost uniformly down. Companies are moving cautiously, at least in the short term, slowing the pace of their capital investments, aggressively managing operating costs, and protecting their cash flow positions.

With the infusion of stimulus money in rural broadband, however, there is room for hope that deployment of additional facilities will, to some extent, resuscitate Colorado's rural economy.

Broadband Deployment: The American Recovery and Reinvestment Act of 2009

In 2009, the most significant development in the area of broadband deployment came as the result of passage of the federal American Recovery and Reinvestment Act (ARRA), which allocated $7.2 billion in grant money to be awarded to broadband infrastructure and other investment projects nationwide. The ARRA created two programs for the evaluation of grant proposals: the Broadband Technology Opportunities Program (BTOP), administered by the National Telecommunications and Information Administration of the Department of Commerce, and the Broadband Initiatives Program (BIP), administered by the Rural Utilities Service of the Department of Agriculture.

BIP will fund some $2.5 billion in grants targeting rural broadband projects, while BTOP will distribute another $4.7 billion to unserved and underserved areas. The BTOP program is divided into separate funding categories: $3.9 billion for infrastructure, $250 million for programs encouraging sustainable broadband connections, $200 million for public computer centers, and $350 million for a nationwide broadband mapping project.

The initial evaluation round drew nearly 2,200 applications seeking $28 billion in funding. Applicants must provide matching funds of at least 20% of the amount of the grant. However, the proposals offered more than $10.5 billion in matching funds—far exceeding the 20% floor and causing some analysts to conclude that investment dollars are more readily available than previously thought.

Colorado-based applicants under the ARRA programs include Open Range ($87 million), Viaero ($116.2 million), EchoStar ($28 million), Delta County Tele-Comm ($5.4 million), WildBlue ($15.5 million), Peetz Cooperative ($1.5 million), San Isabel Telecom ($7.2 million), and Wiggins Telephone ($2.2 million). Some of these applications call for construction in multiple states. Applications that would provide facilities exclusively within Colorado total approximately $348.6 million for infrastructure, $2.6 million for public computer centers, and $91.3 million for sustainable broadband connections.

The Colorado bid for mapping project money came from the Governor's Office of Information and Technology. The 2008 state legislature (SB 08-215) tasked the agency with preparing an inventory of broadband service areas, determining where broadband service is and is not available, and then developing an illustrative map of the results.

The most ambitious in-state infrastructure proposal came from the Colorado Community Anchor Broadband Consortium (CCABC), a group representing 178 school districts, 26 libraries, and 12 Boards of Cooperative Educational Services (BOCES). Its three-year, $178 million project envisions a "middle-mile" network passing approximately one million households and nearly 50,000 businesses in unserved and underserved areas of the state. This "middle mile" is essentially the connection between the local network and the back bone, and is sometimes referred to as "back-haul." Providing middle-mile service is one of the central problems in establishing Internet access to remote areas. Thus, the project appears to be a critical link in providing broadband in Colorado.

The ARRA grant-award process should be completed by summer 2010. By February 2010, the National Telecommunications and Information Administration expects to have finished collecting its broadband mapping data. The agency plans to have a comprehensive, interactive national broadband map available online by February 2011.

Private Broadband Investment

As of Q2 2009—the most recent figures available at the time of this report—Qwest and Comcast estimated a drop in 2009 capital expenditures and an increase in cash flow. According to Qwest, the improved cash flow is "mainly due to timing of capital investment," thus, continuing a trend to delay capital investment. Still, Qwest states that it continues to fund key strategic capital projects, including additional fiber to the node (FTTN) deployment, which it says remains on track to reach three million homes by the end of 2009. At the end of 2008, Qwest's FTTN passed about two million homes in its 14-state serving area. Similarly, Level 3 warned investors that capital outlays are expected to decline "significantly" from their 2008 levels. Capital investment remains stable for tw telecom.

Telephone

Qwest's telephone access lines continue to decline in number, together with associated revenues. Second quarter 2009 figures show Qwest's access lines fell 11.8% from the previous year (to approximately 10.8 million lines across its 14-state territory). However, due to cost control measures, income for the telephone segment was down only 5% from Q2 2008, to $691 million. Qwest's margin for its residential telephone service has climbed to

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2008 INFORMATION EMPLOYMENT, WAGES, AND ESTABLISHMENTS

Category	Percentage of Total Employees	Percentage of Total Firms	2008 Average Annual Wages
Telecommunications	40.3%	44.7%	$85,041
Publishing Industries, except Internet	34.8	34.9	77,035
ISPs, Search Portals, and Data Processing	8.3	9.6	89,264
Broadcasting, except Internet	9.0	6.9	58,768
Motion Picture and Sound Recording[a]	5.4	1.6	23,301
Other Information Services	2.4	2.3	74,274
Total Information[b]	100.0%	100.0%	$76,670
Information in Denver Metro Area	63.0%	51.4%	$82,386
Information in Rest of State	37.0%	48.6%	$66,932
Total All Industries (State Average)			$46,614

[a]Includes movie theater employees and wages.

[b]Totals may not sum to 100.0% due to rounding.

Note: Differences occur between QCEW data and CES data series.

Source: Colorado Employment and Wages (QCEW) and Colorado Business Economic Outlook Committee.

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54.5%, mostly on the strength of cost-cutting efforts. By comparison, Qwest's business market revenues in Q2 were flat, at $1.0 billion, and its margin for business service stands at about 40%. In other words, Qwest is making more money per access line on fewer and fewer access lines.

Comcast, on the other hand, continues to report growth in its digital voice product. Its Q2 2009 voice revenues climbed 25% from the same quarter in 2008, with subscribership up almost 24%, from 5.6 million to 7.0 million. Penetration now approaches 15% of its video customer base.

While Qwest and AT&T try to predict when their access line numbers will stop shrinking, Verizon's response to the continuing decline is reportedly to assume that its landline telephone business will eventually go away. Speaking to Goldman Sachs investors on September 17, 2009, Verizon's CEO Ivan Seidenberg said the company is "no longer concerned" with telephones that are connected by wire, and instead is moving its voice services to Voice over Internet Protocol (VoIP) connected through Verizon's fiber network, known as FiOS. If Qwest were to take a similar approach to providing voice service, it would require the company to make a substantial additional capital investment in fiber facilities.

Television

Most observers agree that the June 12, 2009, conversion to digital TV went reasonably smoothly. The Associated Press reported on June 16, 2009, that the Federal Communications Commission (FCC) received nearly 800,000 calls in the week before the switch from people confused about the nationwide move to drop analog TV signals. The FCC said more than 300,000 of those calls came in on June 12 alone. The agency expected a total of "600,000 to 3 million callers" on transition day, a broad range that indicates just how tenuous and uncertain the transition was.

It is unclear how the switch affected cable and satellite subscribership. Comcast's video customers numbered 23.9 million in Q2 2009, down 2.7% from the same period in 2008. Digital television subscribers increased from 16.3 million to 17.5 million over the same period. DirectTV and Dish Network both added subscribers over the period.

Wireless

As part of the 2008 auction of spectrum in the 700 MHz bandwidth, the FCC imposed some fairly mild build-out requirements in an effort to speed investment and development of new services. Two of the categories of licenses offered in Auction 73 require that signal coverage be up and running to at least 35% of the geographic areas of the licenses by 2012, and to at least 70% of the geographic areas of the licenses at the end of the license term. As a result, investment in additional wireless facilities is proceeding and may be a more significant factor in 2010 than it was in 2009.

Qwest migrated more than 75% of its wireless customer base to the Verizon wireless platform by midyear 2009. Wireless subscribers for Qwest totaled 763,000 at the end of Q2 2009, an increase of 16,000 from the previous March.

2008 COLORADO INFORMATION TECHNOLOGY LABOR MARKET BY OCCUPATIONAL TITLE

Occupational Title	Employment Estimates	Average Hourly Wage
Computer and information scientists, research	350	$47.00
Computer and information systems managers	4,210	60.00
Computer hardware engineers	3,960	51.40
Computer programmers	5,900	38.90
Computer science teachers, postsecondary	430	NA
Computer software engineers, applications	16,300	44.30
Computer software engineers, systems software	16,000	46.70
Computer specialists, all other	7,030	36.10
Computer support specialists	12,450	24.10
Computer systems analysts	10,040	39.50
Database administrators	3,330	34.80
Network and computer systems administrators	8,250	35.30
Total	88,250	NA

Source: Colorado Department of Labor and Employment.

Internet

Demand for broadband services from Qwest remains steady with net additions of 34,000 subscribers in Q2 2009, bringing the company's total broadband subscribership to more than 2.9 million. Early in 2008, Qwest committed to an investment of approximately $300 million in a fiber to the node (FTTN) build-out to provide higher speed Internet connections for customers in 23 markets in 10 states. Deployment of those facilities continued in 2009 along the Front Range. Qwest says customers on its FTTN platform receive downstream connection speeds up to 40 Mbps. As of midyear 2009, Qwest had approximately 265,000 customers on the platform.

Comcast added 65,000 new high-speed Internet subscribers in Q2 2009. Its overall subscribership grew from 14.4 million in Q2 2008 to 15.3 million in Q2 2009.

INFORMATION EMPLOYMENT
2001–2010
(In Thousands)

Year	Publishing	Telecommunications	Other	Total[a]
2001	34.8	46.8	25.7	107.3
2002	31.1	39.1	22.7	92.9
2003	30.3	34.5	19.8	84.6
2004	29.7	32.5	19.0	81.2
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	26.8	31.0	19.2	77.0
2009[b]	24.7	29.9	18.5	73.1
2010[c]	23.9	29.7	18.7	72.3

[a]Due to rounding, the sum of the individual sectors may not equal the total.

[b]Estimated.

[c]Forecast.

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

Federal Regulation

The ARRA directed the FCC to submit a National Broadband Plan to Congress by February 17, 2010, that addresses broadband deployment, adoption, affordability, and the use of broadband to advance solutions to national priorities, including healthcare, education, energy, public safety, job creation, investment, and others.

The plan is intended to present a strategy for delivery of universal, affordable, widely adopted broadband. One of its focal points will be consideration of subsidy mechanisms as a means to encourage universal adoption. Most observers agree existing subsidy mechanisms—particularly the Universal Service Fund (USF)—are insufficient for purposes of broadband deployment. In addition, the USF has systemic problems that must be addressed separately. The plan also promises to address ways to reduce the cost of key inputs, such as spectrum, rights-of-way, backhaul, and fiber.

Overall, new investment in telecom facilities is likely to come from two sources: first, from stimulus money and grants, mainly for broadband deployment to rural areas, and second, from construction of wireless facilities as the result of the FCC's 2008 700 MHz spectrum auction. Other telecom investment will not begin prior to a resurgence in consumer confidence. The impact of these investment dollars might begin to be felt in 2010. However, the time tables for grant awards extend well into 2010, and deadlines for build-out of wireless facilities go into 2012 and beyond. As a result, while some new investment is on the horizon, it is not here yet. Employment in the telecom sector is

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likely to be equally slow to improve. Telecommunications employment will decrease by 1,100 jobs, or 3.2%, in 2009 and another 200 jobs, or 0.7%, in 2010.

Other

Motion Picture and Television Industry

Colorado's film industry suffered from slashed advertising budgets and uncompetitive film incentives in 2009. While the production of television commercials is expected to rebound somewhat in 2010, incentives will lure major production projects to other states. Motion picture and television employment is expected to decrease 200 jobs in 2009 and an additional 100 jobs in 2010.

The lack of a competitive film incentive is one of the major problems facing this sector. The film business is driven by film incentives (currently more than 40 states offer production incentives, and Colorado ranks near the bottom of the list). Recently, Colorado was scouted for a major feature film and after three full days of scouting and positive comments from the production company, they passed on Colorado in favor of several other states that offer significantly better incentives. This could have been at least a $20 million infusion of cash and jobs into rural regions of the state. A second major film also scouted considerable portions of southern Colorado for locations for a project that could have lasted up to two years and created a sizeable number of jobs, hotel room nights, and infusions of cash but the producers chose a neighboring state based on its incentive program.

While the production of television commercials is expected to rebound somewhat in 2010, incentives will lure major production projects to other states.

Colorado is having some success with the television sector as several local production companies are currently in production of series that are broadcast on major cable channels. Plans for additional new episodes and new programs during 2010 are in the works.

Slight growth is anticipated in the production of television commercials in 2010. Activity in this sector fell significantly in 2009 due to the economy and the overhaul of the banking/credit and auto industries. These factors resulted in the cancellation of a significant number of productions that normally film in Colorado during the year. While these projects disappeared during much of 2009, it is believed that many will return to the state in 2010.

Broadcasting (except Internet)

The broadcasting subsector includes television and radio broadcasting, as well as cable and other subscription programming. Like newspapers, television is experiencing rapid consolidation due to the influence of the Internet. Denver television news outlets now share resources, including pooled cameras and helicopters for certain events. This is a move unheard of back in the days of abundant resources and the fierce competition between stations.

Radio in Colorado had already extended its reach to the Internet, and most major stations have an online presence to complement over-the-air offerings. Over-the-air radio is not immune to threats, however, as satellite radio has taken a bite out of its market. Most new car sales come with the option of including satellite radio in the package, and Sirius Satellite Radio saw subscriptions spike with the Cash-for-Clunkers Program.

Summary

Overall, after gaining 600 jobs in 2008, the Information Supersector is expected to lose 3,900 jobs in 2009 and 800 jobs in 2010. ✜

Financial Activities

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 36% 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.

Between 2001 and 2008, the Financial Activities Supersector grew at an annualized rate of 0.7% compared to 0.8% for the state. In 2009, the Finance and Insurance Sector is expected to shed approximately 5,700 jobs, while the Real Estate and Rental and Leasing Sector will drop 3,400. In 2010, the Finance and Insurance Sector will decline further, contracting by 1,000 jobs. The Real Estate and Rental and Leasing Sector is expected to lose 1,900.

FINANCIAL ACTIVITIES EMPLOYMENT
2001–2010
(In Thousands)

Year	Finance and Insurance	Real Estate and Rental and Leasing	Total[a]
2001	102.3	46.0	148.3
2002	103.5	46.1	149.6
2003	107.1	47.1	154.2
2004	107.3	47.3	154.6
2005	110.3	48.3	158.6
2006	111.4	49.1	160.5
2007	110.1	49.4	159.5
2008	107.3	48.3	155.6
2009[b]	101.6	44.9	146.5
2010[c]	100.6	43.0	143.6

[a]Due to rounding, the sum of the individual items may not equal the total.

[b]Estimated.

[c]Forecast.

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

Finance and Insurance

Financial Markets

This is a tale of two markets, a tale of two worlds. Change can be difficult because of an inherent fear of the unknown. Challenges can seem insurmountable. The Colorado economy, the U.S. economy, and the developed economies of the industrialized world have been struggling for years now. Is it time to sound the all clear? Or have we been down so long that down seems up now?

On March 9, 2009, the equity markets hit devastating lows. The Dow closed at 6,547, and the S&P 500 sunk to 676. As of November 2009, the Dow is above 10,400, and the S&P is above 1,100. Both indices are up well over 50% from their recent lows. Is it any wonder there is a sense of relief?

However, context dictates perception. Little more than two years ago, both the Dow and the broader S&P were trading above 14,000 and 1,500, respectively. We likely all remember the phenomenal heights that the NASDAQ reached during the Internet bubble. In March 2000, the NASDAQ index was trading above 5,000. Where is it today? It is trading just above 2,100. In the nearly 10 years since its high, has it ever come close to such lofty levels as it saw in 2000? No. In fact, the closest it has come was in the fall of 2007 when it was trading above 2,800…still down more than 40% from its peak.

Some analysts draw parallels between the United States and Japan. Let's take a look at the NIKKEI

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stock index. At the height of Japan's bubble, the NIKKEI peaked in December 1989 at approximately 39,000. Nearly 20 years later, where is the NIKKEI? It is trading at less than 10,000.

Just last year, many were concerned, and rightfully so, that the global economy was on the edge of an abyss with the United States leading the way. Unfathomable spending measures were implemented by the governments of the major economies of the world in an attempt to break the feedback loop that was seen to be perpetuating the decline. Near the end of 2008, the United States passed the $700 billion Troubled Asset Relief Plan (TARP), followed by the $787 billion American Recovery and Reinvestment Act (ARRA) of 2009. We have seen a near trebling of the Federal Reserve's balance sheet as it has become a dominant buyer of U.S. Treasuries, Fannie Mae and Freddie Mac debentures, and guaranteed mortgages.

FINANCE AND INSURANCE EMPLOYMENT
2001–2010
(In Thousands)

Year	Credit Intermediation and Related Activities	Securities, Commodities, and Other Activities	Insurance Carriers and Related Activities	Other Finance and Insurance Activities	Total
2001	45.0	17.4	39.0	0.9	102.3
2002	47.4	15.1	39.3	1.7	103.5
2003	50.7	13.9	39.5	3.0	107.1
2004	51.5	13.4	39.5	2.9	107.3
2005	53.3	13.7	40.2	3.1	110.3
2006	53.7	14.7	40.0	3.0	111.4
2007	51.8	15.8	39.2	3.3	110.1
2008	48.3	16.6	38.8	3.6	107.3
2009[a]	44.6	16.4	37.0	3.6	101.6
2010[b]	44.0	16.4	36.6	3.6	100.6

[a]Estimated.

[b]Forecast.

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

The Federal Reserve Q2 2009 flow of funds report shows that the Fed purchased as much as 50% of the newly issued treasuries in that quarter. While it is difficult to argue with the pragmatic choices that were made at the height of the crisis, such dramatic actions can cause their own problems. Massive amounts of stimulus spending, new government programs, and market intervention have succeeded in arresting the slide into the abyss. They have also created innumerable distortions, making it difficult to gauge the real health of the economy, as well as real asset values.

Fannie Mae, which had been one of the best-performing stocks in 2009 (having been up more than 100% in Q3), is now up a more modest 36% year to date—this, despite the fact that they have posted cumulative losses over the last eight quarters of $102 billion, and they guarantee $164 billion in loans that are nonperforming. Consequently, in November they tapped the U.S. government for the fourth time this year, bringing their 2009 total to $60 billion of their $200 billion emergency lifeline.

Our market economy is not being allowed to behave as one—at least, not when you're viewed as too big to fail. As of November 23, 2009, the FDIC had closed its 124th bank of the year. However, one has to wonder if the pace might be faster still if it were not for the fact that many consider the FDIC to be insolvent. Is there a predisposition not to push the larger institutions too hard at a time when governments are straining from supporting those too-big-to-fail institutions?

With the U.S. government, or elements thereof, being a dominant buyer of a variety of asset classes issued by government-sponsored enterprises (GSEs) (including debentures and GSE-guaranteed mortgage backed securities), volatility in those assets is diminished. This creates an illusion of stability and leads to the mispricing of risk due to the suppression of volatility.

Add in a Federal Open Market Committee statement that economic conditions are likely to warrant exceptionally low rates for an extended period and you have a great metaphor for a patient on life support, or more precisely an economy on life support—even though Q3 2009 GDP was reported up 3.5%!

The Federal Reserve seems to recognize the tenuous tight rope they are walking. They appear to recognize the fragility of the economy, and the dependence on government stimulus and cheap money while at the same time cognizant of the inflation threat should the velocity of money accelerate. The Fed has begun an exploratory dialogue regarding ways to drain excess reserves from the system in an attempt to exit from their quantitative easing strategy.

One of the many challenges would seem to be the fact that the longer rates are kept low, like a body on life support, the more dependent on that support the body becomes as systems atrophy. Are we in the midst of economic atrophy? How great of a shock will it be to the system once quantitative easing is removed? Have we not already seen a

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FINANCIAL MARKETS: STOCKS
2000–2009
(Year to Date)

	Value				Index (2000=100)			
Year	S&P 500	Dow Jones	NASDAQ	Bloomberg Colorado Index	S&P 500	Dow Jones	NASDAQ	Index of Bloomberg Colorado
2000	1,320.3	10,788.0	2,470.5	228.2	100.0	100.0	100.0	100.0
2001	1,148.8	10,021.6	1,950.4	204.4	87.0	92.9	78.9	89.5
2002	879.8	8,341.6	1,335.5	167.2	66.6	77.3	54.1	73.2
2003	1,111.9	10,453.9	2,003.4	237.0	84.2	96.9	81.1	103.9
2004	1,211.9	10,783.0	2,175.4	278.9	91.8	100.0	88.1	122.2
2005	1,248.3	10,717.5	2,205.3	326.0	94.5	99.3	89.3	142.8
2006	1,418.3	12,463.2	2,415.3	382.5	107.4	115.5	97.8	167.6
2007	1,468.4	13,264.8	2,652.3	450.2	111.2	123.0	107.4	197.3
2008	903.3	8,776.3	1,577.0	220.5	68.4	81.4	63.8	96.6
2009[a]	1,106.4	10,426.3	2,193.1	310.3	83.8	96.6	88.8	136.0

[a]Year-to-date value at market close on November 18, 2009.

Source: Bloomberg and Colorado Business Economic Outlook Committee.

Financial Activities

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FINANCIAL MARKETS: INTEREST RATES 2001–2010

Month End	3-Month Treasury (Monthly Rates)	10-Year Treasury (Monthly Rates)	Spread[a]
December 2001	1.72%	5.09%	3.37%
June 2002	1.73	4.93	3.20
December 2002	1.21	4.03	2.82
June 2003	0.94	3.33	2.39
December 2003	0.91	4.27	3.36
June 2004	1.29	4.73	3.44
December 2004	2.22	4.23	2.01
June 2005	3.04	4.00	0.96
December 2005	3.97	4.47	0.50
June 2006	4.92	5.11	0.19
December 2006	5.00	4.56	-0.44
June 2007	4.74	5.10	0.36
December 2007	3.07	4.10	1.03
June 2008	1.90	3.99	2.09
December 2008	0.11	2.25	2.14
June 2009	0.19	3.52	3.33
December 2009[b]	0.20	3.60	3.40
June 2010[b]	0.50	3.70	3.20
December 2010[b]	0.70	4.10	3.40

[a]Spread=10-year rate minus 3-month rate.

[b]Forecast.

Source: Federal Reserve Board, Consensus Forecasts, and Colorado Business Economic Outlook Committee.

foreshadow of the risk facing us when Ben Bernanke, chairman of the Federal Reserve, attempted to wean the economy off cheap money when the Federal Funds rate was gradually and methodically moved from 1% to 5.25% from 2004 to 2006?

Ultimately, we are talking about asset bubbles. In the words of Yeats, "…and chase the frothy bubbles while the world is full of troubles." Central bankers and economists the world over are attempting to come up with a model that will enable them to avert bubbles in the future. Looking back, there is now recognition that low interest rates can cause a distortion in asset values as it creates a leverage cycle that inflates asset values. This economic distortion then diverts resources that might be more beneficially deployed elsewhere in the economy into what might best be described as an economic tumor rather than a bubble. The notion of efficient markets is itself being questioned.

So what lies ahead? While Colorado has a great many things going for it, we can no more decouple from the overall U.S. economy than Europe, Japan, or China can. Headwinds include a national unemployment rate of more than 10%. Problems are also looming in the commercial real estate (CRE) market. Billionaire investor Wilbur Ross was quoted at the end of October 2009 as saying the nation is at the beginning of a "huge crash in commercial real estate." He went on to say that "all of the components of real estate value are going in the wrong direction simultaneously." He said, "Occupancy rates are going down. Rent rates are going down and the capitalization rate—the return that investors are demanding to buy a property—are going up." What makes this even more compelling is that he is one of the nine money managers selected by the U.S. government to participate in the Public Private Investment Partnership (PPIP). Of the more than $1.5 billion available to him under PPIP, he reported that as of October 15 he had spent less than $100 million. He went on to say that "I think it's going to take quite a while to work itself out."

What is the motivation to invest when there is continued uncertainty and government programs are distorting the market? When does a temporary impairment become permanent? What are the costs of national healthcare? What about the state of Medicare and Social Security? What of the unfunded pension obligations? The chairman of New Jersey's Investment Council estimates that state and local government pensions alone are underfunded by $1 trillion.

That isn't to say that there are no opportunities and that there won't be economic growth. Consumers will continue to have basic needs, and as they deleverage their own balance sheets they should see an increase in their discretionary income. However, given all of the issues previously cited, and a whole host of others relating to an aging population that has not adequately saved for retirement, growth can be expected to be at a reduced pace. Another correction in the stock market would not be unexpected. When there is uncertainty in asset valuations and government legislation, capital that would have been deployed in less liquid assets is being invested in markets that provide the liquidity, such as stock and bond markets. A reduction in quantitative easing or a significant institutional failure could spark significant volatility as those dollars seek safe harbor. For that matter, a greater sense of clarity and the confidence to invest in less liquid assets could trigger a correction in the equity markets as capital is reallocated.

Colorado may be one of the best states to weather this economic purgatory. The economy is diverse, and there is a culture of entrepreneurialism. The climate and lifestyle is a big draw and encourages population in-migration, and with that comes growth and new ideas. Initiatives to encourage green technology companies to locate in the state are undoubtedly planting the seeds for technological innovations that could help not only drive the Colorado economy, but the U.S. economy as a whole.

Colorado may be one of the best states to weather this economic purgatory. The economy is diverse, and there is a culture of entrepreneurialism.

In the meantime, buckle up because 2010 has the potential to be another gut-wrenching ride.

Commercial Banking

Over the past few years, it has become apparent that older and established laws governing the banking industry have become obsolete after two decades of deregulation and failing to keep up with the industry's creativity. Results included a credit freeze, credit-driven recession, deleveraging of both financial institutions and consumers, and financial asset price declines. The theme for 2009 is best summed up by FDIC Chair Shelia Bair when she said, "I know these numbers look bad, but keep in mind the banking sector is a lagging economic indicator." Banks are currently going through the necessary and difficult process of recognizing loan losses and cleaning up balance sheets. While there is strong evidence that a national cyclical recovery may be under way, significant structural problems still exist that could constrain a sustainable economic recovery, especially in the banking sector.

At the end of Q2, the FDIC reported 98% of U.S. banks were well capitalized, 1.5% were adequately capitalized, and only 416 banks were "troubled," representing 2.2% of the banking industry's assets. In comparison, in 1990 the FDIC listed 1,496 banks as troubled at a time the ratio of bank capital was half of its current level. Despite the industry's significant increase in capital and reserves for potential loan losses, the regulators are not maintaining standards as they have in previous downturns, but significantly increasing them. This has left the banking industry with mixed messages in 2010. Congress, the public, and the media are requesting more lending, while bank regulators are restricting credit by significantly increasing capital standards, imposing more restrictive loan concentration standards, and requiring aggressive loan write-downs even when the borrower has not missed a payment and has the ability to make future payments. This regulatory action could be explained as an appropriate prudent response to what has been called the "Black Swan of recessions" or an overreaction for missing the dangerously low credit standards that led to a housing bubble. Ironically, the latter standards were established by financial institutions, not banks, that made 42% of the residential mortgage loans but accounted for 82% of the foreclosures. The banking industry

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maintains these stricter standards are compounding the liquidity problem in the CRE market, thus further impairing their balance sheets.

A number of positive and negative influences have affected large regional and community banks in 2009. All have benefited from stable overnight lending rates, a steep upward sloping yield curve, stabilization of certain financial asset prices (residential real estate), and a modification of the mark-to-market rules. They have all been negatively impacted by the fore mentioned continued pressures from banking regulators, while at the same time dealing with declining commercial real estate values and recession-driven impairments on their commercial loan portfolios. Raising capital in this economic environment has been challenging—some were able to do so in the open market at a high cost, while others applied for TARP funds. Those banks that were not able to raise capital were forced to shrink the size of their existing loan portfolios to meet the new capital reserve requirements. This strategy typically means lower dividend rates, more leverage, shrinking profit, and a declining stock price.

Securitization has typically helped banks deleverage their balance sheets or reduce exposure to a specific type of loan product by accessing the secondary markets. The securitization market is still virtually stalled and will not likely return to a meaningful level until the government passes proposed legislation outlining the new rules. At the time this section was written (November 2009), a Senate bill was passed requiring 10% retention for securitization originators. The bill is currently being debated in the House. Until this market is reestablished, banks must manage their risk with the loans they currently have on their balance sheets. A common theme for some banks has been to selectively reduce exposure to specialized asset classes (such as CRE) as these loans renew, or save what limited loan capacity they have for existing, longstanding customers.

The 2009 government responses to the banking crisis are now being evaluated to determine if certain provisions should be allowed to expire or extended to backstop a still fragile banking system.

TARP is scheduled to expire on December 31, 2009, unless extended by Secretary Geitner. The program began as a rescue plan for troubled banks, where stock was purchased to provide additional capital. Its focus was changed to healthy banks just two weeks after its enactment. Some banks participated voluntarily while others were forced, but all participants faced government scrutiny of executive pay. This stock investment by the government has earned the U.S. Treasury a 16% return on an annualized basis from the banks that have been allowed to fully repay the funds. There is an argument to allow this provision to expire as residential real estate prices stabilize and continued government intervention creates price distortions that interfere with market efficiencies.

Term Asset-Backed Securities Loan Facility (TALF) was extended from the end of 2009 through March 31, 2010. This should help consumer and CRE loans.

The FDIC has extended $250,000 insurance protection for individual accounts through May 22, 2010. In response to the depletion of the FDIC's reserves, they are proposing raising $45 billion in needed funds by requiring solvent banks to prepay three years of FDIC insurance premiums.

Colorado banking in 2008 did not directly feel the devastating effects of declining residential real estate prices of some states because of the state's large community bank presence and a relatively stable real estate market. Large and regional banks doing business in Colorado dealt with this exposure in other markets or states of domicile. In 2009, this theme has reversed. Colorado's banking industry is more exposed as the banking risks shift from stabilizing residential real estate to recessionary effects on CRE and commercial business loans. As a result, two Colorado banks failed in 2009, New Frontier Bank of Greeley and Colorado National Bank of Colorado Springs. Unemployment in Colorado banking has increased as banks were forced to layoff business development officers and underwriters because of diminished capacity to write new loans, as well as businesses paying off existing lines because of recessionary concerns.

Aside from the risks associated with CRE, Colorado's CRE market is more stable compared to other states. Banks with exposure to CRE especially stand to benefit if the securitization market is reestablished. Other potential benefits include the Treasury's new plan to allow community banks to access TARP funds for small business loans at a lower 3% dividend rate and a new FDIC regulatory policy stating that banks will not be treated harshly for modifying souring commercial loans.

While we do not know how much further the decline in CRE can go, or the effect it will have on Colorado banks, time will tell if the regulatory action was prudent or too far-reaching so as to perpetuate the decline. It is thought that if commercial real estate has additional declines, TALF and TARP have the ability to help protect banks by stabilizing asset prices with direct purchases of these assets. With the benefit of hindsight, the ultimate question may be what was the effect of transferring the mass leveraging of the financial industry onto the balance sheet of the federal government? After asset prices stabilize and the final cost is calculated, who and when will these funds be paid back? Finally, without the multiplier effect of a housing boom, and a now ballooning deficit, how can the government sustain historical GDP growth levels?

Credit Unions

Credit unions are member-owned and not-for-profit cooperatives. They exist to serve their members, not profit from them. Colorado credit unions generally did not get involved in the subprime mortgage loan market, unlike other financial institutions. Credit unions operate more conservatively and have kept with sound lending practices for their members. Therefore, credit unions remain a strong and secure place for their member's savings, while still offering lower fees and competitive rates.

Overall, Colorado credit unions are well capitalized, which means they are able to better weather problems caused by the current economic environment. Colorado credit unions have an average net worth ratio of 9.8%, which is in excess of the minimum 7% required by federal law to be considered adequately capitalized. Nationally, consumers are working on repairing their individual balance sheets by increasing their savings and decreasing their borrowing in response to concerns about the economy. Share savings accounts at Colorado credit unions have climbed 9.9% and lending has increased 7.6% as of June 2009.

A significant number of employees consider workplace benefits to be the foundation of their personal safety net.

Consolidation in the credit union industry continued in 2009. This trend is primarily driven by tight interest margins, increasing costs, and the need to create sustainable economies of scale. These consolidation pressures are not expected to ease much in 2010.

Insurance

According to a MetLife Study of Employee Benefits Trends released in 2009, benefits are an important factor in employee loyalty. A significant number of employees consider workplace benefits to be the foundation of their personal safety net. A majority report that they obtain most of their financial products through the workplace. One-third expressed concern that their employers may reduce benefits in response to economic pressures. Two-thirds of those polled said that the current economic situation has been a real wake-up call and that they are making changes in their lives with respect to personal finances. Not surprisingly, interest in retirement planning, life insurance, and disability coverage has increased.

