FIFTY-NINTH ANNUAL

COLORADO BUSINESS ECONOMIC OUTLOOK

2024

Leeds School of Business
UNIVERSITY OF COLORADO BOULDER

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2024 Colorado Business Economic Outlook Partner

WhippleWood places a high value on the information provided by the University of Colorado's *Business Economic Outlook.* We are a provider of accounting and advisory services to entrepreneurs, franchisees, franchisors, nonprofits, executives, real estate investors, family-owned businesses, and corporate chieftains. We find the insights provided by the *Colorado Business Economic Outlook* a great resource when navigating the ever-changing economic environment.

WhippleWood believes that access to insights on all sectors of the economy empowers the business community to make more informed business decisions. It is even more imperative during a time of high inflation, where the cost of capital is increasing and the inputs to business, from materials to labor, are squeezing profit margins. Further, managing costs and revenues to comply with your business's existing loan covenants becomes a precarious challenge when entering a potential recession. This is something our client accounting group understands very well.

When it comes to important financial decisions, WhippleWood has been a supporter and partner to our clients and the business community for more than 40 years. Professionals at WhippleWood have contributed to the forecast since 2005, that is why we are excited to support the University of Colorado in bringing these insights to you.

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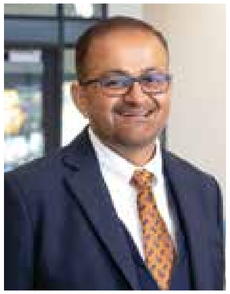


Greetings Business Colleagues,

It's a pleasure to welcome you to the 59th annual Colorado Business Economic Outlook Forum. The Leeds School of Business and its Business Research Division are pleased to bring you this year's event.

In my position as dean of the Leeds School of Business, I feel fortunate for our partnerships with 130 private and public leaders across Colorado who help inform our annual report. With their support, the Business Research Division continues to produce its invaluable economic forecast to professionals across nearly every industry in Colorado.

With our turbulent economy, rising interest rates, inflation, and escalating geopolitical conflicts, this year's report cuts to the root of the challenges and opportunities facing our state, while delivering useful insights to help businesses strategize for what is to come.

Meanwhile, business continues to evolve with the times. Two decades ago, it was about the top and bottom lines—enhancing revenue, cutting costs, and managing risk. Now, we conduct business in a sustainable manner by focusing on our social and environmental impact alongside financial performance.

Top of mind for me is preparing Leeds graduates for what is to come—to empower them to address and tackle complex societal issues including poverty, inequality, and climate change, while prioritizing sustainability and ethics-based reasoning. When you visit our classes, mentor our students, judge our competitions, and provide meaningful input on our programs and curricula, you are helping us inspire and educate the high-quality talent poised to become your organization's next generation of leaders.

We welcome you to engage with us as we continue to look forward.

Sincerely,

Vijay Khatri

Vijay Khatri
Tandean Rustandy Endowed Dean
Leeds School of Business

Pride Points

- #1 Business School in Colorado
- #18 Best Public Undergraduate Business Program
  U.S. News & World Report (2024)
- #32 Best Public Undergraduate Business School
  U.S. News & World Report (2024)
- Class of 2027 — Incoming class of 2027 is more academically prepared than ever.
- #25 Best Part-Time Public MBA Program
  U.S. News & World Report (2024)
- 795 Leeds faculty news mentions (up 85%)
- 7 specialized graduate programs for working professionals
- Newly redesigned MS in Real Estate
- Excellence in Specialty Entrepreneurship Education, 2023
  Global Consortium of Entrepreneurship Center Awards

Introduction

The Business Research Division (BRD) in the Leeds School of Business is proud to present the 59th annual *Colorado Business Economic Outlook.* This 2024 consensus forecast is a product of partnerships with individuals spanning numerous universities, businesses, nonprofits, and government entities. These individuals generously gift their time, sharing their unique expertise and perspectives about people, industry, and policy relating to the state of Colorado. This forecast analyzes changes that have occurred in all economic sectors during the past year and looks at the opportunities and challenges that will shape population, employment, and the overall economy in the coming year. The information in this book is initially presented at the 59th annual Colorado Business Economic Outlook Forum in Denver, followed by approximately 50 forecast speeches that are held throughout the state during the year, ranging from presentations to industry associations and nonprofit organizations to the Federal Reserve Bank of Kansas City.

Methodology

We are fortunate to have more than 125 individuals from the business, education, and government communities who serve on 13-sector estimating groups. These groups convene at a kickoff meeting in September where members discuss trends and issues that are likely to affect economic growth during the upcoming year. During the second half of September and into October, the committees apply this information to their industry. The BRD simultaneously generates an econometric forecast by industry, which is given to each industry committee. 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 July, the Steering Committee, which is made up of the sector chairs, meets to review their forecasts and identify factors that will positively or negatively drive change in their industry's economic performance during the second half of the year. These updates are published in the summer issue of our quarterly newsletter, the *Colorado Business Review.*

Related Economic Research

The BRD conducts customized business and economic research that expands the knowledge base of decision makers throughout the state and region. The annual *Colorado Business Economic Outlook* provides the foundation for much of the research the BRD conducts within the state. Among the other BRD research tools available to businesses and organizations is the Leeds Business Confidence Index, a forward-looking index that gauges Colorado business leaders' opinions about national and state economic trends and how their industry will perform in the coming quarter, and the *Colorado Business Review,* which explores current topics important to the state's economy. Visit www.colorado.edu/business/brd for more information about BRD offerings.

Acknowledgments

We are humbled and thankful to have dedicated partners in producing this forecast. A complete list of committee members appears at the back of this book. Their efforts are very much appreciated. We also thank the staff of the Colorado Department of Local Affairs and the Colorado Department of Labor and Employment who supply us with much of the employment and population data used in the forecast. Finally, I would like to thank the many Leeds School of Business and CU Boulder personnel who have worked hard at preparing, presenting, and promoting this project. My sincerest thanks go to Brian Lewandowski, executive director; Adam Illig, data scientist; Shannon Furniss, project editor; Cindy DiPersio, guest editor; Kristin Weber, graphic designer; Denise Munn, senior print production manager; and Roberto Berkowitz, Jayson Brubaker, Lucas Ericson, Michelle Kim, Marcus Popoff, and Shivam Vats, student research assistants, for their help in assembling and presenting the *2024 Colorado Business Economic Outlook.* The assistance provided by Leeds School staff member Cora Dooley, associate director of event management; Julie Noble, Leeds event manager; and Carolyn Gleason, assistant dean for advancement, is greatly appreciated. The Leeds Marketing and Communications team— executive director Joshua Casto and team members Erik Jeffries, Justin Forbis, Ollie Peterson, Jennifer Schuman, Kelsey Cipolla, and Cody Johnston—contributed marketing and promotion assistance. I also appreciate the help provided by Jennifer Soules with CU Boulder Strategic Media Relations.

Colorado Economic Forecast for 2024

The sections that follow provide a summary of 2023, a forecast for 2024, and industry-specific data analysis and insight into the key factors influencing each sector. We believe this information will prove useful in your business and policy decision-making process.

Richard L. Wobbekind, Ph.D.
Associate Dean Business and Government Relations
Faculty Director, Business Research Division Leeds School of Business
www.colorado.edu/business/brd

Colorado Then and Now

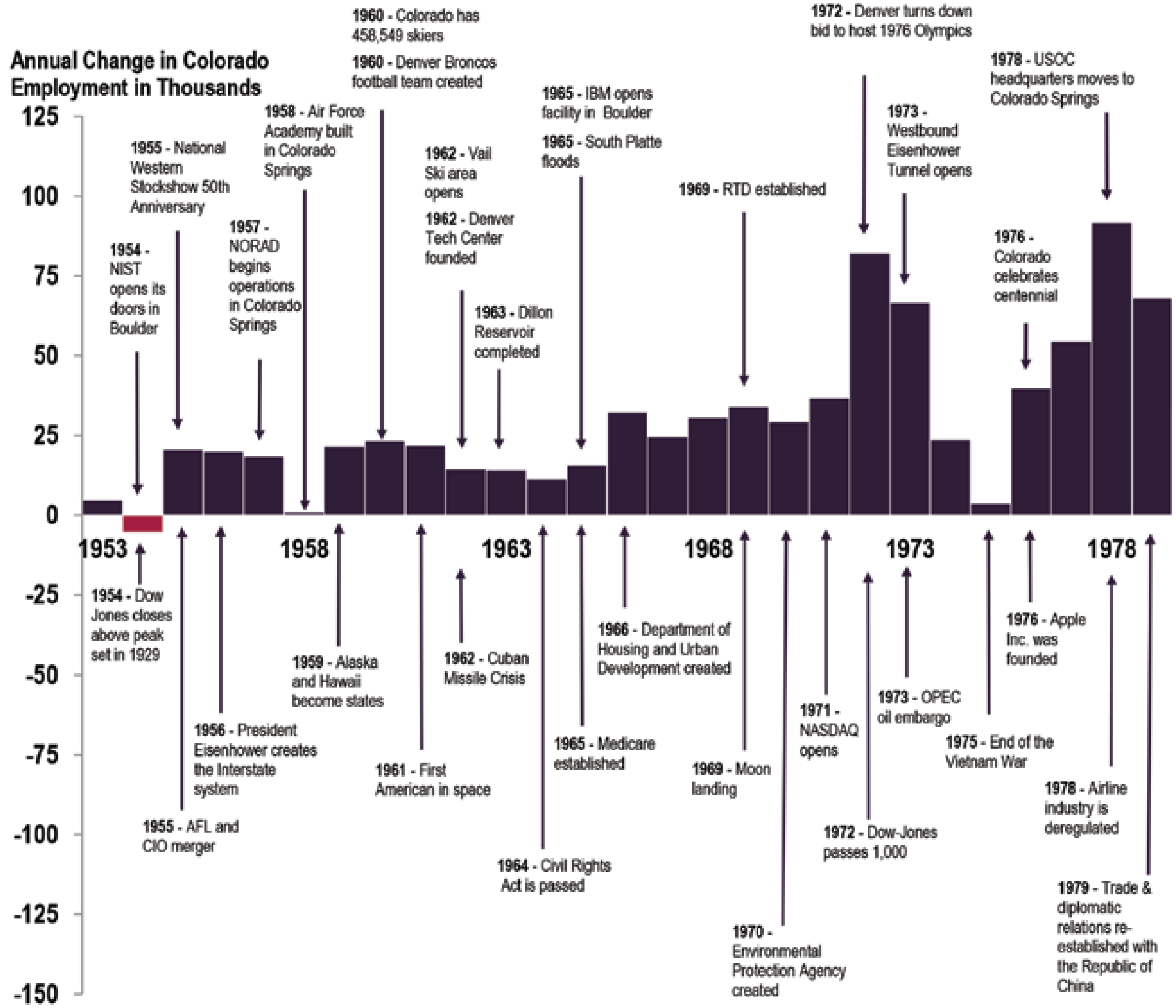
The timeline to the right provides a glimpse into the past, showing the annual change in state employment. Changes in employment have been accompanied by numerous social, economic, educational, and political changes. Colorado events are listed above the line; national events are noted below.

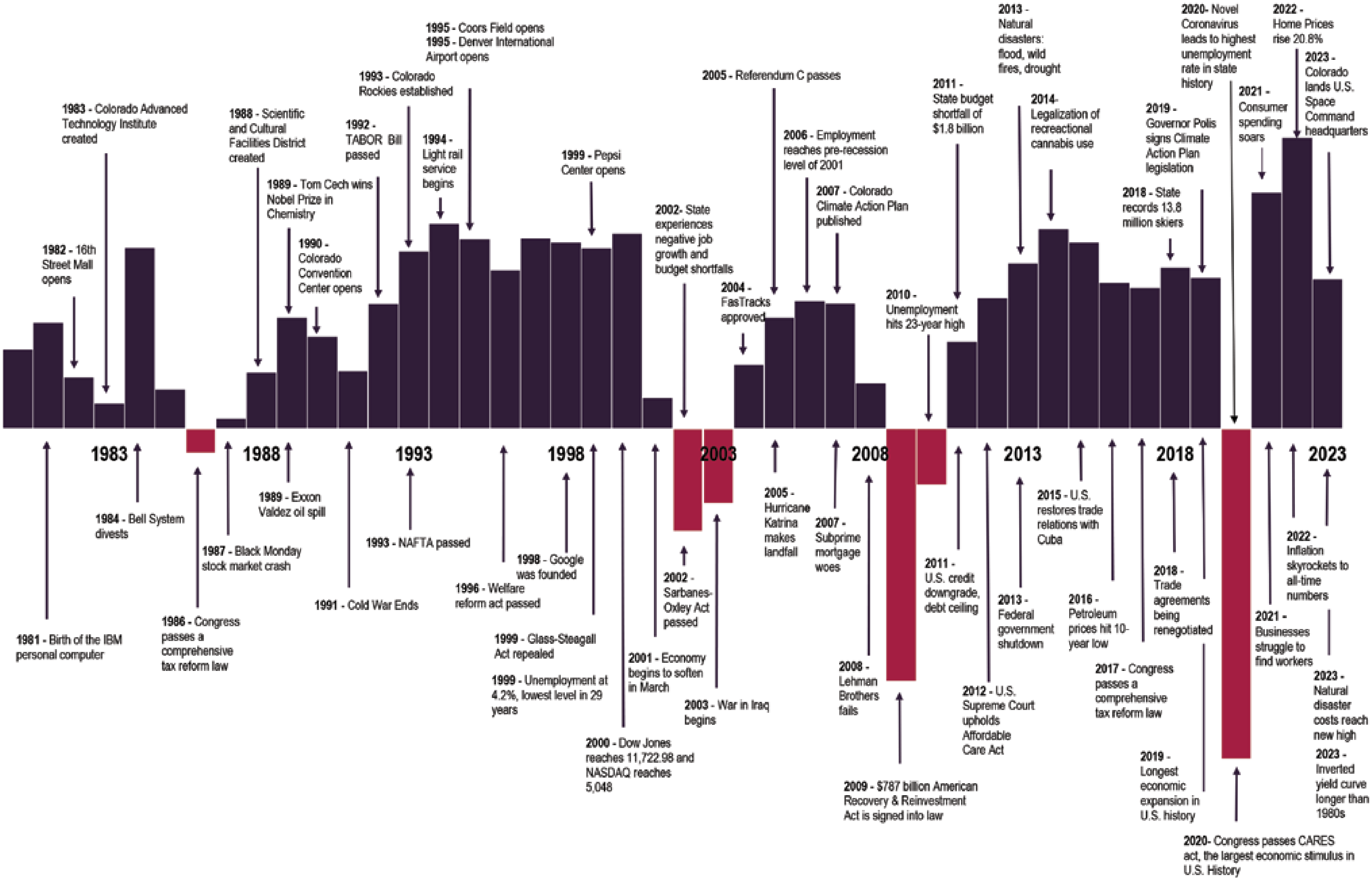
Over the past five decades, Colorado has experienced numerous economic booms and busts, dynamically changing industries and (mostly) unrelenting population growth. The timeline puts the COVID-19 recession and rebound into perspective, comparing the recovery to those following prior economic recessions through which Colorado has persevered.

In 1970, just over 1 million individuals were employed in Colorado, and the average annual earnings were under $6,700. Since then, wage and salary employment in the state has grown to nearly 3 million (not including proprietor employment), and average annual pay for covered wage and salary earners grew to $74,400.

Goods-producing industries accounted for 24% of jobs and made up 26.7% of the Colorado GDP in 1970. By 2023, those sectors accounted for just over 12% of total jobs and 15% of the state's GDP. While proprietor employment represented less than 17% of total employment in 1970, it now represents 28.3%. The share of women in the state's labor force was 46% in 2022, nearly a 10 percentage point increase from 1970.

Throughout the 1970s, the Colorado economy benefited profoundly from booms in petroleum and mining production. The state has undergone an enormous increase in college-educated population as the percent of Colorado residents 25 years or older with four or more years of college nearly tripled, from 14.9% in 1970 to 45.9% in 2022. With a larger base of highly qualified employees, high-tech industries have added significantly to Colorado's economy and the state's key industry clusters, specifically aerospace, biosciences, telecommunications, and IT software.