Retention, cost control, and increased productivity are the top employer objectives, reflecting the reality of a smaller workforce and the need to maximize employee resources. Of the employers surveyed in the MetLife study, 12% reported that they are considering reducing the coverage levels of benefits offered. Although some employers underestimate the degree to which benefits are valued by employees, most employers do recognize the link between benefits and job satisfaction. Of those employees who were highly satisfied with their benefits, 73% were also satisfied with their jobs. Of employees not satisfied with their benefits, only 22% said they were satisfied with their jobs.

Group sizes are declining due to layoffs, but also due to the fact that employers increasingly restrict access to benefits to management, sales, and office staff. Many hourly employees—even those who work full time—are finding that they are not eligible for coverage or only eligible for a limited-benefit plan. Only 60% of employers offer benefits to employees. Most of the employers who do not offer benefits are small, employing fewer than 10 individuals. According to the 2009 Kaiser Family

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Foundation report, 21% of employers reduced the scope of benefits or increased cost sharing in 2009, and 15% reported that they increased the worker's share of the premium. When asked about plans for 2010, 21% said they are very likely to raise the worker's share of premium, 16% said they are very likely to raise deductibles, 4% are very likely to restrict eligibility, and 2% are very likely to drop coverage altogether.

These numbers are higher in Colorado, due to a high percentage of small business and low union presence. Aggravating the situation is the fallout from Colorado House Bill 1355 passed in 2007. This legislation forbids an insurance company from considering the health status and past claims of a small group in establishing premiums for the group. Prior to this legislation, the insurance company was permitted to consider these factors and issue up to a 25% discount or a 10% surcharge. Surcharges were eliminated in 2008, resulting in relatively low renewals for surcharged groups. However, many of the groups facing the loss of deep discounts at renewal in 2009 chose to renew in November and December 2008—off cycle—in order to retain discounts for an additional 12 months. These groups are renewing now, and many are facing increases of 35% and higher. Already grappling with the effects of the poor economy, these businesses are being forced to make significant changes in order to reduce the increased renewal. In addition, the economy is burdening employees' abilities to pay more. In order to keep coverage in place and premiums in line, copays, deductibles, and coinsurance limits are increasing. In light of the national healthcare debate, some of these employers are now starting to believe that it should be the government's problem and not theirs. Of course, if they are currently paying less than 8% of gross payroll for their medical plan, they will end up paying more in the long run.

According to the Colorado Fiscal Policy Institute (October 2009), the trend in health insurance among Coloradans is away from private insurance and toward public coverage or none at all. Since 2000, the number of Coloradans with private insurance has declined by 5.6%, and the number with public insurance or none at all has increased by 2.2% and 2.1%, respectively. These numbers are expected to increase as they are updated to reflect the full impact of the current recession. Employer-sponsored coverage has declined nearly 7% since 2001. Many families that have health insurance are only able to afford it because they have access to group coverage and the employer's share serves as a significant "subsidy."

Healthcare legislation passed in Colorado in 2009 includes Colorado House Bill 1293. This bill creates a provider fee to be levied on hospitals, generating an estimated $600 million in revenue. This revenue, which will be matched by federal funds, will be used to reimburse providers (including hospitals) for uncompensated care and to expand Medicaid to parents and single adults up to 100% of the federal poverty level (FPL) and CHP+ for children to 250% of FPL. This is intended to help address the high levels of uninsured in Colorado (currently approaching 20%). House Bill 1353 eliminates the five-year waiting period for access to care through Medicaid and CHP+ imposed on lawfully present immigrant children and pregnant women. Federal legislation signed in February 2009 allows states to eliminate the waiting period, making the state eligible for matching funds to help cover this population. House Bill 1349 protects workers laid off by employers with fewer than 20 employees (these firms are not required to comply with federal COBRA laws), providing them with the opportunity to continue their health insurance coverage and receive the 65% subsidy provided under ARRA. House Bill 1012 permits insurance companies writing individual and small group coverage to give discounts for participation in health and wellness programs. No specific health outcome is required. This is intended to provide incentives for people to do what they can to improve their health and reduce overall healthcare costs. House Bill 1204 changes the way most plans cover specific preventive-care screenings. They cannot be subject to deductible or coinsurance; however, copays may apply. Colorado Senate Bill 244 mandates coverage for the assessment, diagnosis, and treatment of autism.

Many families that have health insurance are only able to afford it because they have access to group coverage and the employer's share serves as a significant "subsidy."

According to the Council of Insurance Agents & Brokers' Q2 2009 report, there appears to be "no hard market in sight." Continued soft pricing is anticipated and is driven more by the weak economy than market capacity. Insurer new business pricing is more aggressive than renewal pricing, where insurers' are pursuing slight increases. On average, large accounts declined 6.7%, compared with the Q1 drop of 6.4%. Midsize accounts fell on average 5.7%, about the same decrease as in Q1. The rate of decline for small accounts was 2.5%, compared with 3.3% in the first part of 2009.

A recent briefing written by Dave Bradford, an executive vice president with Advisen Ltd., a source for market data on business insurance trends, reports "the continuing impact of the recession means that meaningful rate increases are now unlikely until at least 2011, with most of the commercial insurance marketplace mired in the soft market. The recession may have ended, but recovery has not yet begun in any meaningful way. . . . Because of the economic slowdown, there is less to insure, and written premiums are taking a beating as a result. Factor in soft market pricing and 2010 looks like it will be another tough year for carriers."

Surety

Several surety insiders have called the surety market in 2009 the "calm before the storm" or "weathering the storm." The weak overall economy has impacted the construction marketplace significantly, and contract surety premiums have declined year over year. The Surety and Fidelity Association of America (SFAA) Q2 2009 data reveal that written premiums on June 30, 2009, were $2.4 billion compared to $2.7 billion at June 30, 2008—a 11% decrease year over year.

Losses in the surety market generally follow a decline in the construction market with a 12-24 month lag. The SFAA reported that surety loss ratios through the first six months of 2009 have increased from 13% in Q1 to 28.9% in Q2. This is a very big concern. Despite the increase in losses, the surety marketplace still remains competitive, with many sureties actively pursuing new business and attempting to increase market share. Loss activity is expected to dramatically increase in late 2009 and early 2010, which will impact sureties and their corresponding reinsurers. It is recommended that active users of surety credit stay in close contact with their surety (through their agent) and continuously monitor their surety's financial results.

Employment in the insurance sector is down and is not expected to recover until after 2010.

The office market is showing signs of stabilizing, with lease rates bottoming out and vacancy rising only slightly.

Real Estate, Rental, and Leasing

Real Estate

Commercial Real Estate

During 2009, Colorado's CRE industry slumped in concert with state job losses and consumer confidence. CRE product types that depend on consumption, such as retail and industrial, were impacted by falling demand. Still, CRE managed to outperform residential real estate year to date. However, 2010 portends further weakening in the economy, property value deterioration, and several billion dollars in CRE loan maturities. Poor credit markets impacting the availability of capital will have adverse affects on loan renewals. Attracting new, good-paying jobs to the state will buffer CRE markets and Colorado's economy if the state can continue to be a national leader in computer systems and high technology, and become a leader in renewable energy technology.

In Q3 YTD 2009, **Metro Denver** office and industrial metrics exhibited softening, owing to minimal new supply, whereas retail slowed in accordance with an ailing housing market and flat consumer spending. According to Bitzer Real Estate Partners, the office market is showing signs of stabilizing, with lease rates bottoming out and vacancy rising only slightly. Overall, office vacancy rose to 14.7% from 13.6% at year-end 2008. The office market is still experiencing negative absorption but should turn positive again in the coming quarters. The

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Financial Activities

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VACANCY RATES IN NORTHERN COLORADO COMMERCIAL REAL ESTATE MARKETS

	2008[a]	2009[a]
Fort Collins		
Industrial	5.7%	5.8%
Retail	8.6	9.5
Office	14.2	14.7
Greeley		
Industrial	9.5	9.0
Retail	12.1	15.0
Office	16.0	17.5
Loveland		
Industrial	3.9	8.3
Retail	6.4	7.6
Office	8.3	8.3

[a]As of Q3.

Source: Ross Research, Sierra Commercial Real Estate, Realtec, and Colorado Business Economic Outlook Committee.

metro's industrial market is one of the most stable in the country. Industrial vacancy rose slightly, to 8.9%, from 8.2% at year-end 2008, due more to supply and demand than employment numbers. Metro retail market fundamentals are weakening owing to frozen credit, an ailing housing market, flat consumer spending, and wavering consumer confidence. Ross Research notes that retail vacancy rose to 8.6% at Q2 2009 from 7.4% at year-end 2008 and 6.9% at Q1 2008, the seventh-consecutive quarter of vacancy increases. Median lease rates decreased moderately, and the supply pipeline has diminished. Metro Denver is favorably positioned for a rebound but a continued credit freeze, dwindling business and consumer income, and a protracted economic recession could derail a 2010 CRE rebound.

Northern Colorado has not been completely impervious to the slumping economy and is "weathering the storm." The region's unemployment rate of 4.4% is better than the overall Colorado and U.S. unemployment rates, and housing is affordable due to a relatively higher supply of finished lots and homes. Natural gas reserves are productive, and energy economy businesses, such as wind and solar, are attracted to this region. Consumer confidence and access to credit are major factors in the performance of commercial and residential real estate markets.

Southern Colorado is characterized by a service-based economy, with a high concentration of military personnel and related support industries. Therefore, the negative impacts have disproportionately affected the region. In particular, the residential environment deteriorated substantially in 2008 and into 2009, affecting everything around it, including CRE and other industries not related to real estate. Despite Fort Carson increasing troop levels, and companies such as Affiliated Computer Services Inc. announcing expansions and relocations to Colorado Springs, Sierra Commercial Real Estate notes that CRE vacancies are rising, and net rents are falling. From year-end 2008 to Q3 2009, office vacancy rose from 14.8% to 17%, and rents fell from $14.10 per square foot to $14.03 per square foot due to new supply and the seventh quarter of negative absorption. Industrial vacancy rose from 10.5% to 12.1%, and rents fell from $6.93 per square foot to $6.30 per square foot, owing to employment losses in the Construction and Manufacturing Sectors. Retail vacancy rose from 9.9% to 11.3%, and lease rates remain relatively flat. Expect that the farther CRE markets are from employers, the harder it will be to reach stabilized operating levels.

The hot **Western Slope** economy has cooled significantly from 2007 and 2008, tied primarily to the deflating price of oil and natural gas, and a decrease in other mining activity. Previous strong in-migration drove commercial and residential real estate appreciation and demand; however, Western Slope CRE markets have felt the impact of the national financial crisis. Through Q3 2009, First American Heritage Title Company reports 841 foreclosure filings, a 150% increase year over year, although several have been cured or withdrawn. Mesa County real estate secured loans (residential and commercial) decreased 45%, to 1,998, from Q3 2008. A correlation exists between commodity prices and economic activity. Western Slope CRE will not benefit until there is a strengthening of commodity prices.

CRE activity has been terribly affected by a prolonged tightening of business and consumer credit. The ability of Colorado to retain, and more importantly, attract new businesses, especially those seeking high-skilled workers, will positively impact CRE markets. While Colorado is better positioned economically than most states, a turnaround is not forecast for 2010. Expect more creativity among CRE landlords as they must bridge another four quarters of rising vacancy and declining rents.

Residential Real Estate

Colorado's residential real estate market continues to outperform the country. The most recent Federal Housing Finance Agency data (through Q2 2009, not seasonally adjusted) show that Colorado housing depreciated by 1.1% during the past year, compared to a 6.1% drop for the nation. On the other hand, U.S. housing appreciated at a rate of 5.1% compared to a 4% increase for the state for the 10-year period Q2 1999 to Q2 2009.

Over the past 10 years, housing in Grand Junction has appreciated at the highest rate, 6.9% annually, as a result of the energy boom. The drop in energy prices and the subsequent decline in employment have decreased demand for housing. While prices held strong longer than other areas in the state, housing prices have fallen at a faster rate, 3.6%, during the past year. Presently, Boulder is the only metro area recording positive appreciation, 0.6%, for the past year.

The fact that Colorado housing appreciated at a lower rate than other states during the past decade is thought to have reduced the impact of the recession.

REAL ESTATE AND RENTAL AND LEASING EMPLOYMENT
2001–2010
(In Thousands)

Year	Real Estate	Rental and Leasing	Total
2001	32.0	14.0	46.0
2002	32.2	13.9	46.1
2003	32.9	14.2	47.1
2004	33.3	14.0	47.3
2005	34.4	13.9	48.3
2006	35.1	14.0	49.1
2007	35.4	14.0	49.4
2008	34.3	14.0	48.3
2009[a]	29.9	15.0	44.9
2010[b]	28.0	15.0	43.0

[a]Estimated.

[b]Forecast.

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

Rental and Leasing

Rental and Leasing is one of the more diverse sectors in the NAICS structure. Because NAICS categories are defined by process, it includes a variety of companies tied together by their renting/leasing function, but otherwise unrelated. For example, companies classified within the sector include those that rent or lease equipment, videos, cars, and formal wear. The sector is consumer-driven and tends to mirror general economic and population growth trends.

Companies in this sector will feel the pinch as consumers cut back on spending. On the other hand, certain areas of leasing will increase as consumers who cannot afford to purchase goods will be more likely to rent them. The sector is expected to remain flat, at 15,000 employees, in 2010. ✜

Professional and Business Services

Overview of Service Industries

The Professional and Business Services (PBS) Supersector experienced employment gains of more than 4% per year from 2003 to 2007. Growth in 2008 flattened to 1.1%, mostly buoyed by momentum built in the first nine months of the year. The last three months exhibited significant job losses. The projection for 2009 is a decline of 26,600 jobs, or 7.6%—the largest drop since the data series began in 1990. Supersector employment should increase by 2% in 2010 if federal government financial stimulus funding takes hold and if there is a modest economic recovery.

This supersector consists of three sectors: Professional, Scientific, and Technical Services (PST); Management of Companies and Enterprises (MCE); and Administrative and Support and Waste Management and Remediation Services (AS&WMRS). One notable characteristic of PBS firms is that many provide services to other firms, not to consumers. This suggests that the PBS Supersector will lead the recovery because many firms may not need to wait for consumers to start spending again. Instead, firms will rely on the thawing of frozen credit markets and increased confidence from business leaders, leading to either investing in capital or labor.

Job levels in the employment services subsector, part of the AS&WMRS Sector, can be a leading indicator of the future condition of the overall job market. Companies tend to let temporary workers go before their permanent employees when economic conditions weaken. Conversely, firms are more cautious when conditions improve, hiring more temporary workers to handle additional workloads before bringing on permanent workers. The majority of employees in the employment services category work for temporary staffing firms such as Prime Source Staffing, Intellisource Colorado, and Westaff. Temporary workers are employed in a range of occupations, including administration and clerical, manufacturing, engineering, finance, accounting, and information technology.

As in prior recessions, the employment services sector began to slide before overall employment weakened. A marked decline started in 2008, resulting in a drop of 9.1%. In 2009, employment is expected to fall about 22%. Percentage declines like this have not been seen since the 2001-2003 recession, which produced losses of 13.9%, 16.8%, and 7.2%, respectively.

2008 PROFESSIONAL AND BUSINESS SERVICES SUPERSECTOR EMPLOYMENT AND WAGES

Subsector	Firm Percentage of Supersector	Employment Percentage of Supersector	Average Employees per Firm	Total Wages (in Billions)	Wage Percentage of Supersector	Average Wages
Professional, Scientific, and Technical Services	70.4%	50.2%	6	$13,568	63.4%	$76,902
Management of Companies and Enterprises	4.0	8.2	18	3,052	14.3	106,548
Admin and Support and Waste Management	25.6	41.7	14	4,794	22.4	32,737
Total PBS Supersector[a]	100.0%	100.0%	9	$21,415	100.0%	$72,063
Total State (Private)			11	$90,796		$46,726
PBS as Percentage of State Total	23.2%	18.2%		23.6%		

[a]Sum may not equal total due to rounding.

Source: Colorado Department of Labor and Employment, Quarterly Census of Employment and Wages.

PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES SECTOR EMPLOYMENT
2003–2010
(In Thousands)

Year	Legal Services	Architectural and Engineering Services	Computer Systems Design Services	Management, Scientific, and Technical Consulting Services	Other	Total[a]
2003	16.3	35.4	33.1	12.6	44.4	141.8
2004	16.6	36.8	34.1	13.7	46.9	148.1
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	18.0	44.5	41.1	17.5	55.2	176.3
2009[b]	17.8	41.5	40.0	17.8	47.6	164.7
2010[c]	18.0	42.3	41.0	18.3	48.4	168.0

[a]Due to rounding, the sum of the individual items may not equal the total.

[b]Estimated.

[c]Forecast.

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

Professional, Scientific, and Technical Services

The PST Sector accounted for just over half of the supersector's employment in 2009. About 60% of the sector is comprised of architectural, engineering, legal, and computer system design services. These services employ highly skilled workers at wages significantly above the Colorado average, which has a positive impact on Colorado's economy. Additionally, these subsectors have close ties to the state's high-tech clusters, with growth partly a function of research and technology transfer from local universities and federal facilities. They are also leading indicators for activity in other industries, such as commercial construction.

Legal Services

In 2009, legal services employment is expected to show a slight contraction for the first time since 1996—the subsector even added jobs during the 2001-2003 downturn. The demand for legal services has slowed due to the sluggish economy. In particular, the hiring of new graduates was severely curtailed in many large firms. This subsector enjoyed a little over 2% growth from 1998 to 2007, with the largest increase, 3.6%, in 2005. Demand for water law specialists, construction defects litigators, and mineral litigators will be bright spots. New demands from bioscience and the renewable energy industry will continue. Employment in this subsector is projected to increase by almost 200 jobs in 2010, or 1.1%.

Architectural, Engineering, and Related Services

The Architectural, Engineering, and Related Services subsector is represented by numerous small

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Professional and Business Services

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firms and heavy hitters, such as CH2M Hill, ARCADIS, Merrick & Company, Raytheon, and Lockheed Martin. Douglas County-based CH2M Hill, which specializes in sustainable planning, construction, engineering, and architectural design, continues to exhibit diversified growth in public agency and international projects. In April 2009, it announced that it had been awarded procurement construction oversight for the $26 billion Crossrail project in London. The firm is currently managing a $5.3 million project to upgrade the Panama Canal, as well as renewable energy and sustainable projects in British Columbia, Spain, and Abu Dhabi.

The development of residential and commercial projects is an important part of the engineering and architectural sector. New residential and commercial construction has significantly decreased in 2009, with a turnaround not projected until 2011. Demand for services has declined as a result of mergers and acquisitions. In addition, commercial vacancy rates are continuing to rise in 2009, and several office buildings have been mothballed due to a lack of tenants, further illustrating the lack of demand for design services. Anecdotal evidence suggests that several small to medium-size firms have either closed their doors or have merged in order to survive.

Further evidence pointing to declines in demand for engineering and design services are tied to falling sales tax revenues for state and local agencies. The majority of cuts are to transportation, health, corrections, and buildings. Even with federal stimulus money to backfill higher education, transportation, and renewable energy projects, the overall appropriations will be lower than in 2008. One bright spot is in the upgrading of federal facilities in Colorado, which started in 2008 and should continue for several years. Furthermore, Colorado has benefited from the military base realignment and closure process.

Emerging Technologies

Colorado is home to a growing number of clusters whose companies cross a number of industries. Some of the clusters, such as photonics, nanotechnology, and radio frequency identification, focus on enabling technology, whereas aerospace, biotechnology, renewable energy, and software are benefactors of the enabling technologies. Because many of these technologies rely on private research and commercialization and processes included in the PBS Sector, it is appropriate to mention them. The State of Colorado facilitates these clusters through the development of target industries and the creation of incentives intended to spur investment and growth in the state.

Renewable Energy

The renewable energy cluster is one of the state's target industries. Along with solar technologies, the development of wind technologies in the state has led to the presence of numerous wind firms, including Renewable Energy Systems (RES) and Vestas Wind Systems. However, the bankruptcy of Entegrity Wind, which had a presence in Boulder, points to the continued difficulties associated with new technology and the troubled financial markets. Renewable energy may see significant growth during 2010 as the use of photovoltaic technologies, along with lasers for aiding the design and manufacturing of wind turbines and optical sensors for renewable energy applications, build demand.

Aerospace

According to the Colorado Office of Economic Development and International Trade, Colorado ranks third nationally for private aerospace employment. Major companies in this cluster include Ball Aerospace, Lockheed Martin, and United Launch Alliance (ULA) (a joint venture between Lockheed and Boeing). A number of high-profile deals have driven employment increases in both large and small aerospace companies in 2009. In particular, Lockheed Martin won the contract to develop GPS III, the newest military and civilian navigation technology. Assembly and final testing work will occur at the Jefferson County campus. In addition, Ball Aerospace announced work on the Iridium Next satellite program for mobile communications and Earth observations. Despite positive activity in the cluster, Lockheed Martin announced layoffs in Colorado in 2009 aimed at improving competitiveness.

Photonics

The photonics cluster has been at the forefront of the renewable energy movement with the development of solar technologies. Solar companies are flocking to the state with the identification of renewable energy as a target industry, the existence of the National Renewable Energy Laboratory (NREL) and other federal labs in the state, the collaboration of research institutions, and

With a lower level of overall design services being performed in 2009, the future of building, highway, and bridge construction looks bleak. Many contractors are able to maintain their employment levels with work created by federal stimulus funds. However, if the economy does not pick up after this work is finished, construction job losses will continue. A local architect summed up the situation by saying, "I have great credentials, and excellent ideas. What I lack are clients."

Employment in this sector is expected to decline 6.7% in 2009, and then rebound by 1.9% in 2010.

Computer Systems Design and Related Services

After experiencing job losses from 2001 to 2003, employment in the Computer Systems Design and Related Services subsector has increased about 4.5% per year since 2004. Represented by many small firms and several large firms headquartered in Colorado, such as Quark, Inc., Ciber, Inc., and a branch office of Hewlett-Packard, companies in this sector depend on the outsourcing of computer technology, which by all indications has increased during this decade. Companies have chosen to focus on their core competencies rather than handle information technology in-house. Since the downturn earlier this decade, more business is being conducted over internet lines rather than by airlines. Computer networks and conferencing systems are becoming increasingly complex, so rather than deal with viruses, spam, malware, and adware, companies have found it cost effective to outsource these services.

Even though this subsector's forecast of employment for 2009 is a loss of 2.7%, or 1,100 jobs, employment in 2010 is projected to climb by 2.5%, or 1,000 positions, due to the expected demand for upgrading computer systems.

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Colorado's abundance of sunny days and open space. Abound Solar and Ascent Solar Technologies are located along the Front Range, and Denver landed German-based SMA Solar Technology in 2009. Photonics is not exclusive to solar technology—Digital Globe incorporates photonics into their satellite imagery technology.

Engineering services in advanced technologies such as photonics have been less effected by the national recession due to their involvement with aerospace, research, electronics and semiconductor, and military markets, which are weathering the downturn well (optics.org, September 21, 2009). Colorado usually sees a dramatic increase in new photonics companies during a downturn; however, with pressure on banks and other financing institutions, the total number of companies in the state has remained steady, with the number of employees dropping around 5% compared to 2008 levels.

Colorado is a national leader in federal awards via Small Business Innovative Research (SBIR) grants from the U.S. government. With recent legislation extending this program through June 2010, concerns about companies relying on this source of funding have been waylaid for the next funding cycle. The long-term reauthorization of the SBIR program is essential to the photonics cluster and other emerging technologies.

Biosciences

The biosciences cluster has been a favorite in the state since the mid-1980s. Now comprising 300 firms, it is facilitated by subsidies and the development of Fitzsimons, which is home to bioscience research and development. The Colorado Center for Biorefining and Biofuels (C2B2) bridges private companies with researchers at the University of Colorado, Colorado State University, Colorado School of Mines, and NREL. Furthermore, Nobel laureate Dr. Thomas Cech returned to continue bioscience research at CU-Boulder in April 2009, and a ground-breaking ceremony for a $115 million research and teaching facility at the CU-Boulder Research Park was held in September.

While biosciences has received tax incentives from the state and is listed as a target industry, the cluster continues to deal with employment volatility. In early 2009, Gilead Sciences, Inc., a biopharmaceutical firm with operations in Boulder and Westminster, acquired CV Therapeutics of Palo Alto, California. It later announced the closing of both Colorado offices by the end of 2009, removing 137 employees from Colorado. This follows the July announcement of the relocation of NeXstar Pharmaceuticals of Boulder, a branch of OSI Pharmaceuticals. Consolidation of employees from this office to New York will happen in late 2009. ✜

Professional and Business Services

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Management of Companies and Enterprises

In Colorado, almost all of the firms in the MCE Sector are company headquarters or regional managing offices that oversee a company's establishments from a strategic, organizational, and operational front. In some cases, the establishments that are managed are located across the nation or in another country. MCE accounts for almost 9% of the PBS Supersector employment.

Colorado's attractive business climate, educated workforce, diverse economy, mid-continent location, and quality of life have lured many companies to set up managing offices or headquarters in the state. These offices oversee an economically diverse set of companies ranging from mining, aerospace, communications, information technology, renewable energy, and biotechnology to restaurants and retail establishments. Some of the largest and high-profile company headquarters in Colorado are Echosphere, Encana Oil and Gas, ULA, Sports Authority, and Rock Bottom Restaurants.

MCE's benefits to Colorado include its high wages and economic diversity. Average employee earnings top $100,000 annually, and since establishments cross a broad spectrum of the economy, the sector provides a stable job base during economic expansions and downturns. An added benefit of housing corporate headquarters in the state is the additional spending for PR, marketing, legal, philanthropy, and other services.

The recent expansion of energy production provided a positive contribution to the state's economy and to the MCE Sector, which gained 200 jobs in 2008. Although the MCE Sector's diversity somewhat shielded it from the weak economy in 2009, it will not be immune from pressures to reduce costs due to soft aggregate demand. Consequently, employment is expected to remain flat. However, federal appropriations are stimulating significant portions of this sector. Therefore, sector employment is anticipated to climb by 300 jobs in 2010, representing a 1.5% increase.

TOTAL PROFESSIONAL AND BUSINESS SERVICES SUPERSECTOR EMPLOYMENT 2001–2010 (In Thousands)

Year	Professional, Scientific, and Technical Services	Management of Companies and Enterprises	Administrative and Support and Waste Management Services	Total[a]
2001	154.0	19.8	138.5	312.3
2002	144.5	20.9	130.8	296.2
2003	141.8	22.5	127.6	292.0
2004	148.1	24.5	131.6	304.1
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	176.3	28.8	146.5	351.6
2009[b]	164.7	28.8	131.5	325.0
2010[c]	168.0	29.1	134.4	331.5

[a]Due to rounding, the sum of the individual items may not equal the total.

[b]Estimated.

[c]Forecast.

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

Administrative Support and Waste Management and Remediation Services

Accounting for approximately 41% of the PBS Supersector employment in 2009, the AS&WMRS Sector includes companies that provide services to other businesses. This sector contracted by 15,000 jobs in 2009, sliding 2.3%. The employment and services to buildings subsectors have been the hardest hit, with the consolidation of buildings and building services by commercial building owners a major contributor. About 2,900 jobs will be added in 2010.

Conclusions/Looking Forward

A summary of factors that will impact PBS Supersector growth include the following:

- Outsourcing of work to businesses in the PBS Supersector was severely curtailed starting in 2008 and will continue through 2009. Increased outsourcing is projected in the year ahead.
- The need to renew aging hardware and software systems is expected to commence in 2010. Outsourcing of technology is also anticipated to increase in 2010.
- The cost structure for businesses has changed during 2009, with healthcare costs rising an annual average of 10.5%. Conversely, energy costs have fallen significantly from 2008, which has helped offset some cost increases. Businesses are expected to continue keeping a close watch on expenditures in 2010. The downturn has caused the costs for technology and other business support to decrease, making procurement of these items more attractive. This can be a benefit or a detriment, depending on the individual business.
- The lack of credit will make it difficult for companies to expand their services and operations. In the services industries, lending is especially tricky as these firms do not have large amounts of hard assets for banks to use as collateral.
- Adding to the tight credit market is the glut of available office buildings and plants, which stymies new construction. This will negatively impact architectural and design companies.
- Federal stimulus funding will continue to have a positive impact in 2010.
- Policy decisions may be affected by the 2010 mid-term elections.
- Expectations are that state and local agencies will continue to be faced with lower tax revenues. This may directly impact outsourcing and procurement of support services for public agencies in 2010.

With 2009 starting off at a much lower employment level than 2008, it is expected that the PBS Supersector will realize an overall loss of 26,600 jobs, a 7.6% decrease from 2008. The economy is expected to recover in 2010, and Colorado employment is projected to return to more normal patterns. As was the case in the 2001 downturn, the PBS Supersector will lead Colorado out of the recession. Supersector employment is anticipated to increase by 6,500 jobs, or 2%, in 2010. ✜

**ADMINISTRATIVE AND SUPPORT AND WASTE MANAGEMENT SERVICES SECTOR EMPLOYMENT
2003–2010
(In Thousands)**

Year	Employment Services	Services to Buildings and Dwellings	Business Support Services	Other	Total
2003	36.2	35.0	16.3	40.1	127.6
2004	38.5	36.9	16.7	39.5	131.6
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	21.8	43.2	149.3
2008	40.0	40.3	21.9	44.3	146.5
2009[a]	31.3	37.5	21.7	41.0	131.5
2010[b]	32.0	37.9	22.6	41.9	134.4

[a]Estimated.

[b]Forecast.

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

Educational and Health Services

The Educational and Health Services (EHS) Supersector includes private educational services and healthcare companies and organizations. Employment growth will increase 2.6%, for a total of 263,500 employees, in 2010. Approximately 6,600 workers will be added.

Educational Services (Private)

About 2,250 organizations will employ roughly 32,100 employees in some form of private education in 2010. By comparison, more than 180,000 public-sector education employees are recorded in the state and local government sectors. (Elementary and secondary educators are included in local government, while higher education is in state government.)

The largest employers include the state's private colleges: the University of Denver, Regis University, Colorado College, the University of Phoenix, Naropa Institute, and Colorado Christian University. Other organizations consist of companies that provide instruction in a variety of venues—sports camps, acting schools, horseback-riding academies, and driver training institutes, for example.

In part, the increase in private education has occurred because of state population growth. Additionally, as the general economy and various industries go through their normal business cycles, higher demand for training occurs during expansionary cycles, and outsourcing for educational programs often occurs during recessionary cycles. Demand for educational programs may also increase during recessionary times as unemployed workers update their skills in an effort to find employment.

Furthermore, sector employment is driven by both business demand for continuing education programs and consumer demand for training that improves quality of life. Approximately 700 jobs will be added in private education in 2010.

Healthcare and Social Assistance

Employment

Healthcare and social-assistance employment data can be traced back to 1990 using the North American Industry Classification System (NAICS). The sector includes establishments that provide individuals both healthcare and social assistance because it is sometimes difficult to distinguish the boundaries of these two activities. Healthcare and social assistance is the second-largest sector by payroll behind professional and technical assistance.

Job growth has occurred every year in this sector, even during recessionary cycles—a phenomenon that will repeat again in 2010. Between 2001 and 2010, EHS is expected to add 54,200 jobs.

Healthcare and social-assistance employment will increase 2.6%, or by 5,900 jobs, in 2010. Growth will be driven by the demand for medically trained workers, information technology workers to develop and manage computer networks and ensure network security, and billing staff to collect payments and reduce bad debts.

The Colorado healthcare industry is important to the state economy because it provides the infrastructure for maintaining a healthy population, which in turn leads to improved productivity. The healthcare sector drives jobs and spending in related sectors, such as Professional and Business Services and Construction. Rural hospitals are often the largest employers in their region. A solid healthcare system is needed to attract and maintain businesses in each region of Colorado. If insurance expands considerably, as indicated under the proposed healthcare reform, significant growth in the healthcare workforce will also be needed. Meanwhile, the healthcare workforce is aging. The industry will be challenged as those two factors occur simultaneously.

Employment and Workforce Issues

Colorado's Healthcare and Social Assistance sector employs more individuals than all other economic sectors, except for retail trade—almost 257,000 workers. Statewide, the healthcare sector employs about 11% of the state's working population, and in seven counties, more than 17% of the county's employment is in healthcare. The largest sector is ambulatory healthcare services (41%), followed by hospitals (24%). The Colorado Department of Labor and Employment projects significant growth for all healthcare occupations from 2005 to 2025, including registered nurses (RNs) (50%), home health aides (69%), pharmacists (64%), and medical and clinical lab technicians (60%). Almost all healthcare occupations are expected to see significant growth—35% or more.

RNs account for 25% of the entire healthcare workforce. However, in Colorado, only 10% are age 30 or younger, while just over 60% are 45 years or older. According to a 2008 survey, nearly 10% of RNs plan on retiring over the next two years. In order to maintain current population-to-RN ratios, the state will need an additional 14,800 RNs, a 39% increase, by 2028.

In 2007, Colorado graduated approximately 1,800 RNs and 600 practical nurses, and only about 30% of RNs working in Colorado were trained in the state. Yet, a large number of qualified applicants for nursing schools are turned away every year as the number and size of nursing programs are inadequate. In fact, in the 2008-09 academic year, Colorado's nursing schools declined more than 3,500 qualified applications due to limits on institutional capacity. Nursing schools are expensive to operate, and nursing faculty positions are difficult to fill. The vacancy rate in Colorado's nursing schools is 11% for full-time faculty positions and 13% for part-time positions.

COLORADO EDUCATIONAL AND HEALTHCARE SERVICES EMPLOYMENT 2001–2010 (In Thousands)

Year	Educational Services	Healthcare Services	Total[a]
2001	23.7	177.2	200.8
2002	24.6	183.9	208.5
2003	25.0	188.0	213.0
2004	26.1	192.4	218.5
2005	27.5	197.1	224.6
2006	28.6	202.6	231.2
2007	29.6	210.9	240.4
2008	30.7	219.9	250.6
2009[b]	31.4	225.5	256.9
2010[c]	32.1	231.4	263.5

[a]Due to rounding, the sum of the individual items may not equal the total.

[b]Estimated.

[c]Forecast.

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

In addition to the challenge of finding faculty for nursing education, programs are finding it difficult to locate resources for the clinical education component. Hospitals and other providers have been generous in offering their services for clinical education, but schools still need additional capacity to overcome the bottlenecks associated with providing students access to adequate clinical education.

A major shortage of physicians is also predicted. In the United States, the number of medical school graduates has remained relatively stable throughout the past 25 years. The Association of American Medical Colleges has called for a 30% increase in graduates to meet demand by 2020 and has responded with plans to open a number of new medical schools in the next few years.

In order to maintain 2005 primary-care provider-to-population ratios, by 2025 Colorado will need an additional 2,200 primary-care providers beyond the anticipated supply. This includes 1,000 physicians, 480 physician assistants, and 660 advanced practice nurses. Approximately 35% of the physicians in Colorado are over the age of 55 and will reach retirement age within 10 years. A recent survey conducted by the Colorado Health Institute determined that about 14% of the current practicing rural physicians plan to leave within the next 12 months. Compounding the problem is a shortage of new physicians who choose to practice in primary-care specialties. Since newly graduated MDs are often deeply in debt with student loans, they choose higher-paying specialties.

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Educational and Health Services

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Organizations such as the Colorado Trust's Health Professions Initiative (HPI) are tackling Colorado's shortage of healthcare professionals. The initiative aims to stimulate partnerships among training programs, community-based organizations, and health professionals to strengthen the training infrastructure and meet the long-term need for health professionals across the state. The outcomes of HPI grant funding from 2005-2007 include: 1,500 healthcare students advancing their careers, three-quarters of the sponsored programs located in or focused on training professionals in rural areas, and 39% of students intending to work in rural communities. The average age of HPI students is 33 years. Grantees have increased their ability to accommodate the growing number of students across 32 health professions by providing faculty development opportunities, expanding training sites, and improving curricula. Many of these approaches are long-term program changes designed to increase capacity into the future, address healthcare access and delivery in Colorado, and create a pipeline of healthcare professionals.

In 2008, the Colorado Trust launched the Health Care Professions Workforce Policy Collaborative. The purpose of the collaborative is to convene policymakers, healthcare professionals, and workforce planning experts in order to establish a framework to address healthcare provider shortages. The collaborative has identified six immediate policy interventions to present to the Colorado General Assembly during the 2010 legislative session to address demand and distribution issues associated with primary healthcare professionals. In subsequent years, additional healthcare workforce needs will be identified and solutions promoted.

Colorado has a number of professional schools for training healthcare providers, and two of the largest educational providers are located in Denver. The University of Colorado Denver (UC Denver) is an Academic Medical Center (AMC). AMCs offer training programs, research, and patient-care delivery options, such as inpatient and outpatient care services. UC Denver has schools for dental medicine, medicine, nursing, pharmacy, and public health. Other professionals, including dieticians, dental hygienists, physical therapists, and physician assistants, are also trained at the Fitzsimons campus. Regis University has schools of nursing, pharmacy, and physical therapy, and has healthcare ethics and health-science administration departments. The only other program in the state preparing physicians is Rocky Vista University College of Osteopathic Medicine, which opened in Parker in 2008.

Healthcare Services: Spending

Nationally, total health spending in 2008 was estimated at $2.4 trillion, or $8,160 per person, a 6.1% increase from 2007. Healthcare spending is expected to increase annually at 6% for the next decade. These expenditures currently consume 16.8% of GDP, with forecasts suggesting that by 2018 healthcare expenditures will reach 20% of GDP, or $4.4 trillion. The U.S. expenditure per capita is twice as high as the next most-expensive healthcare system in the world. In 2007, 45% of U.S. healthcare expenses were paid with public funds. Economists widely agree that consumers and employers bear the brunt of these cost increases in terms of erosion of wages and profits, which impairs the nation's ability to compete in the global marketplace.

In 2010, healthcare spending in Colorado is expected to total more than $32 billion compared to $16 billion in 2000—a 105% increase over the 10-year period. In the absence of major health reform, Colorado healthcare expenditures are projected to surpass $52 billion in 2018.

In the late 1980s, managed competition promised to lower healthcare costs and improve access to the system. In fact, it was credited with reducing costs in the early 1990s. However, given the backlash from consumers and physicians against tightly managed networks and care, escalation of costs returned. What factors drive price escalation? Frequently cited elements include:

- An aging population with an additional burden of poor life choices driving a high disease burden (examples include obesity, tobacco use, sedentary lifestyles)
- Regional variation in the delivery of healthcare services, whereby the use and cost of services are sometimes two or three times higher than other regions
- Cost shifting by Medicare and Medicaid to the private sector as their reimbursements are often less than "cost"

- Cost shifting by physicians and hospitals to cover uncompensated services to persons without insurance
- The increase in the cost of medical malpractice insurance, litigation, and "defensive medicine" among physicians
- Technological advancements that may raise costs without increasing value
- Lack of coordination and final accountability for managing patients with chronic diseases leading to duplicative services, missed services, and poor overall outcomes. (For example, on average, 20% of all Medicare patients who are discharged from the hospital for congestive heart failure are readmitted within 30 days.)

These elements contribute to an increase in healthcare spending that exceeds the growth of the economy. The return on this higher investment is not clear as evidence indicates that more expensive care does not always mean high-quality care. On many indices of health, including longevity, the United States ranks lower than all other industrialized nations. Therefore, the challenge to restraining costs and unsustainable trends includes reengineering the healthcare system to assure cost efficiencies without harming health outcomes overall.

Employer-Based Health Insurance: Premiums and Coverage

Employers provide health insurance coverage to about 159 million nonelderly individuals in America. Health insurance premiums continue to rise. According to a 2009 report by the Kaiser Family Foundation and the Health Research and Education Trust (KFF/HRET), the national average annual premium for employer-sponsored health insurance is $4,824 for single coverage and $13,375 for a family policy. Premiums for single coverage and family coverage increased about 3% and 5.5%, respectively, in 2009, while inflation in the past year fell by 0.4%.

By way of contrast, premiums grew at double-digit rates from 2000 to 2005. The overall premium increase over the last decade was 131%, while the total CPI gain was 28% during that same time. Families USA, a consumer health organization, reported that family healthcare premiums rose 4.2 times faster than earnings for Colorado's workers from 2000-2009. For 2010, average premiums in Colorado are estimated to increase 9%-11%. As with the national figures reported by Kaiser Family Foundation, Colorado premium costs are expected to continue to outpace all other economic indicators, such as inflation and growth of the overall economy.

The KFF/HRET study also found that 60% of companies offer health benefits to at least some of their workers, a decrease from 69% in 2000. While virtually all firms with 200 or more employees offer health insurance, compared to only 59% of firms with fewer than 200 employees—a 3% decline from 2008. In step with overall premium increases, the average worker dollar contribution continues to rise, although the percentage share between employer/employee of contribution has remained relatively stable. Nationally, covered workers contribute 16% of the premiums for single coverage ($780) and 27% of the premium ($3,516) for family coverage on average. Yet there is disparity among firms: the average worker contribution is less in small firms than large firms—$625 versus $854 for single coverage. The opposite is true for family coverage, where workers in small firms contribute $4,204 versus $3,182 for workers in large firms. In Colorado, 52% of firms offer health insurance to their employees. More than 98% of firms with 50 or more employees offer health benefits, while only

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HEALTH INSURANCE PREMIUM COSTS

	2008 National	2008 Colorado	2009 National
Premium Cost: Family	$12,700	$11,952	$13,375
Premium Cost: Single	$4,704	$4,303	$4,824
Worker Contribution: Family	27.0%	34.7%	N/A
Worker Contribution: Single	16.0%	23.2%	N/A

Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits.

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38% of firms with fewer than 50 employees provide health insurance benefits.

Impact of the Uninsured

Today, the patchwork of employer-based, individual, and government systems results in high costs and an average of 47 million people uninsured nationally. Absent federal reform, employer-sponsored healthcare coverage and access are expected to deteriorate, with a projected growth of the uninsured population to more than 60 million by 2020. According to a recent U.S. Treasury report, nearly 50% of Americans will go without coverage at some point over the next decade.

The uninsured rate in Colorado has remained fairly consistent since 2003, at about 17%; however, the absolute number of uninsured has increased with population growth. Part of that stability in the face of erosion of employer-sponsored insurance has been the growth in the number of children covered by government programs called S-CHIP. A recent study conducted by the Lewin Group found that 70% of the uninsured in Colorado occurs in families where at least one person is employed, giving rise to the concern that employer-sponsored insurance alone cannot adequately or affordably cover all workers. Colorado ranks 38th among states in per capita insurance coverage. The state's low ranking is attributed to tough Medicaid eligibility requirements, a lack of presence of large employers, and young adults with other spending priorities. Access to health insurance in Colorado varies significantly by race and ethnicity, with 42% of Hispanics without coverage compared to 13% of non-Hispanic whites.

Experts suggest that Colorado's high rate of uninsured individuals leads to higher health-insurance premiums. This occurs because healthcare providers, such as physicians and hospitals, pass to insurers the uncompensated costs of services provided to the uninsured. In turn, the additional costs insurers pay are incorporated back to employers and other purchasers in the form of higher healthcare premiums. A second significant source of cost shifting to employers and private payers is attributable to government reimbursements for Medicaid and Medicare that fall short of costs. Last, expansion of ambulatory surgical centers and inpatient capacity in new and expanded hospitals creates additional supply, which will meet demand for services.

Colorado Small-Group Market

In 2008, 38.1% of Colorado businesses with 50 or fewer employees offered health insurance. Small businesses in Colorado that tend to offer healthcare coverage employ more than 10 workers and have a larger proportion of full-time workers. They also occupy higher income industry segments that must compete with large businesses for employees.

Colorado ranks 38th among states in per capita insurance coverage.

The impact of rising healthcare costs on small-group (50 or fewer employees) employers remains especially challenging. Coverage in the small-group market in 2008 declined to 331,000 individuals, compared to nearly 538,000 in 2000. The 2009 Colorado Division of Insurance's survey of the small-group market reports that the number of individuals covered by small-group employers in 2008 fell by 7%, or by 25,518 individuals, from 2007. This reverses a relatively flat two-year trend, but could be expected in this economic environment and signals the difficulty small businesses have in finding affordable coverage.

Carriers in the small-group market report 41,438 group plans, a 9% decrease from 2007. Of that, 11,355 represent "business groups-of-one," down from the 12,342 policies reported in 2007 and in sharp contrast to the 28,805 policies in 2000. Colorado remains one of the few states to offer limited guaranteed issue to business groups-of-one.

The marketplace remains stable, with 21 insurance carriers offering coverage in 2008. Three carriers, Kaiser Permanente (74,000 covered lives), United Healthcare (85,000), and Anthem/Wellpoint (78,000) dominate the small-carrier market. The market leaders have 72% of the total covered lives. Anthem/Wellpoint and United Healthcare gained 5,000 and 4,000 covered lives, respectively, in 2008, while Kaiser Permanente lost 9,000 lives.

The small-group marketplace continues to migrate toward lower benefited deductible and catastrophic products. The market perception of low-cost products has shifted. Where health maintenance organizations (HMOs) once dominated the low-price segment, carriers have built larger product portfolios to offer plans at much lower price points. These plans have become extremely popular. In Colorado, HMOs and indemnity plan types continue to decline, while preferred provider organizations (PPO) plans and high-deductible health plans with savings options have increased.

Health Coverage Plans, Market Shares, and Cost Sharing

Nationally, almost 60% of covered workers are enrolled in PPO-type plans, followed by 20% of workers in HMOs and 10% for point-of-service (POS) plans. The "consumer-driven health plans" or high-deductible health plans with savings options (HDHP/SO) grew from 5% in 2007 to 8% in 2009. Most firms that provide health benefits offer only one type of plan; however, large firms are more likely to offer more. Nationally, 65 million people under the age of 65 are enrolled in HMO plans; in Colorado, it was somewhat less than 1 million in 2008.

Employee cost sharing for medical services depends greatly on the type of plan an employee is enrolled in. Cost sharing is defined as an employee's out-of-pocket expenses. These are required premium contributions, general annual deductibles before some or all services are covered, copayments (fixed-dollar amounts), and/or coinsurance (a percentage of the charge for services) when services are received. Cost sharing may also vary by the type of service an employee receives, such as office visits, hospitalizations, or prescription drugs.

Estimates suggest that 14 million more people had problems paying medical bills in 2007 compared to five years ago, even though 78% of these individuals had medical insurance during their illness.

Plan deductibles vary by plan type. Eighty-four percent of workers in HMOs do not have an annual deductible. Individuals with single coverage who have annual deductibles pay on average $699 for HMO plans, $634 for PPO plans, $1,061 for POS plans, and $1,838 for HDHP/SO plans. The average amount for workers with a family deductible is $1,524 for HMOs, $1,488 for PPOs, $2,191 for PPOs, and $3,626 for HDH/SO plans. HMO average single and family deductible plans increased dramatically, 45%—the only statistically significant increase for individual and family deductible plans. To encourage preventative care and the purchase of prescription drugs, more than 80% of covered workers with general annual deductibles are in plans where the general deductible does not have to be met prior to receiving this coverage.

Many industry watchers claim that consumers have too long been insulated from the actual costs and utility of visits, procedures, and medicines, leading to inappropriate utilization. "Consumerism" is viewed as a potential solution to the healthcare cost predicament, and employers are introducing a range of plan designs to promote this type of behavior. One difficulty for HDHP/SO plans is that information around comparative cost and quality among providers of service is not readily available to inform decision making. Another difficulty arises in that large costs by patients/employees often occur from major surgeries, accidents, or catastrophic illnesses that quickly surpass the deductible and make "shopping for less expensive services" moot. According to the Kaiser Family Foundation study, 42% of employers offering HDHP/SOs have realized lower costs. As firms continue to be interested in these plans, it is likely that their numbers will grow.

One critique of these plan designs is that fewer benefits or higher cost sharing exposes individuals to greater financial risk. Interestingly, vendors specializing in healthcare savings accounts are now working with companies that have employees in HDHP/SO plans to mitigate their cost sharing exposure by negotiating prices to help lower medical bills. Estimates suggest that 14 million more people had problems paying medical bills in 2007 compared to five years ago, even though 78% of these individuals had medical insurance during their illness. This is also concerning to Colorado providers—Colorado hospital respondents reported a 50% increase in bad debt expense from 2003 to 2006, some of which may be attributable to these new plan designs. These plans are forcing

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hospitals and physicians to invest resources to collect directly from patients, increasing healthcare overhead costs.

Sixty-two percent of all U.S bankruptcies are caused by medical problems.

Employers' Healthcare Strategies

Employers are very interested in containing cost increases and have taken an active role in their employees' health. To combat escalating healthcare costs and to realize a consistent annual healthcare premium rate trend, employers are implementing a variety of strategies. The reasoning behind these strategies is to improve understanding of employees' medical utilization patterns; increase effectiveness of worker's compensation programs; and improve worker productivity, absenteeism, and turnover rates—all of which adversely impact the firm's bottom line. Businesses believe implementing all or some of these strategies will enable them to better manage their medical costs, determine which services bring value to their employees and which do not, and lower barriers to cost-effective services. Examples of these strategies include customized benefit designs, educational programs, disease management programs, workplace screening, health assessments, rewards and incentive plans, employee assistance plans, wellness and prevention programs, and on-site clinics. Typically, large employers have the resources to invest in several programs. However, many of these programs are also available from carriers to employers in the small-group market, and even very small employers can institute wellness initiatives (such as Weight Watchers, America on the Move, tobacco cessation) for very low costs.

Colorado Legislative Initiatives

The 2006 General Assembly created a Blue Ribbon Commission for healthcare reform. The purpose of the commission was to study healthcare reform models with the goals to increase coverage and decrease costs. The final report was delivered to the legislature in January 2008.

Commissioners constructed a proposal, endorsed by 24 of the 27 members, which did not support either a single-payer or a market-only solution, but built on the existing system. Commissioners recommended continuation of the public-private financing. In addition, they called for enhancing reimbursement in public programs (to decrease cost shifting to business) and moving toward an individual mandate (which requires that everyone has health insurance). In addition, they offered recommendations to improve quality, transparency, and administrative efficiencies.

One direct result emanating from the commission's report is reflected in an Executive Order signed by Governor Ritter to create the Center for Improving Value in Health Care (CIVHC). A multi-stakeholder board has been selected and a director has been hired to be the nexus for impacting cost and quality for the benefit of Coloradans.

Another commission recommendation was to expand Colorado's Medicaid and Children Health Plan Plus (CHP+) programs, noting that Colorado's programs are leaner than those of almost every other state. These programs draw down 50% federal matching dollars. One mechanism that states use to raise their share of the match is from "provider fees." In 2008, the Colorado General Assembly passed HB 08-1114, which assesses a provider fee on nursing homes. In 2009, the General Assembly passed HB 09-1293, which assesses a similar fee on hospitals. Provider fees are a funding source eligible for federal matching funds when used to reimburse Medicaid covered services. The state imposes a fee on a class of healthcare providers, and the federal government matches the revenue generated through the fee. The state then uses the new revenue to pay for health programs. In Colorado, the additional funds are expected to allow for expanded Medicaid and CHP+ eligibility and to reduce undercompensated care and the resulting cost shifting in the healthcare system. Governor Ritter appointed the Hospital Provider Fee Oversight and Advisory Board, which will be responsible for working with the Department of Health Care Policy and Financing and the Medical Services Board, to develop the hospital provider fee model. The model will be submitted to the federal Centers for Medicare and Medicaid Services (CMS) for final approval. Implementation is expected to begin in the spring of 2010.

Sixty-two percent of all U.S bankruptcies are caused by medical problems.

In 2007, the General Assembly passed HB 07-1355, which ends a practice of insurance rating flexibility that includes health status in the premium calculation for small-group insurance. All other band rates, that is, the use of age, geography, industry, tobacco use, and family composition, remain. According to the insurance industry, health-status rating creates an environment where incentives are aligned with healthy behaviors, and 60% of small groups experienced premium discounts of up to 25%. Advocates for the bill supported a "more fair" community rating basis, pointing out that small businesses should not be penalized for hiring persons with medical conditions and cited a Division of Insurance fact that many of the small groups that received the larger discounts had seen their rates go up the following year. The immediate impact of the loss of flexibility means that businesses that were seeing the discount will have that eroded at the same time their premiums will be increasing anyway. Both sides dispute the ultimate effect on the number of lives that the small-group market will continue to cover and whether the number of carriers that offer small-group policies will change. In 2008, the legislature passed HB 08-1012, which allows carriers to provide a financial incentive to small businesses that engage in health promotion activities. At this time, one carrier (Humana) has announced plans to do so.

Activities at Fitzsimons accounted for $3.5 billion of economic production in the state's economy, generating $1.4 billion in personal income in 2008.

Healthcare Drives Spending in Other Sectors: Construction and Information Technology

Construction

In recent years, capital spending in the healthcare sector has included new and improved equipment and buildings. An informal sampling of hospital construction and renovation projects indicates 17 new facilities and 11 renovations were completed within the last five years. In the current economic climate and financial market, this trend is not expected to continue. Tightening access to credit from banks and bond markets is adding to the financial challenge. According to a recent American Hospital Association survey, more than half of all hospitals are reconsidering or postponing capital expenditures for new buildings and renovations. Similarly, 45% of hospitals are considering putting off capital expenditures in clinical technology and equipment. As credit markets rebound, hospitals may continue to find borrowing to be difficult and expensive. High demand could result in only the highest-rated hospitals being able to access credit.

In spite of this, high-profile construction projects in 2009 and beyond include the relocation of St. Anthony Hospital to Lakewood, the expansion of Lutheran Medical Center in Wheat Ridge, and the new Rocky Mountain Hospital for Children on the Presbyterian/St. Luke's Medical Center Campus in Denver.

The continued development of the Fitzsimons Campus provides a vital stimulus to the Colorado economy. The reuse and development of the former 578-acre Fitzsimons Army Medical Center, located in Aurora, broke ground in 1998. The development phases span 20+ years, with a budget greater than $5 billion. It is dedicated to patient care, medical education, life science research, development, and commercialization (industry and academic). The projected economic impact for 2008, excluding construction workers, includes 15,900 jobs at Fitzsimons/Anschutz (many of whom were already employed in Denver prior to the move). Economic activities at Fitzsimons/Anschutz in 2008 supported 20,200 other jobs throughout Colorado, yielding a total of 36,100 positions. Activities at the facility accounted for $3.5 billion of economic production in the state's economy, generating $1.4 billion in personal income in 2008.

The long-term economic impact for 2013 is projected to produce $2.8 billion in annual operating expenditures. Following the relocation of the VA Hospital, expected growth in healthcare service delivery at the University of Colorado Hospital and the Children's Hospital, and development in the Life Sciences District, a total of 20,300 jobs will be

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HEALTHCARE SERVICES EMPLOYMENT
2001–2010
(In Thousands)

Year	Ambulatory Care	Hospitals	Nursing Care	Social Assistance	Total[a]
2001	71.0	44.4	32.6	29.1	177.2
2002	74.7	45.4	33.8	30.0	183.9
2003	77.4	46.4	33.9	30.3	188.0
2004	78.7	48.1	34.3	31.3	192.4
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	35.6	210.9
2008	90.4	53.7	37.6	38.2	219.9
2009[b]	92.8	54.6	38.2	39.9	225.5
2010[c]	96.1	55.6	38.8	40.9	231.4

[a]Due to rounding, the sum of the individual items may not equal the total.

[b]Estimated.

[c]Forecast.

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

based at Fitzsimons/Anschutz in 2013, supporting 24,300 additional jobs in Colorado. These jobs will provide $1.8 billion in personal income and generate $4.5 billion in total economic output annually.

By 2018, the projected economic contributions associated with Fitzsimons/Anschutz include $3.3 billion in annual operating expenditures; more than 3,200 undergraduate and graduate students at UC Denver (not including medical residents and fellows); 23,100 jobs based on-site, supporting another 28,100 elsewhere in the metropolitan area and across Colorado; and nearly $2.1 billion in labor income annually. Beyond 2018, university and private-sector bioscience research and development will continue to expand, along with increased healthcare delivery.

Health Information Technology

Federal, state, and local agencies are driving numerous health information technology (HIT) initiatives related to a broad agenda to "transform" healthcare through improved efficiency, better quality of care, and more information "transparency" for consumers. Through executive branch actions, legislative mandates, and other public-private partnerships, states are increasingly active in establishing targets for HIT adoption, setting up leadership and oversight entities, and in some cases, providing resources and incentives for HIT adoption. Federal American Recovery and Reinvestment Act (ARRA) stimulus funds are slated to fund physician adoption of electronic medical records.

Colorado's efforts to develop statewide interoperability continue through numerous avenues. These include the $5 million Colorado Health Information Exchange (COHIE) project originally funded by the Agency for Healthcare Research and Quality (AHRQ) to develop technical architecture to exchange information between Denver Health Medical, Kaiser Permanente, and University Hospital. There are numerous local HIE "nodes," including healthcare providers in Mesa, El Paso, and Weld counties.

A multi-stakeholder coalition called the Colorado Regional Health Information Organization (CORHIO) incorporated in March 2007 as a 501(c)3 nonprofit organization, built upon the foundation of the COHIE project. CORHIO is working to build Colorado's capacity for a statewide health information exchange-based on a federated, web-based model. CORHIO will lead the development and be responsible for the ongoing operation of this statewide network, linking an array of providers, organizations, and networks throughout the state and eventually a bridge to other states' networks. CORHIO has been funded by local foundations and has been named by the governor to manage the ARRA funds—a total of about $30 million over the next few years.

In 2009, the Colorado Hospital Association and the Colorado Behavioral Healthcare Council formed the Colorado Telehealth Network that will provide high-speed broadband services to nearly 400 of the state's urban and rural healthcare and behavioral health providers and facilitate telemedicine access. Once complete, the Colorado Telehealth Network will be the among the largest healthcare information networks in the nation. The network will enhance the delivery of health services, especially to patients in rural areas. It will help control costs and make care more affordable, reduce travel time for patients, decrease medical errors, and enable healthcare providers to share critical information. It also will help minimize the amount of time workers are away from their jobs visiting healthcare professionals.

Trends

Hospital Quality and Transparency

In 2005, Colorado hospitals released quality indicators to the public through the Colorado Hospital Association Performance and Quality Group, whose members represent healthcare, business, and governmental organizations. Colorado consumers now have available 11 risk-adjusted mortality indicators and 4 volume indicators to gauge performance of Colorado full-service hospitals. The publication of hospital infection rate reports began in 2008. A Presidential Executive Order issued in 2006 requires the federal government to release hospital and physician data from Medicare, the Department of Defense, and Federal Employee Benefits programs on costs and quality of care. Over the past four years, Medicare has required participating hospitals, nursing homes, renal dialysis centers, and home health agencies to post quality of care data on the web, with reimbursement penalties for failing to report. As of October 2008, Medicare will reduce reimbursement for eight adverse "hospital-acquired conditions" (such as certain infections or bedsores), thereby pushing the industry toward greater safety and accountability for the benefit of consumers. Many employers and health plans are also endorsing policies to deny payments to hospitals for avoidable, adverse outcomes called "never events."

It is estimated that lifestyle behaviors contribute up to 50% of an individual's health status.

In 2009, the Colorado Hospital Association and the Colorado Division of Insurance jointly published average hospital charges and average insurance reimbursements for the most common illnesses and procedures provided in hospitals. The interactive website complements the quality reporting and is intended is to help consumers make educated choices regarding their healthcare needs.

Paying for Performance, Not Volume

It is broadly agreed that the current disjointed, fee-for-service model does not promote efficiency or quality. Efforts adopted by Medicare, private purchasers, and payers, dubbed "pay for performance," will pay financial rewards to hospitals and physicians whose data reflect that they are improving quality through top performance on process and outcome metrics related to patient care. The premise is that improved quality of care, combined with publicly disclosed performance data, will result in better care and lower costs. Bridges to Excellence (BTE) is a program designed to reward physicians for improved care for patients with diabetes and cardiac conditions. Employers and health plans are paying these awards to physicians who voluntarily seek national recognition and manage their patients to the appropriate targets for blood pressure, lipids, and blood sugar levels. Research has shown that physicians deliver, on average, about half the recommended care and that excellence in practice results in fewer emergency department visits, fewer inpatient admissions, less absenteeism, and a reduction in the morbidity and mortality in the population. The Colorado BTE Program is operating along the Front Range. Since its inception in 2006, the program is now recognized by more than 200 physicians.

Poor Choices by Consumers Drive Costs

It is estimated that lifestyle behaviors contribute up to 50% of an individual's health status. For example, the epidemic of obesity leads to diabetes, smoking leads to heart disease, and the excessive use of alcohol leads to increased motor vehicle deaths, liver damage, and unintentional injuries.

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The impact of these lifestyle choices significantly affects healthcare costs.

Of the $500 billion spent annually in the United States to treat the top 10 most expensive diseases, $93 billion are attributed to obesity-related factors.

While Colorado boasts the lowest rate of obesity in the nation, residents are getting bigger. Nineteen percent of Colorado adults are considered obese, a 2% increase from 2006.

The prevalence of smoking in Colorado is about 19% of the adult population, just slightly under the median for all states. Smoking results in Colorado productivity losses and direct healthcare expenses totaling more than $2 billion annually. An estimated 4,300 smokers in Colorado die each year. The state excise tax on cigarettes is used to fund tobacco control programs.

Each year, alcohol abuse costs the United States an estimated $185 billion, according to the National Institute on Alcohol Abuse and Alcoholism. But only $26 billion, 14% of the total, comes from direct medical costs or treating alcoholics. Almost half, $88 billion, comes from lost productivity. Alcohol abuse or binge drinking has an adverse effect on health due to increased injuries and deaths, increased aggression, damage to the fetus and liver diseases, along with other health concerns. Colorado ranks among the upper half of states with residents who abuse alcohol. Deaths by drunk driving have steadily declined over the years in the state. In 2006, about one-third of all traffic fatalities (533) involved a blood alcoholic concentration of 0.08 or higher—the lowest percentage since 2000.

It would be beneficial for public policymakers, employers, and individuals to continue to create opportunities to implement smoking, drug, alcohol, and wellness programs to encourage healthy lifestyles for Coloradans and their families.

As our population ages and our lifestyle behaviors catch up with us, healthcare expenditures will continue to rise. Chronic diseases are the most prevalent, costly, and preventable of all health diseases. Seventy-five percent of the health expenditures in the nation are spent on those with chronic diseases. Approximately 125 million people in the United States have at least one chronic illness (e.g., heart disease, respiratory disease, diabetes).

According to the 2009 Commonwealth Fund study measuring all states' health performance, Colorado ranks in the middle. The ranking, based on 38 indicators, spans the dimensions of access to prevention and treatment services, efficiency of care delivery, and healthy living. Colorado's health outcomes of relatively low prevalence of obesity, low levels of air pollution, and low rates of cancer and cardiovascular deaths provide the opportunity for residents to lead full and productive lives. Yet, we continue to see signs of our state's health system under stress that impacts the fabric of our families, businesses, and economy. ✜

Leisure and Hospitality

Overview

The Leisure and Hospitality Supersector includes performing arts, entertainment, and recreation organizations, as well as accommodations and food services. This supersector of the Colorado economy encompasses the recreational and entertainment activities of both Colorado residents and tourists, and the effects of business travelers to Colorado. Over the years, Colorado's appeal has expanded beyond that of our natural environment to include a vibrant sports, entertainment, and business community.

The industry has been hard hit by the economic recession because it depends heavily on discretionary spending. The downturn, with its job losses, uncertainty, and cuts in business spending, continues to weaken the tourism industry and sends discouraging signals for the months ahead. Key statistics released by the U.S. Department of Commerce confirm that the current economic downturn has created the most difficult environment for the tourism industry since 9/11. PhoCusWright projects a 15% decline in the U.S. corporate travel market by 2009 year-end. The total U.S. travel market is expected to fall 11% in 2009, dipping below 2006 levels. International travel to the United States remains depressed—monthly reports show that visitation is off by as much as 12% and spending is down 24% from 2008. July 2009 marked the ninth-straight monthly decline, year over year.

The Smith Travel Research (STR) lodging forecast projects U.S. 2009 occupancy to be down 8.4%, to 55.4%; the average daily rate (ADR) to decline 9.7%, to $96.43; and revenue per available room (RevPAR) to end the year down 17.1%, to $53.43. Supply in 2009 is projected to increase 3%, while demand is expected to slump 5.5%.

STR's outlook is slightly better for 2010, but decreases are anticipated in all three key metrics. Occupancy is projected to drop 0.6%, ADR is forecasted to slide 3.4%, and RevPAR is expected to fall 4%. Supply and demand are both expected to end 2010 with positive growth. Supply is estimated to be up 1.8%, and demand is expected to increase 1.3%.