1983 - Colorado Advanced Technology Institute created
1982 - 16th Street Mall opens
1988 - Scientific and Cultural Facilities District created
1989 - Tom Cech wins Nobel Prize in Chemistry
1990 - Colorado Convention Center opens
1992 - TABOR Bill passed
1993 - Colorado Rockies established
1994 - Light rail service begins
1995 - Coors Field opens
1995 - Denver International Airport opens
1999 - Pepsi Center opens
2002- State experiences negative job growth and budget shortfalls
2004 - FasTracks approved
2005 - Referendum C passes
2006 - Employment reaches pre-recession level of 2001
2007 - Colorado Climate Action Plan published
2010 - Unemployment hits 23-year high
2011 - State budget shortfall of $1.8 billion
2013 - Natural disasters: flood, wild fires, drought
2014- Legalization of recreactional cannabis use
2018 - State records 13.8 million skiers
2019 - Governor Polis signs Climate Action Plan legislation
2020- Novel Coronavirus leads to highest unemployment rate in state history
2021 - Consumer spending soars
2022 - Home Prices rise 20.8%
2023 - Colorado lands U.S. Space Command headquarters
1983
1988
1993
1998
2003
2008
2013
2018
2023
1981 - Birth of the IBM personal computer
1984 - Bell System divests
1986 - Congress passes a comprehensive tax reform law
1987 - Black Monday stock market crash
1989 - Exxon Valdez oil spill
1991 - Cold War Ends
1993 - NAFTA passed
1996 - Welfare reform act passed
1998 - Google was founded
1999 - Glass-Steagall Act repealed
1999 - Unemployment at 4.2%, lowest level in 29 years
2000 - Dow Jones reaches 11,722.98 and NASDAQ reaches 5,048
2001 - Economy begins to soften in March
2002 - Sarbanes-Oxley Act passed
2003 - War in Iraq begins
2005 - Hurricane Katrina makes landfall
2007 - Subprime mortgage woes
2008 - Lehman Brothers fails
2009 - $787 billion American Recovery & Reinvestment Act is signed into law
2011 - U.S. credit downgrade, debt ceiling
2012 - U.S. Supreme Court upholds Affordable Care Act
2013 - Federal government shutdown
2015 - U.S. restores trade relations with Cuba
2016 - Petroleum prices hit 10-year low
2017 - Congress passes a comprehensive tax reform law
2018 - Trade agreements being renegotiated
2019 - Longest economic expansion in U.S. history
2020- Congress passes CARES act, the largest economic stimulus in U.S. History
2021 - Businesses struggle to find workers
2022 - Inflation skyrockets to all-time numbers
2023 - Natural disaster costs reach new high
2023 - Inverted yield curve longer than 1980s

U.S. Economic Outlook

Present Situation and Short-Term Outlook

Gross Domestic Product

National real GDP increased 1.9% in 2022 after experiencing the fastest pace of growth in nearly four decades in 2021. In 2023, growth increased to an estimated 2.4% as the economy remained resilient in the face of rising interest rates in response to easing—but historically high—inflation. The continued impacts of high interest rates could slow growth in 2024 to an estimated 1.1% based on Consensus Forecasts' projections in November 2023. The Business Research Division is modestly more bullish, expecting 1.4% growth, as consumption slows but remains resilient in the face of several headwinds.

Employment and Wages

The unique factor is employment growth. The U.S. added 2.4 million jobs from January through October 2023, an average of 239,000 per month. Adding to the supply of workers, the labor force grew, increasing 1.7% year-to-date in October 2023 compared to 2022. After averaging 61.7% in 2020 and 2021, the labor force participation rate increased to an average 62.6% through October 2023. At the same time, the demand for workers eased in 2023, but remained above historical levels—9.5 million job openings in September (or 5.7% of total employment) compared to 10.9 million in September 2022 (6.6%). This supply-demand imbalance has been a contributing factor to higher wages, which grew an average of 3.7% year-over-year through October. Job growth will revert to a slower pace in 2024, and real wage growth is expected as inflation eases.

Consumption

Consumer spending on goods and services generally accounts for 70% of total GDP. Personal consumer expenditures are estimated to increase 2.2% in 2023. Consumers have continued to be resilient in 2023 in the face of high inflation chipping away at purchasing power. In the first half of 2023, the pace of wage growth was outpaced by the Consumer Price Index, but they have equalized in recent months. With lower inflation, it is plausible that real wages could increase in 2024. While the personal savings rate is higher than a year ago, it has declined in recent months and remains below historic averages. In addition, household debt has increased, driven by increases in balances of mortgages, credit cards, and student loans. The Conference Board's Consumer Confidence Index and the Michigan Consumer Sentiment Survey have both posted higher readings in 2023 compared to 2022. The resilience of consumers will outweigh the headwinds in 2024, but personal consumption expenditures are expected to moderate to 1.4%.

Investment

The pace of gross private domestic investment cooled in 2023 as the cost of debt increased. Investment shifted from growth of 4.8% in 2022 to a decline of 1.5% in 2023, but is projected to rise modestly in 2024. Nonresidential fixed investment and infrastructure are

REAL GROSS DOMESTIC PRODUCT, 2014-2024
(In Billions of Chained 2017 Dollars)

Economic Indicator	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023[a]	2024[b]
Gross Domestic Product	$ 18,261.7	$ 18,799.6	$ 19,141.7	$ 19,612.1	$ 20,193.9	$ 20,692.1	$ 20,234.1	$ 21,407.7	$ 21,822.0	$22,345.8	$22,658.6
Percentage Change	2.5%	2.9%	1.8%	2.5%	3.0%	2.5%	-2.2%	5.8%	1.9%	2.4%	1.4%
Personal Consumption Expenditures	$ 12,226.4	$ 12,638.8	$ 12,949.0	$ 13,290.6	$ 13,654.9	$ 13,928.3	$ 13,577.0	$ 14,718.2	$ 15,090.8	$15,422.8	$15,638.7
Percentage Change	2.8%	3.4%	2.5%	2.6%	2.7%	2.0%	-2.5%	8.4%	2.5%	2.2%	1.4%
Gross Private Domestic Investment	$3,129.0	$3,323.4	$3,320.2	$3,467.7	$3,668.1	$3,780.3	$3,602.5	$3,914.4	$4,102.8	$4,041.3	$4,061.5
Percentage Change	6.5%	6.2%	-0.1%	4.4%	5.8%	3.1%	-4.7%	8.7%	4.8%	-1.5%	0.5%
Government Expenditures	$3,247.3	$3,313.6	$3,378.5	$3,397.1	$3,465.0	$3,601.4	$3,715.5	$3,704.7	$3,670.4	$3,800.7	$3,854.0
Percentage Change	-0.9%	2.0%	2.0%	0.6%	2.0%	3.9%	3.2%	-0.3%	-0.9%	3.6%	1.4%
Net Exports	-$347.57	-$476.47	-$505.84	-$543.33	-$593.54	-$617.50	-$663.43	-$933.80	-$1,051.0	-$915.0	-$900.0
Percent of GDP	-1.9%	-2.5%	-2.6%	-2.8%	-2.9%	-3.0%	-3.3%	-4.4%	-4.8%	-4.1%	-4.0%

[a]Estimate. [b]Forecast. Note: Excludes changes in inventories. Values are in chained dollars and do not sum to the total.

Sources: Bureau of Economic Analysis, Consensus Forecasts, and Colorado Business Economic Outlook Committee.

expected to offset continued weakness in residential fixed investment. Some investment has shifted. Venture capital activity remains well below 2021 and 2022 levels as some tech sectors faced challenges and as higher interest rates led to greater competition for returns from other assets.

Government

Government consumption increased an estimated 3.6% in 2023, but growth is expected to moderate in 2024 (1.4%).

Net Exports

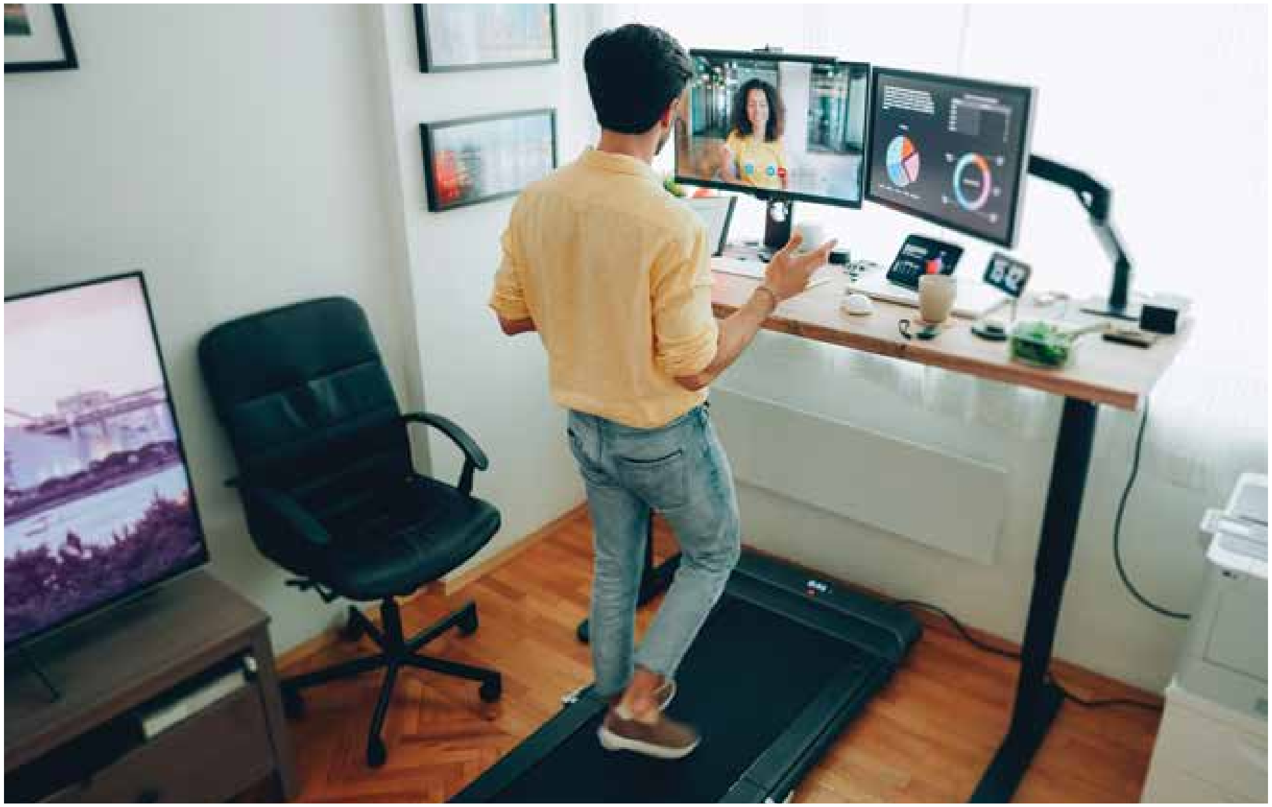
Net exports continued to be a drag on U.S. economic growth. The trade deficit increased to record levels in 2022 as real net exports grew to -$1.1 trillion, with the growth in imports exceeding the growth in exports. Real net exports are projected to moderate to -$915 billion in 2023 and -$900 billion in 2024.

Economic Risks

Multiple economic risks—with upsides and downsides—may impact the economy in 2024 and beyond.

Inflation—While inflation eased in 2023, it continues to be at the forefront of economic headwinds in Colorado and the nation. The Consumer Price Index (CPI), which measures a basket of products ranging from gasoline and health care to groceries and rents, rose 3.2% in October 2023—down from 9.1% in June 2022. Prices for all items in the Denver-Aurora-Lakewood region rose 5.4% in September, down from 7.7% in September 2022. Managing inflation will continue to be a priority for the Federal Reserve, and the health of the economy will be intrinsically linked with the Federal Funds interest rate.

Consumer Growth—Consumers continued to be resilient in 2023, but there are some indications that their spending may be fading. Retail sales declined 0.1% in October, the first decline since March. Total household debt rose to $17.3 trillion in Q3 2023, driven by mortgage, credit card, and student loan balances. Credit card



debt accelerated 4.7% from Q2 2023 and over 16% from the prior year, and the personal saving rate has been declining in recent months.

Worker Shortage—In October 2023, the civilian labor force participation rate remained below prepandemic levels. The October 2023 labor force participation rate was 62.7%, an improvement over October 2022 (62.2%), but below January 2020 levels (63.3%). The U.S. Chamber of Commerce Worker Shortage Index ratio represents the number of available workers for every job opening in the state. A ratio above 1.0 would indicate surplus of available workers compared to job openings in the state. As of September 2023, Colorado had a Worker Shortage Index of 0.52, indicating that Colorado has 52 available workers for every 100 open jobs, ranking 31st in the nation.

Work From Home—During the pandemic, most office workplaces transitioned from in-person to remote work environments. According to the Census Bureau Household Pulse Surveys, the work from home rate peaked at 37% in early 2021, and since then, has dropped to a pandemic low, with less than 26% of U.S. households having at least one member of the household working from home at least one day a week. Even with the decreasing number of people working from home, the demand for

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U.S. Economic Outlook

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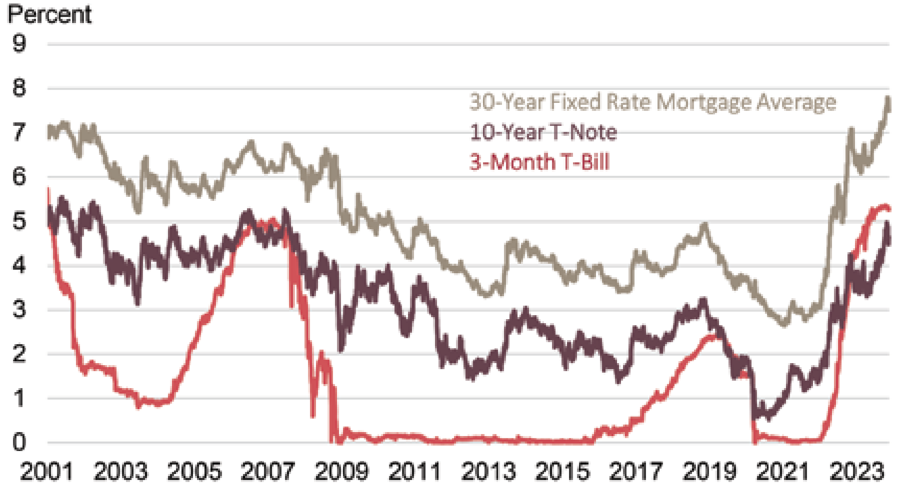
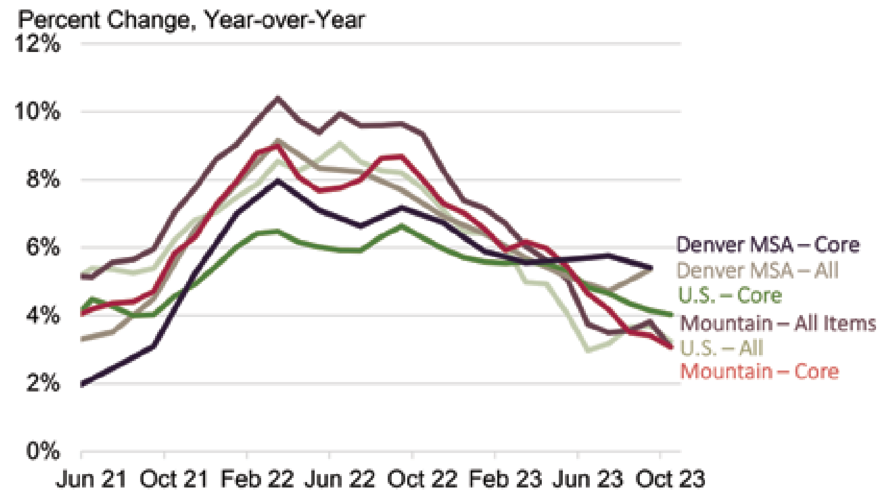
INTEREST RATES 2001-2023



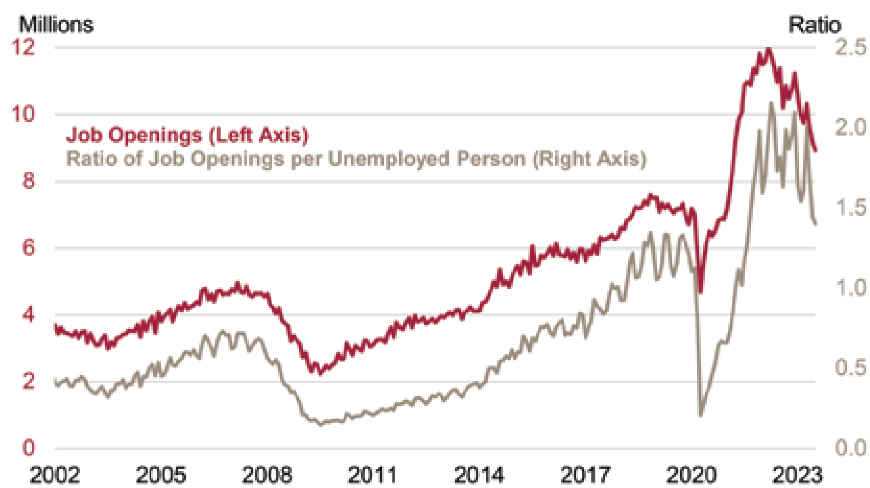
Sources: Federal Reserve, Freddie Mac, and Moody's Analytics.