The Air Transport Association reported the sharpest drop in passenger demand in a decade as June passenger revenue fell 26% versus the same month in 2008—the eighth-consecutive month in which passenger revenue has fallen year over year. The airline industry projects continued declines beyond the end of the recession. Customers are not flying, and are putting off purchases and trading down to cheaper fares. Airlines are concerned that this behavior will continue. In this "new normal" environment, consumers are conserving cash to

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LEISURE AND HOSPITALITY EMPLOYMENT
2001–2010
(In Thousands)

Year	Arts, Entertainment, and Recreation	Accommodations	Food Service	Total Accommodations and Food Service[a]	Total Leisure and Hospitality[a]
2001	42.1	40.4	164.8	205.1	247.2
2002	41.1	39.8	166.2	205.9	247.0
2003	40.5	39.3	165.8	205.1	245.6
2004	42.2	39.1	170.0	209.1	251.3
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	45.5	42.5	185.0	227.5	273.0
2009[b]	43.0	40.2	174.8	215.0	258.0
2010[c]	43.0	40.0	174.5	214.5	257.5

[a]Due to rounding, the sum of the individual items may not equal the total.

[b]Estimated.

[c]Forecast.

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

Leisure and Hospitality

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cover essentials, spending less when they do take trips, and staying closer to home. They are also eating out less, looking for bargains, and trying to do more with less when planning and taking vacations.

Additional tourism scares weaned even the savviest traveler from unnecessary trips. The swine flu pandemic and the associated media coverage nearly devastated parts of Mexico with significant tourism economies. In addition, international familiarization tours and media visits to U.S. destinations were postponed.

A July 16, 2009, a *U.S. News and World Report* blog identified eight industries that will "sit out the recovery" as they are "mired in a world of hurt with weak prospects for improvement any time soon." Among that list were travel industry sectors—airlines, hotels, cruise lines, and casinos. The road to recovery is likely to be long and hard.

Tourism in Colorado

Colorado's tourism economy reflects many of these national trends and will continue to mirror them in 2010. With the recession and cautious consumers reducing expenditures, receipts in Colorado's travel, tourism, outdoor recreation, leisure, and hospitality economy are expected to decline by a modest 5% in 2010, suggesting a bottoming from the double-digit declines of 2009.

Employment

The strong employment performance of the Leisure and Hospitality Supersector came to an abrupt halt in 2009, losing more than half the jobs created over the previous five years. While a total of about 27,400 jobs were added between 2003 and 2008, a projected 15,000 positions will be lost in 2009. While employment in this sector is anticipated to contract again in 2010, the job loss is expected to be a modest 500 positions.

Food service dominates the employment picture for this supersector, accounting for more than two-thirds of total leisure and hospitality employees.

Accommodations

According to the *Rocky Mountain Lodging Report*, 2009 statewide lodging occupancies (through August) contracted 8 percentage points from 2008 (57.2% compared to 65.2%) and ADR dropped $12.71 ($120.32 compared to $133.03), or 9.6%. RevPAR has taken the biggest hit, down $15.92 ($68.82 compared to $84.74), or a loss of 18.4%. These declines are consistent with national trends.

The Colorado lodging and hospitality forecast table on page 81 shows a moderate decline for 2010. For the state as a whole, occupancy rates are expected to slide an additional 1.9%. ADR will fall 4.7%, and RevPAR will decrease 7.3%. It will most likely be 2011 before the accommodations sector fully recovers.

The Denver Area

Unprecedented record lows across the travel industry were recorded in 2009. According to PKF Consulting, the industry posted the greatest percentage drop in RevPAR (2009) since the Great Depression. According to the September 2009 edition of PKF's *Hotel Horizons,* declining demand for U.S. hotels will continue until Q2 2010. Unfortunately, the practice of price discounting has firmly taken hold, and, as a result, room rates are expected to decline once again in 2010. PKF believes that in 2010 the country will see a 1.6% increase in lodging demand, which will surpass a 1.2% increase in supply. This will result in a 0.4 percentage rise in the annual occupancy rate; however, the average room rate is expected to drop another 3.1% due to the sagging economy and discounting.

While Denver fared better in Q4 2008 than many parts of the country, the recession was having a staggering effect by Q1 2009. Market conditions continued to weaken significantly during the first eight months of 2009, leading to declines in occupancy rates and ADR. As a result, RevPAR fell by $17.69 during the first eight months of 2009, to $64.01, compared to a similar period in 2008. This represents a 22% decrease. Occupancy rates declined to 60.3% during the first eight months of 2009 from 68.5% during same period in 2008. Through August 2009, ADRs in the Denver Metro Area (DMA) lodging market dropped 11%, to $106.20, compared to $119.20 through August 2008. In downtown Denver, lodging market conditions have shown a similar trend, with a 22% decrease in RevPAR through August 2009 compared to the same time frame in 2008.

Another recognized source, PKF's *Hotel Horizons,* projects that Denver hotels will see a RevPAR decrease of 23.4% by the end of 2009. This is the result of an estimated 12.9 percentage point drop

COLORADO LODGING AND HOSPITALITY FORECASTS

	2009			2010		
	Occupancy	Average Daily Rate	RevPAR	Occupancy	Average Daily Rate	RevPAR
Denver Metro Area						
South and Southeast	54%	$95.30	$51.46	53%	$91.00	$48.23
Midtown	52	77.60	40.35	50	73.00	36.50
Downtown	63	139.00	87.57	62	135.00	83.70
Northeast	63	92.80	58.46	63	90.00	56.70
West	54	91.10	49.19	53	87.00	46.11
North Denver	43	71.40	30.70	41	65.00	26.65
Highway 36 Corridor	57	99.40	56.66	58	98.00	56.84
Boulder	61	113.40	69.17	62	114.00	70.68
Subtotal	57	105.50	60.14	55	100.00	55.00
Percentage Change	*-14.9%*	*-15.6%*	*-28.2%*	*-3.5%*	*-5.2%*	*-8.5%*
Total Colorado Springs	56	$85.20	$47.71	56	$83.00	$46.48
Percentage Change	-3.4%	*-2.6%*	*-6.0%*	*0.0%*	*-2.6%*	*-2.6%*
Resorts						
Vail	45	243.40	109.53	41	245.00	100.45
Aspen	48	333.50	160.08	46	325.00	149.50
Steamboat	53	144.10	76.37	52	135.00	70.20
Winter Park	28	118.60	33.21	30	115.00	34.50
Other resorts	42	216.30	90.85	41	200.00	82.00
Subtotal	42	212.20	89.12	40	202.00	80.80
Percentage Change	*-20.8%*	*-12.1%*	*-1.8%*	*-4.8%*	*-4.8%*	*-9.3%*
Other Colorado Cities						
Durango	54	120.90	65.29	53	117.00	62.01
Grand Junction	59	82.70	48.79	58	81.00	46.98
Glenwood Springs	55	106.90	58.80	54	108.00	58.32
Estes Park	49	150.80	73.89	50	145.00	72.50
Fort Collins	50	86.20	43.10	50	84.00	42.00
Other Colorado areas	53	87.10	46.16	52	82.00	42.64
Colorado Total	54.0%	$117.50	$63.45	53%	$112.00	$58.80
Percentage Change	*-14.3%*	*-10.3%*	*-23.1%*	*-1.9%*	*-4.7%*	*-7.3%*

Source: HVS, Inc. *Rocky Mountain Lodging Report* , and Colorado Business Economic Outlook Committee.

in occupancy and a 12.1% decline in the ADR. PKF also projects that Denver's occupancy levels are expected to range from 56.4% to 63.2% during 2010-2013.

The recession has impacted all aspects of the city's travel industry, resulting in declines in restaurant business, attendance at events, and retail spending. A consequence of the downturn is that Denver city employees will take four nonpaid furlough days to help balance the budget as the city faced a multimillion dollar shortfall for the 2009-2010 fiscal year.

In terms of supply, the Denver metro area realized fewer than 1,200 new hotel rooms in 2009. Many of the projected new rooms slated to open in 2010 are now on hold due to the financial market crisis and the weak national economy. No new rooms were added to downtown Denver in 2009. The 1,225-room Sheraton Denver Hotel (formerly the Adam's Mark Denver Hotel) underwent a $70 million renovation that was completed in September 2009. The hotel remained open during the renovation.

A 230-room Four Seasons Hotel is under construction and scheduled to open mid-2010 in downtown Denver. In addition, the Embassy Suites project adjacent to the convention center will add 400 rooms by

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late 2010. Projects still on the drawing board are a new 200-room hotel project at 15th and California and a 180-room W Hotel near Larimer Square in downtown, as well as a 500-room Westin Hotel attached to the terminal at the Denver International Airport (DIA).

Convention Business

National competition for lucrative citywide conventions is intense. With the expansion of the Colorado Convention Center, Denver competes against all major U.S. destinations, including those that have been branded as major convention cities for decades.

Meeting planners looking for convention centers have witnessed a "buyer's market" because so many cities have added or expanded their centers. This will continue through 2011, with several new buildings coming on line. According to a Metropol study, a national survey of major associations and leading corporate meeting planners, 73% of those surveyed plan on negotiating more discounts and concessions in 2010 and 66% indicated that they will shop for value before choosing meeting destinations and hotel properties.

Competition for the Colorado Convention Center also comes from large hotels with an abundance of meeting and exhibit space. These "mega-hotels" are facilities so large that they allow the meeting planner to bypass the use of a convention center and have their entire meeting within the confines of one hotel. In many cases, these properties offer complimentary meeting space, as well as the convenience of doing business with one facility.

Denver remains well positioned as the Colorado Convention Center can host approximately 95% of all convention and meeting business in the nation as long as the hotels continue to provide substantial room blocks. In 2009, for the second straight year, Denver was recognized by *Tradeshow Week* magazine as a top 10 tradeshow destination for the number of exhibitions held in the top cities around the country.

Denver is a strong convention city and is increasingly perceived by meeting planners as a first-tier destination. The city's "bricks and mortar" meeting infrastructure continues to rate high with meeting planners. In addition, the perception of Denver's experiential and destination appeal (attractions, nightlife, arts and culture, shopping, and dining) is also improving. Hosting high-profile events like the Democratic National Convention (DNC) and many of the national conventions over the last several years has helped brand the city as a premier tourism and convention destination. The DNC gave Denver an increased competitive advantage in three areas that meeting planners consider when selecting a destination: world-class hospitality, green/sustainability, and reputation for handling large events.

Coming off a record high in 2008, Denver's 2009 convention year was still solid for number of groups, attendees, and room nights. The decreasing hotel occupancies and average rates can be largely attributed to the business traveler market that evaporated in 2009. Next year is on pace to be one of the better years in Denver's meeting and convention history. The year-to-date percentage of number of room nights currently on the books for 2010 versus the same time frame in 2009 represents more than a 12% increase.

Denver Tourism

Denver has experienced five consecutive years of growth in number of visitors; however, there is concern that the recession and poor economy will erode 2010 bookings. The U.S. Travel Association estimates that domestic leisure travel will fall 2% or more in 2010.

Consumers remain cautious about discretionary travel spending and are even more demanding of value for the price. They are looking for the "best deal," which does not necessarily mean "cheap." Bargains abound in the travel industry, but price is not the only factor important in the decision-making process. Consumers still need to be inspired, and they want an exciting, memorable, and unique travel experience. The U.S. travel industry continues to see increases in "stay-cations," trips that are closer to home and shorter in length. Early analysis reveals that Visit Denver's and the Colorado Tourism Office's stay-cation marketing efforts worked well in 2009. The only downside is that spending by these travelers is typically much less than that of the out-of-state vacationer.

Denver competes against other vacation options, including cruises and beach getaways, as well as destinations around the world, many of which have much larger marketing budgets. The city's geographic isolation and reliance on air access remain a concern in terms of maintaining or increasing visitor numbers and spending in 2010. Collaboration with DIA in air service development is vital to Denver's tourism success both domestically and internationally. The current stresses within the airline industry threaten future tourism growth because access and competitive fares are crucial to the city's success as a leisure destination.

The city is no longer considered just a gateway to the mountains, but rather is establishing itself as a competitive U.S. and global urban destination.

Denver is a huge contributor to Colorado's leisure tourism success, with city visitors representing more than 4 in 10 of the state's visitors. According to Longwoods International, some 12.2 million overnight visitors spent $3.1 billion in Denver in 2008, up 9% over 2007 and the most money ever spent by visitors in Denver in a single year. Most of the growth in visitors and spending came from "marketable" visitors—those who could travel to any destination, but chose to visit Denver. These visitors totaled 4.1 million in 2008, up 3% over the previous year and representing the fifth-consecutive year of growth in leisure travel.

In 2010, Denver is poised to take advantage of large events with tourism appeal, including Denver's Biennial of the Americas, blockbuster exhibitions at the Denver Museum of Nature and Science, as well as the *Tutankhamun: The Golden King and the Great Pharaohs* exhibit coming to the Denver Art Museum in July.

Casinos and Gaming

Colorado's casino and gaming industry continued to experience a downturn through the first six months of 2009, but has been a bright spot in the economy the latter half of the year, due in large

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COLORADO CASINOS
2001–2010

Year	Colorado Casinos Open	Colorado Devices (In Thousands)	Adjusted Gross Proceeds[a] (In Millions)			
			Black Hawk	Central City	Cripple Creek	Total
2001	44	14.6	$478.3	$59.7	$139.5	$676.7
2002	43	15.6	524.5	52.8	142.4	719.7
2003	44	15.5	505.9	49.9	142.5	698.3
2004	45	15.7	524.0	53.2	148.7	725.9
2005	46	16.4	531.9	72.6	151.0	755.5
2006	46	17.1	554.5	74.5	153.1	782.1
2007	44	16.9	581.4	79.8	154.9	816.1
2008	42	17.0	514.8	66.5	140.9	722.2
2009[b]	40	16.1	514.7	64.0	140.5	719.2
2010[c]	40	16.1	527.5	65.6	144.1	737.2

[a]Adjusted Gross Proceeds is calculated on an annual basis, hence different from the state fiscal year.
[b]Estimated.
[c]Forecast.
Source: Colorado Division of Gaming and Colorado Business Economic Outlook Committee.

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part to new legislation. The betting limit in Colorado had been $5, but on July 2, 2009, it increased to $100. Casinos were allowed to stay open 24 hours and could add craps and roulette, as well.

Those changes resulted in a large jump in adjusted gross proceeds (AGP) for July 2009, $76.1 million versus $65.7 million the previous year. (AGP is defined as the amount wagered by betters less payout from casinos.) August 2009 AGP was up modestly over August 2008 as the enthusiasm surrounding the advent of new games, higher betting limits, and longer hours waned. The new legislation, plus consumers seeking entertainment closer to home, leads to an expected gain of 2.4% in AGP for 2010.

Black Hawk continues to dominate the Colorado casino sector. It is clearly the leader, with 16 casinos, over 9,000 gaming devices, and more than 70% of the industry's AGP.

In addition to the state-regulated casinos, Native American tribe casinos are located in the southwest part of the state. The Sky Ute Casino in Ignacio and the Ute Mountain Casino in Towaoc make important economic contributions to their local economies, although their data are not available and are not included in this analysis.

Restaurants

According to the National Restaurant Association, for every $1 spent in restaurants in Colorado an additional $1.29 in sales in other industries in the state is generated. Each additional $1 million spent in eating and drinking places in Colorado generates another 30.4 jobs. Eating and drinking establishments in Colorado number an estimated 10,500 and serve more than two million meals a day. Restaurant sales volume will top $8.4 billion in 2009, up from $8.1 billion in 2008.

Employment data show that the Colorado restaurant industry has not been hit nearly as hard as other Leisure and Hospitality sectors. On a year-to-date basis through September 2009, employment in eating and drinking places was down 2% in Colorado. During the same period, the other sectors within Leisure and Hospitality saw a 6% employment decline. The restaurant industry is

COLORADO PARKS VISITS
2001–2009
(In Thousands)

Parks	2001	2002	2003	2004	2005	2006	2007	2008	2009[a]
Bent's Old Fort NHS	31.0	29.8	31.2	31.0	27.8	26.5	24.0	25.0	28.8
Black Canyon of the Gunnison NP	181.0	173.7	167.2	175.6	180.8	160.5	219.6	160.2	179.1
Colorado NM	237.6	294.0	336.6	352.6	347.1	332.7	395.3	391.0	401.0
Curecanti NRA	879.8	732.7	1,008.8	1,006.1	882.8	936.4	964.6	1,007.4	961.5
Dinosaur NM[b]	241.5	221.4	289.8	325.3	360.6	278.5	230.9	201.7	186.2
Florissant Fossil Beds NM	79.7	62.5	67.5	61.3	59.5	56.1	56.0	57.0	64.7
Great Sand Dunes NM	277.5	234.8	251.4	267.2	279.6	258.7	285.1	273.9	289.0
Hovenweep NM[b]	16.5	13.6	29.7	26.9	26.7	26.3	26.3	25.4	27.4
Mesa Verde NP	513.4	406.4	438.6	446.8	498.3	557.2	541.1	551.4	549.4
Rocky Mountain NP	3,139.7	2,988.5	3,067.3	2,781.9	2,798.4	2,743.7	2,895.4	2,757.4	2,882.1
Total Visitors to Parks and Sites	5,597.6	5,157.4	5,688.2	5,474.6	5,461.6	5,376.6	5,638.3	5,450.5	5,569.2

[a]Estimated.

[b]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.

Source: National Park Service and Colorado Business Economic Outlook Committee.

not without challenges; however, it is faring better than the other sectors, simply because a majority of the customer base is local. A final factor that will slightly bump up restaurant sales is continued net migration to the state.

Parks and Outdoor Recreation

Colorado has an incredible outdoor recreation system anchored by premier national parks. Yet, visitation to state parks, national forests, Bureau of Land Management lands, and various county and city parks and open-space areas exceeds the visitation to National Park Service (NPS) properties in the state.

The more than 5.5 million visits to NPS areas are an important component of tourism and the overall outdoor recreation system in Colorado. While many destinations have experienced losses this year, national parks have bucked the trend and are heading for a record-breaking year. Colorado national parks are on track to follow this trend. Through September 2009, NPS visits in Colorado were up 117,000 visits. It is projected that NPS visits will increase more than 2% in 2009 and another 2% the following year. Filmmaker Ken Burns' series, "The National Parks: America's Best Idea," which aired on PBS in 2009, is expected to keep interest in the parks high into 2010.

Colorado state park visits have been climbing, a testimony to the work of Colorado State Parks. The organization oversees the state park system and is celebrating its 50th anniversary in 2009. Colorado's 43 state parks attract more than 11 million visitors each year. Estimated expenditures by Colorado state park visitors, as measured by purchases made within a 50-mile radius of the parks, total more than $200 million.

Since consumers are traveling closer to home and are seeking less expensive activities, it is projected that outdoor recreation activity will perform better than overall state tourism. Thus, outdoor recreation visitation is forecasted to increase by 2% in 2010.

Skiing Industry

Colorado's ski areas recorded 11.85 million skier visits in the 2008-09 ski season, a 5.5% drop compared to the previous season. Nevertheless, it was the state's fourth-best season on record. On a national level, the National Ski Areas Association

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COLORADO SKIER VISITS BY TYPE OF SKI AREA
1999–2010
(In Millions)

Season	Destination Resorts[a]	Front Range Destination Resorts[b]	Gems/Front Range[c]	Total
1999-00	3.47	6.30	1.12	10.89
2000-01	3.58	6.95	1.14	11.67
2001-02	3.38	6.71	1.03	11.12
2002-03	3.46	6.85	1.30	11.61
2003-04	3.52	6.56	1.17	11.25
2004-05	3.64	6.91	1.26	11.81
2005-06	3.72	7.47	1.33	12.53
2006-07	3.81	7.37	1.38	12.56
2007-08	3.87	7.18	1.49	12.54
2008-09	3.54	6.88	1.43	11.85
2009-10[d]	3.34	6.68	1.40	11.43

[a]Resorts *more* than a two-hour drive from Denver with a bed base. This includes: Aspen Highlands, Aspen Mountain, Buttermilk, Crested Butte, Purgatory, Howelsen Hill, Silverton, Snowmass, Steamboat, Telluride, and Wolf Creek.

[b]Resorts *within* a two-hour drive of Denver with a bed base. This includes: Beaver Creek, Breckenridge, Copper Mountain, Keystone, Vail, and Winter Park.

[c]Resorts either within a two-hour drive from Denver and/or with no bed base. This includes: Arapahoe Basin, Echo Mountain, Eldora, Loveland, Monarch, Powderhorn, Ski Cooper, SolVista, and Sunlight.

[d]Forecast.

Source: Colorado Ski Country USA and Colorado Business Economic Outlook Committee.

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reported a total of 57.1 million skier visits, down 5.5%, with the Rocky Mountain region falling 7.2%.

Skier visits are the measure used to track participation in skiing and snowboarding. A skier visit represents one person participating in the sport of skiing or snowboarding for any part of one day at a mountain resort. "The travel industry as a whole was put to the test this past year," explained Melanie Mills, president and CEO of Colorado Ski Country USA (CSCUSA). "But visitation numbers show not only the enduring value of a Colorado ski vacation, but the strong commitment our resident skiing and riding community has to our state's signature sports."

CSCUSA has historically reported skier visit numbers in three overall categories: destination resorts, Front Range destination resorts, and Gems/Front Range resorts. All categories reported declines compared to the 2007-08 season for a total decrease of 5.5%. The destination resorts posted the largest loss, 8.5%, followed by the Front Range destination resorts, falling 4.2%, and the Gems/Front Range resorts, declining 4%.

While it is hoped that good snow conditions will triumph over economic conditions, the realistic view is the economy will lead to a 3.5% drop in skier visits in the 2009-10 season, resulting in 11.43 million skier visits.

To enhance the skiing experience and draw more crowds, CSCUSA reported that more than $107 million in total capital improvements have been made at nearly all of its resorts for the 2009-10 season. New lifts were added at Aspen/Snowmass, Echo Mountain, Powderhorn, Telluride, and Winter Park, and terrain was expanded at Crested Butte, Echo Mountain, Monarch Mountain, Powderhorn, Telluride, and Winter Park. Buttermilk Mountain, which hosts the ESPN Winter X Games every year, added an Olympic-size superpipe, making it one of five of its size in the United States.

In mid-November, Canada-based Intrawest announced the sale of Copper Mountain to Utah's Powdr Corp.

Air Travel

Air travel is very important to the Leisure and Hospitality Supersector. DIA is the 5th-busiest airport in the United States and the 10th busiest in the world. In 2008, DIA averaged 1,714 fights daily (arrivals and departures) and served 51.2 million passengers, posting its fourth-consecutive record year, with an increase of 2.8% over 2007.

DENVER INTERNATIONAL AIRPORT PASSENGERS
2001–2010
(In Millions)

Year	Enplanements	Deplanements	Total Passengers[a]
2001	18.0	18.0	36.1
2002	17.8	17.8	35.7
2003	18.7	18.8	37.5
2004	21.1	21.1	42.4
2005	21.6	21.7	43.4
2006	23.7	23.7	47.3
2007	24.7	24.7	49.9
2008	25.6	25.6	51.2
2009[b]	25.0	25.0	50.0
2010[c]	25.7	25.8	51.5

[a]Due to rounding, the sum of the individual items may not equal the total.

[b]Estimated.

[c]Forecast.

Source: Denver International Airport and Colorado Business Economic Outlook Committee.

The number of passengers slid in the first six months of 2009; however, good news came in July. With more than 5.1 million passengers, July was DIA's busiest month in history and bucked the trend of declining passenger numbers that started in the fall of 2008. Continuing the positive traffic trend, 4.8 million passengers traveled in August, an increase of 2.3% over 2008, and an indication that Denver air travel is stabilizing in contrast with the national picture. It is still likely DIA will finish 2009 down slightly from the record year of 2008, but the recent positive trends bode well for 2010. Because of the strong competition in the Denver market, it is projected DIA passengers will increase to 51.5 million in 2010.

Colorado Springs has the second-busiest airport in the state. Colorado Municipal Airport enplanements and deplanements serviced just under 2 million passengers in 2008. January to September year-to-date 2009 numbers reveal that overall passenger traffic (enplanements and deplanements) fell by 8.9% from 2008. However, the September decline was much smaller, 2.3%, indicating the situation is improving.

The Grand Junction Regional Airport serves western Colorado. In 2008, an estimated 214,632 passengers enplaned. Traffic year-to-September 2009 climbed 14.1% compared to the same period in 2008.

In addition to DIA, Colorado Springs, and Grand Junction, seven mountain airports provide service to many resorts. Refer to the Trade, Transportation, and Utilities section for more information on air transportation.

Challenges

The biggest challenges facing the Leisure and Hospitality Supersector include the following:

- *The weak economy.* Although glimmers of hope are on the economic horizon, consumer confidence remains low, resulting in weak spending. The trends of shorter distance, shorter lead times, and more budget conscious decisions are the new norm.
- *Discounting.* Rate discipline seems to have disappeared. Price erosion has a detrimental effect on profitability. Pricing strategies will be a real challenge in 2010.
- *Swine flu (H1N1 virus).* It has the potential to keep travelers home.
- *The hassle factor.* The cuts in the number of flights and in personnel have increased security lines, late flights, packed airplanes, and congestion in the skies. Highway congestion is also an issue, and the combination of all of these elements makes visitors and locals ask if travel is still a fun, rewarding experience or if they should just stay at home.
- *The tight state tourism promotion and marketing budget.* The budget was cut by 25% in 2009. In this time of economic uncertainty, the industry will have to make its marketing dollars work harder. ✜

Other Services

The Other Services Supersector includes three sectors: Repair and Maintenance; Personal Laundry Services; and Religious, Grantmaking, Civic, Professional, and Similar Organizations. There are approximately 12,800 firms in the sector. Generally, sector employment is fueled by changes in population. Accordingly, employment will increase by 0.6% in 2010 to a total of 94,100 workers.

Repair and Maintenance Services

In recent years the Repair and Maintenance Sector has not grown with the population as employment levels have been driven by changes in technology. Net employment has decreased slightly since 2003. Motor vehicles are lasting longer, and appliances are becoming cheaper to replace than fix. In addition, during difficult economic times, consumers often choose to hold off on repairs, although in subsectors with goods that are difficult or more expensive to replace, repairs are being made. This has led to limited growth in some areas—other electronic equipment, commercial machinery, and other household goods—but has not supported growth in the sector as a whole.

Automotive repair and maintenance accounts for more than 74% of all repair sector employment. An estimated 8,900 Colorado cars that might have been repaired have been taken off the streets forever because of the "Cash-for-Clunkers" Program.

OTHER SERVICES EMPLOYMENT
2001–2010
(In Thousands)

Year	Repair and Maintenance Services	Personal and Laundry Services	Religious, Grantmaking, Civic, Professional, and Similar Organizations	Total[a]
2001	23.5	21.0	39.3	83.8
2002	23.5	21.1	41.0	85.6
2003	22.8	21.1	41.9	85.9
2004	22.7	21.5	43.2	87.4
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	23.7	48.5	94.9
2009[b]	21.5	23.5	48.5	93.5
2010[c]	21.7	23.7	48.7	94.1

[a]Due to rounding, the sum of the individual items may not equal the total.

[b]Estimated.

[c]Forecast.

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

Commercial machinery repair and maintenance is the third-largest employment sector, with approximately 11.5%. Commercial machinery includes agricultural and other heavy and industrial machinery and equipment (e.g., forklifts, machine tools, construction equipment, and mining machinery). The health of the mining and construction industries has impacted the rate of sector growth in recent years.

Electronic equipment repair and maintenance, which accounts for roughly 8.2% of the sector's employment, has declined in employment, while other electronic and precision equipment repair and maintenance has recorded solid expansion. Finally, overall household goods repair and maintenance is stable.

Repair firms total about 4,400 in Colorado. Average annual wages are slightly less than $38,000.

Personal and Laundry Services

Personal and Laundry Services, the second-largest Other Services sector, comprises four main groups: death care services, dry-cleaning and laundry, personal care services, and other personal services.

The sector has grown consistently since 1990, but will remain flat between 2008 and 2010 as many consumers will spend money only on essential services, such as death services, and possibly postpone nonessential services or find less expensive alternatives (e.g., washing clothes at home versus using professional cleaners). As the economy improves and disposable income increases, consumers may purchase more nonessential services again.

Religious Grantmaking, Civic, Professional, and Similar Organizations

Of the three Other Services Sectors, Religious Grantmaking, Civic, Professional, and Similar Organizations is the largest. It is comprised mainly of nonprofit organizations, grant and scholarship foundations, and business, civic, and professional organizations. The sector employed 48,500 people, nearly 52% of the supersector, in 2009. Employment is expected to remain flat in 2009 and add 200 jobs in 2010.

The slowdown in the economy has reduced personal discretionary spending and business investment, which are important sources of revenue for many of these organizations. Despite increases over the past few years in the average annual wage for employees in this sector, the gains have been at a slower rate. This trend is expected to continue in 2010 due to decreases in organizational revenue. However, some charities, such as food pantries, have seen increased donations in 2009, perhaps in response to the higher demand for goods and services these organizations offer.

Many organizations are facing tough times. For example, some religious day schools across Colorado have closed or are in extreme financial distress as endowments have fallen and families have become unable to afford tuition. Many churches have been forced to cut their national budgets. Large organizations, such as Colorado-based Focus on the Family, which had been growing for decades, have cut jobs and salaries in order to make ends meet. While some organizations may enjoy increases in both membership and funding, others will experience instability and financial distress.

Some homeowners' associations are having trouble collecting dues because of the large number of foreclosures.

Another effect of the recession is that some homeowners' associations are having trouble collecting dues because of the large number of foreclosures. Foreclosures cause difficulties for homeowners' associations because the vacant homes and unpaid dues leave the remaining residents with higher bills to cover the cost of maintenance, water, snow removal, and other services provided by the association. With resets on adjustable rate mortgages looming in the future, more foreclosures will be triggered by homeowners whose home value is falling and loan balance is increasing, leading to problems for more than just the homeowners' associations.

However, there is a silver lining: renewed interest in volunteerism. As Colorado residents are laid off, many are choosing to donate their time to nonprofits, allowing them to keep their skills sharp while searching for new employment. In 2008, Colorado ranked 17th in the nation for the percentage of the population who volunteers and 13th for total hours donated per resident. These numbers are expected to increase in 2009 and into 2010. ✜

Government

Mirroring the national concentration of public jobs, Government is the second-largest supersector in the Colorado economy, making up 16.3% of total nonfarm employment. Government tends to lag private industry in recessionary times; hence, total government employment in Colorado is expected to increase to 389,700 in 2009 (1.5% growth) and then fall to 387,600 in 2010 (0.5% decline).

As Colorado experiences uninterrupted population growth and individuals seek greater government assistance through this downturn, the demand for government services continues to increase. Mandated furlough days for state workers have translated into pay cuts, with the adverse consequence of pushing some into early retirement (to prevent benefits that are based on the average of the last years of employment from being negatively altered), and enticing others into private enterprise. Meanwhile, vacant positions are left unfilled. Thus, while the state added 5,600 government jobs in 2009, the impacts of declining tax revenues will be felt in 2010, especially at the local and state levels, forcing employment cuts.

Overall, government employment is subject to economic cycles and political winds. Gains and losses in total full-time equivalent (FTE) federal employment can be spurred by changes in federal programs, funding levels for scientific research at various institutes and laboratories, and the budget for the state's national parks. State employment is funded from income and sales taxes, which are positively correlated, but sometimes volatile. County budgets, which depend mostly on property taxes and fees, tend to be somewhat more predictable. Municipal budgets hinge on unpredictable local sales taxes that may lead to layoffs and furloughs in years of slow revenue growth.

Federal Government

Federal government employment peaked in Colorado in 1993 with 8,000 more federal jobs in the state than in 2008. This decade, however, Colorado has experienced moderate gains and losses in the federal sector, consistent with the national trend. In 2008, Colorado's federal government payrolls rose 0.2%, compared to 1.1% growth at the national level. Employment will increase in 2009, to a total of 53,500 employees.

The U.S. Postal Service and the Department of Defense comprise more than two out of five federal jobs in Colorado. The U.S. Postal Service employs more than 12,000 workers in the state and over 684,700 employees nationwide. Although urban

GOVERNMENT EMPLOYMENT IN COLORADO
2001–2010
(In Thousands)

Industry Group	2001	2002	2003	2004	2005	2006	2007	2008	2009[a]	2010[b]
Total Government[c]	344.1	355.4	356.2	358.5	362.6	367.2	374.7	384.1	389.7	387.6
Federal	52.9	53.2	53.5	52.9	52.7	52.2	52.1	52.2	53.5	54.6
State	80.0	81.9	80.3	81.5	82.3	82.5	84.7	87.7	89.3	88.3
General	31.3	31.9	30.1	29.7	30.0	30.3	31.3	32.4	32.1	31.0
Education	48.7	50.0	50.2	51.8	52.3	52.2	53.4	55.3	57.2	57.3
Local	211.2	220.3	222.4	224.2	227.6	232.6	237.8	244.2	246.9	244.7
General	102.3	106.5	107.2	108.4	109.9	112.8	115.4	118.0	119.2	116.2
Education	108.9	113.8	115.2	115.8	117.7	119.8	122.4	126.2	127.7	128.5

[a]Estimated.