CONSUMER PRICE INDEX, 2021-2023



Source: Bureau of Labor Statistics.

NATIONAL JOB OPENINGS 2002-2023



Sources: Bureau of Labor Statistics, JOLTS and Current Population Survey.

PERSONAL SAVINGS RATE 2013-2023

Source: Bureau of Economic Analysis.

remote or hybrid jobs is higher than the number of positions available. According to LinkedIn data, 76% of job applications in Colorado Springs were solicited as remote or hybrid opportunities in August of 2023.

Commercial Real Estate—Related to the shift to work remotely, the behavioral change is having disruptive impacts on central business districts, commercial real estate occupancy, and real estate valuations. Data from Kastle illustrate workplace occupancy remains below prepandemic levels, and that within the workweek, Monday and Friday represent the lowest occupancy, while Tuesday and Wednesday have the highest occupancy. Office vacancy rates hit a 30-year high in Q2 2023, according to CBRE, but that vacancy was concentrated in a minority of buildings. Nonetheless, as loans need to be refinanced over the coming few years, the risk remains about higher vacancy, lower net operating income, and lower valuations in a higher interest rate environment, and where the capital infusion will come from to rescue assets.

Student Loans—Due to the COVID-19 pandemic, both the Trump and Biden administrations enacted and expanded a pause on student loan payments by freezing accounts and preventing interest accumulation. In October 2023, and for the first time since March 2020, monthly payments on student loans resumed as part of the debt ceiling package that Congress passed in June 2023. The payment restart is anticipated to pull more than $100 billion from consumers through the end of 2023. In August 2023, the Biden administration announced an income-driven repayment plan, which may help mitigate the impact. According to data from the U.S. Department of Education, Colorado ranks 16th-highest among all states in average student loan debt, and 19th in total student loan debt with $27.3 billion between 754,800 borrowers.

Artificial Intelligence—The workforce in Colorado, like other states, could significantly be impacted by emergence of AI technologies such as ChatGPT. A report from a U.K.-based e-commerce firm states that automation and AI pose a risk to at least 387,900 jobs in Colorado. On a national level, workers with the most exposure to chat-bots like ChatGPT tend to be high earners in white-collar jobs with a college degree. Even though AI poses a risk to white-collar jobs, according to Goldman Sachs economists, technological innovation will be a benefactor in increasing workforce productivity and employment growth over the long haul.

Job Sharing—Job sharing, when two individuals perform the duties and tasks of a single full-time job, has become increasingly popular in recent years. Although job sharing is still a relatively new process in the workforce, many companies are using it as a recruiting strategy to bring in and retain high talent. The benefits that come with job sharing—healthy succession, job satisfaction, and work-life balance—have outweighed the costs for many major companies in recent years, such as Ford and PwC.

Housing—Heightened mortgage interest rates continue to impact national and statewide housing markets, forcing sellers to adapt to an environment that has been increasingly unwelcoming to prospective home buyers. Paired with the staggering mortgage rates, other headwinds like elevated home prices and limited housing inventory serve as key indicators for a growing housing affordability crisis. The October 2023 Housing Affordability Index, developed by the Colorado Association of Realtors, stood at 41 for single-family homes, down from 46 in October 2022, which suggests that statewide affordability is extremely low.

U.S. Fiscal Policy—In 2023, Congress passed legislation to lift the nation's debt ceiling in order to avoid what would be an "economically disastrous default." The act is referred to as the Fiscal Responsibility Act, and will raise the debt ceiling through January 1, 2025, while also raising limits on government spending and other policy changes. If the U.S. were to default on its debt, massive ripple effects would likely occur that could send the economy into a recession, such as a fallout in consumer confidence, increased borrowing costs for businesses and homeowners, job losses, and decreased valuations in financial markets. Additionally, federal government debt that was issued at very low interest rates is now coming due, necessitating new debt issuances at much higher rates, creating a fiscal drag. Furthermore, large projected U.S. budget deficits and the resulting issuance of an increasing volume of U.S. Treasury securities are putting upward pressure on long-term interest rates, which can be harmful to investment. ✤

Contributors:
Jayson Brubaker, Leeds School of Business
William Craighead, UCCS Economic Forum
Lucas Ericson, Leeds School of Business
Adam Illig, Leeds School of Business
Brian Lewandowski, Leeds School of Business
Marcus Popoff, Leeds School of Business
Shivam Vats, Leeds School of Business
Richard Wobbekind, Leeds School of Business

Colorado Economic, Employment, and Population Outlook

Economy

Colorado has arguably been a leading economy since the Great Recession, outperforming most other states in terms of employment, labor force, population, and GDP growth. On the surface, 2023 marked a notable slowdown in Colorado's pace of growth and overall ranking. The official statistics put Colorado's year-to-date job growth at 1.5%, ranking the state 42nd (9th-slowest). However, the Colorado Department of Labor and Employment has demonstrated that employment has been statistically underestimated in the state, suggesting upward adjustments when revisions are applied during the first quarter of 2024, moving Colorado up considerably in the national ranking. The state's GDP increased 2.2% in 2022 (16th-highest) and 1.5% (24th) in Q1 2023 year-over-year, compared to the simple average growth of 1.6% for the 50 states. Colorado's population growth ranked 12th in 2022 in absolute change and 19th in percentage change. Colorado's unemployment rate (3.3%) was tied at 26th. The state had the 5th-highest labor force participation rate in the country, the 19th-highest labor force growth rate, and a labor force that is hovering around record levels for the state of Colorado.

For more than half a century, the *Colorado Business Economic Outlook* has been compiled by industry leaders in the state and presented by the Business Research Division (BRD) of the Leeds School of Business at the University of Colorado Boulder. For 59 years, this book has served as a chronicle of the changing issues and opportunities facing people and industry in Colorado. Presenting historical data and forward-looking estimates on employment for each sector of the economy, the book also offers discussion on other relevant economic metrics, ranging from sales and cash receipts to building permits and airport enplanements. This section lays the foundation for each of the North American Industry Classification System (NAICS) supersectors by providing an overview of labor force and wage and salary employment totals. Every five years, the NAICS system undergoes reclassification. Some of the code revisions will impact industry statistics over the coming year, but no adjustments have been made to data in this book in anticipation of the revisions.

Employment

Colorado employment stood at a record 2.9 million in October 2023. After losing 377,700 jobs due to the pandemic, Colorado added 473,500 jobs following the April 2020 trough (May 2020-October 2023). Evidence supports that statewide employment has been underestimated by 19,000-41,000 jobs in the first half of 2023. Annual job growth in 2022 is reestimated at 121,700 jobs (4.4%). Growth in 2023 is estimated at 64,500 (2.2%), and the forecast for 2024 is for an additional 41,900 jobs (1.4%).

Year-over-year employment growth was recorded in all but one of Colorado's seven metropolitan areas in October 2023—Boulder (2.9%), Fort Collins-Loveland (2.7%), Colorado Springs (1.7%), Greeley (0.8%), Grand Junction (0.6%), and Pueblo (0.2%). The Denver-Aurora-Lakewood MSA was the only one to record a decline in the official statistics (-0.5%), but the Denver MSA is also expected to be revised sharply positive when benchmark revisions are applied in the first quarter of 2024.

Most businesses in the economy are small businesses—97% of wage and salary establishments have fewer than 50 employees. These small businesses represent just under half (49%) of jobs in Colorado.

Labor Force and Unemployment

The monthly unemployment rate improved from a record high 11.6% in May 2020 to a near-record low of 2.6% in August 2022. Since then, the employment rate ticked up to 3.3% as of October 2023, with an increase in both the labor force and number of unemployed. The rising unemployment reflects the delicate balance between a moving number of unemployed (numerator) and labor force (denominator) that sometimes produces nonintuitive results (e.g., a rising unemployment rate during periods of job growth). Colorado is projected to have both labor force growth and a higher number of people unemployed looking for work in 2024.

The labor force participation rate (LFPR) is important because it conveys the relative amount of labor resources available for the production of goods and services. The LFPR is the percentage of the civilian noninstitutional population 16 years and older either working or actively looking for work. This metric is calculated by dividing the labor force by the civilian noninstitutional population age 16 and older. The labor force is calculated as the sum of the number of employed and unemployed members of the civilian noninstitutional population age 16 and older, where "employed" is defined as someone who did any work for pay or profit during the week of the survey; did at least 15 hours of unpaid work in a business or farm operated by a family member they live with; or were temporarily absent from regular jobs because of illness, vacation, bad weather, labor disputes, or various personal reasons. Civilians within the noninstitutional population considered "unemployed" are those who did not have a job during the week of the survey, made at least one specific active effort to find a job during the past four weeks, and were available for work. Unemployed also includes those not working because they are waiting to be called back to a job they had been laid off from.

The average national LPFR was 63.1% in 2019, but the peak crested much earlier, at 67.1% in 2000, driven down by structural demographic shifts as a generation of workers began to retire. Participation fell further in 2020 during the recession, before rebounding to 62.7% as of October 2023. In 2019, Colorado's LPFR averaged 68.7% and then dropped due to the pandemic before rebounding to a projected rate of 68.8% in 2023 and 69% in 2024. Colorado was tied for fifth in the nation in terms of the highest LFPRs in October 2023.

Another measure of the labor market is the employment-to-population ratio. This measure of labor

COLORADO RESIDENT LABOR FORCE
2014-2024
(Not Seasonally Adjusted) (In Thousands)

Labor Force	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023[a]	2024[b]
Colorado Labor Force	2,800.7	2,825.8	2,894.2	2,963.8	3,054.3	3,105.6	3,089.0	3,158.1	3,200.6	3,248.6	3,294.1
Total Employment	2,661.1	2,720.0	2,803.5	2,886.0	2,961.4	3,022.8	2,880.2	2,986.2	3,103.5	3,143.9	3,181.6
Unemployed	139.6	105.8	90.7	77.8	92.9	82.8	208.8	171.9	97.1	104.8	112.5
Unemployment Rate	5.0%	3.7%	3.1%	2.6%	3.0%	2.7%	6.8%	5.4%	3.0%	3.2%	3.4%
Labor Force Participation Rate	67.6%	66.7%	67.0%	67.7%	68.6%	68.7%	67.3%	68.1%	68.4%	68.8%	69.0%

[a]Estimated. [b]Forecast. Note: There are methodological differences between the LAUS data series and the CES employment data series that is used throughout the rest of this book.

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

COLORADO NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT
2014-2024
(In Thousands)

Sector	2014	2015	2016	2017	2018	2019	2020	2021	2022[a]	2023[b]	2024[c]
Natural Resources and Mining	34.1	30.7	23.7	25.8	28.6	28.8	21.8	19.8	20.8	21.7	22.9
Construction	142.2	148.8	155.3	163.7	173.2	179.1	174.9	177.5	183.0	184.3	182.0
Manufacturing	136.6	141.0	142.7	144.3	147.5	150.5	146.8	149.2	153.0	151.4	150.0
Trade, Transportation, and Utilities	432.7	445.7	453.9	461.3	470.4	477.9	469.3	486.5	503.2	508.2	513.5
Information	70.5	71.0	72.2	72.3	75.6	77.1	75.1	76.2	79.5	77.5	76.5
Financial Activities	153.9	159.0	163.9	168.1	171.6	174.6	172.8	178.2	181.3	179.0	178.2
Professional and Business Services	386.4	398.1	405.4	412.4	423.5	439.2	430.4	453.8	484.2	500.4	514.9
Education and Health Services	298.0	313.3	325.8	334.1	340.7	347.6	339.2	347.8	353.4	366.3	375.7
Leisure and Hospitality	300.4	312.8	323.6	333.2	339.7	345.4	272.0	305.6	338.3	351.0	356.0
Other Services	100.9	104.2	107.3	108.6	110.9	114.8	110.4	117.8	123.1	125.7	127.0
Government	407.9	416.5	428.1	436.7	445.6	455.1	440.2	438.5	452.8	471.5	482.4
Total[d]	2,463.6	2,541.1	2,601.9	2,660.5	2,727.3	2,790.1	2,652.9	2,750.9	2,872.6	2,937.1	2,979.1

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

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Colorado Economic, Employment, and Population Outlook

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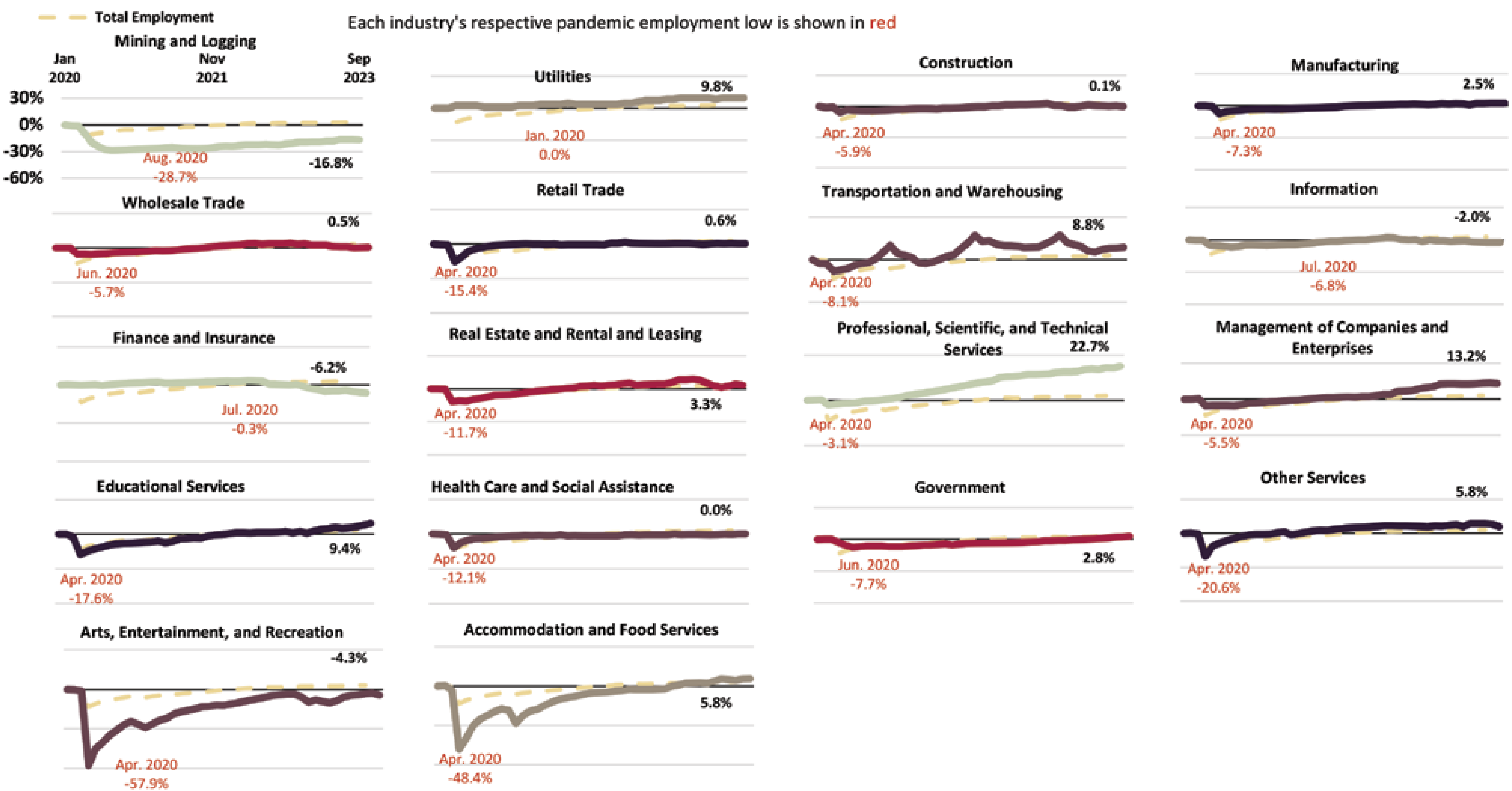
COLORADO EMPLOYMENT TRENDS BY SECTOR, PERCENT CHANGE FROM JANUARY 2020 - SEPTEMBER 2023



Notes: Employment differences taken from January 2020; the month and percent difference from January 2020 for each industry's pandemic bottom in employment is shown for each industry.
The CES employment data is succeptible to large revisions.
Source: Bureau of Labor Statistics, Current Employment Statistics (CES).

market performance is helpful because it tends to be less volatile than the unemployment rate, which has a fluctuating numerator (unemployed) and denominator (labor force). Colorado's employment-to-population ratio averaged 66.9% in 2019, decreased in 2020, and increased to 66.3% in 2022.

Labor Data Sets Differ

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- 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—three 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 provide an estimate of the size of the total labor force and is used to calculate the unemployment rate. The LAUS data consider 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.

Population

Total Population Change

In July of 2022, the U.S. population reached 333.3 million, an increase of 1.2 million over the year or a growth rate of 0.4%. Eighteen states declined in population. Colorado's resident population as of July 2022 was 5.8 million, ranking 21st in size in the United States. Colorado's population increased by 27,710, or 0.5%, from July 2021 to July 2022, ranking Colorado 12th in total change and 19th in percentage change. This growth is very similar to the growth in 2021 and significantly slower than the 74,000 annual average during the previous decade. The growth rate is the slowest since the late-1980s. Births in Colorado were 62,500, up about 500 from the previous year but still lower than the peak of 70,700 in 2007. Births are the largest component of population change in Colorado. There were 49,700 deaths between July 2021 and 2022, an increase of 3,200 from 2021. Deaths have been increasing due to aging in Colorado but also due to COVID-19. Natural change (births minus deaths) was 12,800, about 2,600 lower than last year. Despite the lower levels of natural increase, it was the 7th-largest natural increase in the country. There are 24 states in a phase of natural decline, with more deaths than births.

Net migration accounted for 14,924 of the growth in the state. International migration was estimated at 10,000, returning to prepandemic levels and accounting for about 1% of the U.S. international migration. The late-2022 arrival of refugees and international migrants will not count in population estimates until 2023 since it occurred after July. Domestic migration was estimated at 4,924, very similar to 2021. Net migration of 14,924 in 2022 was slightly higher than 2021 but significantly lower than the 45,000 annual average during the 2010s.

Forty-seven percent (1,482) of U.S. counties declined in population. In Colorado, 28 of the 64 counties, or 44%, declined. Twenty-six counties experienced net out migration led by Jefferson, Arapahoe, Denver, Eagle, and Summit. Forty of the sixty-four counties are in a phase of natural decline—meaning there were more deaths than births. Most of the counties in a phase of natural decline were in the nonmetro parts of the state and ranged from -900 to -1. However, the metro counties of Pueblo and Mesa led the list of counties in natural decline. The three counties with the largest natural increase included El Paso, Denver, and Adams.

COLOADO POPULATION BY AGE 2021-2022

Age	2021	2022	Change	Pct Ch.
0 to 17	1,260,302	1,250,481	-9,821	-0.8%
18 to 24	536,615	539,270	2,655	0.5%
25 to 44	1,712,664	1,727,962	15,298	0.9%
45 to 64	1,402,333	1,392,996	-9,337	-0.7%
65+	899,215	928,029	28,814	3.2%
Total	5,811,129	5,838,738	27,609	0.5%

Source: Colorado State Demography Office.

Births continued to be lower than historical trends in 2022 but were up slightly from 2021. The slowing in births will continue to have long-run impacts on K-12 and higher education, as well as the labor force. Every county is different. Most counties reached their peak births in 2007, but some counties, like Jefferson, reached their peak births in 2000. Weld is the only Front Range county that is continuing to see an increase in births. Births are forecast to increase slightly in 2023 and 2024 as the number of women of child-bearing age increases in the state. Additionally, the largest group of millennials are entering their 30s, where Colorado has experienced increased birth rates.

Over time the number of deaths in Colorado has increased, reflecting an increased number of older adults. COVID-19 caused an additional increase in deaths in 2020, 2021, and 2022. In 2022, deaths reached 49,600, an estimated 11,000 more than in 2019. Forecasts for 2023 and 2024 have deaths slowing to 45,500 but still higher than the 39,000 in 2019.

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Colorado Economic, Employment, and Population Outlook

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COUNTY POPULATION GROWTH, 2021-2022

	Rank	County	2021-2022	County	Largest Population
Growth	1	Weld	10,341	El Paso	740,552
	2	Douglas	6,268	Denver	712,637
	3	Adams	4,084	Arapahoe	656,015
	4	Larimer	4,069	Jefferson	575,936
	5	El Paso	3,350	Adams	527,501
				Douglas	376,026
Percent Growth	1	San Juan	8.1%	Larimer	366,843
	2	Custer	5.4%	Weld	350,206
	3	Dolores	3.9%	Boulder	327,424
	4	Weld	3.0%	Pueblo	169,383
	5	Chaffee	2.7%	Mesa	158,534

Source: Colorado State Demography Office.

COMPONENTS OF COLORADO RESIDENT POPULATION CHANGE, 2014-2024 (In Thousands)

Year	Births (Resident)	Deaths (Resident)	Natural Increase	Net Migration	Population Change	Total Population
2014	65.7	34.0	31.7	45.1	76.8	5,347.7
2015	66.3	36.2	30.1	68.8	98.9	5,446.6
2016	66.6	36.8	29.7	53.3	83.0	5,529.6
2017	65.3	37.7	27.6	42.4	70.0	5,599.6
2018	63.8	38.2	25.6	51.8	77.3	5,676.9
2019	62.5	38.6	23.8	34.2	58.0	5,734.9
2020	62.8	42.1	20.7	29.0	49.2	5,784.2
2021	62.0	46.5	15.5	11.0	26.4	5,811.0
2022	62.3	49.7	12.6	15.1	27.7	5,838.7
2023[a]	62.1	45.2	16.9	35.0	51.9	5,890.6
2024[b]	64.5	43.0	21.5	40.0	61.6	5,952.2

[a]Estimated. [b]Forecast. Source: Colorado Department of Local Affairs, State Demography Office (November 2023 estimates).

Change by County

From 2021-2022, 90% of the population growth was along the Front Range but varied by county. Jefferson and Arapahoe declined, but there were increases in Douglas, Weld, Adams, and El Paso. The Front Range still increased by the most in population, but many Central Mountains and Western Slope regions experienced faster growth.

Age

Population growth by age group continues to be a defining factor for Colorado due to two primary influences. First, births have been declining since 2007 in both the United States and Colorado. The second significant impact is the growth in the 65+ population, which has increased by almost 29,000 between 2021 and 2022 and is forecast to increase by 35,000 between 2022 and 2023. The growth in this group is primarily due to more people aging into the cohort rather than net migration. It is estimated that 69,000 Coloradans turned 65 in 2022, and another 68,000 are turning 65 in 2023. The growth in the 65+ age group is impacting the labor force, with a growing number of retirements even with workers staying in the labor force longer. It is estimated that 40,000 workers will retire annually this decade. Additionally, the 65+ population is driving the economy, with demand for health services and leisure and hospitality, and is impacting housing with lower rates of mobility and smaller household sizes.

The 65+ age group now comprises over 928,000 in the state and is the fastest- and largest-growing cohort, increasing by almost 29,000 and growing at a rate of 3.2%. Growth in the 65+ population represented over 100% of the growth in the state. Between 2021 and 2022, there was an absolute decline of 9,800 in the under 18 population due to slowing births since 2007.

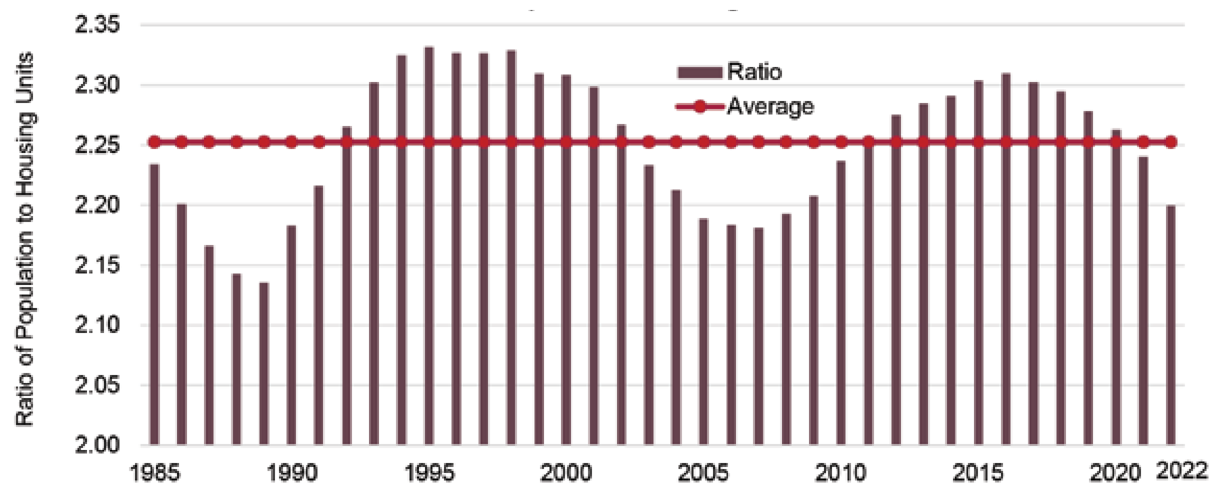
As Gen X ages into the 45-64 age cohort being vacated by the boomers, there is a decline in that cohort of 9,300. The age cohort 25 to 44 did increase by 15,000. This cohort is primarily made up of millennials, with the leading-edge age 41, peak age 30, and tail-end age 26 in 2022.

Housing

Housing unit growth did not keep up with household formation during the last decade due to the Great Recession, creating the tight housing market and escalating home prices. Since 2018, Colorado has built more housing units than new population growth, making a dent in the housing under-supply. In 2022, housing growth increased by 56,000, and in 2023, housing is expected to increase by 48,000 and then slow to 42,000 in 2024 due to the higher interest rates. Population growth was 27,000 in 2022, primarily driven by births. Deaths were over 30,000 more than net migration, meaning that there was an absolute loss in the adult population. The increased supply in housing units and slowing demand by new population growth will help alleviate the supply/demand mismatch and allow those who have had to "double up" on housing the potential opportunity to find independent housing. The ratio of household population to housing units reached a low of 2.2 in 2022 after hitting a high of 2.31 in 2016. The 38-year average is 2.25, indicating that currently the housing supply is slightly looser than the historical average.

Household formation is forecast to grow annually by an estimated 35,000 through 2025—as long as job recovery and employment growth holds as forecast. The largest cohort of millennials are in their 30s, the primary age for first-time home buyers. Future job growth, as well as future expected retirements from the baby boomers, will support demand for workers and the need for housing. The aging of the baby boomers into their 70s and 80s may create more turnover in larger, single-family homes as the boomers look to downsize. Of course, several factors, including location, availability, cost, and health needs, will also factor into these decisions.

HOUSEHOLD POPULATION TO HOUSING UNIT RATIO



Source: Colorado Demography Office.

Forecasts

Colorado's population growth has slowed in the short run, with continued slowing births, increased deaths due to both aging and Covid, and slowing migration. International migration historically has contributed to 20% of Colorado's total net migration, and it slowed significantly in recent years. In 2022, international migration returned to prepandemic levels and is expected to remain at levels around 10,000 in 2023. Students, and the demand for labor, should draw more individuals from abroad, depending on U.S. immigration policies and staffing in visa offices. Population growth in 2023 is projected to be 50,000, or a 0.9% growth rate, and 60,000 in 2024. Most of the growth continues to be driven by births, around 62,000 per year. Deaths are forecast to return to prepandemic levels in the mid- to low-40,000s. Net migration is forecast to increase to 35,000 in 2023 and 40,000 in 2024 and 2025. Net migration is forecast to increase due to both job growth as well as retirements of baby boomers and the need for their replacements. Over 40,000 retirements are forecast annually this decade, and job growth is forecast at an average of 37,000 per year from 2023-2030. This is a demand for approximately 77,000 new workers combined annually.

After 2030, population growth is expected to slow more significantly due to a slowing economy, continued slowing birth rates nationally, an aging population, slowing labor force growth, and increased national competition for workers. Although Colorado's population growth is forecast to slow over the next few decades, it is projected to continue to outpace the nation, growing at roughly twice the national rate. Colorado is forecast to increase from 1.7% of the U.S. population in 2020 to 2% by 2050. The largest population growth is forecast to be along the Front Range. Between 2020 and 2030, the state's population is projected to increase by 600,000, with 88% of this increase projected for the Front Range, and of that, 285,000 for the Denver Metro area. The North Front Range is expected to observe the fastest growth, at an annual average growth rate of 2%, or 138,000 people. The 2050 forecast for the state is 7.49 million, with 6.3 million along the Front Range, or 85% of the total population.

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Colorado Economic, Employment, and Population Outlook

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Economic Impacts on Diverse Communities

Nationally, labor force participation and unemployment rates have long differed by community. Individuals with lower levels of educational attainment tend to have higher rates of unemployment than people who have earned post-secondary education; young cohorts tend to have higher rates than the middle-age population. By race, the Black or African American population tends to have higher rates of unemployment than Asian or White populations; and by ethnicity, the Hispanic or Latino population has higher rates of unemployment than non-Hispanic or Latino. Women tend to have higher rates than men; however, women had a lower average unemployment rate than men as of October 2023. These observations held during the pandemic, with rising unemployment rates across all groups. The highest rates occurred in April 2020 for individuals 16 to 19 years, 20 to 24 years, for those with less than a high school diploma, and for Hispanic or Latino people. Following the pandemic, every cohort also improved within tenths of percentage points to their prepandemic level by October 2023, while many of these cohorts have a labor force participation rate below prerecession levels.

Race

The disproportionate impacts of COVID-19 could also be observed among different races. The unemployment rate among all racial populations rose drastically at the beginning of the pandemic and has since trended toward recovery for most races. For the nation, the unemployment rate for the White population has recovered, standing at 3.2% in October 2023 compared to 3.5% in January 2020. For the Black population, October 2023 numbers were recorded at 5.8%, recovering generously from the January 2020 at 6.6%. The Asian population has increased year-over-year from 2.9% in October 2022 to 3.1% in October 2023, but remains lower than January 2020 levels, which stood at 3.2%. The October 2023 unemployment rate for the American Indian population has decreased in recent months, standing at 6.7%, but it remains higher than a year prior (5.6%).

In Colorado, a similar unemployment trend to that of the nation was observed. Colorado's total continuous unemployment claims for Asian populations in July 2023 have struggled to rebound since the pandemic, increasing 103.3% since January 2020 and 75.2% year-over-year. The increase in continuous unemployment claims for White populations in July 2023 was slightly less drastic, rising from 27.5% year-over-year and 0.7% since January 2020. Similarly, Black continuous unemployment claims in July 2023 grew 15.5% since January 2020 but decreased 8% year-over-year, showing a steady trend toward recovery. The American Indian population has fully recovered since the pandemic. As of July 2023, continuous unemployment claims for American Indians decreased 11.1% year-over-year and 30.6% since January 2020 levels.