[b]Forecast.

[c]Due to rounding, the sum of the individual may not equal the total.

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

and rural areas in the state continue to experience population growth, these are offset by an overall decline in mail volume. The economic downturn has perpetuated the transition to paperless—mail volume declined 4.5% in FY 2008, to 202.7 billion pieces. As mail volume depends on economic growth, significant drops are expected in 2009. Additionally, rising fuel costs have contributed to increasing expenses and declining revenues. The second-largest employer, the Department of Defense, accounted for more than 10,600 workers throughout the state in 2008, a 0.7% increase over 2007.

Colorado is home to 24 federal labs conducting ongoing aerospace research, including the National Oceanic and Atmospheric Administration (NOAA) and the University Corporation for Atmospheric Research (UCAR). The Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado at Boulder (CU-Boulder) serves as one of the country's premier labs for designing, building, and controlling spacecraft and scientific instruments. The net economic benefit of federal research facilities and university affiliates was $1.1 billion in 2007. The facilities are projected to have a strong impact in 2008 and 2009—$1.3 billion and $1.6 billion, respectively. LASP is the only lab in the world to have designed and built instruments that have visited every planet in the solar system. In 2008, LASP and Lockheed Martin Space Systems won a contract for the $485 million NASA mission to Mars.

As a result of hiring to conduct the 2010 U.S. Census and ongoing federal spending under the American Recovery and Reinvestment Act (ARRA), federal employment is expected to increase 2.5% and 2.1% in 2009 and 2010, respectively, for total employment of 54,600.

State Government

Historically, the impact of recession on state government employment has lagged private-sector job losses, and the current recession will continue this trend. While state government employment saw modest growth of 1.8% in 2009, employment will decline 1.1% in 2010, a loss of about 1,000 jobs, as the state continues to addresses budget shortfalls by reducing staff. The economic downturn in 2001-2002 led to a decrease of state government employment of 2% in 2003. While the current state budget situation is more severe than the budget situation following downturn in the early 2000s, state government job losses will be spread over both 2010 and 2011. Moreover, the state has been furloughing workers to help address budget shortfalls. Without the furloughs, layoffs would likely be higher in coming years, thus softening the decline.

The state budget shortfall perpetuated throughout 2009 as revenue from taxes and fees saw sharp declines. According to a Legislative Council forecast of some of the state's largest revenue sources, individual income tax revenue declined 12.9%, individual corporate income tax revenue fell 42.4%, and sales tax revenue was down more than 9% in state fiscal year 2008-09. Resulting from depressed revenue and higher demand for state services, the state budget shortfall totaled $1.2 billion in fiscal year 2008-09. Actions by the General Assembly and Governor Bill Ritter to address the fiscal year 2008-09 budget shortfall included raising fees, suspending some tax exemptions, instituting employee furlough days, and implementing program cuts. In addition to similar actions, heavier program cuts and job loss will be necessary to address an even greater projected budget shortfall of $1.7 billion in FY 2009-10.

State higher education institutions employ slightly less than two-thirds of all state government employees. Due to budgetary pressures, these institutions will see near flat growth in 2010. Similar to past economic downturns, the current recession has led to increased student enrollment as many people return to school for training when jobs are difficult to land. However, even with the assistance of $150 million in annual ARRA funds that offset the same amount in budget cuts, many institutions will be unable to hire additional faculty and staff to match growing enrollment due to mounting budgetary pressures.

Local Government

General

Local government employment in Colorado has generally increased over time as the state's population and the demand for local government services has grown accordingly. Total local government employment grew 2.2% in 2007 and 2.6% the following year. However, the impacts of the current economic downturn have been pervasive, and local government employment is expected to grow just 1.1% in 2009 and decline 0.9% in 2010.

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Government

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As of October 2009, local governments of various types across Colorado totaled 3,257, including counties, school districts, and special districts. Each local government has a statutorily defined authority and responsibility, ranging from landscape services and mosquito control to road construction and fire service. Local government revenue is generally derived from tax collections and state-level contributions. Revenue-enhancing options available to local government officials are limited by Colorado's constitutional provisions. Relative to other states, Colorado has maintained a disaggregated tax structure with taxes imposed at the state and local levels. Property taxes and sales taxes account for a significant share of local government tax revenue, and Colorado's emphasis on the local government tax burden is reflected in higher local sales taxes than those in many other states. The current national and statewide economic downturn has diminished tax revenue collections for all levels of government, and Colorado's local governments are no exception.

Generally diminished growth in the state's economy will continue to adversely impact local government tax revenue collections and hinder prospects for local government employment growth. Despite some signs of housing market and potential retail trade sales stabilization, significant improvement in these variables is not anticipated in 2010, attributable largely to expectations of lackluster total nonagricultural employment levels. With high unemployment continuing to suppress retail sales and continued rigidity in credit markets, the housing market will be slow to rebound. Furthermore, state government revenue declines will compel state funding reductions for various local governments, which will also reduce the likelihood of local government employment growth in 2010.

Many counties, such as Pitkin and Broomfield, have already announced layoffs for 2009, and several more are following the state's lead by furloughing employees. With revenue forecasts looking grim, the expectation is for more local layoffs in 2010, and vacant positions going unfilled. Overall, the noneducational component of local government will lose 3,000 jobs in 2010, a 2.5% decrease.

Education

According to the Colorado Legislative Council, the state's K-12 school enrollment is expected to increase 1.4% from the 2008-09 school year to the 2009-10 school year, a gain of 10,713 students. In the prior year, Colorado experienced 2% growth in student enrollment, bringing the total to 818,443. The state demographer's office is projecting growth of 1.7% between 2009 and 2010 in the population of school-age children.

Denver Public Schools (DPS) greeted the 2009 school year with its largest enrollment increase since 1962. With 2,400 more students attending classes than in 2008, DPS is considering reopening schools that were closed in recent years. A couple of these schools are in the Stapleton area, where redevelopment has enticed young families to move to the neighborhood.

Although enrollment is up and K-12 education emerged relatively unscathed from the 2009-10 state budget crunch, districts are preparing for anticipated cuts in 2010. They were asked to hold back $110 million in spending for a crisis reserve, and districts are creating budgets without these extra funds. To account for the cut-back, districts are increasing class sizes, reducing course options, letting open positions go unfilled, and changing bus routes. The state is looking at cutting K-12 budgets by more than $200 million.

The majority of revenues to Colorado's 178 school districts is provided through the Public School Finance Act. In budget year 2009-10, more than $5.6 billion went to fund schools via state taxes ($3.5 billion), local property taxes ($1.8 billion), federal stimulus funds ($152 million), and vehicle registration taxes ($148 million). For the 2009-10 budget year, each school district is guaranteed a minimum of $6,856.72 per enrolled student, with the average across all districts coming in at $7,225.71 per student.

Colorado ranked 17th in the nation in the percentage of residents with a high school degree, at 88.9% of residents, according to the U.S. Census Bureau's 2008 American Community Survey. According to the National Center for Education Statistics' *Projections of Education Statistics to 2018*, public enrollment in elementary and secondary schools across the nation is expected to rise 9% between 2006 and 2018, compared to more than 19% estimated growth for Colorado. Colorado ranks 9th for the largest projected gain among the 34 states with forecasted enrollment increases between 2006 and 2018.

Overall, local education employment will grow 0.6% in Colorado in 2010, to 128,500 employees. ✜

International Trade

Export Performance in 2009

Colorado's merchandise and commodities exports fell 27.2% in U.S. dollar terms through the first nine months of 2009, slightly worse than the 23.8% drop in U.S. exports for the same period. The global financial crisis and resulting recession have greatly impacted the demand for goods worldwide, and the International Monetary Fund (IMF) estimates an 11.9% overall decline in global trade volume for 2009. Indeed, global trade has suffered its steepest drop since World War II. The International Trade Committee expects Colorado merchandise exports to finish 2009 with a loss of 27%.

Colorado's merchandise exports have structurally changed over the past few years. The high-tech export categories of electronic integrated circuits and automatic data process machines have declined significantly with the closing of some facilities and production shifting overseas to be nearer to end-user facilities. As a result, other goods, such as medical devices, print machines, and commodities, including molybdenum and beef, have become more important to the state's export profile.

The committee believes that service exports have also become a significant and growing part of Colorado's export picture. Anecdotal evidence suggests that activities overseas from architectural firms, engineering firms, accounting and legal services, as well as cleantech services, have increased. Data on services exports are not available at the state level, but an analysis conducted by the Business Research Division in the Leeds School of Business, which looked at various ratio methodologies, estimates that service sector exports contributed somewhere between $8 and $10 billion to Colorado's economy in 2007.

Main Factors Impacting Exports in 2010

The stabilization of the global economy is the most significant factor expected to drive growth in Colorado's merchandise and commodity exports in 2010. The IMF estimates that world output will rise 3.1%, compared to a 1.1% decline in 2009. The growing affluence of the middle class in many Asian economies will help boost exports to that region, with developing Asia (including China and India) projected to post 7.3% growth in 2010. Within the Americas, Colorado's two top trading partners—Canada and Mexico—are expected to show GDP growth of 2.1% and 3.3%, respectively.

The availability of trade finance for those entering international markets will also be a factor affecting exports in 2010. It is unclear if credit markets will begin to loosen. Both export financing and working capital are important to the production and shipping of goods overseas.

The competitiveness of the U.S. dollar vis à vis Colorado's major trading partners should help support the state's exports in 2010. The U.S. dollar, measured against the currencies of Colorado's trading partners on a trade-weighted basis, has been losing value since the spring of 2009, a trend that is expected to continue. Although there are negatives to a weaker dollar, it benefits Colorado's exporters by giving overseas importers more buying power, which can lead to higher demand for the state's goods.

VALUE OF COLORADO EXPORTS 2001–2010 (In Millions of Dollars)

Year	Total Exports	Percentage Change
2001	$6,125.5	7.1%
2002	5,525.1	-9.8
2003	6,086.9	10.2
2004	6,659.8	9.4
2005	6,773.3	1.7
2006	7,954.7	17.4
2007	7,352.2	-7.6
2008	7,668.0	4.3
2009[a]	5,597.0	-27.0
2010[b]	6,157.0	10.0

[a]Estimated.

[b]Forecast.

Source: World Institute for Strategic Economic Research Trade and Colorado Business Economic Outlook Committee.

Investors drove the dollar higher into March of 2009 in a "flight to safety" during the height of the financial crisis. However, the dollar has given back much of its gain after the financial markets began to stabilize, the stock market rebounded, and the perception grew that the global economy was beginning to recover. On a trade-weighted basis, the dollar fell 13% since March through the middle of October. The dollar has slid even further against the Canadian dollar—19% in the same time period. Canada is the largest importer of Colorado

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International Trade

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TOP 20 COLORADO EXPORTS
2007–2009 YTD
(In Millions of Dollars)

Description	2007	2008	SEP 2009 YTD
Electronic Integrated Circuits & Micro-assemblies, Pts	820	520	287
Medical, Surgical, Dental Or Vet Inst, No Elec, Pt	301	305	237
Meat Of Bovine Animals, Fresh Or Chilled (Not Frozen)	276	400	227
Heterocyclic Comp, Nit Hetero-Atoms Only	20	71	224
Crude Oil From Petroleum And Bituminous Minerals	25	137	174
Civilian Aircraft, Engines, And Parts	0	0	168
Automatic Data Process Machines; Magn Reader Etc.	511	402	125
Orthopedic Appl; Artif Body Pts; Hear Aid; Pts Etc.	85	119	117
Photo Film In Rolls Sensitized, Unexposed	112	119	117
Inst Etc Measure Or Check Flow, Level Etc, Pts Etc	161	164	108
Inst Etc. For Physical Etc. Analysis Etc.; Microtome; Pts.	140	150	87
Photo Plates & Film, Flat, Sensitized, Unexposed	182	177	76
Meat Of Swine (Pork), Fresh, Chilled Or Frozen	96	102	73
Print Mach Incl Ink-Jet Mach Ancil T Prnt Pt Nesoi	367	577	63
Raw Hides & Skins (No Furskins) and Leather	130	124	62
Molybdenum Ores And Concentrates	182	302	61
Meat Of Bovine Animals, Frozen	26	71	56
Aluminum Waste And Scrap	32	34	49
Railway Etc Track Construct Material, Iron & Steel	71	56	49
Air Or Vac Pumps, Compr & Fans; Hoods & Fans; Pts	59	80	42
All Others	3,756	3,758	1,925
Total All Commodities	7,352	7,668	4,327

Source: The World Institute for Strategic Economic Research-Trade.

goods. Other factors have contributed to the falling dollar, including concerns over the large U.S. federal budget deficit, the potential for future inflation, and the Federal Reserve's loose monetary policy implemented to fight the recession and the financial crisis.

The International Trade Committee is projecting a 10% increase in Colorado merchandise exports in dollar terms for 2010, assuming the continued stabilization of the global economy, a recovering credit market, and the competitive position of the U.S. dollar vis à vis the currencies of the state's major trading partners. Industries that are likely to benefit from increased global demand for goods and services include medical devices, cleantech, aerospace, agriculture, and mining.

Key Export Sectors and Opportunities for Colorado Companies

Aerospace

The products covered in this forecast are those that define the U.S. aerospace industry as delineated by the U.S. Department of Commerce, including but not limited to airplanes, helicopters, spacecraft and launch vehicles, aircraft launching gear, air combat simulators, engines of varying sizes for aerospace applications, missiles and projectile ammunition, and a wide variety of original equipment manufacturer parts and after-market equipment for these and related products.

From September 2008 to September 2009, Colorado companies' international exports of aerospace products fell 80.6%, from $132.7 million to $43.6 million. While the purchasing power in markets such as Israel, China (Mainland), and the Netherlands may continue to increase markedly from 2009 into 2010, they will not soon replace the greatly diminished purchasing power seen in 2008 and 2009 by various organizations in France, Canada, the United Kingdom, and other countries. Given that 82 (73%) of Colorado's aerospace markets declined in purchasing power year over year as of September 2009, and that exports to 58 markets dropped by more than 75% over the same period, the return of Colorado's primary aerospace markets (France, the United Kingdom, Canada, and others) alone will not provide for substantial growth in the industry's 2010 export revenues. A return to 2008 levels will likely not take place until 2011 or 2012 given the state of credit markets in even the strongest economies worldwide. The value of Colorado's aerospace exports in 2010 is expected to increase no more than 5% from 2009, if at all.

For aerospace products, France, Canada, the United Kingdom, and Hong Kong were among Colorado companies' top five shipping destinations in both 2007 and 2008. However, aerospace exports from Colorado to each of these destinations slid by more than 80% year over year as of September 2009. Similarly, exports of those goods to Ireland, Germany, and Japan all exceeded $9 million in 2008, but each market has fallen by more than 50% during the same time period year over year.

The drop in global demand has significantly affected Colorado's exports in 2009. Nonetheless, with key Colorado markets expected to rebound in 2010, there will be opportunities for exporters, in particular to developing Asia, Mexico, and the Middle East. A competitive dollar should provide a boost for exports to Western Europe and a return to growth in the EU markets.

Several export product categories in the aerospace industry have increased annually from 2007 to 2009, including missiles and projectile ammunition and parts, gas turbines with power not exceeding 5,000 Kw, engines and motor parts, aircraft engines, aircraft launching gear and parts, transmission apparatus, and radar apparatus. Israel, Mainland China, and the Netherlands are among the few countries that imported more than $1 million of aerospace products from Colorado in 2008 and also increased their imports significantly from September 2008 to September 2009. Israel imports climbed 76.8%, Mainland China rose 75.4%, and the Netherlands increased almost five-fold from a low base. While China imports a variety of aerospace parts and equipment from Colorado companies, U.S. export regulations per that market and other prospective ones will likely inhibit large increases in defense-related purchases. Should the U.S. Department of State begin to relax its International Trafficking in Arms Regulations in 2010 (as the aerospace industry anticipates), new export opportunities may become available to Colorado companies that manufacture products in the aerospace industry.

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International Trade

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MAJOR DESTINATIONS FOR COLORADO EXPORTS OF MANUFACTURED GOODS, MINERALS, AND AGRICULTURAL PRODUCTS 2005–2008
(In Millions of Dollars)

Country	2005	2006	2007	2008	2008 Percentage of Total
Canada	$1,791	$1,850	$1,774	$2,144	28.0%
Mexico	851	1,019	950	961	12.5
China (Mainland)	357	583	488	508	6.6
Netherlands	244	181	294	404	5.3
Japan	384	400	359	336	4.4
Germany	278	371	315	284	3.7
United Kingdom	241	221	254	231	3.0
Philippines	77	132	205	221	2.9
France	225	220	183	198	2.6
Malaysia	246	242	207	186	2.4
Belgium	75	85	134	180	2.3
South Korea	274	240	182	175	2.3
Australia	223	218	157	162	2.1
Switzerland	79	147	137	157	2.1
Taiwan	206	707	329	131	1.7
Total Top 15	5,551	6,615	5,968	6,279	81.9
All Other Countries	1,222	1,340	1,384	1,389	18.1
Total All Countries	$6,773	$7,955	$7,352	$7,668	100.0%

Source: Foreign Trade Division of the U.S. Census Bureau and World Institute for Strategic Economic Research.

Agriculture

Colorado's agricultural exports increased 27% in 2008 for a record value in state exports. Export growth was from increasing meat exports, record world market prices for grains, and an excellent Colorado wheat harvest. Colorado's 2009 agricultural exports are retreating from record highs in 2008, with a weaker world market for meat products, reduced global demand and prices for wheat, and a general reduction of imports for all product categories. Colorado's agricultural exports are projected to drop 27% in 2009, to $1.3 billion.

Beef

Colorado's beef exports surged in 2008, to $472 million, increasing 55% year over year. Colorado's top four markets represent more than 97% of total exports. Moreover, Colorado is the number one or two supplier in each market. The state's exports of beef rose 33% faster than total U.S. exports, which reached a total of $2.7 billion.

Exports to the state's largest beef export market, Mexico, grew by more than 37% in 2008, to $206 million. Colorado's beef industry supplied over 23% of all fresh beef to Mexico and was second only to Texas in beef exports. Canada remained Colorado's second-largest market, increasing 36% in 2008 for exports totaling $171.2 million. Colorado is the top U.S. supplier of beef to Canada, providing almost 29% of all imported fresh beef.

Japan's 2008 beef imports surged 122%, to $76.3 million, with the partial opening of its market to U.S. and Colorado beef. Colorado was the second-largest supplier of fresh beef to Japan, supplying 18% of all beef from the United States. Colorado's beef industry looks forward to the full opening of the Japanese market, which should allow the country's imports to return and exceed pre-2003 levels.

Korea was Colorado's fourth-largest export market in 2008. With the reopening of the Korean market to Colorado and U.S. beef in mid-2008, Colorado beef exports grew from $2.1 million to more than $30 million. Colorado was the top supplier of fresh beef to the Korean market in 2008, providing over 43% of all fresh beef from the United States.

Colorado's beef exports in 2008 are 33% higher than in 2003 (prior to the temporary global market closures). The state's beef industry looks forward to the newly opened Korean market and the eventual

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AGRICULTURAL EXPORTS FROM THE STATE OF COLORADO
FISCAL YEARS 2005–2010
(In Millions of Dollars)

Product	2005	2006	2007	2008	2009[a]	2010[b]
Live Animals and Meat, exc. Poultry	$316.7	$375.9	$423.4	$609.0	$505.5	$539.4
Hides and Skins	141.0	160.1	147.9	144.2	103.8	110.2
Wheat, Feed Grains, Fodders, and Products	290.1	316	565.3	700.6	399.3	385.7
Vegetables, Fruits and Products	79.3	81.6	46.9	93.5	89.2	92.4
Other	68.8	80.7	90.3	98.5	78.8	78.4
Seeds, Sunflower Seed and Oil	14.5	22.8	20.5	21.4	18.2	18.1
Fats, Oils, and Greases	27.2	28.1	42.7	71.2	62.7	62.4
Dairy Products	6.3	15.4	25.3	29.4	23.0	30.0
Total	$943.9	$1,080.6	$1,392.2	$1,767.9	$1,280.5	$1,316.6

[a]Estimated projections based on USDA Economic Research Service Outlook for U.S. Agricultural Trade.

[b]Forecast based on USDA Economic Research Service Outlook for U.S. Agricultural Trade.

Source: U.S. Department of Agriculture Economic Research Service (ERS), ERS Forecast, and Colorado Business Economic Outlook Committee.

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COLORADO'S TOP AGRICULTURAL EXPORTS REGIONAL DESTINATIONS (In Millions of Dollars)

	Exports		
Region	2006	2007	2008
Mexico	$287.9	$365.4	$371.4
Canada	185.1	229.9	293.6
Japan	35.0	72.6	113.4
China (Mainland)	61.2	51.4	72.0
Korea	18.2	17.2	51.1
China (Taiwan)	49.3	54.7	35.6
Russia	3.5	3.7	9.8
Hong Kong	10.4	9.4	9.4
Thailand	11.2	8.9	7.7
Other	38.1	45.8	27.9
Total	$709.4	$869.1	$1,010.2

Source: WISER, U.S. Bureau of Census.

acceptance of U.S. and Colorado beef in China, each of which will add new and significant sales.

Colorado's top export markets reflect Colorado's top beef export markets, with China and Korea representing major markets for hides from Colorado's cattle industry. The European market imports from the state do not include significant beef products. Recent trade regulations could create a market for Colorado and U.S. beef in Europe. Currently, the exports are processed foods, millet, seeds for planting, sunflowers, and beverages. Colorado is the largest U.S. exporter of millet, supplying 50% of all exported millet.

For 2010, the U.S. Department of Agriculture is forecasting slight gains in meat and hides in dollar value, which should result in Colorado's agricultural exports growing 2.8%, to $1.3 billion.

Colorado's 2010 agricultural exports will track the downward trend of the U.S. market. While global demand for grains remains strong, lower export prices will reduce the nation's overall value of exports in 2010. Worldwide market demand for meats has been impacted by the slowing global economy and the continued closure of key markets. The Japanese market remains restricted, and China does not allow U.S. beef exports. Meat products will experience slight gains, with more shipments to most major markets forecast in 2010. Although slight growth is anticipated for hide exports, reduced global demand for leather upholstery from the automobile industry will continue to dampen this market.

Cleantech Sector

Widely recognized as one of Colorado's greatest potential growth sectors, the cleantech industry holds tremendous promise for export market development. Cleantech products and technologies help consumers and industries use energy, water, and waste more efficiently, minimizing environmental footprints. For the purposes of this report, the cleantech industry includes companies involved in renewable energy generation, efficient building design and development, energy infrastructure and storage, water and wastewater management, materials development (advanced nanotechnology, biotechnology, ceramics, and so forth), and air and environmental quality technologies.

With more than 300 cleantech companies located in Colorado and over 1,500 firms within the more broadly defined environmental technologies sector, Colorado has emerged as a global center in this large and rapidly growing industry. In 2009, the state welcomed multiple cleantech delegations from Europe, Asia, and the Americas. Foreign direct investment will play a critical role in the ongoing development and expansion of Colorado's cleantech export market.

Many market opportunities exist for Colorado's cleantech products and services companies. According to WISER statistics and the U.S. Department of Commerce HS-code definition for environmental technologies, Colorado companies exported $617 million in environmental goods worldwide in 2008. The sector is showing consistent growth, with a three-year average growth rate of 7.6% for worldwide exports. In 2008, Colorado exports climbed 6.8% within the environmental technologies sector; however, numbers are down approximately 17% through September 2009. In 2008, China was Colorado's top export market for environmental technologies, with more than $91.7 million. Following China, other top markets include Canada ($75.8 million), Germany ($42.5 million), Japan ($37.2 million), and the Netherlands ($35.6 million). Approximately 70% of Colorado's environmental exports are classified as monitoring and analysis products and instruments, and 21% of environmental exports are related to wastewater management.

Although current data on related *services* exports are unavailable, such exports add significantly to these figures. Likewise, these statistics do not capture products such as those that improve efficiencies and reduce waste in the manufacturing process.

While the United States has dedicated about $94 billion, or approximately 12%, of its stimulus package to "green spending," this is in sharp contrast to the almost 37% that China will invest. Even more staggering is the 80% of stimulus money that the Republic of Korea is prepared to spend on green technologies.

This funding environment presents both opportunities and challenges for Colorado cleantech exporters. The cleantech products and services offered by U.S. companies are generally recognized around the world as being of higher quality than those from domestic competitors, yet typically they have a higher price as well. Competition is, and will continue to be, fierce for projects of all scale. While Colorado is a leader in solar, wind, and smart grid development, it will be competing with nations such as China, India, and South Korea, where highly motivated governments are developing ever more sophisticated technology and less expensive manufacturing facilities.

In addition, the state of the global economic crisis will play a major role in how quickly, and to what degree, Colorado companies continue to grow and expand their businesses internationally. New global investment in clean-energy companies fell 22% in Q3 2009 as government financing was offset by tight credit markets. That said, the sector appears to be heading toward a recovery, with investment in Q3 nearly double what it was in Q1 and investors growing more confident. Many analysts think a turnaround will come in 2010 but caution that much depends on the U.S. economy, the health of the financial sector, natural gas prices, and even electricity demand.

Computer and Electronic Product Manufacturing

For the first nine months of 2009, the total value of Colorado exports of computer and electronic products was $1.3 billion, down more than 47.3% from $2.4 billion in September 2008. In 2008, combined computer and electronic product exports from Colorado totaled nearly $3 billion, a loss of 9% from $3.3 billion in 2007 and 30% from an all-time high of $4.3 billion in 2006. In 2008, Colorado's $3 billion computer and electronic exports were comprised primarily of $1.9 billion in industrial machinery (including computers) and $1.1 billion in electric machinery (including sound and TV equipment and parts), and represented Colorado's top two export commodities in 2008, respectively.

As of September 2009, Colorado's top export markets for computer and electronic products were:

- Canada ($199 million, down 72.6% from September 2008)
- Malaysia ($132.5 million, down 3.5% from September 2008)
- Philippines ($165 million, down 36.9% from September 2008)
- Mexico ($80.6 million, down 69.6% from September 2008)
- China ($78.5 million, down 17.8% from August 2008)

The top export markets for 2008 were:

- Canada, with $866.7 million
- Mexico, with $301.6 million
- Philippines, with $199.5 million
- Malaysia, with $166.2 million
- Germany, with $140.2 million
- China, with $126.4 million

The following export markets showed growth through the first nine months of 2009:

- Peru (89%, $3.8 million)
- Oman (146%, $2.5 million)
- Slovakia (366.8%, $1.8 million)
- Colombia (62.8%, $1.6 million)
- Turkey (62.2%, $1.5 million)
- Nigeria (66.5%, $1.5 million)

The overall computer and electronic product manufacturing sector has been more resilient to economic fluctuations, due to the global nature of its business and an increased focus on providing core components for consumer products. However, this

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sector faced numerous growth challenges in 2009 that will likely continue into early 2010.

- Given that the technology sector is geared toward consumer sales and that consumers have had diminished disposable income and limited access to credit, it is not clear that 2010 will see a consumer-led exit for the sector from the current economic downturn.
- The value of the U.S. dollar relative to world currencies is a concern to many tech companies, since many of these firms have a widespread global footprint and extensive offshore assets.
- Adoption of new technologies and products may be delayed given the economic uncertainty of the marketplace.

Computer and electronic product manufacturers may be able to offset some of the growth challenges they face in 2010 by identifying revenue opportunities in niche markets that might not have been as interesting when revenue was more robust. For example, if a company had been focused on domestic markets, executives may explore international markets. In addition, companies should evaluate their need to restructure sales models and incentives around micro-sales versus mega-sales, especially in the enterprise marketplace. In light of current economic conditions, it is likely that corporate customers will continue purchasing in smaller increments of technology in the near term.

Demand for products and services overseas will depend largely on whether economic conditions continue improving in international markets. Emerging countries such as Brazil, China, and India, which have driven much of the recent technology sector growth, have experienced economic slowdowns and thus decreased demand for computer and electric products and services. Exports to China, in particular, are a big uncertainty going into 2010. As a growth engine, the country has showed signs of economic recovery but the pace of growth has slowed. If the Chinese government decides to focus its economy on strengthening its infrastructure versus rekindling consumer activity, it could have a negative impact on the technology sector.

As in past economic downturns, mergers and acquisitions (M&A) in the technology sector could once again help to spur sector growth for computer and electronic manufacturers, particularly in the form of small acquisitions funded out of companies' research and development (R&D) spending. While some uncertainty exists around the amount of financial leverage that will be available for M&A activity in 2010, many of the large technology players are in a positive cash flow position and may likely be looking at M&A as a growth solution.

Medical Devices

The medical devices industry is proving itself recession proof, both nationally and locally. Sector growth is driven by the continued demand worldwide for high-quality healthcare and the necessary medical devices to deliver it to global consumers.

Increases in income in China, Brazil, and other rapidly developing nations spur the growth for medical devices from the United States. Demographics play a key role in the growth of markets in developed nations. Aging societies within Western Europe and Japan increasingly demand U.S. medical devices for their quality and sophistication. Income growth and aging populations combine to create a robust foreign market for U.S. medical devices both now and into the future.

Growth in U.S. exports of medical devices has been strong throughout this decade. Medical instruments and appliances remain the largest subsector, accounting for around $20 billion of exports in 2008, an increase of 16.2% from 2007 and 41.9% from 2005 to 2008. Japan and Western European nations remain the largest markets within this subsector, both registering strong growth. Developing nations such as China, Brazil, and South Korea contributed stronger growth. With this trend in place, China and Brazil will increase their market share of these exports, but medical device sales in established markets will remain robust.

The orthopedic devices subsector, while not as large as surgical devices, continues to grow significantly as market dynamics increase demand for U.S. orthopedic products. Exports of these devices totaled approximately $7.8 billion in 2008, a gain of nearly 20% year over year. This rapid growth highlights an immense opportunity for U.S. companies. Japan and the Netherlands have the highest market share, with 15% and 20%, respectively. China, India, and Mexico are again among the strongest contributors to export growth in this subsector. There are many opportunities, and trends continue to favor growth for U.S. medical device exports.

Exports of Colorado's medical devices continue to grow. More medical device companies are operating in Colorado, buoyed by the state's encouragement of biotechnology development and a highly skilled workforce. Exports from Colorado climbed 56% from 2005 to 2008 across all sectors and 12% from 2007 to 2008. This significant growth represents the success of the state in promoting the bioscience industry. With its continued support and increasing global demand for Colorado exports, the future of the state's medical devices market is bright.

Services Sectors

Tourism

The global economic climate has chilled the U.S. and Colorado tourism industries considerably. The year 2009 was certainly down, with 17 out of the United States' top international markets posting losses (Switzerland, Argentina, and Brazil posted gains, July 2009 year to date [YTD]). For the top 20 international markets, total arrivals were down 9.9% YTD as of July 2009. Bleak numbers are not unique in a down economic climate. People economize, and discretionary travel often becomes the first sacrifice. Furthermore, travelers cut down on hotel, restaurant, and other forms of discretionary spending. Downturns in both domestic and international travelers have affected both U.S. and Colorado tourism.

While the numbers appear dismal, there are reasons for optimism, especially when looking internationally. Forecasts of the national tourism industry predict strong growth starting in 2010 through 2013. According to forecasts, a record 64 million international visitors will come to the United States in 2013. The two largest markets, Canada and Mexico, will resume healthy rates of growth beginning in 2010 and continue to be the two largest sources of international arrivals. This is good news for Colorado.

This forecasted growth will be led by arrivals from Latin American and Asian markets. The number of arrivals from Brazil and Argentina continue to climb and are projected to remain growth leaders in the region. Brazil overtook Italy this year as the nation's seventh-largest international visitor market. Given growth in 2009 and projected regional increases looking ahead, Latin America, and especially Brazil, holds significant promise for Colorado tourism.

Asian markets are another future growth engine. While arrivals from countries across the region tumbled more than 10%, growth is expected to pick up briskly starting in 2010. Japan, China, and India are projected to lead the region in generating tourist arrivals. Latin American and Asian markets will define growth in international arrivals over the next four years.