The 2022 Census provides the unemployment rate for Colorado for the White population, Black population, American Indian population, and Asian population as follows: 3%, 5.8%, 9%, and 3.7%. The 2019 and 2020 rates were White (3.7% and 4.3%), Black (6.1% and 7.3%), American Indian (5.3% and 7.1%), and Asian (4.4% and 3.7%). It is shown that the pandemic highly affected the unemployment for the minority races in the state. These levels are still recovering through 2023.

Colorado's labor force participation rate was higher than the nation for all the races. Nationally, the labor force participation rate for the White population, Black population, American Indian population, and Asian population were 62.8%, 63%, 58%, and 65.6%, respectively. For Colorado, the labor force participation shows similar trends, with the Asian population having the highest participation rate and the American Indian population having the lowest participation. The Colorado labor force participation rates were White population (68%), Black population (68%), American Indian population (62.2%), and Asian population (68.5%).

Educational Attainment

The percentage of Colorado population with a high school degree or higher is 93%, according to the 2022 U.S. Census. This ranks Colorado the 14th-highest state. The percentage of the population with a bachelor's degree or higher ranks Colorado the 2nd-highest state, with 45.9% in 2022.

There is an inverse correlation between educational attainment and the unemployment rate—the higher the level of educational attainment, the lower the unemployment rate. The unemployment rate of individuals with a bachelor's degree or higher in Colorado was 1.7% in 2022, compared to 4% in the same year for individuals with just a high school diploma. These numbers are significantly lower and have fully recovered since the onset of the pandemic. In terms of the population with college degrees, 57.4% of the U.S. Asian population had a bachelor's degree or higher in 2022. This is significantly higher than the U.S. White population (39%), the U.S. Black population (25.4%), and the U.S. American Indian population (16.8%). Similar numbers were seen in Colorado in 2022, with 57.5% of the Asian population, 50.9% of the White population, 22.6% of the American Indian population, and 32.3% of the Black population holding a bachelor's degree or higher.

Median earnings for the state and nation show that men are making more than women. In 2022, Colorado males who had a bachelor's degree had median earnings of $84,200, whereas females with a bachelor's degree had median earnings of $56,700. Males and females who graduated high school had median earnings of $49,700 and $34,100. Trends are similar in the nation, with median earnings for bachelor's degree males and females at $78,800 and $55,000, respectively. For high school graduates, males earn $43,400 and females earn $30,400.

For Colorado, the labor force participation rate for high school graduates was 76.6% and 86.3% for the population with bachelor's degrees or higher in 2022. This is higher for high school graduates since 2020 (74.5%), but lower for bachelor's degree population (87.4%). This trend is similar to the nation, with a labor force participation of 72.6% for high school graduates and 87.7% for the population with bachelor's degrees or higher in 2022. ✥

Contributors:

Elizabeth Garner, Colorado Department of Local Affairs (Co-Chair)
Joseph Winter, Colorado Department of Labor and Employment (Co-Chair)
Monicque Aragon, Colorado Department of Labor and Employment
Jayson Brubaker, Leeds School of Business
Cindy DeGroen, Colorado Department of Local Affairs
Lucas Ericson, Leeds School of Business
Ryan Gedney, Colorado Department of Labor and Employment
Adam Illig, University of Colorado Boulder
Michelle Kim, Leeds School of Business
Brian Lewandowski, University of Colorado Boulder
Robert McNown, JTC Econometrics
Marcus Popoff, Leeds School of Business
Richard Wobbekind, University of Colorado Boulder
Tim Wonhof, Colorado Department of Labor and Employment

AVERAGE ANNUAL PAY BY SECTOR COLORADO AND UNITED STATES (Q1 2023)

NAICS	Sector	Colorado	1-Year Growth	United States	1-Year Growth
11	Agriculture, Forestry, Fishing, Hunting	$47,118	6.8%	$44,311	4.6%
21	Mining	165,924	14.1	122,277	7.8
22	Utilities	126,280	3.3	127,226	4.9
23	Construction	77,453	7.1	75,078	6.2
31-33	Manufacturing	83,863	2.3	80,940	3.7
42	Wholesale Trade	109,042	3.6	96,946	4.8
44-45	Retail Trade	43,067	5.0	41,048	1.2
48-49	Transportation and Warehousing	68,781	7.7	62,020	4.9
51	Information	136,927	1.4	146,228	-3.9
52	Finance and Insurance	122,793	0.5	133,610	-1.2
53	Real Estate and Rental and Leasing	80,768	6.6	74,955	4.3
54	Professional and Technical Services	124,561	4.9	118,958	2.6
55	Mgmt of Companies and Enterprises	159,940	-4.6	145,498	-0.3
56	Administrative and Waste Services	60,007	10.4	55,516	7.2
61	Educational Services	54,044	6.7	60,764	3.6
62	Health Care and Social Assistance	64,071	6.9	62,254	5.3
71	Arts, Entertainment, and Recreation	48,133	6.8	49,328	5.8
72	Accommodation and Food Services	32,058	8.9	28,118	6.9
81	Other Services	53,811	9.3	49,657	6.3
	Government	69,241	5.0	69,200	5.1
	Federal	98,268	7.4	95,787	6.5
	State	77,494	3.6	74,283	6.2
	Local	59,928	5.3	62,088	4.4
	Total, All Industries	75,799	5.1	71,180	3.6

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

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Colorado Economic, Employment, and Population Outlook

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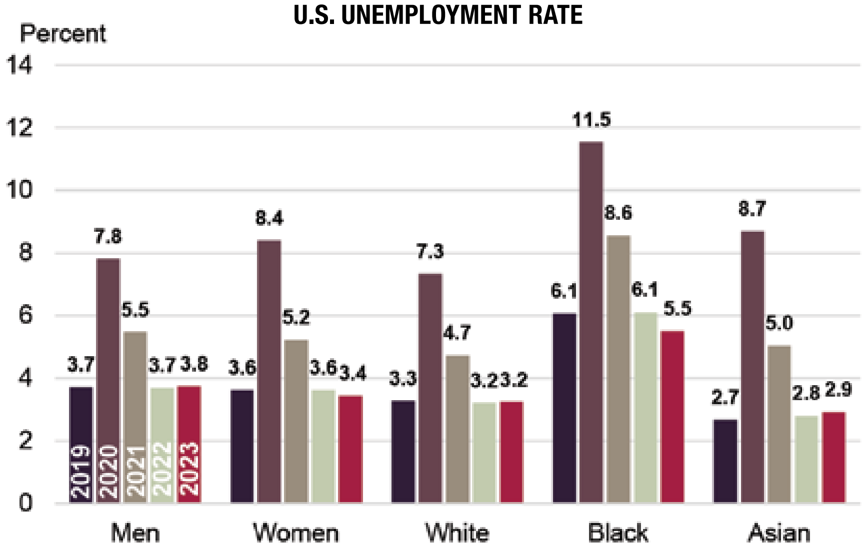
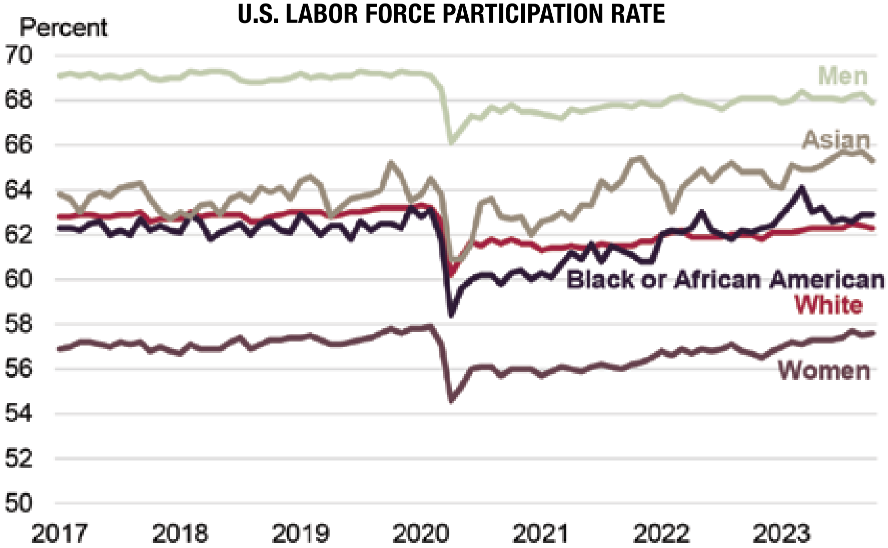
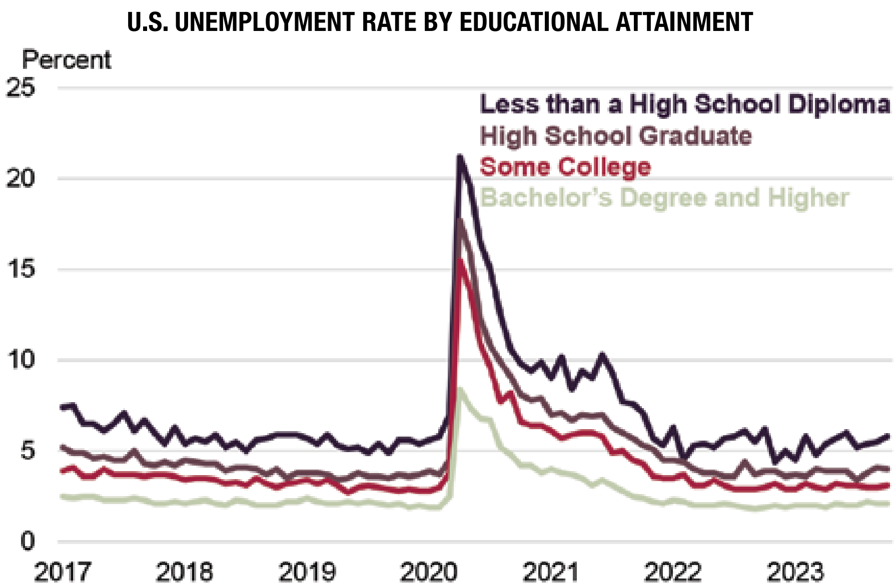


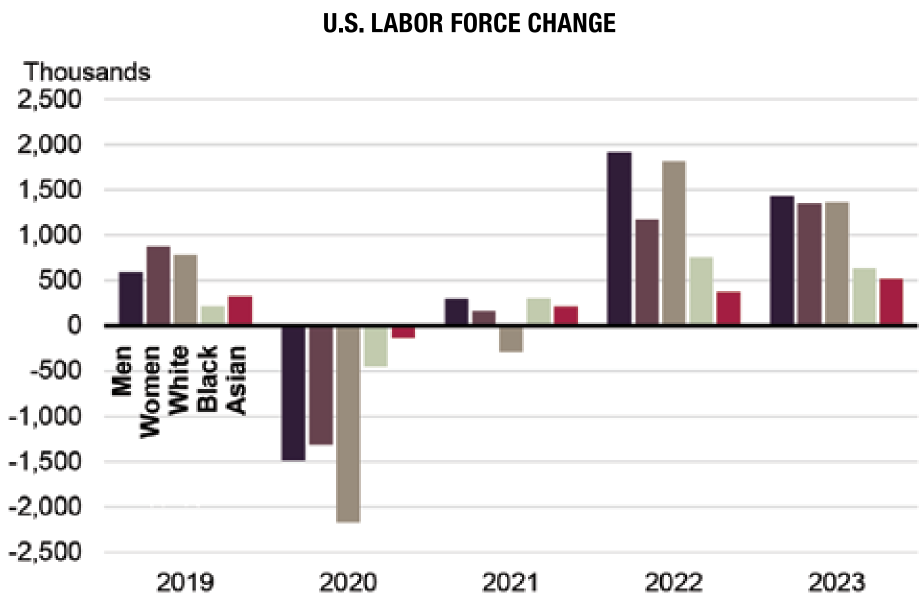
Source: Bureau of Labor Statistics. Note: 2023 includes the average through October.



Source: Bureau of Labor Statistics.



Source: Bureau of Labor Statistics.



Source: Bureau of Labor Statistics. Note: 2023 includes the average through October.


Photo courtesy of Kris Stewart.

Summary

Employment in Colorado is estimated to have increased 2.2%, or 64,500 jobs, in 2023 once data revisions take effect in March 2024, pushing the economy to new peaks. Colorado will sustain job growth in 2024 despite a slowing economy, increasing another 41,900 (1.4%). Of the 11 industry groups in the state, seven are projected to add jobs in 2024; the exceptions are Construction, Manufacturing, Information, and Financial Activities, which are navigating the accentuated ill effects of rising interest rates and other economic headwinds. In 2024, Professional and Business Services is projected to add the most jobs, while the fastest pace of jobs growth (percentage terms) is projected in Natural Resources and Mining.

Agriculture—High production costs and lower crop prices will remain a headwind for the Agriculture sector in 2024. While Colorado's 2023 net farm income is expected to decrease 21%, which is lower than the expected national decline, the state's strong beef cattle industry will help offset higher input costs and lower income from government programs. Although heavy precipitation values helped mitigate drought conditions, farmers and ranchers are still very mindful of long-term water issues in the state and surrounding regions.

Natural Resources and Mining—While regional oil prices remain elevated over the running five-year average, natural gas prices in 2023 are likely to be nearly 60% lower from 2022. This will likely contribute to a $18.4 billion sector value for 2023, down 35% from 2022, but still representing a historically robust value. Colorado's total value of oil and gas production is estimated to be nearly $16 billion in 2023, down 37.5% from the all-time high in 2022, driven by significantly lower average natural gas prices in 2023. In 2021, Colorado ranked 10th nationally for coal production, and 7th in petroleum liquid reserves. Colorado is also a leading producer of renewable energy, including wind, solar, biomass, and hydroelectric energy sources.

Construction—In 2023, two trends have continued within the Construction sector. The residential market has faced constrained demand as a result of high interest rates, while infrastructure (nonbuilding) is expected to continue experiencing increasing demand. Overall, total construction activity is estimated at $20.9 billion in 2023, representing a decline of 12%. While high interest rates slowed the single-family housing market, the future remains bright, as millennials are in the typical home-buying phase of life, the state has experienced increased migration, and Colorado remains an attractive destination for primary and secondary home options. Multifamily construction will likely decline in 2024, largely because apartment demand will be partially met by the abundance of units already under construction reaching completion. Both nonresidential building and nonbuilding construction are expected to remain steady in 2024.

Manufacturing—Although the Manufacturing sector in Colorado posted its fastest pace of growth since 2018, interest rates, shifts in consumer behavior, and other issues, such as drought and water availability, have impacted employment in 2023. Products sensitive to interest rates and building activity have struggled with slowing demand in 2023 but have been offset by strength in food products and transportation equipment subsectors. In addition, federal investment and incentives are expected to boost employment in industries that support aerospace and defense. Further, the Inflation Reduction Act and the CHIPS Act are expected to boost the state's renewable energy and computer and electronic products manufacturers. As a result of these conditions, employment in this sector is expected to continue growing, albeit at a more modest pace in 2024.

ANNUAL EMPLOYMENT CHANGE IN NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT SECTORS, 2014-2024 (In Thousands)

Sector	2014	2015	2016	2017	2018	2019	2020	2021	2022[a]	2023[b]	2024[c]
Natural Resources and Mining	3.5	-3.4	-7.0	2.1	2.8	0.2	-7.0	-2.0	1.0	0.9	1.2
Construction	14.7	6.6	6.5	8.4	9.5	5.9	-4.2	2.6	5.5	1.3	-2.3
Manufacturing	3.8	4.4	1.7	1.6	3.2	3.0	-3.7	2.4	3.8	-1.6	-1.4
Trade, Transportation, and Utilities	12.6	13.0	8.2	7.4	9.1	7.5	-8.6	17.2	16.7	5.0	5.3
Information	0.5	0.5	1.2	0.1	3.3	1.5	-2.0	1.1	3.3	-2.0	-1.0
Financial Activities	2.9	5.1	4.9	4.2	3.5	3.0	-1.8	5.4	3.1	-2.3	-0.8
Professional and Business Services	14.0	11.7	7.3	7.0	11.1	15.7	-8.8	23.4	30.4	16.3	14.5
Education and Health Services	12.1	15.3	12.5	8.3	6.6	6.9	-8.4	8.6	5.6	12.9	9.4
Leisure and Hospitality	11.0	12.4	10.8	9.6	6.5	5.7	-73.4	33.6	32.7	12.7	5.0
Other Services	3.2	3.3	3.1	1.3	2.3	3.9	-4.4	7.4	5.3	2.6	1.3
Government	4.7	8.6	11.6	8.6	8.9	9.5	-14.9	-1.7	14.3	18.7	10.9
Total[d]	83.0	77.5	60.8	58.6	66.8	62.8	-137.2	98.0	121.7	64.5	41.9

[a]Revised. [b]Estimated. [c]Forecast. [d]Due to rounding, the sum of the sectors may not equal the total. Sources: Colorado Dept. of Labor and Employment and Colorado Business Economic Outlook Committees.