Another important feature of tourism markets is the relative decline in international arrivals from Western European nations. Growth from nations such as the United Kingdom and Germany is expected to level off through 2013, while visitation from France and Italy is projected to continue shrinking.

These trends continue the diversification of visitors from around the world to both the United States and Colorado.

Colorado tourism encompasses many unique features, including world-class skiing and exceptional natural destinations. However, the state's tourism industry is not unique in weathering the 2009 downturn. Occupancy rates and lodging sales were significantly down 12.6% and 15.8%, respectively, through Q1 2009, despite a decrease of 7.4% in overall room rates. Air travel suffered as well. Domestic arrivals fell 5.8% through Q1 2009, and international arrivals dropped 12.6%. These downward trends represent the pain inflicted on the state's tourism industry during this recession.

As tourists downscale their vacations, some beneficial trends have been occurring in the tourism industry. First, families are reorienting their vacations toward road trips and city visits. Visitation to Denver has boomed as a result. City-based travel is the fastest-growing segment of Colorado tourism, climbing 4.4%.

In addition, visitation to Colorado's parks is increasing as a result of the downscaling trend. Visitation to U.S. national parks within Colorado climbed 4% in Q1 2009. Furthermore, visitor numbers to Colorado state parks jumped 6.5% over the same period. Although visitation growth

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to Colorado's parks and wilderness areas is a positive, it appears to be coming at the expense of other, higher revenue recreational activities.

International Students

In the most recent academic year for which complete data are available (2008-2009), Colorado institutions enrolled 6,857 international students. This represents a 16.3% increase over the previous year and ranks Colorado 26th in the nation. Although starting from a small base, the rate of increase in Colorado's international student population in 2008 was more than double that of the United States as a whole.

The top sending countries for international students coming to Colorado were China, Saudi Arabia, India, South Korea, and Taiwan. (Top sending countries for the nation are India, China, South Korea, Canada, and Japan.) Together, these countries represent nearly 50% of all international students in Colorado.

The expenditure of these international students in Colorado was estimated to be $187.4 million, an increase of 27% compared to the previous year. The majority of student expenses are paid by parents and home-country governments and represent an important service export for Colorado.

Once again, the University of Colorado at Boulder enrolled the highest number of international students, 1,341.

The number of students studying abroad through Colorado institutions increased nearly 12% over the previous year, from 3,803 to 4,287. This figure includes students from Colorado and other states, due to out-of-state enrollment, but represents a strong growing presence and representation of Colorado institutions overseas.

These data show that international education remains a viable industry for Colorado policymakers and business leaders to promote for the economic and competitive advantages it brings to the state. ✜

INTERNATIONAL STUDENT ENROLLMENT AT SELECT COLORADO INSTITUTIONS

Institution	Number of Students 2008-09 Academic Year	Number of Students 2007-08 Academic Year	Percentage Change
University of Colorado at Boulder	1,341	1,264	6.1%
Colorado State University	984	1,046	-5.9
University of Denver	919	870	5.6
University of Colorado at Denver	729	635	14.8
Colorado School of Mines	516	423	22.0

Source: Institute of International Education, *Open Doors Report*.

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Source: Colorado Business Economic Outlook Committee.

Summary

Of the 50 states and the District of Columbia, only two are projected to show job growth in 2009. Employment growth rates for the states will range from 0.5% to -6.9%. Colorado is projected to finish 2009 in the bottom half, or possibly the bottom quarter.

Significant improvement is expected for 2010, when employment growth rates for states will range from 0.5% to -2.7%. Only Texas and Washington, D.C. are expected to show gains. The Colorado Business Economic Outlook Committee is optimistic that Colorado will rank in the upper quartile for change in employment in 2010.

With this backdrop, the outlook committee believes that relative to their projections for 2009, Colorado employment will contract in 2010. Monthly employment will return to more normal patterns, where the lowest levels are in the first quarter. Gradual increases will occur as the year progresses, with a spike during summer months, a decline when school starts, and an expansion during the final quarter to support holiday activity. Employment levels for Q1 2010 are likely to be far enough below the levels of 2009 to offset job gains in the remainder of the year.

Although most sectors will show significant improvement during 2010, growth is expected to occur only in the Educational and Health Services (EHS); Professional and Business Services (PBS); Trade, Transportation, and Utilities (TTU); and Other Services supersectors. Over the past two decades, EHS Supersector employment has been fairly steady and immune to volatility associated with the business cycle. It appears that the PBS Supersector will lead us out of the recession, much as it did in 2003. Monthly employment levels have begun to approach typical employment patterns.

ESTIMATED NET JOBS CREATED IN NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT SECTORS

Industry	Estimated Net Jobs Added 2000-2009	Forecasted Jobs Added 2010
Natural Resources and Mining	13,300	-500
Construction	-11,500	-9,000
Manufacturing	-55,400	-3,800
Total Goods Producing	-53,600	-13,300
Trade, Transportation, and Utilities	8,300	2,700
Information	-23,900	-800
Financial Activities	-900	-2,900
Professional and Business Services	22,600	6,500
Educational and Health Services	70,000	6,600
Leisure and Hospitality	19,500	-500
Other Services	14,500	600
Government	61,300	-2,100
Total Service Producing	171,500	10,100
Total Jobs Created[a]	117,900	-3,200

[a]Due to rounding, the sum of the individual items may not equal the total.

Note: 2005 employment change includes the effect of 2,500 jobs being reclassified from Computer and Electronics Manufacturing to Scientific Research and Development Services (a subsector of Professional and Business Services).

Source: Colorado LMI, Colorado Business Economic Outlook Committee.

From an employment perspective, the decade ending in 2009 can best be described as the lost decade. Over this period, population increased by about 870,000, to nearly 5.2 million in 2009. At the same

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time, total state net employment between 2000 and 2009 climbed by only 117,900 employees, with most of those jobs added in 2000. This is well below the 650,000 workers added during the 1990s.

From 2000 to 2009, approximately 171,500 service-producing jobs will be added, while about 53,600 goods-producing positions will be lost. It is projected that the leading growth categories will be the EHS and Government supersectors, adding a combined total of 131,300 jobs. On the other hand, the Manufacturing, Professional and Business Services, and Information supersectors, which encompass the state's advanced technology cluster, will shed a total of 56,700 workers.

In 1990, approximately 16.5% of all employees were in the goods-producing sectors (Natural Resources and Mining, Construction, and Manufacturing). The percentage of workers in the goods-producing sector fell slightly, to 16.3%, by 2000. A structural shift has continued throughout the current decade as a higher concentration of workers is in service-producing jobs. By 2010, only 12.5% of Colorado workers will be employed in goods-producing industries. While benefits are associated with all types of jobs, concerns exist because goods-producing industries typically have higher wages, a larger supply chain, and a greater multiplier effect than service industries.

The following observations summarize the thoughts of committee members for 2010 and beyond:

National and International

- Those who believed the U.S. economy was decoupled from the global economy have been proven wrong over the past year.
- The growing affluence of the middle class in China and other Asian economies will lead global growth and prompt exports to those regions.
- Economic expansion in Western Europe will be below potential, while risks will continue in Eastern Europe.
- On a trade-weighted basis, the dollar has been losing value since the spring of 2009. This trend, which is expected to continue, will likely benefit Colorado exporters.
- The U.S. economic recovery has already begun.
- Nationally, government spending and debt, driven by stimulus efforts, is at record levels. Sustained U.S. growth cannot rely on this level of government spending and debt.
- Business and consumer confidence will continue to improve.
- Business leaders will remain cautious about making investments in capital and labor (hiring). Capital expenditures will be constrained by excess capacity, industrial restructuring, and tight credit markets.
- Consumers have altered their consumption patterns in favor of deleveraging and saving—shifts that may be long term.
- In the short term, inflation is expected to remain low, and the Fed will be cautious about raising interest rates.
- The high unemployment levels in all states will have significant long-term unquantifiable social impacts.

COLORADO JOBS ADDED VS. REAL GDP GROWTH
1970–2009

Decade	Jobs Added in Colorado	Colorado Employment CAGR[a]	National Real GDP CAGR[a]
1970-1979	497,200	5.4%	3.2%
1980-1989	264,300	2.0	3.0
1990-1999	650,300	3.7	3.2
2000-2009[b]	117,900	0.5	2.1

[a]Compound annual growth rate.

[b]Forecast.

Note: Real GDP Growth in Billions of Chained 2005 Dollars.

Source: Bureau of Labor Statistics, Bureau of Economic Analysis.

Colorado

- Growth of the global and national economies will be a significant driver of the state economy. Currently, there are mixed signals about whether or not Colorado will be one of states leading the recovery.
- Employment gains derived from renewable energy will continue to be offset by the impact of pricing and policy decisions associated with traditional energy sources.
- Colorado housing and commercial markets will remain an attractive long-term investment.
- State and local governments will experience further deterioration in their revenue sources. Many entities have reached the point where cuts must be deep and narrow, rather than broad-based.
- Advanced technology will continue to play an integral, yet evolving role in the state. Despite steep layoffs, it appears that the highly trained workforce associated with the cluster has remained in state, in large part because of the lack of mobility caused by credit markets.
- The impact of the recession on the state's intellectual firepower, the high concentration of primary jobs, and the higher than average personal per capita income will not be fully understood until the country has recovered from the recession.
- Colorado will continue to be a popular place to live, with projected population growth above 1.5%.

The effects of the national recession that began in December 2007 will be felt well beyond 2010. Coloradans will rely on the Wild West frontier spirit that has made this a great state to push us through the recovery. ✣

CHANGES IN COLORADO NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT, 2008–2010
(In Thousands)

Sector	2008	2009[a]	2010[b]	2009 New Jobs	Percentage Change	2010 New Jobs	Percentage Change
Natural Resources and Mining	28.4	25.6	25.1	-2.8	-9.9%	-0.5	2.0%
Construction	161.8	137.0	128.0	-24.8	-15.3	-9.0	-6.6
Manufacturing	144.2	132.0	128.2	-12.2	-8.5	-3.8	-2.9
Trade, Transportation, and Utilities	429.3	413.2	415.9	-16.1	-3.8	2.7	0.7
Information	77.0	73.1	72.3	-3.9	-5.1	-0.8	-1.1
Financial Activities	155.6	146.5	143.6	-9.1	-5.8	-2.9	-2.0
Professional and Business Services	351.6	325.0	331.5	-26.6	-7.6	6.5	2.0
Educational and Health Services	250.6	256.9	263.5	6.3	2.5	6.6	2.6
Leisure and Hospitality	273.0	258.0	257.5	-15.0	-5.5	-0.5	-0.2
Other Services	94.9	93.5	94.1	-1.4	-1.5	0.6	0.6
Government	384.1	389.7	387.6	5.6	1.5	-2.1	-0.5
Total[c]	2,350.5	2,250.5	2,247.3	-100.0	-4.3	-3.2	-0.1

[a]Estimated.
[b]Forecast.
[c]Due to rounding, the sum of the individual sectors may not equal the total.
Source: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

Around the Region

The neighboring states of Arizona, Colorado, Kansas, Montana, Nebraska, New Mexico, Utah, and Wyoming compose the western state region. This review compares economic activity, as measured by total employment, per capita income, and real GDP, in this region and some of the top metropolitan statistical areas (MSAs) in these states.

Over the past decade (from 2000 to 2008), Wyoming, Utah, and Arizona led employment growth with annualized rates of 2.8%, 2.0%, and 1.9%, respectively. Colorado lagged behind, with only 0.8% growth annually. Regarding MSAs, Grand Junction led with 3.4% growth, while Greeley and Cheyenne placed second and third with 2.5% and 2.3%, respectively.

However, when employment growth is analyzed more recently (2007 and 2008), different trends materialize. While Wyoming continued to lead with 3.3% growth, Utah only recorded 0.2% and Arizona's employment actually declined by 2.1%. Colorado—tied with Kansas and Nebraska—ranked second in employment growth, all increasing 0.8% in 2008. In terms of state GDP, Colorado's growth of 2.9% trails only Wyoming's 4.4%—although Arizona's $210.2 billion economy continues to represent the largest in the region.

In 2008, Colorado's $46,614 average annual earnings surpass all others in the region, including Arizona, at $42,518. Boulder and Denver have maintained their place with above-average annual pay levels exceeding $50,000. This far surpasses the next-largest MSAs in the region, which fall within the $40,000-$45,000 range. ✜

WESTERN STATES

States	2008 Total Employees (In Thousands)	Employment CAGR 2000-2008	Employment Percentage Change 2007-08	2008 Average Annual Pay	2008 Real GDP (Millions of Chained 2000 Dollars)	GDP Percentage Change 2007-2008
Colorado	2,350.5	0.8%	0.8%	$46,614	$203,024	2.9%
Arizona	2,616.3	1.9	-2.1	42,518	210,235	-0.6
Kansas	1,391.1	0.4	0.8	38,178	98,110	2.2
Montana	446.5	1.7	0.4	33,305	27,253	1.8
Nebraska	964.7	0.7	0.8	36,243	66,568	1.3
New Mexico	846.8	1.6	0.4	37,910	61,385	2.0
Utah	1,255.2	2.0	0.2	37,980	87,700	1.4
Wyoming	298.5	2.8	3.3	41,487	21,752	4.4

Source: U.S. Census Bureau, Bureau of Economic Analysis, Bureau of Labor Statistics (CES and QCEW data).

COLORADO METROPOLITAN STATISTICAL AREAS (MSA)

MSAs	2008 Total Employees (In Thousands)	Employment CAGR 2000-2008	Employment Percentage Change 2007-08	2008 Average Annual Pay	2008 Real GDP (Millions of Chained 2000 Dollars)	GDP Percentage Change 2007-2008
Statewide	2,350.5	0.8%	0.8%	$46,614	$203,024	2.9%
Boulder	168.7	0.4	1.5	53,455	16,533	3.2
Colorado Springs	258.9	0.5	-0.8	40,973	20,178	3.2
Denver-Aurora	1,251.0	0.4	0.8	51,270	125,448	2.0
Fort Collins-Loveland	137.8	1.4	1.0	40,154	9,685	4.2
Grand Junction	65.7	3.4	4.5	39,246	4,160	12.3
Greeley	82.9	2.5	1.3	38,700	5,625	1.9
Pueblo	58.8	0.7	0.5	34,055	3,150	3.6

Source: U.S. Census Bureau, Bureau of Economic Analysis, Bureau of Labor Statistics (CES and QCEW data).

REGIONAL METROPOLITAN STATISTICAL AREAS (MSA)

MSAs	2008 Total Employees (In Thousands)	Employment CAGR 2000-2008	Employment Percentage Change 2007-08	2008 Average Annual Pay	2008 Real GDP (Millions of Chained 2000 Dollars)	GDP Percentage Change 2007-2008
Albuquerque	395.5	1.3%	-0.1%	$39,342	$32,111	2.2%
Cheyenne	45.3	2.3	2.5	37,452	3,296	3.5
Kansas City	448.2	0.5	0.4	44,155	86,312	1.3
Lincoln	172.6	0.7	0.6	35,834	11,233	1.7
Phoenix-Scottsdale	1,868.3	2.1	-2.4	44,482	162,749	-1.1
Salt Lake City	642.2	1.6	0.7	41,628	51,827	0.7
Tucson	381.1	1.2	-1.1	39,973	26,594	0.7
Wichita	308.6	0.6	1.9	40,423	22,942	2.7

Source: U.S. Census Bureau, Bureau of Economic Analysis, Bureau of Labor Statistics (CES and QCEW data).

Around the State: Boulder County

Despite being impacted by the economic downturn, the Boulder County economy has been outperforming the state and national economy in many areas and is well positioned for the recovery. The local economy is supported by the presence of a world-class research university, major federally funded research facilities, a high concentration of companies in advanced technology clusters, visionary entrepreneurs, and the nation's highest percentage of college graduates.

Population, Employment, and Income

Boulder County's population was estimated at 298,685 in 2008, increasing an average of 1.8% each year since 2000. During that time, the cities of Longmont, Boulder, and Erie had the largest increases in population.

While the number of jobs fell and the unemployment rate climbed over the past year, both measures improved in late 2009. A year-to-year comparison of September 2008 and 2009 shows total nonfarm employment in Boulder County dropped by 5.2%, representing a loss of 8,800 jobs. This compares to a decline of 4.3% in state employment and decrease of 4.2% nationally. However, a month-to-month comparison of August and September 2009 shows nonfarm employment in Boulder County rose 1.7%, representing a gain of 2,700 jobs, while figures for the state and the nation were nearly flat.

After increasing through 2008 and into 2009, the unemployment rate in Boulder County dropped from 6.6% in July 2009 to 6% in August and 5.5% in September. While the unemployment rate in the county has remained consistently lower than state and national rates, recent declines may be partially attributable to individuals leaving the labor force.

Boulder County has a high concentration of jobs in the information and the professional, scientific, and technical services industries. These jobs pay higher than average wages and have contributed to the above-average income levels for county residents. In 2008, the median household income in Boulder County was $66,463, compared to $56,993 for Colorado and $52,029 for the United States (inflation-adjusted dollars).

Real Estate, Housing, and Construction

The commercial real estate market has reflected the economic downturn. The office vacancy rate for the Boulder-Longmont market rose from 2008 to 2009, but improved during the year. According to the Frederick Ross Company's *Boulder Market Report,* the office vacancy rate fell from 12.6% in Q1 2009 to 11.6% in Q2, but remained higher than the previous year (10.7% in Q2 2008). Industrial vacancy rates for the Boulder-Longmont market fell from 16.3% in Q2 2008 to 14.4% in Q1 2009 and 14.1% in Q2 2009.

Boulder was named the nation's strongest housing market in Q2 2009 by *BusinessWeek* magazine.

The number of nonresidential building permits issued in Boulder County for the first half of 2009 declined 41% compared to the same period in 2008. Valuation remained fairly constant, falling by less than 1%.

The total number of residential permits issued in Boulder County during the first half of 2009 was 39% lower than the first half of 2008, and permit valuation dropped 62%.

Residential real estate activity has slowed. The number of single-family homes sold in Boulder County for the 12 months ending in September 2009 was 21.4% lower than the same period in 2008. The biggest decrease in sales has been in the upper end of the market.

While single-family home sales declined, home values held steady. In fact, Boulder was named the nation's strongest housing market in Q2 2009 by *BusinessWeek* magazine. The Federal Housing Finance Agency house price index for Boulder County rose 0.6% from midyear 2008 to 2009. During the same period, the house price index for Colorado fell 1.1%, and the national index slid 6.1%.

Financial Services and Investment

Boulder County has 32 FDIC-insured financial institutions, with 115 offices and deposits totaling $6 billion, representing 7% of the state's FDIC-insured deposits. From midyear 2008 to midyear 2009, deposits in Boulder County's banks rose $247 million, or 4.3%, compared to 3.6% for the state.

Boulder County's high concentration of software development and biotechnology has continued to help fuel high levels of venture capital (VC) investment. According to the PwC/NVCA MoneyTree™ Report, companies located in Boulder County received $271 million of VC investment during the first three quarters of 2009, representing 80% of the VC funding received by companies in the state.

Retail Sales

Retail sales in Boulder County have decreased over the past year, reflecting the economic downturn. Retail sales were $1.8 million in Q2 2009, a decrease of 16.9% and 2.2% from Q2 2008 and Q1 2009, respectively. By comparison, retail sales for the state were 16.1% lower in Q2 2009 than Q2 2008 and increased slightly (0.2%) between Q1 and Q2 2009.

Retail sales activity is expected to increase as consumer confidence improves.

Key Clusters

Aerospace

Boulder County is positioned to benefit from continued growth in the aerospace cluster in response to new space exploration projects and programs to commercialize aerospace technology.

Colorado has the second-largest aerospace economy in the nation, and the metro Denver area has the nation's highest number of private aerospace workers. Several aerospace companies are headquartered in Boulder County, including Ball Aerospace and DigitalGlobe, and the area has a high concentration of aerospace employment. The University of Colorado at Boulder is home to major aerospace-related programs. Among those is the Laboratory for Atmospheric and Space Physics (LASP), which continues to receive major funding from NASA. CU-Boulder is also a top university for training astronauts.

Bioscience

Boulder County has a very high concentration of companies and employment in the biotechnology, pharmaceuticals, and medical devices clusters. More than one-third of the 40 biotechnology companies established in Colorado from 2006 to 2008 are located in Boulder County.

Two large Boulder County biotech companies, OSI Pharmaceuticals and Gilead Sciences, announced they would be closing their Boulder facilities as part of plans to consolidate operations in other states. Despite these recent losses, the Boulder area is expected to continue to play a key role in the growth of the bioscience cluster in the state. A case in point is Clovis Oncology receiving $146 million, the nation's largest VC investment in Q2 2009.

Colorado has the second-largest aerospace economy in the nation, and the metro Denver area has the nation's highest number of private aerospace workers.

The University of Colorado has a distinguished record in biotechnology research that has attracted millions of dollars in sponsored research awards and generated numerous biotech startup companies. In September 2009, CU-Boulder broke ground on a new world-class biotechnology facility that will house 60 senior faculty researchers and more than 500 research and support staff spanning eight departments. The facility will also be home to the new Colorado Initiative in Molecular Biotechnology (CIMB), headed by Nobel laureate Dr. Tom Cech.

Information Technology

Boulder County has a long history of involvement in the information technology (IT) cluster, and is home to more than 1,000 firms, including some of the area's largest employers. Locally, over 15,000 individuals are employed in the IT cluster, a concentration that is more than four times the national average. The cluster pays higher than average wages and will continue to play a vital role in the Boulder County economy.

IBM's new data storage facility, which uses state-of-the-art technology to help the company and its clients reduce energy costs, is fully leased. Boulder-based LeftHand Networks was recently acquired by HP, and the company has designated Boulder as a core site.

Natural and Organic Products

Many leaders in the natural and organic products cluster got their start in Boulder, and the area is

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expected to play an important role in the continued growth and development of the industry.

The natural and organic products cluster has experienced significant growth as more consumers buy organic and more retailers and manufacturers offer natural and organic products. While the cluster has been affected by the economic downturn, organic food has grown to represent 3.5% of all food product sales in the nation, according to the Organic Trade Association's 2009 Organic Industry Survey.

In the Boulder area, new natural and organic products companies continue to be launched, and many existing companies, including Whole Foods, Rudi's Organic Bakery, and Celestial Seasonings, are growing and expanding.

Outdoor and Active Living

According to a 2007 Outdoor Industry Foundation report, the outdoor industry generates $289 billion in retail sales and services nationwide and contributes $730 billion to the U.S. economy. Boulder is widely recognized as a center for the expanding industry and is home to more than 100 outdoor recreation companies, including manufacturers; distributors; retailers; marketing and media companies; medical, event, and other service providers; and national nonprofit organizations. Retailers have experienced slower sales during the economic downturn, but interest and participation in outdoor recreation remain strong, and the industry is anticipated to recover as consumer spending rebounds.

Renewable Energy

Continued growth is expected in Boulder County's renewable energy and energy research clusters.

Colorado has become a center for renewable energy, supported by research conducted at the federal labs and universities, a concentration of companies, and a commitment by policymakers to make the state a model for the development of the cluster. According to a 2009 report by the Pew Charitable Trusts, clean energy sector jobs in Colorado grew more than twice the rate of total employment for the period 1998-2007. In 2008, the nine-county Metro Denver and Northern Colorado region had the fourth-highest concentration of renewable energy and energy research employment in the nation.

In Boulder County, over 600 firms and more than 7,000 individuals are employed in the energy cluster, most of which are in the renewable energy and energy efficiency category.

In addition to the high concentration of companies and employment, growth in the industry in Boulder County is supported by the planned development of ConocoPhillips' Corporate Learning Center and Global Technology Center in Louisville, which will focus on renewable energy, and the $100 million SmartGridCity investment by Xcel Energy and its partners to create the nation's first fully integrated smart grid community in the city of Boulder.

Renewable energy companies establishing operations in Boulder County in 2009 include Creative Foam Corporation, which opened a new facility in Longmont to help supply Vestas Wind Systems plants in the state, and GE Energy Control Solutions, which relocated its global headquarters to Longmont.

Tourism

Tourism is often cited as the second-largest industry in the state and a significant contributor to the Boulder County economy. While the economic downturn has affected tourist activity in the area, the situation is expected to improve as the economy recovers.

Hotel occupancy in the county fell 8%, from 70.3% in September 2008 to 64.6% in September 2009. Average daily room rates slid 10.3%, and revenue per available room declined 17.6% during the same period.

The Boulder area continues to be a popular desination. Boulder was featured on the cover of *National Geographic Traveler* magazine in July 2009, and the Downtown Boulder Visitor Center reported an increase in visitor activity compared to the previous summer. ✜

Around the State: La Plata County

The Office of Economic Analysis and Business Research in the School of Business Administration at Fort Lewis College measures and reports on economic activity in La Plata County. The La Plata County economy is highly seasonal and integrally related to tourism. Although significant winter tourism activity is associated with winter sports, most county tourism occurs during the summer. This summer concentration of tourism causes a third quarter seasonal upswing in economic indicators such as retail sales and employment.

La Plata County is also the home of Fort Lewis College, which provides both long- and short-term, or seasonal, stability to the local economy. Students attend classes from September through April, when tourist activity is relatively low. The presence of the students and their expenditures moderates the seasonal decline in the local economy during the fall and winter months. However, the student body has been steadily shrinking, from a high of about 4,300 in 2002 to a current enrollment of approximately 3,700. This has reduced county income and job creation because of diminished out-of-town student spending. The drop in state spending on higher education may also lower county income and demand over the next few years.

Employment and Unemployment

Employment concentrations in La Plata County differ from the state and the nation, with a higher concentration of tourism-related employment and a lower concentration of manufacturing.

In 2009, La Plata County's unemployment rate averaged 4.7%—lower than the nation and the state. This rate is 1.3 percentage points higher than the same period in 2008. In October 2009, the La Plata County labor force was 30,342, or about 2.3% less than the same month in 2008. Moreover, the county's population is decreasing. The number of employed workers in October 2009 was 28,295, an 8.8% drop year over year.

Wages

Average annual wages in La Plata County have improved over the last few years, both absolutely and relative to national per capita personal income. Average wages in 2008 were $38,070, the highest in Region 9. This is about 18.3% below the Colorado average of $46,614, but an improvement relative to the nearly 30% gap in 2001. Wages grew at a compound annual rate of 5.4% from 2001 to 2008 compared to 3% for the state. This rise in income coincides with the growing diversity of producers in the region.

In terms of sector share of total income, it is not surprising that the building boom in Durango in the mid-2000s led to an increase in construction income, rising from 13% of total private income to 16% between 2001 and 2008. Mining income also rose, which corresponded to the increase in natural gas prices. However, retail income fell from 16% to 11%. The increasing diversification of the local economy is positive for its long-term health, providing buffers against idiosyncratic sector shocks.

Although significant winter tourism activity is associated with winter sports, most La Plata County tourism occurs during the summer.

Tourism

Despite the county's growing economic diversification, tourism continues to play a significant role. Combined, the Retail and Accommodations and Food Services sectors account for almost 18% of private income.

Tourism indicators showed mixed results during the 2008-2009 period, which may point to concerns in 2010. Mesa Verde National Park visits increased 1.9% from 2007 to 2008, to 551,446. Year-to-date growth was down 0.9% through October 2009, year over year. Enplanements from the La Plata County Airport rose 15.5% in 2008 and 6.6% year to date in October year over year. Although Mesa Verde is in Montezuma County, many tourists who visit the park stay in La Plata County. On the other hand, over the first two quarters of 2009, lodging taxes dropped an average of 21.8%, implying that more tourists were making day trips, staying outside the county, camping, or simply not traveling. Similarly, overall retail sales taxes were down an average of 9% through October 2009.

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La Plata County

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Real Estate

Like many Colorado resort communities, La Plata County's economy is closely tied to real estate. The median home price in Durango slid approximately 10% from its peak in 2007. Local real estate will likely have a challenging year in 2010 as inventories increase. Moreover, the Colorado Q2 2009 foreclosure report shows that 1 out of every 374 homes is in foreclosure in La Plata County. This is the 27th lowest rate in the state.

Southwest Colorado Price Index

In late 2008, the Office of Economic Analysis and Business Research at Fort Lewis College and the Region 9 Economic Development District of Southwest Colorado, Inc. (Region 9 EDD) combined resources to construct and maintain a consumer price index for southwest Colorado, the Southwest Colorado Price Index (SCPI). The index allows for the comparison of price changes to Denver and the nation.

Since Q4 2008, prices have been collected on nearly 60 goods and services in the region under the main categories of groceries, housing, utilities, transportation, healthcare, and miscellaneous.

The SCPI indicates that the cost of living in the region has fallen 2% since late 2008 versus the national consumer price index drop of 1.5% and the Denver decline of 1.7%.

Recent and Future Trends

Although more volatile, the La Plata County economy generally tracks the state's economy. Like the state, it also lags the rest of the country. In the near term, the local economy will remain weak. Slowing demand for construction and real estate will continue to hamper the economic expansion. Though unemployment should stay below that of the nation and state, it will continue to rise. An increase in the level of underemployment is also projected. Similar to other resort communities, many job opportunities rely on seasonal construction jobs and low value-added service jobs.

Given the rise in the importance of building and natural gas in the La Plata County macroeconomy, 2010 will continue the slide in employment and the slowing in wage growth. The large inventory of homes for sale will remain, especially given that most of growth in the housing market has been fueled by nonresidents. A close relationship has been found between housing markets in San Diego and Durango, with a one-year lag. Thus, real estate should remain flat for another year or so.

Natural gas remains a strong contributor to the local economy, particularly in terms of county taxes generated. The most recent data indicate an annual decline natural gas prices of almost 60% (adjusted for inflation). The decline in local tax revenues has affected local government employment and will be deleterious to the provision of local services. ✤

Around the State: Mesa County

As part of a nation in the midst of recession, the Grand Junction Metropolitan Statistical Area's (MSA) economy has felt the effects of the downturn. However, even in light of difficult economic conditions, Grand Junction continues to receive national attention. In early 2009, the city was recognized by Forbes.com as the 24th best small place in the nation for business and careers.

In September 2008, the Grand Junction MSA had one of the lowest unemployment rates in the country, at 3.2%. September 2009 tells a very different story. The labor force has slightly decreased during the year, to 83,106. According to the Mesa County Workforce Center, the ratio of applicants to open jobs is 50:1. The unemployment rate has climbed exponentially, to 8.2% in September 2009, although it has eased from the peak level of 9.1% in July. While this is higher than the rate for the state, it remains lower than the national rate.

From 2003 to 2008, average Mesa County wages grew at a compound rate of 6.2%, to $39,246, compared to 3.7% statewide. However, county wages remained 15.8% below the state average. Much of the county's wage growth can be attributed to the energy boom. Average wages for the area are expected to decrease when new data become available for 2009.

Grand Junction's area nominal GDP grew in 2008, from $4.5 billion to $5.2 billion.

Compared to 2008, Grand Junction median home prices have slumped about 13%, to $200,000. The number of foreclosure filings in the area has climbed, which is related to the decline in home values. As of late 2009, active foreclosure filings in Mesa County totaled 938.

The Housing Affordability Index has increased since 2008, rising from 100 to 120. The Cost of Living Index shows that Grand Junction's consumer prices are slightly below the national average.

New residential construction has declined significantly. The total number of single-family permits pulled by September 2008 was 576, a 46% drop from the same period in 2007. The number continues to contract, falling to 304 in 2009. The bright spots in the area's construction sector are the Century Project at St. Mary's Hospital and the substantial construction projects at Mesa State College—although these projects are scheduled for completion in early 2010.

Grand Junction's sales and use tax revenues have significantly decreased in 2009. Collections are down nearly 14% from 2008. As of July 2009, the City of Grand Junction has collected $25 million in revenue from sales and use taxes. Revenue is expected to continue that downward trend, falling below original budget projections.

Lodging tax and hotel occupancy rates have also slipped in 2009. Lodging tax collections are down 18% from 2008. Hotel occupancy rates were 63.2% in September 2009, a significant decrease from last year's 84.7%. It is important to note that a hotel occupancy rate of that proportion is considered fully occupied and is difficult, if not impossible, to sustain.

Passenger traffic at Grand Junction Regional Airport increased nearly 14% for the first nine months of 2009 compared to the same period in 2008 (176,439 and 155,041, and respectively). Traffic in September 2009 fell slightly from August, but remained 1% higher than September 2008. This is the second year in a row with substantial increases in passenger enplanements.

Summary

The Grand Junction MSA's economy has experienced its share of ups and downs. In past years, growth was exponential, at unprecedented rate—and unsustainable. Although it entered the recession late, Grand Junction has not been immune to the seriousness of the national economic downturn and subsequent recession. However, some indicators suggest that the local economy may have bottomed out.

Economic recovery will likely be slow. While projects are on hold, the area's unemployment figures will probably remain near the September 2009 level, and GDP growth will be marginal. However, there are opportunities to position the area for future growth, such as increased and improved branding and marketing, as well as nurturing and attracting innovation and entrepreneurship. Mesa County is in a good place to capitalize on all of these areas. ✣

Around the State: Northern Colorado

I was wrong…very wrong. Twelve months ago I wrote the following for this publication: "*Economic forecasts are always risky propositions, more so given the current economic environment. Yet, we make one anyway. In 2009, we expect Larimer and Weld counties to add 4,200 net new jobs, a 1.9% growth rate.*"

Here we are 12 months later, and the Current Employment Survey data show the two counties lost 10,600 nonfarm jobs between September 2008 and 2009. This 4.7% decline was right in line with the state and actually slightly worse than the nation (-4.1%) over the same time frame.

What was in retrospect an extremely optimistic forecast was founded on the fact that Northern Colorado was, at the time of our projection, doing a pretty good job of riding out a national recession that officially began in December 2007. And at that time the national downturn was fairly mild.

Indeed, through the first eight months of 2008 Larimer and Weld counties actually saw employment totals increase. To illustrate, in August 2008 the two counties added 1,500 positions (0.7%) from a year earlier, and the U.S. economy, while struggling, had shed fewer than 500,000 jobs year over year.

But then the financial markets collapsed in the early fall of 2008, precipitating a dramatic recession that still painfully lingers today. And the region's economy declined in lockstep with the nation. In the end, while Northern Colorado may have been somewhat late to the recession, it wasted no time in shedding jobs once there.

The primary job losers were the Construction Sector and Mining and Logging (a loss of 3,500 jobs) and Trade, Transportation, and Utilities (2,600 jobs shed). But reflecting the pervasiveness of the recession, employment losses mounted in nearly every sector. For example, Professional and Business Services, a historically robust regional sector, lost 1,500 jobs in September 2009, year over year. Indeed, Healthcare and Social Assistance, and Government were the only sectors that did not see reduced payrolls.

As job losses mounted, unemployment increased. Over the past 12 months (September to September) the number of active job seekers in the two counties grew by more than 5,600, a 42% increase. As of September 2009, nearly 19,000 unemployed Northern Coloradans were actively looking for work. June's 7.7% unemployment rate was the region's highest in at least 20 years.

There are, however, some indications that the economy is turning around. At the national level the recession has ended. The financial crisis has mitigated. The housing market has somewhat stabilized. Both GDP and productivity are increasing.

The question is, "What does this mean for the region?"

Much of the media and many analysts are talking about a national "jobless recovery." This is when the economy returns to output growth, but the job market remains uninspired.

The concern is valid. After the 2001 recession it took Colorado about five years to get back to its prerecessionary employment levels. Larimer County, which entered the last recession nearly two years late, recouped its job losses in approximately three years. Interestingly, Weld County, buoyed by population growth and fairly nonreliant on high tech, did not have any sustained periods of job loss during the last recession.

It is difficult, however, to extrapolate experiences from the post dot-com recession to life after the most prolonged downturn in some 75 years. The fact is that the 2001 recession was both fairly mild and relatively isolated, affecting primarily high-tech sectors. By contrast, the 2007 recession was both deep and wide.

For several reasons, we expect a very modest turnaround in job totals in Northern Colorado in 2010 and a long slog until the economy "fully recovers." First, while regional job losses have slowed, they are still accumulating. Looking at preliminary monthly data for September 2009, both Larimer and Weld counties continue to see monthly increases in the rate of annual job loss. The region is not expected to "bottom out" until early 2010.

At that point, job levels are anticipated to remain flat for several months. This will be due, in part, to the fact that many workers have seen their hours cut during the recession.

Nationally, the average production employee worked 33.0 hours in September 2009, down from 33.8 hours at the start of the recession. In recoveries, employers first tend to bring their current workers back to a normal schedule before hiring new ones. Thus, the first phase of the labor market recovery will be eliminating furloughs and moving those workers reduced to part-time status back to full-time employment.

Beginning in late spring 2010, it is anticipated that the regional economy will start adding jobs, although at a subdued pace. State and local governments, which had for the most part been able to maintain their employment levels in the downturn, will almost certainly be grappling with slowing growth due to substantial revenue shortfalls. As a result, the sector may contract somewhat in 2010.

At the same time, the Healthcare Sector, which has been a leading growth sector in Colorado over the decade, may slow. Factors at play will be reduced household spending on medical care and a winding down of new capacity brought into the market.

While the Government and Healthcare sectors may be slowing, other industries will likely bounce back. The region's Manufacturing Sector will likely see notable growth. One important reason is that Vestas will continue to ramp up its production activities in Weld County, and its supply chain will localize, creating other clean energy opportunities. Additionally, the continued weakness of the U.S. dollar vis-à-vis the euro should strengthen the competitive position of other regional export firms.

New housing construction will be worth watching. As of September 2009, Census Bureau data show that regional single-family building permits year-to-date are down 479 units (36%) from the same point 12 months earlier. Larimer County declined by 331 units (56%), while Weld County fell 148 (21%). Given that regional population is expected to continue growing, it is reasonable to expect the local housing construction market to pick up somewhat.

Regional Retail employment is also forecast to stop declining as the economy recovers. Notable growth will remain elusive, however, because consumers are expected to remain cautious with their spending until a full-fledged job recovery proceeds.

Professional and Business Services is the wildcard sector. September to September, Larimer County shed 1,000 jobs in the sector, a 5.5% decline, while Weld County lost 500 (7.2%). Most of these job losses occurred in the first half of 2009, and the industry has already started to rebound in Larimer County. In 2010, this sector is expected to slowly add jobs, especially in Fort Collins.

Northern Colorado's Manufacturing Sector will likely see notable growth.

In summary, Northern Colorado's economy is projected to offer tepid employment growth in 2010, marked by periods of fits and starts. A 1% increase in total employment, about 2,100 new jobs, seems a reasonable forecast.

While the region should add jobs, the unemployment rate is expected to remain uncharacteristically high as the nation slowly pulls out of its malaise. Indeed, an earnest recovery is not expected until 2011, and it may be longer than that until the region fully recovers the jobs lost in 2009.

Given the reach of the recession, a true recovery will require significant upticks across the board. Retail and tourism need to spring back, not only creating jobs, but helping replenish government coffers with sales tax revenues. Residential construction must climb up from rock bottom and put plumbers, electricians, and architects back to work.

Perhaps most importantly, the region must continue to innovate and evolve. The truth is that no one knows what the U.S. economy will look like as it exits its biggest slump since the Great Depression. But it almost certainly won't look like it did in 2007. ✜

Around the State: Pueblo County

Encouraging economic news for Pueblo during 2009 has been hard to find, with the economic picture clouded by rising unemployment, a declining number of jobs, a shrinking housing market, and a burgeoning number of home mortgage foreclosures. However, not all of the clouds are gloomy; a few have silver linings. Given that the most unpleasant tasks are those that should be tackled first, this report presents an evaluation of the most recent economic data, followed by a more upbeat assessment of future economic prospects that appear likely to have a major influence on the foreseeable future. In the long run, the Pueblo economy stands to gain from the increasing impact of energy-related industries and its closer integration with the Colorado Springs economy.

In September 2009, the seasonally adjusted unemployment rate in Pueblo (latest available data) stood at 7.9%, compared to 6.3% the same period the previous year. The Colorado statewide rate in September was 7% and the national rate, 9.8%. Pueblo posted a 3.2% resident job loss during this period.

An analysis of employment growth by industry sector (based on 2008-2009 nonseasonally adjusted data for September) reveals that the Educational and Health Services Supersector accounted for the greatest number of new jobs, 300, a 3% increase. With the graying of Pueblo's baby boomers, this sector stands to see substantial gains in the ensuing years. Nominally, Retail Trade accounted for the greatest loss of jobs, 500, or 6.7%. Although several large-scale commercial projects have sustained Construction Sector employment, the cutback in residential building activity has had a telling effect. The sector lost 400 jobs September year over year, a decline of 10.3%. Temporary employment related to repair of damages caused by two late-summer hailstorms in Pueblo may have provided some relief to the sector. Manufacturing also experienced losses, with the announcement that Trane Co., Pueblo's second-largest manufacturing employer, would be laying off workers as it transfers some of its air conditioning systems manufacturing operations to North Carolina. This brings the plant's workforce to about 435 workers. Over the long term, continued expansion of operations at the Pueblo Chemical Depot can be expected to offset recent job losses in other sectors of the economy. The construction phase of this project, which will dispose of 2,600 tons of weapons containing mustard agent, is well underway. Once the facility is completed, the 350-400 construction jobs will be supplanted by the 700-800 positions required to complete the actual destruction of the weapons.

During the last week of October 2009, Convergys, one of several telemarketing firms in Pueblo, announced that it would be hiring an additional 300 workers. The company recently celebrated its 20th anniversary as a Pueblo employer, and currently employees approximately 550 workers.

In the long run, the Pueblo economy stands to gain from the increasing impact of energy-related industries and its closer integration with the Colorado Springs economy.

New home construction is showing a downward trend. New single-family homes authorized by building permits totaled 148 in the first nine months of 2009, compared to 337 in the comparable period in 2008, 579 in 2007, and 986 in 2006 (six times the 2009 level). However, multifamily construction shows signs of increased activity after years of dormancy. For the first nine months of 2009, 124 new multifamily residential units were authorized by building permits, compared to 37 in the same period in 2008 and only 12 in 2007. These figures exclude 67 new off-campus units for students attending Colorado State University-Pueblo, and 78 one- and two-bedroom independent and assisted living apartments at the Primrose retirement complex. The mini-surge in apartment construction commenced during Q3 2008 with the addition of 25 apartment units in Pueblo's Belmont neighborhood. Multifamily construction in Pueblo is perhaps becoming a more viable economic prospect.

Existing home sales have also seen a downturn in terms of units sold. For Q3 2009, the Colorado Association of Realtors reported 498 single-family residence sales compared to 568 in Q3 2008, a 12.3% decrease. However, the median home sales price grew from $110,989 to $124,268. Comparing Q2 and Q3 2009 data reveals that the Pueblo market may be improving slightly. Single-family unit sales climbed by 7.3%, and the median sales price grew 11.3%. The total number of home mortgage foreclosure filings through September 2009 rose 20% year over year.

Pueblo is on the verge of seeing a realignment of its economy as a provider of alternative forms of energy. The August 2008 announcement that Danish wind-turbine manufacturer Vestas Wind Systems had selected Pueblo as the site for its tower manufacturing facility has begun affecting the local economy. The construction phase of the new $240 million plant, which employed about 500 construction workers at the peak, is nearly complete. As the construction jobs are phasing out, the plant has been hiring welders, painters, and materials-handling and transportation workers to produce the actual towers. The plant currently employs approximately 100 production workers; that number is anticipated to increase to 450-550. The first tower was finished in mid-October 2009, and Vestas plans to build 1,000 steel towers annually. Part of the success of Pueblo's economic development efforts has been the training programs that Pueblo Community College (PCC) offers to economic prospects. PCC tailors training programs to fit employers' needs, and the training provided to Vestas employees is a good example of this program in action.

Pueblo is an ideal location for developing solar energy, with sunny skies three out of four days. To this end, Colorado State University-Pueblo completed a 1.2-megawatt (MW) photovoltaic solar array designed to provide more than 10% of total campus power usage. It is one of the largest solar energy power complexes located on a U.S. college campus.

The Pueblo Chemical Depot Reuse Authority is actively pursuing development of some of the property under its jurisdiction for solar power production. Earlier this year, Helios Energy Partners submitted a proposal to Xcel Energy to develop a 200-MW solar power facility at this site. Although Xcel did not select this application as its preferred site, efforts are underway to court another prospective utility and complete leasing arrangements with the Department of Defense. Another power provider, Black Hills Energy, has expressed interest in developing a Pueblo site as its preferred location for a gas-fired 400-MW power plant. Final arrangements will depend on completion of regulatory and land use agreements with the appropriate governmental entities and development of the site infrastructure. The facility would be located on a 240-acre parcel about two miles north-northwest of the Pueblo Airport Industrial Park. The plant was proposed following a decision by Xcel Energy to not renew its sales contracts with Black Hills.

Pueblo's economy is increasingly affected by development in Colorado Springs' economy. More than 10% of Pueblo County residents commute to work in El Paso County. This represents over 6,300 workers out of total resident employment of 60,000. Conversely, only 1.4% (3,400 commuters) of El Paso County's 242,000 resident workers commute to jobs in Pueblo County. Pueblo metro area per capita income is nearly 24% lower than that for the Colorado Springs metro area, but housing costs are also lower. The median sales price for a Pueblo home is about 60% of the Colorado Springs value. A report released by the Council for Community and Economic Research shows that Pueblo has the lowest cost of living of any U.S. metropolitan area on the basis of Q3 2009 data. This report assigns an index value of 100.0 as representing the cost of living in an average U.S. community. Pueblo's index value was 84.3, while the Colorado Springs metro index was 92.4 and the Denver-Aurora value was 104.3. Increasing integration of the two economies would appear to make sense and benefit both communities.

Despite Pueblo's lackluster short-term economic picture, long-term prospects are encouraging. Many exciting new opportunities are opening up that could significantly alter the county's future course of development and position it as a major supply center for "green" energy production. ✜

Around the State: Southern Colorado

During 2008-2009, the El Paso County economy was significantly influenced by the national and global recession, a strong military presence, and a deteriorating economic base. The national recession proved to be the worst since the double-dip recessions of the early 1980s. A decline in consumer sentiment was accompanied by reduced retail and tourism activity. This lowered city sales tax and the lodging and auto rental tax (LART) collections. The national recession had a lagged effect on local employment patterns.

The military presence has had both positive and negative affects on the economy. According to the analysis for the Southern Colorado Economic Forum (Forum), the Department of Defense wage and allowances for army personnel, which is the average civilian equivalent wage of a soldier at Fort Carson, was approximately $57,000 in 2008. This includes direct wages, plus the value of housing, clothes, and meals provided by the Army.

Since the wars in Iraq and Afghanistan, Fort Carson troops have experienced recurring deployments, effectively reducing the military population in the community. Over the same period, the BRAC05 reallocation added approximately 10,000 troops to Fort Carson. The deployments and arrivals of additional troops have kept the Army population in the community relatively stable since 2003. Air Force facilities in the region have approximately 15,000 flight personnel. When civilian personnel are included, the military bases employ approximately 54,300 people in El Paso County. The direct and indirect economic effects of the military are estimated to be approximately 20% of the region's gross metropolitan product.

LART receipts for 2009 are expected to total $3.5 million compared to peak collection of $4.2 million in 2007. Sales tax receipts for Colorado Springs are expected to be 8.5% below 2008 receipts. The important lesson of a reduction in LART revenue is that a slow national economy reduces tourism-related expenditures in the local economy.

Consumer sentiment fell sharply in late 2007 through mid-2008. Since then, it has rebounded but remains approximately 20% below its 2007 value. One consequence of declining consumer sentiment is reduced retail expenditures. Saving also tends to increase as consumers deleverage. Reduced tourism expenditures and declines in general retail sales result in revenue shortfalls for communities that depend on sales tax revenues to fund their respective general funds. With the exception of Green Mountain Falls, all municipal governments in El Paso County are experiencing significant reductions in revenue collections in 2009. This may lead to reduced government services.

The deployments and arrivals of additional troops at Fort Carson have kept the Army population in the community relatively stable since 2003.

Employment and Unemployment

El Paso County private-sector employment based on figures from the Quarterly Census of Employment and Wages (QCEW) decreased by 0.9%, or 2,216 jobs, in 2008. The loss of jobs followed gains of 1,884 and 4,208 jobs in 2007 and 2006, respectively. Three sectors saw significant job gains: government (1,396 jobs), healthcare (1,230 jobs), and professional and technical services (1,019 jobs). According to QCEW data, six NAICS sectors recorded job losses. Significant declines occurred in manufacturing (1,375 jobs), construction (1,326 jobs), administration and waste management (1,138), finance and insurance (580 jobs), retail (477 jobs), and accommodations and food service (397 jobs).

These losses propelled the unemployment rate to 8.3% in April 2009 from approximately 5% in early 2008. The September 2009 (seasonally adjusted) unemployment rate in El Paso County fell to 7.4%. This is 2.4 points lower than the national unemployment rate of 9.8%. The military presence and reduced dependence on jobs in volatile industries contribute to the lower unemployment rate in the county.

Wages and Income

The economic base in the region continues to change. The community lost approximately 17,000 manufacturing and technology-related positions since 2000. These jobs paid very high wages compared to the average wage in the community; however, they were in volatile and cyclically sensitive sectors. High-paying manufacturing and information jobs were replaced with service-producing jobs. These jobs tend to be more stable but pay lower wages than the jobs that were lost. The net effect is the employment base is less susceptible to swings of the business cycle, but the average wage for workers is lower.

In 2008, the average wage in El Paso County increased to $40,664, which is 1.7% above the 2007 average wage of $39,988. El Paso County's average wage is now 12.1% below the state average—a record wage gap. Higher income has been linked to higher standards of living, better quality of life, lower crime, better educational attainment, better coverage of medical insurance, and improved life expectancy. Strong primary job growth in high-wage industries is needed in El Paso County.

Retail Sales

Retail sales fell 0.9% in 2008, to $13.7 billion, compared to $13.8 billion in 2007. The decline should not be a surprise, given the decrease in employment during a national recession and a drop in consumer sentiment.

The largest loser in the competition for sales tax dollars in El Paso County was the City of Colorado Springs. Ten years ago, the city captured 91.7% of taxable retail sales. As of 2008, its market share of taxable retail sales fell to 86.7%. The Forum has repeatedly pointed out that growth in retail activity in El Paso County will follow the growing number of rooftops beyond Colorado Springs' city limits. The movement of retail activity beyond city limits began more than 10 years ago and became more pronounced in 2004. Over 50% of Colorado Springs' general fund revenues come from sales tax collections. The city's general fund budget will continue to deteriorate as long as it depends so heavily on sales tax revenues.

Growth in retail activity in El Paso County will follow the growing number of rooftops beyond Colorado Springs' city limits.

Housing Construction and Commercial Activity

According to the Pikes Peak Regional Building Department, the number of permits for new, single-family, detached residential homes in 2008 totaled 1,223, a decline of 42.7% year over year. This follows a loss of 22.3% in 2007 and 35.2% in 2006. Compared to 2006, there were 2,223 fewer single-family detached permits issued.

The decline in permit activity was accompanied by an increase in permit values in 2008. The average single-family, detached, permit value in 2008 was $213,982, an increase of $20,186 compared to $193,669 in 2007. The downturn in housing construction has been accompanied by an inverse relation in permit values. Nominal permit values increased approximately $65,000 since 2005. This is believed to be attributable to a decrease in bare bones, entry level housing and the increased use of incentives by builders to close the deal.

Townhome construction has also declined. Permits totaled 321 in 2008 compared to 542 permits the previous year, a drop of 40.8%. Unlike the detached permits, townhome permits decreased in value to $114,859 in 2008, a decline of $2,098.

Persistent multifamily vacancy rates in the 10% range and falling real rents for apartments were disincentives for multifamily construction in 2008. Despite the weak demand for multifamily housing, new permits were authorized for a total of 441 multifamily units in 2008, up slightly from the 414 multifamily units issued in 2007. Additional multifamily housing unit activity is expected in early 2010 as the newly arrived Fort Carson troops occupy vacant units. This will reduce vacancy rates in the county. Any new construction that is undertaken should be done with caution. The Forum's analysis of statewide vacancy rates found that the El Paso County market has the highest multifamily vacancy rates in Colorado.

Commercial construction value increased to $447 million in 2008 compared to $390.8 million in 2007. If not for $81.5 million in new hotel construction, nonresidential construction would have declined by $20 million. Year-to-date permit values suggest commercial values will be approximately $330 million in 2009. A small gain in 2010 is expected, with the anticipated general growth in the economy in post-recession 2010.

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Southern Colorado

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The current downturn, coupled with strong commercial construction leading up to the recession, placed pressures on commercial vacancies and rents. Vacancies increased in all classes of commercial and industrial space. Real rents declined in every category of commercial and industrial space. A recovery is not anticipated in the commercial market before mid-2010 or beyond.

What Does the Future Hold for the Pikes Peak Region?

The Pikes Peak Region will slowly recover from one of the deepest recessions in its history. Job creation will be an important focus in 2010 and 2011. The first comprehensive regional strategic economic development plan for the Pikes Peak region in well over 15 years, the Operation 60ThirtyFive report, will be presented, along with a strategy for execution, in mid-November 2009. The plan is intended to move the region forward by identifying and implementing a shared vision of economic development. This goal needs to translate into more jobs, better wages and incomes, a more diverse economic base, and increased job and tax multipliers. In addition, the plan should help the region sustain a viable long-term economic strategy.

Over the course of 2010 the Forum expects a substantial increase in population. Some of the growth is explained by the military, while another portion is a result of the 10-year correction in population estimates from the 2010 census.

Unemployment is anticipated to remain below the national average due to the influence of the military. Employment will grow modestly, along with total wages and salaries. Average wages will also rise slightly. Personal income will grow at a rate above the rate for Colorado. Retail trade will rebound and begin to grow but perhaps not as much as in the rest of the state. The expectation is that residential construction will begin to rebound. The commercial sector will see an increase in vacancy rates across all segments, and as businesses renegotiate leases, there will be pressure to reduce rents. Many companies could relocate in order to lock into more favorable lease arrangements. ✜

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2008 AVERAGE ANNUAL WAGES BY SECTOR COLORADO AND UNITED STATES

Sector	Colorado	United States[a]
Agriculture, Forestry, Fishing, Hunting	$28,403	$25,982
Mining	96,802	87,211
Utilities	79,468	84,191
Construction	47,734	49,014
Manufacturing	58,322	54,392
Wholesale Trade	67,409	61,847
Retail Trade	26,720	26,181
Transportation and Warehousing	41,718	42,969
Information	76,678	70,780
Finance and Insurance	70,505	85,274
Real Estate and Rental and Leasing	43,196	43,239
Professional and Technical Services	76,894	74,354
Management of Companies and Enterprises	106,506	94,842
Administrative and Waste Services	32,739	32,078
Educational Services	35,927	40,832
Health Care and Social Assistance	43,062	42,150
Arts, Entertainment, and Recreation	30,539	31,935
Accommodation and Food Services	17,232	16,694
Other Services	32,540	28,776
Government	46,024	46,559
Total	$46,614	$45,559

[a]Average annual pay, Quarterly Census of Employment and Wages.

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

product manufacturing; wood product manufacturing; paper manufacturing; printing and related support activities; petroleum and coal products manufacturing; chemical manufacturing; plastics and rubber products manufacturing; nonmetallic mineral product manufacturing; primary metal manufacturing; fabricated metal product manufacturing; machinery manufacturing; computer and electronic product manufacturing; electrical equipment, appliance, and component manufacturing; transportation equipment manufacturing; furniture and related product manufacturing; and miscellaneous manufacturing.

Trade, Transportation, and Utilities

Merchant wholesalers, durable goods; merchant wholesalers, nondurable goods; wholesale electronic markets and agents and brokers; motor vehicle parts and dealers; furniture and home furnishing stores; electronics and appliance stores; building material and garden equipment and supplies dealers; food and beverage stores; health and personal care stores; gasoline stations; clothing and clothing accessories stores; sporting goods, hobby, book, and music stores; general merchandise stores; miscellaneous store retailers; nonstore retailers; air transportation; rail transportation; water transportation; truck transportation; transit and ground passenger transportation; pipeline transportation; scenic and sightseeing transportation; support activities for transportation; postal service; couriers and messengers; warehousing and storage; and utilities.

Information

Publishing industries (except Internet); motion picture and sound recording industries; broadcasting (except Internet); telecommunications; data processing, hosting, and related services; and other information services.

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2008 AVERAGE ANNUAL WAGES BY SECTOR
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Information

Publishing industries (except Internet); motion picture and sound recording industries; broadcasting (except Internet); telecommunications; data processing, hosting, and related services; and other information services.

Appendix: North American Industry Classification System Descriptions and Concentrations

The economic sectors analyzed in this book reflect the new North American Industry Classification System. In 2007, the system was updated with U.S. revisions to accommodate NAFTA members' rapidly changing economies. The system allows the United States to directly compare its economic data with that of Canada and Mexico. A brief summary of the composition of each supersector appears below, followed by a discussion of each area's concentration in the economy.

Natural Resources and Mining

Crop production; animal production; forestry and logging; fishing, hunting, and trapping; support activities for agriculture and forestry; oil and gas extraction, mining (except oil and gas); and support activities for mining.

Construction

Construction of buildings, heavy and civil engineering construction, and specialty trade contractors.

Manufacturing

Food manufacturing; beverage and tobacco product manufacturing; textile mills; textile product mills; apparel manufacturing; leather and allied

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2008 SECTOR CONCENTRATIONS OF COLORADO FIRMS, EMPLOYMENT, AND WAGES

	Percentage of Total Private			Location Quotient		
Industry	Firms	Employment	Wages	Firms	Employment	Wages
Agriculture, Forestry, Fishing, Hunting	0.8%	0.7%	0.4%	0.73	0.70	0.74
Mining	0.9	1.5	3.0	2.46	2.31	2.49
Construction	12.4	8.3	8.5	1.24	1.32	1.25
Manufacturing	3.3	7.4	9.3	0.81	0.63	0.65
Wholesale Trade	7.4	5.2	7.4	1.03	0.98	1.04
Retail Trade	10.6	13.0	7.4	0.88	0.96	0.95
Transportation and Warehousing	2.2	3.3	2.9	0.86	0.87	0.82
Utilities	0.2	0.4	0.7	1.24	0.86	0.79
Information	1.9	4.0	6.5	1.15	1.50	1.58
Finance and Insurance	6.4	5.4	8.1	1.15	1.04	0.84
Real Estate and Rental and Leasing	5.9	2.4	2.1	1.40	1.29	1.21
Professional and Technical Services	16.3	9.1	14.9	1.43	1.32	1.32
Management of Companies and Enterprises	0.9	1.5	3.4	1.61	0.88	0.96
Administrative and Waste Services	5.9	7.5	5.3	1.12	1.07	1.06
Educational Services	1.3	1.4	1.1	1.27	0.68	0.58
Health Care and Social Assistance	7.4	11.3	10.4	0.86	0.82	0.82
Arts, Entertainment, and Recreation	1.5	2.4	1.5	1.03	1.34	1.25
Accommodation and Food Services	6.9	12.2	4.3	1.00	1.21	1.16
Other Services	7.3	3.5	2.5	0.54	0.89	0.98

Note: Due to rounding, the sum of percentage columns may not equal 100%; total private-sector figures were used as the base for LQ calculations.
Source: Colorado Department of Labor and Employment, Bureau of Labor Statistics.

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**2008 AVERAGE ANNUAL WAGES BY SECTOR
COLORADO AND UNITED STATES**

Sector	Colorado	United States[a]
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Accommodation and Food Services	17,232	16,694
Other Services	32,540	28,776
Government	46,024	46,559
All Industries	$41,587	$45,559

[a]Average annual pay, Quarterly Census of Employment and Wages.
Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

product manufacturing; wood product manufacturing; paper manufacturing; printing and related support activities; petroleum and coal products manufacturing; chemical manufacturing; plastics and rubber products manufacturing; nonmetallic mineral product manufacturing; primary metal manufacturing; fabricated metal product manufacturing; machinery manufacturing; computer and electronic product manufacturing; electrical equipment, appliance, and component manufacturing; transportation equipment manufacturing; furniture and related product manufacturing; and miscellaneous manufacturing.

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Information

Publishing industries (except Internet); motion picture and sound recording industries; broadcasting (except Internet); telecommunications; data processing, hosting, and related services; and other information services.

Financial Activities

Monetary authorities-central bank; credit intermediation and related activities; securities, commodity contracts, and other financial investments and related activities; insurance carriers and related activities; funds, trusts, and other financial vehicles; real estate; rental and leasing services; lessors of nonfinancial intangible assets (except copyrighted works).

Professional and Business Services

Professional, scientific, and technical services; management of companies and enterprises; administrative and support services; waste management and remediation services.

Educational and Health Services

Educational services; ambulatory healthcare services; hospitals; nursing and residential care facilities; and social assistance.

Leisure and Hospitality

Performing arts, spectator sports, and related industries; museums, historical sites, and similar institutions; amusement, gambling, and recreation industries; accommodation; and food services and drinking places.

Other Services

Repair and maintenance; personal and laundry services; religious, grantmaking, civic, professional, and similar organizations; and private households.

Government

Executive, legislative, and other general government support; justice, public order, and safety activities; administration of human resource programs; administration of environmental quality programs; administration of housing programs, urban planning, and community development; administration of economic programs; space research and technology; and national security and international affairs.

Sector Concentration/ Location Quotient

A useful tool for examining an industry's relative concentration in an economy is the location quotient (LQ). The LQ is a ratio comparing and industry's share of a total (can be number of firms, employment, wages, etc.) at a local level to that industry's share of the total at a national level. Therefore, an employment LQ greater than 1 means the industry has a higher than average share of employment in a given area, or is relatively more concentrated in that area. For example, if manufacturing makes up 20% of employment in a state and 10% of total U.S. employment, that state would have an LQ of 2.0 for manufacturing (20/10 = 2). In words, this means that manufacturing is twice as heavily concentrated in that state relative to the United States. Two of the tables in this section explore this concept.

The other table in this section examines average wages by sector for both Colorado and the United States. ✣

2008 PRIVATE-SECTOR CONCENTRATION OF SELECT SUBSECTORS IN COLORADO

	Location Quotient		
Industry	Firms	Employment	Wages
Food Manufacturing	0.91	0.73	0.70
Beverage and Tobacco Product Mfg	0.95	1.68	2.71
Chemical Manufacturing	0.62	0.44	0.37
Computer and Electronic Product Mfg	1.28	1.19	1.16
Transportation Equipment Mfg	0.61	0.34	0.45
Software Publishers	2.27	2.73	2.41
Telecommunications	0.89	1.77	2.04
Scientific Research and Development Services	1.49	1.31	1.40

Note: Total private industries were used as the base for LQ calculations.

Source: Colorado Department of Labor and Employment, Bureau of Labor Statistics.