Trade, Transportation, and Utilities—The uniqueness of this large sector covering a wide array of companies continues to bolster the industry. Changes in consumer behavior shifting purchasing habits to e-commerce and persistent consumer spending have continued to expand warehousing and delivery needs. Despite slowing job growth in the retail trade sector, and a deacceleration in retail sales from pandemic highs, the sector is expected to remain an anchor of Colorado employment and experience continuous—albeit modest—employment growth in 2024.

Information—In 2022, the Information industry experienced its second year of growth following the COVID-19 pandemic. However, job growth softened in 2023 as software publisher employment weakened, long-run declines in traditional publishing employment and telecommunication industry employment continued, and film, television, and media employment remain subdued and below prepandemic levels. Societal shifts toward digitization, automation, and data continue to hurt some companies within the industry and help others in the state. Demand for connectivity and infrastructure has increased with the remote workforce, and data processing and hosting continue to be a large growth area for Colorado. Expanding broadband access across the state continues to be an ongoing mission that is important for increasing remote work, online education, and health care. Employment in the sector is expected to decline in 2023 and again in 2024 as long-term declines in traditional publishing and telecommunications industries persist.

Financial Activities—Financial Activities underperformed other industries in 2022 and is expected to decline in 2023 and 2024, driven by several factors, namely, higher interest rates. Heightened inflation has moderated, but demand for commercial real estate and the residential real estate market has dampened. The health of this sector will continue to be directly linked to monetary and fiscal policy actions until market volatility and interest rates subside.

Professional and Business Services—The sector continues to be a strength within the Colorado economy—at the end of 2022, it was the 2nd-largest private sector industry with about 17% of total—and it recovered quickly from the pandemic-induced downturn. The highly skilled and highly educated workforce continues to increasingly be sourced and managed remotely, offering more flexibility to employees and reducing overhead cost for offices. Employment in the sector rapidly grew in 2022, but is expected to moderate in 2023 and 2024, but Colorado's position as one of the most innovative, educated, and entrepreneurial states bodes well for the sector.

Education and Health Services—While employment in Education and Health Services is still impacted by the vestiges of the pandemic, there are some notes of optimism in 2023. All subsectors in health care and social assistance grew between Q3 2022 and Q1 2023, driven by large employment gains in nursing and residential care facilities. Growth in private education services in the year ahead will continue to be influenced by the ability of schools to adjust to the changing demands of online learning and declining enrollment. In 2023, employment growth in this supersector outpaced respective growth in 2022, and is expected to maintain similar growth in 2024.

Leisure and Hospitality—The Leisure and Hospitality industry continued to see significant growth in 2023, as it fully rebounds from the COVID-19 pandemic. Although the employment gains are notable, industry wages continue to lag behind other industries in the state. Colorado generated a record high in travel spending and visitors in 2022, and statewide hotel performance continues to show strength and recovery from 2019. In addition, the Colorado skiing industry experienced a banner 2022-23 season, setting a second consecutive record for skier visits, and the long-term prospects for the industry remain positive. Industry employment is expected to post gains in 2024, albeit at a more moderate pace, as the industry faces inflation and supply chain issues.

Other Services—This industry fully rebounded from the pandemic recession in 2021 and experienced generally steady growth in 2022. Employment in this sector fluctuated in 2023 but is expected to steadily increase by year-end. Businesses in this sector (e.g., hair and nail care, religious organizations) will continue to be intrinsically linked with the economy, demographics of the Colorado population, disposable income, and consumer confidence.

Government—In 2023, government entities at all levels were impacted by many of the same challenges faced a year ago, including labor force shortages, supply chain issues, and increased costs. While federal government employment decreased in 2022—largely driven by a completion of 2020 Census work—it is expected to modestly increase in 2023 due to continued administration and management hiring. After two years of declining state government employment, employment expanded in 2022, driven by a rebound in public higher education employment. State employment is expected to steadily increase in 2024, driven by new state programs in the Department of Labor and Employment and Department of Public Health in Environment.

National and Colorado

- National real GDP grew an estimated 2.4% in 2023. U.S. real GDP is projected to grow 1.4% in 2024 as consumption slows—but remain resilient in the face of several headwinds.
- Personal consumption grew an estimated 2.2% in 2023. Personal consumption will moderate further to 1.4% in 2024 as headwinds dent the purchasing power of consumers.
- Rising interest rate policies were deployed to manage high inflation. The higher interest rates had a cooling effect on investment. The higher cost of borrowing is expected to slow residential and nonresidential fixed investment, while infrastructure investment is projected to grow.
- After the deficit increased to record levels in 2022, real net exports are projected to moderate in 2023 and 2024.
- Continued headwinds in 2023 include inflation, elevated interest rates, a shortage of workers, and slowing consumption.
- Employment growth in Colorado is projected in seven of the 11 major industries in 2024, with most growth coming from the services sectors.
- In 2024, Colorado is projected to add 61,600 people, according to the State Demography Office. Growth will come from net migration (40,000) and from the natural increase (21,500).

Agriculture

Most of the U.S. is seeing declining optimism about farm income due to higher input costs and lower crop prices. Overall, 2023 U.S. farm income is estimated to decrease almost 23%, according to the U.S. Senate Committee on Agriculture, Nutrition, and Forestry. Colorado's net farm income is expected to be down 21%, a bit better than the national average, because most of the state's agricultural income comes from beef cattle, a segment that remains strong, offsetting higher input costs and lower income from government programs. "Rain made grain" for corn, wheat, and other row crop farmers around the state, with higher production helping farm income in 2023.

After back-to-back record high years, Colorado net farm income for 2023 is estimated at $1.7 billion, about the same as prepandemic 2019, and is projected to be $1.97 billion for 2024. Increased revenue on the livestock side in 2024 will offset the decline in post-Covid government stimulus payments and trade imbalance payments that stemmed from previous administration trade policies. After a record year for Colorado food and agricultural exports in 2022 at $2.3 billion, 2023 is keeping pace despite the strong dollar and growing global geopolitical concerns. Beef, as always, is the top export product.

Inflation may finally have caught up to agricultural producers as fuel and other inputs have started to put a significant dent in profits. Costs for new and used machinery and parts are higher than they were in 2022, and significantly higher than five years ago. Interest rates are up five percentage points from last year, discouraging purchases of new equipment and cutting into the profits of those who utilize operating loans. One spot of good news is reduced fertilizer prices, with some types costing only half what they did last year.

Spring rains and cooler temperatures brought a bit of relief to the continuing, long-term drought picture for Colorado, but the future of Colorado's water and its availability for agricultural purposes is always present in the minds of farmers, ranchers, and state government. Colorado spent a few weeks this summer entirely drought free, according to the U.S. Drought Monitor, but policy-makers and industry leaders both know that water in the West is a long-term problem with no easy solutions. Wet conditions this spring and summer, coupled with states' conservation efforts, have somewhat stabilized the river and water supply. Federal officials announced in October that a plan to cut usage in Arizona, California, and Nevada will be sufficient to keep river levels where they need to be until a new set of rules is finalized for Lake Mead and Lake Powell in 2026. This ruling means that Colorado will not have to cut its water usage for now.

Photo courtesy of Kevin Milder.

INDUSTRY SNAPSHOT
AGRICULTURE

Nominal GDP, 2022 ($ Billions)	1.3
Real GDP, 2022 ($ Billions, 2017 Dollars)	0.8
2022 Real GDP Growth Rate	-65.8%

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

Although the river originates in Colorado, the state does not get to keep all the water in the Colorado River. The Colorado River Compact, signed in 1922, divided the Colorado river into two basins: the Upper Basin (Colorado, New Mexico, Utah, and Wyoming) and the Lower Basin (Arizona, California, and Nevada). This agreement established the water allotment for each basin and provided a framework for management of the river. This framework assumed that 17.5 million acre feet would flow through the river annually. Over the past 100 years, the flow has been closer to 15 million acre feet each year, according to the *New York Times* (2023). Changes in climate, population, farming practices, government, and more will all influence any new agreements that these states come to in the future.

What is the long-term solution for water in Colorado and the West? Farmers and engineers are working on more efficient irrigation systems. Plant breeders who develop wheat, corn, and agricultural plants at universities and private companies have already created drought-tolerant varieties, and are working on more to produce a crop with less water. Can artificial intelligence tools increase water use efficiency? The Colorado General Assembly created a Colorado River Drought Task Force to study and recommend ways state lawmakers can address Colorado River water scarcity in the future. This task force will make recommendations to the Legislature about future water legislation.

Beef production continues to lead the way in value for Colorado agriculture. Record-high prices for fed cattle boosted cash receipts to an estimated $4.9 billion, which are projected to go even higher and exceed $5.1 billion in 2024. Herd reduction across the U.S., caused by many years of drought and higher input prices, has benefited those who still have cattle and had the hay or pastures to feed them. The herd will be rebuilt, based on attractive prices, but beef cattle production is slow to build—a heifer must mature to two years old before she is able to produce a calf. More ranchers are keeping heifers to become mother cows, rather than selling them to become feeder animals. Abundant feed, more water availability, and strong prices are encouraging herd-building rather than reduction. Fewer heifers in the value chain further drive up producers' returns on the animals they do sell (because fewer total cattle are being sold) but will also increase consumer prices at the grocery store.

This herd-building reverses the trend of the last few years in Colorado, where many ranchers were reducing their herd size because of drought conditions and high costs of supplemental feed. Colorado's inventory of breeding cows as of January 1, 2023, was up to 845,000 from 840,000 the previous year, but is still down from 860,000 in 2021, and from a recent high of 980,000 in 2018, according to data from the USDA.

Why is beef Colorado's leading commodity? Much of the land that is used for cattle grazing in the state would be unusable for other agricultural purposes—too steep, too rocky, too dry. Grasslands that are too heavy in clay or sand to support crops still grow grasses that provide grazing for Colorado cattle. Cows eating the grass can make otherwise unproductive land productive, turning it into a protein source. Colorado's climate is also conducive to cattle feeding. Daily weight gain in feeder cattle is higher than in places where the temps are colder in the winter.

There was abundant hay for cattle to eat in 2023 as spring rains created a profusion of forage. Ranchers were able to leave their own cattle on their fields to graze, and did not have to supplement as much with purchased hay or other rations.

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VALUE ADDED BY COLORADO AGRICULTURAL SECTOR, 2014-2024
(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	Total Farm Production Expenses	Net Farm Income
2014	$5,357.7	$2,479.7	$7,837.4	$1,052.9	$285.9	$9,176.2	$7,954.1	$1,222.1
2015	5,551.8	2,224.7	7,776.5	929.3	218.6	8,924.4	7,309.2	1,615.2
2016	4,431.3	2,050.1	6,481.4	907.2	233.9	7,622.5	6,358.2	1,264.3
2017	4,732.2	2,207.0	6,939.2	1,058.3	268.7	8,266.2	7,226.9	1,039.3
2018	4,707.8	2,137.4	6,845.2	1,179.1	229.9	8,254.0	7,036.6	1,217.4
2019	4,963.0	2,395.9	7,358.9	948.2	278.5	8,585.6	6,855.1	1,730.5
2020	5,024.7	1,875.3	6,900.0	1,475.7	738.1	9,113.8	7,964.5	1,167.3
2021	5,653.9	2,837.2	8,491.1	1,009.0	476.4	9,976.5	7,963.0	2,013.5
2022	6,349.9	2,387.9	8,737.8	1,948.1	454.4	11,140.3	8,962.2	2,178.1
2023[c]	6,424.8	2,905.8	9,330.6	1,500.0	400.0	11,230.6	9,500.0	1,730.6
2024[d]	6,672.9	2,898.0	9,570.9	1,500.0	300.0	11,370.9	9,400.0	1,970.9

[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 Ag Committee.

Agriculture

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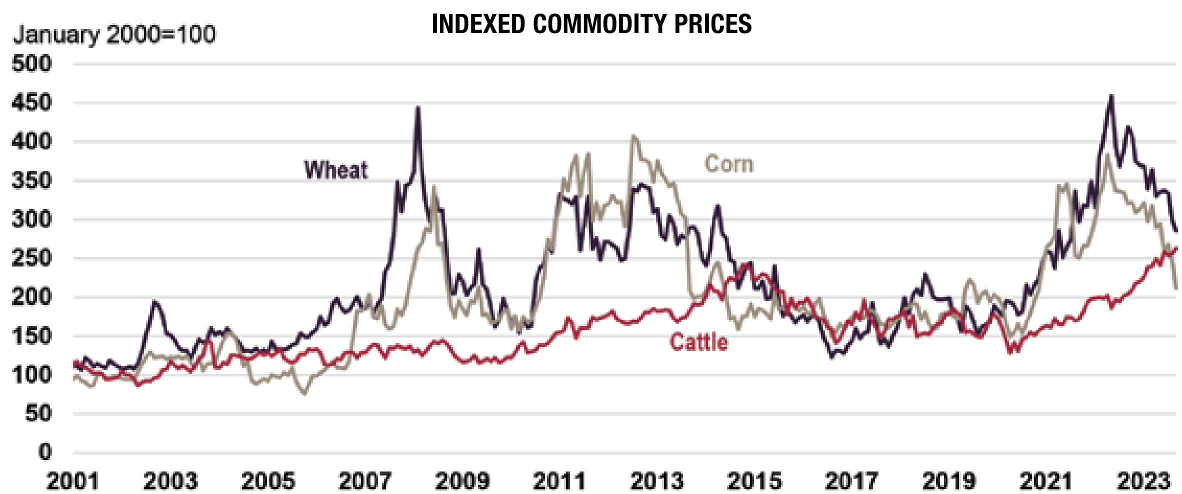

Sources: Bloomberg (USDA Toledo No.2 Yellow Corn Not on the River Spot Price; USDA No. 1 Hard Red Winter Wheat Spot Price/Kansas City Missouri; Generic 1st Live Cattle Future). As of 11/17/2023.

Photo courtesy of Jimmy Baker.

Hay prices for those who need to purchase hay are lower, which is great for those who buy hay but not so good for the grower selling it. Abundant rain was highly regional this spring, so Colorado is exporting hay to other states. Hay from the southwest part of Colorado is often exported to New Mexico dairies, and hay from southeast Colorado goes into Texas. This highest quality alfalfa hay is getting pushed off the cattle feed market because of cost, and is mostly being purchased for horses. This causes a ripple effect of lower dry bean acres because of higher demand for corn to be cut as silage and fed to cattle.

Ranchers are concerned that Colorado could see a "super El Niño" that could create even more hay during the 2024 summer, but could keep grazing pastures covered with snow this winter, so cattle cannot graze existing grass. This would mean that they would either need a sufficient supply of their own hay harvested this summer and stored, or will need to purchase hay.

After tremendous culling of laying flocks caused by an outbreak of avian influenza, Colorado egg production has rebounded. Colorado had 4.9 million egg-laying chickens in 2021, which dropped to 2.4 million in 2022, causing noticeable shortages and high prices at the grocery store. Consumers have had some relief this year as the flock has grown back to 3.9 million by September. Colorado egg production in September 2023 was 107% higher than egg production in September 2022 according to the USDA regional news release (October 20, 2023). Colorado egg producers must also convert their operations to cage-free by 2025, at an estimated cost of $165 million, according to the Poultry Site. Currently, the average national cage-free advertised retail price is $1.93 higher than conventional eggs, according to the USDA Egg Markets Overview (October 27, 2023).