Steering Committee

Dr. Jim Burnell
Minerals Geologist
Colorado Geological Survey
303-866-2611
jim.burnell@state.co.us

Dr. Steve Fisher
Economist
303-499-7875
stevefisher2995@email.msn.com

Ms. Elizabeth Garner
State Demographer
Colorado Department of Local Affairs
Division of Local Government
303-866-3096
elizabeth.garner@state.co.us

Dr. Charles Goeldner
Professor Emeritus of Marketing and Tourism
University of Colorado at Boulder
Leeds School of Business
303-492-2553
Charles.Goeldner@Colorado.EDU

Ms. Allyson Hathaway
Economist
Colorado Department of Labor and Employment
Labor Market Information–Training and Outreach
303-318-8894
allyson.hathaway@state.co.us

Mr. Mark Hamouz, P.E.
LONCO, Inc.
303-620-0098
mhamouz@lonco.com

Mr. Gary Horvath
Managing Director
University of Colorado at Boulder
Business Research Division
303-492-8395
Gary.Horvath@Colorado.EDU

Mr. Wilson Kendall
President
Center for Business and Economic Forecasting
303-329-8491
Bill@CBEF-Colorado.com

Mr. Brian Lewandowski
Research Analyst
University of Colorado at Boulder
Business Research Division
303-492-3307
Brian.Lewandowski@Colorado.EDU

Mr. Tom Lipetzky
Director, Division of Markets
Colorado Department of Agriculture
303-239-4117
tom.lipetzky@ag.state.co.us

Ms. Donna Marshall
Executive Director
Colorado Business Group on Health
303-922-0939
donna.marshall@CBGHealth.org

Dr. Vince Matthews
State Geologist and Director
Colorado Geological Survey
303-866-2611
vince.matthews@state.co.us

Mr. Richard Morgan
Vice President
Colorado State Bank & Trust
Commercial Real Estate Group
303-863-4458
rmorgan@bokf.com

Ms. Natalie Mullis
Chief Economist
Colorado Legislative Council
303-866-4778
natalie.mullis@state.co.us

Mr. Penn Pfiffner
Consulting Economist
Construction Economics, LLC
303-233-7731
constecon@hotmail.com

Ms. Pam Reichert
Division Director, International Trade
Colorado Office of Economic Development and International Trade
303-892-3850
pam.reichert@state.co.us

Mr. Tim Sheesley
Chief Economist
Xcel Energy
303-294-2662
tim.sheesley@xcelenergy.com

Ms. Patty Silverstein
President
Development Research Partners
303-991-0073
patty@developmentresearch.net

Mr. Joseph Winter
Program Manager CES/LAUS
Colorado Department of Labor and Employment
Labor Market Information
303-318-8857
joseph.winter@state.co.us

Dr. Richard Wobbekind
Director
University of Colorado at Boulder
Business Research Division
303-492-1147
Richard.Wobbekind@Colorado.EDU

Estimating Groups

Population and Labor Force

Ms. Elizabeth Garner (Co-Chair)
State Demographer
Colorado Department of Local Affairs
Division of Local Government
303-866-3096
elizabeth.garner@state.co.us

Mr. Joseph Winter (Co-Chair)
Program Manager CES/LAUS
Colorado Department of Labor and Employment
Labor Market Information
303-318-8857
joseph.winter@state.co.us

Mr. Chris Akers
Colorado Department of Labor and Employment
Labor Market Information
303-318-8856
chris.akers@state.co.us

Ms. Cindy DeGroen
Projections Demographer
Colorado Department of Local Affairs
Division of Local Government
303-866-3004
cindy.degroen@state.co.us

Mr. Eddie Hunsinger
Estimates Demographer
Colorado Department of Local Affairs
Division of Local Government
303-866-4989
eddie.hunsinger@state.co.us

Agriculture

Mr. Tom Lipetzky (Chair)
Director, Division of Markets
Department of Agriculture
303-239-4117
tom.lipetzky@ag.state.co.us

Mr. Darrell Hanavan
Executive Director
Colorado Wheat Administration Committee
303-721-3000
dhanavan@coloradowheat.org

Ms. Trudy Kareus
State Executive Director
USDA Colorado Farm Service Agency
720-544-2876
trudy.kareus@co.usda.gov

Mr. Steve Koontz
Associate Professor
Colorado State University
Ag and Resource Economics
970-491-7032
stephenkoontz@colostate.edu

Ms. Maren Macauley
Agricultural Statistician
USDA - NASS-CO Field Office
303-236-2300
maren_macauley@nass.usda.gov

Mr. Bill Meyer
Director
USDA - NASS-CO Field Office
303-236-2300
bill_meyer@nass.usda.gov

Mr. Rodger Ott
Deputy Director
USDA - NASS-CO Field Office
303-236-2300
rodger_ott@nass.usda.gov

Mr. Jim Robb
Director
Livestock Marketing Information
303-236-0460
robb@lmic.info

Ms. Erica Rosa
Agricultural Economist
Livestock Marketing Information Center
303-236-0460
rosa@lmic.info

Ms. Dawn Velasquez
International Marketing Specialist
Colorado Department of Agriculture
303-239-4123
dawn.velasquez@ag.state.co.us

Ms. Wendy White
Marketing Specialist
Colorado Department of Agriculture
303-239-4117
wendy.white@ag.state.co.us

Natural Resources and Mining

Dr. Jim Burnell (Co-Chair)
Minerals Geologist
Colorado Geological Survey
303-866-2611
jim.burnell@state.co.us

Dr. Vince Matthews (Co-Chair)
State Geologist and Director
Colorado Geological Survey
303-866-2611
vince.matthews@state.co.us

Mr. Bob Burnham
Senior Analyst
Wood Mackenzie
303-425-5025
bob.burnam@woodmac.com

Mr. Chris Carroll
Coal Geologist
Colorado Geological Survey
303-866-2611
chris.carroll@state.co.us

Mr. Stuart Sanderson
President
Colorado Mining Association
303-575-9199
ssanderson@coloradomining.org

Mr. John Tobin
Executive Director
Energy Literacy Project
303-674-7083
jtobin3es@aol.com

Ms. Genevieve Young
Senior Petroleum Geologist
Colorado Geological Survey
303-866-2611
genevieve.young@state.co.us

Construction

Mr. Penn Pfiffner (Chair)
Consulting Economist
Construction Economics, LLC
303-233-7731
constecon@hotmail.com

Mr. Jim Coil
Principal
James Coil Research & Consulting, LLC
970-245-2486
jcrc@bresnan.net

Mr. Gary D. Meggison
Senior Vice President
The Weitz Company
303-860-6639
gary.meggison@weitz.com

Mr. Tom Peterson
Colorado Asphalt Pavement Association
303-741-6150
tompeterson@co-asphalt.com

Mr. Michael Rinner
MAI
The Genesis Group
303-662-0155
mrinner@thegenesisgroup.net

Mr. Mark Shaw
Sr. Managing Editor
McGraw Hill Construction
303-584-6725
mark_shaw@mcgraw-hill.com

Manufacturing

Ms. Patty Silverstein (Chair)
President
Development Research Partners
303-991-0073
patty@developmentresearch.net

Dr. Fred Crowley
Senior Economist and Senior Instructor
University of Colorado at Colorado Springs
College of Business and Administration
719-255-3531
fcrowley@uccs.edu

Ms. Jo Ann Miabella Galvan
CFO
Colorado Association for Manufacturing and Technology (CAMT)
719-964-3297
jgalvan@camt.com

Ms. Sue Piatt
Research Manager
Colorado Office of Economic Development and International Trade
303-892-3840
sue.piatt@state.co.us

Dr. Tom Zwirlein
Professor of Finance and Faculty Director of the Southern Colorado Economic Forum
University of Colorado at Colorado Springs
College of Business and Administration
719-255-3241
tzwirlei@uccs.edu

Trade, Transportation, and Utilities

Mr. Wilson Kendall (Co-Chair)
President
Center for Business and Economic Forecasting
303-329-8491
Bill@CBEF-Colorado.com

Mr. Tim Sheesley (Co-Chair)
Chief Economist
Xcel Energy
303-294-2662
tim.sheesley@xcelenergy.com

Mr. Chuck Cannon
Director of Public Affairs
Denver International Airport
303-342-2250
chuck.cannon@diadenver.net

Ms. Heidi Craig
Statistical Analyst
Colorado Department of Revenue
303-866-3705
hcraig@spike.dor.state.co.us

Mr. Greg Demko
Finance Director
City and County of Broomfield
303-438-6313
gdemko@broomfield.org

Mr. John Ferguson
Managing Principal
Excel Consulting, Inc.
303-410-9775
jfergie01@comcast.net

Mr. Gregory Fulton
President
Colorado Motor Carriers Association
303-433-3375
greg@cmca.com

Ms. Michelle Moorman
Policy Development
Excel Energy
303-294-2588
michelle.a.moorman@excelenergy.com

Information

Mr. Brian Lewandowski (Co-Chair)
Research Analyst
University of Colorado at Boulder
Business Research Division
303-492-3307
Brian.Lewandowski@Colorado.EDU

Ms. Natalie Mullis (Co-Chair)
Chief Economist
Colorado Legislative Council
303-866-4778
natalie.mullis@state.co.us

Ms. Sarah Behunek
Director
University of Colorado at Boulder
Alumni Relations and Communications
303-735-6405
sarah.behunek@colorado.edu

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Estimating Groups

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Mr. Ryan Martens
Chief Technology Officer
Rally Software
303-565-2800
ryan.martens@rallydev.com

Mr. Kevin Shand
Director
Office of Film, Television and Media
303-592-4065
kevin.shand@state.co.us

Mr. Gary Witt
Telecommunications Attorney, Private Practice
303-478-8523
g.witt@att.net

Financial Activities

Mr. Richard Morgan (Chair)
Vice President
Colorado State Bank & Trust
Commercial Real Estate Group
303-863-4458
rmorgan@bokf.com

Ms. Lynn Beshany
Vice President—Employee Benefits
Compass Insurance
Olson & Olson Division
720-833-9113
lynnb@compassinsurance.com

Mr. Joe Hubbard
Vice President
True North
303-615-7546
joe.hubbard@truenorthcorp.com

Mr. Ron New
Vice President
Stifel, Nicolaus Company Inc.
Institutional Fixed Income
303-291-5291
rnew@stifel.com

Mr. Michael D. O'Neill
Director of Credit Union Compliance and Operations
Colorado Credit Union Association
720-749-3282
moneill@colocu.com

Ms. Jessica Morgan Ostermick
Business Development Manager
OZ Architecture
720-838-9008
jostermick@ozarch.com

Professional and Business Services

Dr. Steve Fisher (Co-Chair)
Economist
303-499-7875
stevefisher2995@email.msn.com

Mr. Mark Hamouz, P.E. (Co-Chair)
LONCO, Inc.
303-620-0098
mhamouz@lonco.com

Ms. Nancy Burke
Vice President of Government Affairs
Colorado Apartment Association
Apartment Association of Metro Denver
303-329-3300
nancyjburke@yahoo.com

Ms. Barbara Ihde
Executive Director
Colorado Photonics Industry Association
303-250-4665
exec@coloradophotonics.org

Dr. Phyllis Resnick
Managing Director
R. Squared Analysis, LLC
303-554-9292
r2analysis@comcast.net

Ms. Lisa Shade
Northrop-Grumman Corporation
Electronic Systems
720-308-6546
coloradoshade@yahoo.com

Educational and Health Services

Ms. Donna Marshall (Chair)
Executive Director
Colorado Business Group on Health
303-922-0939
donna.marshall@cbghealth.org

Dr. Michele Almendarez
Senior Manager, Strategic Planning
Kaiser Foundation Health Plan–Colorado
303-344-7348
michele.almendarez@kp.org

Mr. Scott Anderson
Vice President, Professional Activities
Colorado Hospital Association
720-330-6028
scott.anderson@cha.com

Ms. Amy Downs
Director for Policy and Research
Colorado Health Institute
303-831-4200
downsa@coloradohealthinstitute.org

Ms. Jackie Driscoll
Vice President, Payer Relations
Centura Health
303-267-9174
jackie.driscoll@Centura.org

Leisure and Hospitality

Dr. Charles Goeldner (Chair)
Professor Emeritus of Marketing and Tourism
University of Colorado at Boulder
Leeds School of Business
303-492-2553
Charles.Goeldner@Colorado.EDU

Dr. Tucker Hart Adams
President
The Adams Group, Inc.
303-329-9218
tuckhadams@aol.com

Mr. Gregory Hartmann
Managing Director
HVS International-Boulder
303-443-3933
ghartmann@hvsinternational.com

Mr. Bill Hopping
President
W.R. Hopping & Co.
303-798-4045
bill@hoppingcompany.com

Mr. Peter M. Meersman
President and CEO
Colorado Restaurant Association
303-830-2972
meersman@coloradorestaurant.com

Mr. Rob Perlman
Vice President of Sales and Marketing
Winter Park Resort
970-726-1524
rperlman@skiwinterpark.com

Mr. Richard W. Scharf
President and CEO
Denver Metro Convention and Visitors Bureau
303-892-1112
rscharf@dmcvb.org

Dr. John Snyder
President
Strategic Studies, Inc.
303-347-2095
sssieti@aol.com

Other Services

Mr. Gary Horvath (Chair)
Managing Director
University of Colorado at Boulder
Business Research Division
303-492-8395
Gary.Horvath@Colorado.EDU

Mr. Noah Hahn
Student Research Assistant
University of Colorado at Boulder
Business Research Division
303-492-8227
Noah.Hahn@Colorado.edu

Ms. Cassidy Kinnaird
Student Research Assistant
University of Colorado at Boulder
Business Research Division
303-492-8227
Cassidy.Kinnaird@Colorado.EDU

Mr. J. Matthew Wolfe
Student Research Assistant
University of Colorado at Boulder
Business Research Division
303-492-8227
Wolfejm@Colorado.EDU

Government

Ms. Allyson Hathaway (Chair)
Economist
Colorado Department of Labor and Employment
Labor Market Information–Training and Outreach
303-318-8894
allyson.hathaway@state.co.us

Mr. Zak Brewer
Economist
Governor's Office of State Planning and Budgeting
303-866-2972
zak.brewer@state.co.us

Ms. Lisa Strunk
Research Economist
Development Research Partners
303-991-0075
lisa@developmentresearch.net

Ms. Kate Watkins
Economist
Colorado Legislative Council
303-866-6289
kate.watkins@state.co.us

International Trade

Ms. Pam Reichert (Chair)
Division Director, International Trade
Colorado Office of Economic Development and International Trade
303-892-3850
pam.reichert@state.co.us

Mr. Paul Bergman, Jr.
Director, Colorado & Wyoming
U.S. Department of Commerce
U.S. Export Assistance Center
303-844-6001
paul.bergman@trade.gov

Ms. Karen de Bartolomé
Director, Rocky Mountain Regional Center
Institute of International Education
303-837-0788
kdebartolome@iie.org

Ms. Shelly Curtiss
Director of Programs and Services
World Trade Center Denver
303-592-5365
shelly.wtcdenver@att.net

Mr. Tim Larsen
Senior International Marketing Specialist
Colorado Department of Agriculture
Markets Division
303-239-4118
tim.larsen@ag.state.co.us

Ms. Sandi Moilanen
Director, Trade and Investment for Europe, Middle East and Africa
Colorado Office of Economic Development and International Trade
303-892-3857
sandi.moilanen@state.co.us

Ms. Amy Reichert
Director, Trade and Investment for the Americas
Colorado Office of Economic Development and International Trade
303-892-3891
amy.reichert@state.co.us

Mr. Jim Reis
President
World Trade Center Denver
303-592-5760
wtcdenver@att.net

Mr. Jason Schrock
Economist
Colorado Legislative Council
303-866-4720
jason.schrock@state.co.us

Around the State

Dr. Fred Crowley
Senior Economist and Senior Instructor
University of Colorado at Colorado Springs
College of Business and Administration
719-255-3531
fcrowley@uccs.edu

Ms. Frances Draper
Executive Director
Boulder Economic Council
303-786-7567
frances.draper@boulderchamber.com

Ms. Ann Driggers
President and CEO
Grand Junction Economic Partnership
970-245-4335
ann@gjep.org

Ms. Kelly Martin
Business Development Manager
Grand Junction Economic Partnership
970-245-4332
Kelly@gjep.org

Dr. Luke Miller
Finance Professor and Co-Director
Office of Economic Analysis and Business Research
Fort Lewis College
970-247-7060
miller_l@fortlewis.edu

Mr. Bill Moore
MPO Administrator
Pueblo MPO/TPR - Urban Transportation Planning Division
719-553-2945
bmoore@pueblo.us

Ms. Jennifer Pinsonneault
Project Manager
Boulder Economic Council
303-938-2081
jennifer.pinsonneault@boulderchamber.com

Dr. Martin Shields
Associate Professor of Economics
Colorado State University
970-491-2922
martin.shields@colostate.edu

Dr. Robert Sonora
Co-Director
Office of Economic Analysis and Business Research
Fort Lewis College
970-247-7296
sonora_t@fortlewis.edu

Mr. Don R. Vest
Pueblo Area Council of Governments
Urban Transportation Planning Division
719-553-2947
dvest@pueblo.us

Dr. Tom Zwirlein
Professor of Finance and Faculty Director of the Southern Colorado Economic Forum
University of Colorado at Colorado Springs
College of Business and Administration
719-255-3241
tzwirlei@uccs.edu

Government

Ms. Allyson Hathaway (Chair)
Economist
Colorado Department of Labor and Employment
Labor Market Information–Training and Outreach
303-318-8894
allyson.hathaway@state.co.us

Mr. Zak Brewer
Economist
Governor's Office of State Planning and Budgeting
303-866-2972
zak.brewer@state.co.us

Ms. Lisa Strunk
Research Economist
Development Research Partners
303-991-0075
lisa@developmentresearch.net

Ms. Kate Watkins
Economist
Colorado Legislative Council
303-866-6289
kate.watkins@state.co.us

International Trade

Ms. Pam Reichert (Chair)
Division Director, International Trade
Colorado Office of Economic Development and International Trade
303-892-3850
pam.reichert@state.co.us

Mr. Paul Bergman, Jr.
Director, Colorado & Wyoming
U.S. Department of Commerce
U.S. Export Assistance Center
303-844-6001
paul.bergman@trade.gov

Ms. Karen de Bartolomé
Director, Rocky Mountain Regional Center
Institute of International Education
303-837-0788
kdebartolome@iie.org

Ms. Shelly Curtiss
Director of Programs and Services
World Trade Center Denver
303-592-5365
shelly.wtcdenver@att.net

Mr. Tim Larsen
Senior International Marketing Specialist
Colorado Department of Agriculture
Markets Division
303-239-4118
tim.larsen@ag.state.co.us

Ms. Sandi Moilanen
Director, Trade and Investment for Europe, Middle East and Africa
Colorado Office of Economic Development and International Trade
303-892-3857
sandi.moilanen@state.co.us

Ms. Amy Reichert
Director, Trade and Investment for the Americas
Colorado Office of Economic Development and International Trade
303-892-3891
amy.reichert@state.co.us

Mr. Jim Reis
President
World Trade Center Denver
303-592-5760
wtcdenver@att.net

Mr. Jason Schrock
Economist
Colorado Legislative Council
303-866-4720
jason.schrock@state.co.us

Around the State

Dr. Fred Crowley
Senior Economist and Senior Instructor
University of Colorado at Colorado Springs
College of Business and Administration
719-255-3531
fcrowley@uccs.edu

Ms. Frances Draper
Executive Director
Boulder Economic Council
303-786-7567
frances.draper@boulderchamber.com

Ms. Ann Driggers
President and CEO
Grand Junction Economic Partnership
970-245-4335
ann@gjep.org

Ms. Kelly Martin
Business Development Manager
Grand Junction Economic Partnership
970-245-4332
Kelly@gjep.org

Dr. Luke Miller
Finance Professor and Co-Director
Office of Economic Analysis and Business Research
Fort Lewis College
970-247-7060
miller_l@fortlewis.edu

Mr. Bill Moore
MPO Administrator
Pueblo MPO/TPR - Urban Transportation Planning Division
719-553-2945
bmoore@pueblo.us

Ms. Jennifer Pinsonneault
Project Manager
Boulder Economic Council
303-938-2081
jennifer.pinsonneault@boulderchamber.com

Dr. Martin Shields
Associate Professor of Economics
Colorado State University
970-491-2922
martin.shields@colostate.edu

Dr. Robert Sonora
Co-Director
Office of Economic Analysis and Business Research
Fort Lewis College
970-247-7296
sonora_t@fortlewis.edu

Mr. Don R. Vest
Pueblo Area Council of Governments
Urban Transportation Planning Division
719-553-2947
dvest@pueblo.us

Dr. Tom Zwirlein
Professor of Finance and Faculty Director of the Southern Colorado Economic Forum
University of Colorado at Colorado Springs
College of Business and Administration
719-255-3241
tzwirlei@uccs.edu

Business Research Division • Leeds School of Business • http://leeds.colorado.edu/brd

Established in 1915, the Business Research Division (BRD) conducts research that assists companies, associations, nonprofit organizations, educational institutions, the general public, and state and local governmental agencies in making sound business and policy decisions. The research conducted by the BRD, including economic and business forecasts, economic impact studies, customer satisfaction surveys, and asset mapping, leverages the various skill sets within the Leeds School. Our applied research touches industries ranging from real estate, sports, and entertainment to advanced technology.

Our premier project is the annual Colorado Business Economic Outlook, which provides business, government, and education decision makers with information to help them focus on the structure of Colorado's economy, both past and present.

Another tool is the quarterly Leeds Business Confidence Index. This forward-looking index measures what local business leaders in a variety of industries are anticipating about the economic conditions and trends that affect their business.

Services

A sampling of recent high-profile projects include:

Local, Regional, and State Research

- Colorado Workforce Data Mining Project
- Economic Drivers: City of Boulder, Boulder County, and Colorado
- Workforce Boulder County: Business Process Map
- Colorado's Economic Opportunities: Today, Tomorrow, and the Future

Targeted Industry and Cluster Analysis

- 2008-09 Colorado Photonics Industry Directory and Analysis
- Colorado Nanotechnology Roadmap 2006
- A Survey of Colorado Recreation Trends, Issues, and Needs

Economic Impact Studies

- Incentivize Success! Phase I
- Summary of the Impact of Film Incentives on the Colorado Economy and on Public Revenues
- The Economic and Fiscal Impact of the Proposed Job Creation Program on the State of Colorado
- The Impact of Federally Funded Research Laboratories in Colorado
- Federal Facilities Impact Study
- The Impact of the Film Industry on Colorado

Forecasts

- Colorado Business Economic Outlook
- Leeds Business Confidence Index

Contact the Business Research Division

Dr. Richard Wobbekind
Executive Director
303-492-1147
Richard.Wobbekind@Colorado.EDU

Mr. Gary Horvath
Managing Director
303-492-8395
Gary.Horvath@Colorado.EDU

Leeds School of Business: Services to Business and Industry

Richard M. Burridge Center for Securities Analysis and Valuation

The mission of the Richard M. Burridge Center for Securities Analysis and Valuation is to encourage and support the creation and dissemination of new knowledge about financial markets, with an emphasis on U.S. financial markets. The center

- Facilitates the exchange of ideas and knowledge among students, professional investment managers, finance scholars, policymakers, and the investing public;
- Identifies critical research issues in the theory and practice of security analysis and valuation; and
- Encourages and supports vigorous qualitative and quantitative research on topics relevant and useful to money managers, valuation experts, and finance academics.

Michael Stutzer, Director
Richard M. Burridge Center for Securities Analysis and Valuation
303-492-4348
Michael.Stutzer@Colorado.EDU
http://leeds.colorado.edu/burridge

Center for Business Integration

The Center for Business Integration (CBI) in the Leeds School of Business creates opportunities to bring together local business people, business students, and faculty to collaborate in solving business problems. Through project-based learning, CBI is connecting the experience provided by local companies, the knowledge created by the university, and the work conducted by students in the Leeds School. The center brings real-world projects to the classroom by assisting students and faculty in identifying, selecting, and executing projects for local companies. After the project has been selected, CBI provides support to faculty and students during project planning and execution.

CBI looks for projects that provide students with experience that will help them get better jobs. In addition, CBI seeks out employers who would like to test students on a real project before making hiring decisions. Successful past projects include: supply-chain audits and recommendations for improvement; website design; software selection; information system review and recommendations for improvement; new product design; business process review; internal control review; database design; product costing; business report design; and business intelligence.

One of the benefits to companies is that they can use this experience to infuse project management principles in their own operations. Managers who are chosen to work with the students are encouraged to participate in the project management components of the coursework. This learning, along with the skills gained through managing an actual company-related project can have an impact on the effectiveness of internal project-management skills.

Projects are selected based on their value to our student's educational experience and relevance to our faculty's research. CBI prefers to receive projects prior to the beginning of the fall and spring semesters. If the opportunity to solve a real problem, to gain additional exposure to project management principles for your staff, and to work with students is appealing, CBI would be pleased to provide additional details.

James Marlatt, Center Director
Center for Business Integration
720-933-5541 (cell)
James.Marlatt@Colorado.EDU
http://leeds.colorado.edu/Centers_of_Excellence/index.aspx?id=1836

Colorado Association for Manufacturing and Technology (CAMT)

The Colorado Association for Manufacturing and Technology (CAMT) is a statewide manufacturing assistance center, partially funded by the NIST Manufacturing Extension Partnership and hosted by the University of Colorado. CAMT encourages the strength and competitiveness of Colorado manufacturers through on-site technical assistance and support, collaboration-focused industry programs, and leveraging of government, university, and economic development partnerships. CAMT hosts many programs in support of its mission.

- Through on-site support and technical assistance, CAMT works to boost the operational efficiency and growth opportunities of Colorado manufacturers. CAMT's experienced engineers and business professionals, with skills in manufacturing process, technology, and management, work

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Services to Business and Industry

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closely with manufacturers to provide customized training and hands-on facilitation to cut costs and increase revenue.

- The CAMT.com portal strengthens the supply chain by enabling companies to search for local suppliers, collaborate on larger national and international opportunities, and pool selling capabilities.
- By partnering with Colorado universities and national laboratories, CAMT helps manufacturers access academic resources and find technology that is available to integrate with product development.
- CAMT offers workforce development on-site training and workshops to provide employees with education in world-class manufacturing. In addition, programs are offered to high school students to foster greater awareness of, and appreciation for, career opportunities in manufacturing.
- Business networks are imperative to achieving regional industry growth, and CAMT is a key driver in the initiation of manufacturing taskforces across the state. These taskforces provide a platform for business leaders to learn from other successful business leaders, share technical knowledge and innovations, and uncover strategic partnership opportunities.

Elaine Thorndike, CEO
Colorado Association of Manufacturing and Technology
303-592-4087
Elaine.Thorndike@Colorado.EDU
http://www.camt.com/

The Robert H. and Beverly A. Deming Center for Entrepreneurship

Continued national recognition affirms the quality of the Deming Center for Entrepreneurship's Program and its success creating innovative new areas of entrepreneurial opportunity. The center's work in sustainable venturing, natural and organic products, and renewable energy keep it at the forefront of entrepreneurship education.

Collaborations cross-campus, in the business community, and with national government labs have established a model for the intersection of entrepreneurial creativity, technology, and innovation. Entrepreneurship students benefit from access to world-renowned faculty and researchers, and the Boulder region's entrepreneurs, venture capitalists, and start-up resources. The area's entrepreneurial community is a core foundation of the program's success, along with the 20+ faculty who teach entrepreneurship courses.

Within CU-Boulder, the Deming Center collaborates with the Technology Transfer Office, the Renewable and Sustainable Energy Institute, the Entrepreneurial Law Clinic, the Music Entrepreneurship Program, the Silicon Flatirons Telecommunications Program, and the College of Engineering's E-ship program. External partnerships with private-sector leaders on the Deming Board and groups such as the Boulder Innovation Center, Naturally Boulder, the National Renewable Energy Laboratory, and the sustainable business trade association CORE help provide students with opportunities to engage with thought leaders and cutting-edge businesses.

Sustainable Entrepreneurship

The Deming Center was the first to define sustainable entrepreneurship as traditional entrepreneurship with an added focus on social and environmental responsibility, public policy, transparency, and global citizenship. The center instills in its students the knowledge that true entrepreneurs create enduring value for shareholders and customers, while also enriching the lives of their employees and strengthening the communities in which they live and work.

Through the Deming Center's program, students receive the multidimensional education they need to thrive in today's complex world, including:

- Cutting-edge business curriculum with courses designed specifically for the entrepreneur;
- Specialty programs in cleantech, bioscience, and organics;
- A rich, cross-campus focus on entrepreneurship that extends beyond the Leeds School to include Tech Transfer and the Bioscience, Engineering and Law programs; and
- The Deming Network, an active group of successful entrepreneurs who serve as mentors, provide internships, sponsor business plan competitions, and are major contributors.

Center Events and Programs

The center's initiatives include the Cleantech Venture Challenge international business plan competition. A student competition showcasing emerging opportunities in the cleantech sector, this event promotes the development of venture-grade business ideas that address pressing environmental problems and increasing global demand for energy. The annual Sustainable Opportunities Summit brings together corporate leaders, entrepreneurs, and venture capitalists from Colorado and the nation in a unique forum to assess the growing opportunities created by climate change.

The center's internal business plan competitions and existing programs continue to grow. Included among those are the undergraduate Certificate of Excellence in Entrepreneurial Studies, the Collegiate Entrepreneurs Organization, and the TREP Café, a student-run business housed in the Leeds School. At the MBA level, the Graduate Entrepreneurs Association supports activities to encourage and promote student activity in entrepreneurship, including Learn from the Best Speaker Series and the annual Entrepreneurship Retreat. MBAs also continue the legacy of Entrepreneurial Solutions, a for-profit, student-run consulting firm staffed by a select group of MBA students. It serves the business community by providing high-value solutions that rely on the expertise of each year's team.

Robert H. and Beverly A. Deming Center for Entrepreneurship
Leeds School of Business
303-735-5415
deming@Colorado.EDU
http://deming.colorado.edu

Evening MBA Program

Two-year commitment. Endless opportunity.

Education and innovation intersect in the reimagined Leeds Evening MBA program. Our program is specifically designed for working professionals and is now offered in a two-year format—one that allows students to take more elective courses. Evening MBA students develop a strong core business foundation complemented by electives that speak to their unique professional goals and interests. Because our students are required to be working full-time while completing the program, they benefit from the unique ability to apply lessons learned from class in the office the very next day.

Our small, personal Evening MBA program starts once a year with the whole class of students, or cohort, completing the experience together. By working with their peers through our lock-step core curriculum, students become part of a committed MBA community that has offered invaluable networking opportunities for our graduates. Another advantage of this peer community is that our graduation rate is consistently above 85%, while national rates for flexible part-time programs lag at 50%.

Evening MBA students often find themselves at a juncture where additional skills or an advanced degree is required to move to the next level in their career. The Evening MBA program gives students the tools necessary to take the next step. Take advantage of all the innovative opportunities the Leeds Evening MBA experience offers.

Please feel free to contact me personally for more information.

Anne Sandoe
Director of MBA Programs
303-492-1832
Anne.Sandoe@Colorado.EDU
http://leeds.colorado.edu/MBA_Evening

Executive Education Programs

CU-Boulder Executive Education provides cost-effective short- and long-term executive training for valuable and high-potential employees. By balancing theory and real-world applications, our professors and industry experts help organizations grow their leaders. Our goal is to be an outsource avenue for HR departments to provide management development that will help companies grow and retain their most valuable employees and assist them in becoming more efficient and productive while expanding their knowledge and skill set.

Value to the Corporate and Business Community

- Our courses provide participants opportunities to network with peers throughout the state from a variety of industries in companies both small and large.
- Our professors and industry experts possess years of experience and provide participants with latest research and models of best practices.
- Our programs are flexible and can be tailored and customized to specific company needs.

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Services to Business and Industry

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- Our Leeds' Executive Education alumni are an extensive and dynamic group of high-achieving managers and executives in a wide range of industries from leading organizations.

Key Offerings

1. Open Enrollment Programs (1-4 days): accounting, finance, human resources, management and leadership, marketing, sustainability, and energy
2. Leadership Programs (monthly): 50 for Colorado (13 days), CEDIR/Colorado Executive Development in Residence Distance Learning Modules (21 days)
3. Custom-Designed Programs and International Programs
4. Distance Learning Modules

Robin Miglarese, Interim Director
Executive Education Programs
303-735-0183
Robin.Miglarese@Colorado.EDU
http://leeds.colorado.edu/ExecEd

University of Colorado Real Estate Center

Through the dedicated efforts of a committed University of Colorado faculty collegium, the CU Real Estate Center provides a world-class real estate curriculum at both the graduate and the undergraduate levels that prepares students to be leaders in the real estate industry.

The CU Real Estate Center was created in 1996 through the efforts of the CU Real Estate Council. The council consists of more than 350 real estate professionals contributing time, expertise, and financial support to educate the next generation of industry leaders. The partnership between the University of Colorado and the University of Colorado Real Estate Council creates a dynamic relationship that offers opportunities to further research and student involvement in real estate issues such as land use, growth management, sustainability, capital markets, and other related topics.

Through the CU Real Estate Council, the center provides a rewarding mentorship program designed to benefit both the students and council members. In addition, the center develops meaningful internship opportunities for students through the council network, requiring on-the-job experiences as part of the learning process for all students, with job placement opportunities as the ultimate goal of the program.

In August 2002, the University of Colorado Real Estate Foundation (CUREF) was created by the university and CU Real Estate Council members to be an independent supporting organization to the University of Colorado. CUREF's mission is to maximize financial returns to the university by creating, managing, and growing a high income-producing real estate portfolio and to assist the university in implementing campus master plans. CUREF utilizes the resources of the CU Real Estate Center and provides support to the center through sponsorship of the CU Real Estate Council.

Susan Watts, Executive Director
CU Real Estate Center
303-492-3258
Sharon.Montini@cu.edu
http://leeds.colorado.edu/realestate/

Rocky Mountain Trade Adjustment Assistance Center (RMTAAC)

RMTAAC is an independent, nonprofit organization offering technical and professional assistance to small and medium-size firms adversely affected by import competition.

The center is staffed by professionals with extensive private-sector experience in marketing, management, and engineering. RMTAAC project managers work closely with U.S. firms to identify cost-effective strategies that enable them to compete with foreign firms.

Additionally, RMTAAC project managers locate outside technical consultants to implement projects that require specialized expertise. Up to 50% of the total project cost is funded by the U.S. Department of Commerce.

Since 1981, RMTAAC has helped firms in a number of industries, including circuit board assembly, recreational equipment, material handling, testing equipment, building materials, apparel, and jewelry.

Edvard Hag, Director
Rocky Mountain Trade Adjustment Assistance Center
303-499-8222
Edvard.Hag@Colorado.EDU
www.rmtaac.org