Dairy farmers are having a very rough year. Milk producers have been selling off their herds due to milk prices being down 20%-25% or more. Costs to feed and care for dairy cattle continue to climb, but the prices farmers are receiving for milk are decreasing. Dairy cattle require

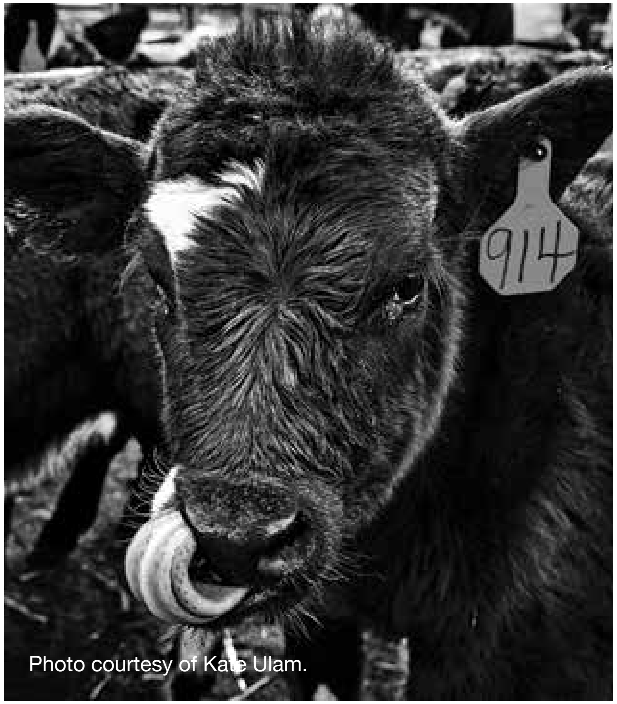
Photo courtesy of Kate Ulam.

high protein feed, which means purchasing high-quality alfalfa rather than less expensive types of hay.

Higher food prices and a slowing economy are being blamed for softened consumer demand for milk and dairy products. Retail prices continue to be high, producing profits for food manufacturers. Those prices do not trickle down to the farm level. Milk prices are determined by the Federal Milk Marketing Board, and recent hearings indicate the Marketing Board may soon reduce the milk price by $1 per hundred pounds, which would be devastating for Colorado dairy farmers.

Colorado has the lowest number of sheep on feed in feedlots since 1993, partly because farmers were able to leave sheep grazing on grass longer due to abundant spring rains. This means 2023 should be more profitable for sheep farmers, as they will have less feed costs invested. The lambs going to market are also less likely to be overweight because of the length of time grazing versus being fed corn. However, wool growers face challenges with the H2-A livestock worker program (a visa program for temporary, nonimmigrant workers to perform agricultural labor or services of a temporary or seasonal nature) as well as municipalities limiting the location of lamb processing facilities within city borders.

Small grains growers in Colorado enjoyed the benefits of the spring rains. The winter wheat crop was more than double that of last year, with 74.6 million bushels harvested versus the 35.8 million bushel crop produced in 2022. Prices remained relatively strong despite the large crop, because of drought in the rest of the U.S. and concerns about the war in Ukraine affecting worldwide exports from the Black Sea region. Significant hail storms impacted many growers, but overall, the increased moisture benefited Colorado's wheat fields.

Corn farmers also profited from the moisture. Colorado corn production is estimated to be 137 million bushels, up 16% from last year's crop. The news is not all good for field corn growers, however, as the rest of the U.S. also has been seeing good yields. With production up nationwide and demand softening, prices will be a bit lower and expected to sink further in 2024. Demand has slipped because the Colorado cattle herd is currently smaller in size. Colorado ranchers retaining heifers as mother cows has also softened the need for corn in feed lots. In addition, Colorado cattle ranchers have abundant supplies of hay and grass in their own fields, and may not need to supplement their cattle feed with corn as quickly or as much.

Coloradans love to support local producers and eat local food. A survey conducted by the Colorado Department of Agriculture and Colorado State University in late 2022 showed 98% of respondents agreed that "Colorado's food and ag industry is important to the state's future economic development; that the presence of ranches, farms, and agriculture is important to the quality of life in Colorado; and that it is important to maintain land and water in Colorado for agricultural purposes." Palisade peaches


Photo courtesy of Luke Munchrath.

were the most recognized product, with 90% of respondents saying they had heard of and purchased them. That was followed by Rocky Ford melons at 76%, Olathe sweet corn and Colorado beer tied at 75%, Colorado beef at 73%, and Colorado dairy products at 72%.

Sweet corn growers on the Western Slope and melon growers in the Arkansas Valley had a disastrous year. An extreme infestation of corn earworm in sweet corn rendered much of the crop unsaleable, and it was either left in the field or chopped with its stalks to be fed to cattle as silage. The worm, which typically shows up in the Olathe area late in the season, appeared earlier this year, in June and July, giving it time to infest many more ears and affect the harvest.

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Agriculture

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Colorado peaches had a good, if somewhat different year. Some growers said it was the longest season in years. Cooler weather and rain this spring delayed the crop somewhat. Consumers were happy to see plentiful supplies of peaches hitting the stores and farm stands about a week later than usual. Peaches continued to be available into September.

Melon farmers suffered from a cool spring that delayed planting, and then devastating hail storms in July that split open melons and damaged the ones not destroyed. Economic damage directly to the crop and supply chain may have been as much as $10 million.

Potatoes only lag behind wheat and corn as the 3rd-largest crop for food for human consumption. Seeing high demand for their crop because of weather challenges in other potato-producing states last year, Colorado potato farmers planted about 5% more acres than they did in 2022. Prices paid to growers for potatoes in 2022 were up $6.70 per one hundred pounds over 2021 prices, encouraging increased acres in 2023. Yields for potatoes in 2023 are expected to be good. Colorado's potato growers are hopeful for a larger market through newly opened opportunities in the interior of Mexico, a market previously tied up in trade disputes.

Nursery and greenhouse growers were not as excited about the rain and cool weather as most of the rest of the agriculture industry. Cool days and rain meant that consumers did not frequent their local garden centers to buy outdoor plants. The weather also delayed construction and landscaping projects, slowing down wholesale purchase of trees, shrubs, and plants meant for commercial landscaping and new housing developments. Those growing plants, trees, and shrubs—and the landscapers planting them—are hoping for warm weather extending into fall and winter 2023.

While much of Colorado's agricultural income is generated by larger commercial farms, the agriculture industry benefits from the diversity and innovation in production and practices of smaller, part-time operations as well. Many beginning farmers establish small fruit and vegetable operations to break into the industry, while also keeping another job to boost income and provide benefits. The Colorado Department of Agriculture has focused on helping these operations get started, with the view of establishing a future core of farmers to help with the increasingly higher average age of current agriculturalists.

Colorado agriculture faces challenges of the unknown with the weather, but also with government regulations. Over the past few years, legislation has been passed that has significantly impacted Colorado's farmers and ranchers. Colorado Senate Bill 21-087 introduced overtime rules for agriculture, which had previously been exempt. While the overtime program is phased in over the next few years, farmers and ranchers are either adapting to the new rules or are switching to crops that can be harvested mechanically, reducing the need for labor. Finding labor at all is a challenge, with the tight labor market, and farm work considered a difficult job by many. Farmers who wish to hire H2-A workers face additional bureaucracy to show that there are no local workers available for the jobs. Agricultural employers must also provide H2-A workers with room and board.

The past few years have seen government support programs for trade imbalance and Covid stimulus taper off. The future of the 2023 Farm Bill is certainly in question, as many of its programs expire on December 31, 2023. It seems likely Congress will pass a one-year extension. While that creates some certainty for programs to continue, it is unlikely a great deal will get done on a new Farm Bill during election season.

Repeated threats of government shutdowns cause uncertainty for farmers applying for loans through government agencies, waiting for crop insurance payments on a field that was hailed out, or requesting temporary immigrant workers. Exports remain strong, but it seems the era of more open trade is being replaced with more trade protectionism. California's Proposition 12, which restricts animal confinement, means that any pork sold into the California market must meet these standards. Colorado will be reintroducing gray wolves into the state by the end of 2023, producing anxiety for livestock producers in that habitat area. Agriculture advocacy associations are expecting more bills introducing local control over issues like pesticide use in the Legislature in 2024.

Uncertainty is always a part of farmers' and ranchers' lives. Agriculture production is tied to factors that are out of their control—the weather, the state and federal governments, other world governments, prices for fuel and fertilizer, and commodity markets. Colorado farmers and ranchers continue to weather the storm, literally and figuratively, and produce a safe, sustainable, and abundant food supply for our state. ✥

Contributors:

Glenda Mostek, Colorado Nursery and Greenhouse Association (Chair)
Elena Brookover, AgRisk Advisors
Nicholas Colglazier, Colorado Corn Administrative Council
Tyler Cozzens, Livestock Marketing Information Center
Heath Dewey, USDA - Agricultural Marketing Service
Chris Dias, USDA - Agricultural Marketing Service
Brad Erker, Colorado Wheat Administrative Committee
Stephen Koontz, Colorado State University
Tom Lipetzky, Colorado Department of Agriculture (retired)
Katelyn McCullock, Livestock Marketing Information Center
Tony Miller, First FarmBank
Rodger Ott, USDA NASS Mountain Regional Field Office – Colorado
Julie Schmidt, USDA NASS Mountain Regional Field Office – Colorado
Tyler Wilson, USDA NASS Mountain Regional Field Office – Colorado

Natural Resources and Mining

Colorado's abundant energy and mineral resources continue to be a key component of the state's economy, with nearly all economic activity built upon the consumption of natural resources and the energy derived from such resources. The Natural Resources and Mining (NRM) sector, while comprising less than 1% of Colorado's workforce, generates some of the highest per worker income levels in the state. In the U.S. Energy Information Administration's (EIA) most recent assessment of 2021 proved reserves, Colorado ranked seventh in the U.S. for petroleum liquids and ninth for wet natural gas. For coal, the state was ninth in recoverable reserves and 10th in production in 2022. That same year, Colorado ranked 19th in total value of produced nonfuel minerals, according to the annual U.S. Geological Survey Mineral Commodity report. Colorado ranks ninth in total energy production, with per capita total energy consumption in the lowest third compared to other states.

Colorado's NRM sector valuation in 2023 has been a mixed bag. While regional oil pricing remains elevated over the running five-year average, the average natural gas price in 2023 is likely to be nearly 60% lower than the average price in 2022. The NRM sector experienced a 5.2% increase in employment in 2022 and grew an estimated 4.3% 2023. In 2024, job growth is expected to continue in this sector, with the potential for 5.3% more jobs coming online in 2024 as oil prices remain in the $60-$70/barrel range. As always, however, uncertainties—geopolitical, economic, and regulatory—have the potential to stagnate job growth. It is worth noting that while natural resource employment in the state is less than 1% of the state's total employment, this sector contributes around 4% to the state's GDP.

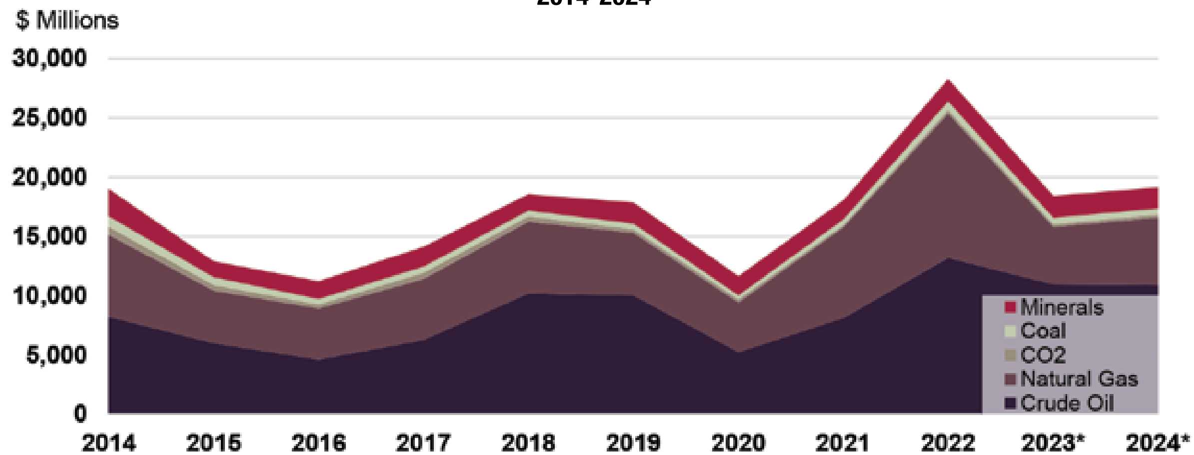
The estimate of Colorado's NRM sector value for 2023 is $18.4 billion. This represents a 35% decrease from the 2022 sector valuation of $28.3 billion but is still robust compared to the previous decade. Assuming energy prices hold up over the next calendar year, the NRM sector will likely see a similar value in 2024.

INDUSTRY SNAPSHOT
NATURAL RESOURCES AND MINING

Nominal GDP, 2022 ($ Billions)	21.2
Real GDP, 2022 ($ Billions, 2017 Dollars)	10.7
2022 Real GDP Growth Rate	-12.4%
Total Employment, 2022 (Thousands)	20.8
2022 Employment Growth Rate	5.2%
Employment Growth National Rank	18
Share of Colorado Employment	0.7%
Share of National Employment	0.4%
Average Wage, 2022	104,978
Percent of Statewide Average Wage	138.9%
2022 Average Wage Growth Rate	17.0%

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics.
Note: 2022 employment includes revised estimates.

VALUE OF COLORADO NATURAL RESOURCES AND MINING, 2014-2024



*2023 estimated and 2024 forecast.
Sources: Colorado Geological Survey Mineral and Minerals Fuel Activity Reports, Colorado Oil and Gas Conservation Commission, Department of Minerals and Geology, and Colorado Business Economic Outlook Committee.

Beyond 2024, there are many factors to consider when forecasting employment and value of Colorado's natural resource industry. These include the state of the national and global economies; increased federal infrastructure and\or renewable energy spending; increased federal, state, and/or local regulation; and volatile oil and gas supply-demand dynamics in the United States and globally. These factors, of course, exist in the macro context of changing social attitudes toward natural resources, the environment, and climate change.

Employment in the Natural Resources and Mining industry declined to less than 20,000 jobs in 2021—a two-decade low. The trend reversed with 1,000 jobs added (5.2%) in 2022 and 900 jobs (4.3%) in 2023. Current forecasts suggest further growth of around 1,200 jobs (5.3%) in 2024.

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VALUE OF COLORADO NATURAL RESOURCES AND MINING, 2014–2024 (In Millions of Dollars)

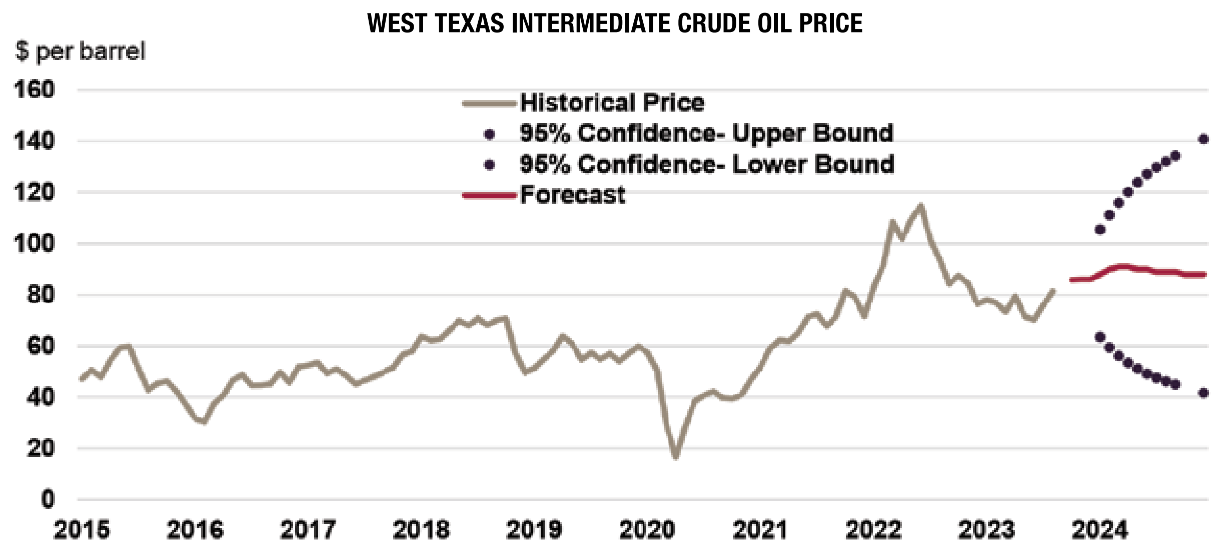
	Oil and Gas Extraction					Mining				
Year	Crude Oil	Natural Gas	Carbon Dioxide	Subtotal	Percent Change	Coal	Minerals	Subtotal	Percent Change	Total
2014	$8,209.0	$6,911.0	$678.0	$15,798.0	25.7%	$900	$2,320	$3,220	8.0%	$19,018
2015	5,975.0	4,437.0	467.0	10,879.0	-31.1	675	1,340	2,015	-37.4	12,894
2016	4,607.2	4,308.7	318.8	9,234.7	-15.1	481	1,510	1,991	-1.2	11,226
2017	6,259.0	5,137.3	517.2	11,913.5	29.0	536	1,680	2,216	11.3	14,130
2018	10,182.0	6,055.8	437.4	16,675.2	40.0	512	1,380	1,892	-14.7	18,567
2019	10,015.4	5,270.0	299.1	15,584.5	-6.5	490	1,790	2,280	20.5	17,865
2020	5,217.7	4,204.2	270.2	9,692.1	-37.8	332	1,620	1,952	-14.4	11,644
2021	8,106.7	7,646.7	181.8	15,935.2	64.4	493	1,610	2,103	7.7	18,038
2022	13,194.4	12,178.6	298.1	25,671.1	61.1	747	1,870	2,617	24.4	28,288
2023[a]	10,946.6	4,858.3	229.1	16,034.0	-37.5	545	1,860	2,405	-8.1	18,439
2024[b]	10,880.0	5,700.0	250.0	16,830.0	5.0	526	1,800	2,326	-3.3	19,156

[a]Estimated. [b]Forecast. Sources: Colorado Geological Survey, United States Geological Survey (USGS), COGCC, Dept. of Minerals and Geology, and CO Business Economic Outlook Committee.

COLORADO PHYSICAL OUTPUT OF FOSSIL FUELS, 2014–2024

	Coal	Crude Oil	Natural Gas	Carbon Dioxide	Index (Base Year: 2014 = 100)			
Year	Millions of Short Tons	Millions of Barrels	Billions of Cubic Feet	Billions of Cubic Feet	Coal	Crude Oil	Natural Gas	Carbon Dioxide
2014	22.8	94.7	1,581	355	100.0	100.0	100.0	100.0
2015	18.7	122.8	1,691	409	82.0	129.7	107.0	115.2
2016	12.8	119.9	1,708	444	56.1	126.6	108.0	125.1
2017	15.2	134.8	1,721	464	66.7	142.3	108.9	130.7
2018	14.3	169.2	1,904	427	62.7	178.7	120.4	120.3
2019	13.6	192.4	2,058	453	59.6	203.2	130.2	127.6
2020	10.0	171.6	2,070	301	43.9	181.2	130.9	84.8
2021	10.7	153.7	1,962	279	46.9	162.3	124.1	78.6
2022	11.5	160.3	1,894	308	50.4	169.3	119.8	86.8
2023[a]	10.9	163.5	1,867	293	47.8	172.7	118.1	82.5
2024[b]	11.0	160.0	1,880	300	48.2	169.0	118.9	84.5

[a]Estimated. [b]Forecast. Sources: CO Geological Survey Mineral and Minerals Fuel Activity Reports, COGCC, Dept. of Minerals and Geology, and the Colorado Business Economic Outlook Committee.



Source: U.S. Energy Information Administration, 11/2023 Short-Term Energy Outlook, West Texas Intermediate Crude Oil Price.

Oil and Gas

Colorado's total oil and gas production is looking to end 2023 with a value of nearly $16 billion—37.5% lower than in 2022. The lower production value is primarily a reflection of the significantly lower (59%) average natural gas prices in 2023 as Colorado's production output has marginally decreased. Valuation of Colorado oil is currently more than double the valuation of Colorado natural gas. For 2024, it is expected that natural gas wellhead prices will remain similar to 2023 or see a modest increase to around $3/Mcf. The September 2023 economic outlook from the Colorado Office of State Planning and Budgeting (OSPB) reports that severance tax collections for FY 2022–23 (July 1, 2021–June 30, 2022) increased to $375 million—an all-time high. Increased commodity pricing (and to a much lesser degree production) was the instigator of this dramatic shift. OSPB is forecasting a 45% drop in severance tax in FY 2023-24 due to a rise in ad valorem credit claims. The ad valorem credit allows taxpayers to claim a credit of 87.5% of the real property taxes paid to a local government, school districts, and special districts on oil and gas produced to offset their severance tax liability. OSPB notes that the combination of stagnant oil pricing and suppressed natural gas pricing will result in ad valorem credit claims having a more pronounced effect and lower severance tax revenue collections in FY 2023-24. On a related note, the recently passed HB23-1272 (Tax Policy that Advances Decarbonization) reduces ad valorem credit, allocating the additional revenue (in excess of costs to administer the tax credits) to the General Fund.

Concerning energy and carbon management regulation in Colorado, the Colorado General Assembly passed SB23-285 that changed the name of the Oil and Gas Conservation Commission (OGCC) to the Energy and Carbon Management Commission (ECMC) and broadened the Commission's regulatory authority to include deep geothermal resource operations and intrastate underground natural gas storage facilities.

Oil

Colorado crude production hit an all-time high in 2019 of 192 million barrels, dropping roughly 20% in 2020 and 2021, to 154 million barrels, before seeing modest rebounds in 2022 and 2023. For 2023, the production output is estimated to be 6% higher than the output of 2021, at around 164 million barrels. In 2024, Colorado is expected to have a similar level of production.

According to the EIA, Colorado accounts for roughly 3.5% of the total crude produced in the United States and ranks fourth among states in production for 2023 (as of August). Development of the prime Niobrara shale assets in the Greater Wattenberg Area has been key to production growth in Colorado. Up until recently, new drilling offset the rapid decline rates of lateral wells (estimated to be from 30% to greater than 50% in the first year). Estimates indicate the Niobrara shale play may contain as many as 2 billion barrels of oil, with the Denver-Julesburg Basin being the 5th-largest liquid play in the nation based on proved reserves.

After spending much of 2020 below $40 per barrel, the U.S. petroleum benchmark, known as West Texas Intermediate (WTI), recovered into the $50-$80 per barrel range in 2021. In 2022, the war in Ukraine triggered a dramatic increase, with WTI prices averaging $95 per barrel for the year. The 2022 WTI mean daily price was up 144% over the 2020 average price of $39 per barrel. As of October 2023, the average WTI price returned to a more palatable $79 per barrel—17% lower than 2022. The Denver Basin regional pricing, however, is typically at a 10-25% discount relative to WTI prices due to market demand and supply chain network constraints. For 2023, the average Denver Basin sales price is $67 per barrel through October. Looking toward 2024, the forecast suggests pricing will fall into the lower range of $50-$80 per barrel on average. Volatility persists due to political and economic uncertainty on both national and global levels.

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Natural Resources and Mining

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The International Energy Agency's (IEA) October Oil Market Report forecasts global oil demand of 101.9 million barrels per day (mb/d) for 2023, a 1.5% increase (+1.5 mb/d) from 2022. For 2024, the IEA is forecasting another 1.7 mb/d increase, to 103.6 mb/d. Lower demand in the U.S. market (U.S. gasoline consumption fell to a two-decade low in 2023) is being offset to some degree by buoyant demand in China, India, and Brazil. Global demand growth is expected to slow, with gains in efficiency and economic headwinds likely to come into play. Total global oil output as of September was 101.6 mb/d.

According to the EIA, the United States consumed 18.2 million barrels of oil per day in 2020, 19.9 million barrels per day in 2021, and 20 million barrels per day in 2022. The estimate is for 20.2 mb/d in 2023 and 20.4 mb/d in 2024. The U.S. domestic production has increased from an average 11.3 mb/d in 2020 to 12.9 mb/d in 2023. For 2024, the forecast is for the supply to increase again to 13.5 mb/d. EIA is estimating that WTI for 2024 will increase to an average $89 per barrel, with the 95% confidence interval, indicating prices above $120 per barrel and below $50 per barrel possible.

Retail Gasoline

The Colorado average retail price of automotive gasoline of all grades in 2023 (through early November) was $3.77 per gallon, a 3% decrease from the 2022 average price of $3.89. Nationally, EIA estimates the average for all grades to end at $3.67 per gallon in 2023 and increase to $3.73 in 2024. The retail price for diesel nationally averaged $3.29 in 2021, increased 55% to $5.01 in 2022, and then decreased to $4.27 in 2023. Expectations are for Colorado gasoline to remain flat or decrease modestly in 2024 (between $3.20 and $3.80 per gallon average for all grades).

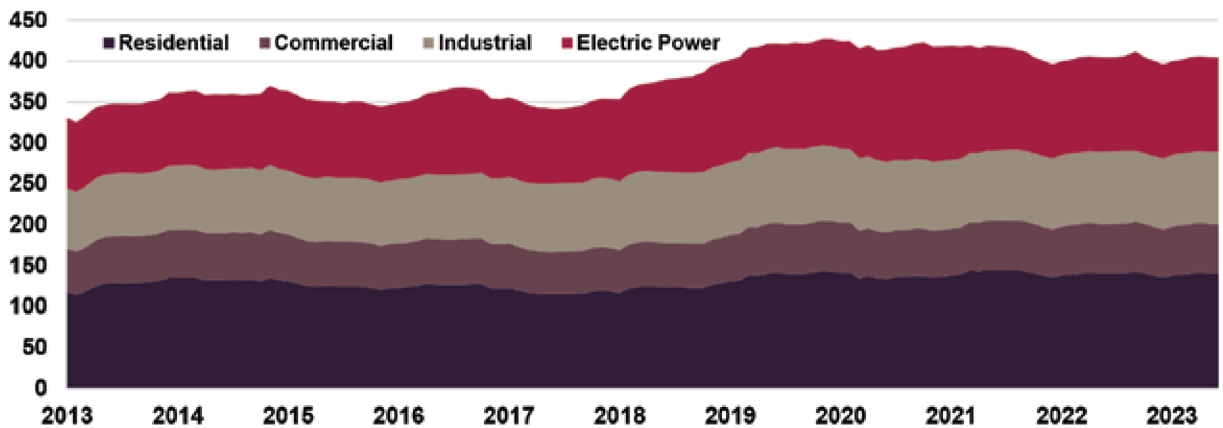
Natural Gas

As of 2022 and 2023, Colorado ranks eighth in the nation for marketed natural gas production. Colorado's natural gas output has more than doubled since 2000. EIA estimates that conventional and unconventional output from Colorado basins accounts for 4.2% of the total annual U.S. natural gas production. The state contains 11 of the largest natural gas fields in the country, leads the nation in gross withdrawals from coalbed methane wells, and contains almost a quarter of the economically recoverable coalbed methane in the country. Power generation has been shifting away from coal for many years. Currently, natural gas provides nearly 27% of Colorado's electric power versus 18% a decade ago. Interestingly, the state's natural gas consumption for electric generation had decreased roughly 14% by 2022 from the 2020 peak—most certainly due to higher natural gas prices. With prices lower again, the state will likely see more natural gas used for electric generation in 2023 and 2024. Colorado uses only about 25% of the natural gas it produces. There are more than 40,000 wells producing natural gas in Colorado. The total output (in combination with the associated gas generated from the state's "oil" wells) will be an estimated 1.87 trillion cubic feet (Tcf) in 2023. For 2024, production is forecast to remain flat or increase modestly.

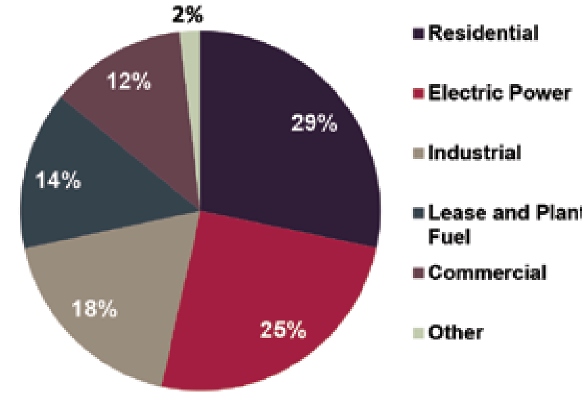
Of the 503,514 million cubic feet of natural gas consumed by Colorado in 2022, roughly a quarter (25%) went to electric power and 28% went toward residential consumption. Other significant end uses included industrial consumption (18%), lease and plant fuel (14%), and commercial consumers (12%). For 2023 (through August), the average monthly residential gas price in Colorado was $13.14 per thousand cubic feet—a 9% decrease compared to the same period in 2022. As of June 2023, Colorado had the 5th-lowest residential gas price in the country.

Colorado currently has 10 underground natural gas storage fields, with over 140 billion cubic feet of capacity—1.5% of the U.S. total capacity. Depleting gas fields have increased the state's overall underground storage capacity by a third since 2010, with this trend continuing.

For 2024, the expectation is that Colorado natural gas spot prices will range between $2.50 and $3.50 per thousand cubic feet. EIA is currently estimating the Henry Hub spot price average for 2023 to end up at $2.67 per thousand



Source: U.S. Energy Information Administration.
Note: Vehicle fuel accounts for less than 1% of consumption of total natural gas delivered to consumers and is omitted from this chart.



Source: U.S. Energy Information Administration.
Note: Other includes vehicle fuel and pipeline and distribution use.

cubic feet, with prices to increase modestly in 2024 to $3.25 per thousand cubic feet. The EIA notes that the U.S. total working natural gas storage is 6% above the five-year (2018-22) average as of October 2023. Nationally, inventories are robust due to a warmer-than-average winter and strong natural gas production over the past year.

EIA forecasts suggest the average U.S. household using natural gas for heating will see a total winter 2023–24 (October through March) household expenditure decrease of 20% on average over winter 2022–23. Regionally, the Mountain Region is forecast to see residential gas prices 14% lower ($2.32 per thousand cubic feet) than last winter. The National Oceanic and Atmospheric Administration (NOAA) estimates that the total heating degree days (HDD) for winter 2023–24 in the Mountain Region will be 3,931, 14% lower than last winter's 4,571 HDD. Just under half of all households in the United States depend on natural gas as a primary heating fuel; for Colorado, this number is more than 70%.

Carbon Dioxide

Colorado's carbon dioxide production is marketed almost exclusively for enhanced oil recovery (EOR) operations. In 2023, an estimated 300 billion cubic feet of CO_2 will be produced in three counties (Montezuma, Dolores, and Huerfano), with the total production value estimated at $229 million.

In 2023, the Colorado Legislature passed SB23-016, giving authority to the ECMC to seek Class VI injection well primacy (wells used for geologic sequestration of carbon dioxide) in the context of greenhouse gas emission reductions. Increased efforts to sequester CO_2 (and other greenhouse gases) could add a new significant economic dimension to valuation.

Drilling Permits and Rig Activity

The Colorado Energy and Carbon Management Commission (ECMC) has received 1,059 Applications for a Permit to Drill (APDs) new wells in 2023 (as of November 12, 2023)—a 9.4% increase in the number of APDs received during the same period in 2022, but still well below the more than 2,000 permits received in 2019. For 2023, the commission approved 860 permits as of November 12. In 2023, 65% of the approved well permits were in Weld County. The COGCC has recorded 671 well starts in 2023 through mid-November. This is a 21% decrease from 2022 for the same time period and 55% lower than the number of well starts for the entire prepandemic year of 2019.

The 2023 average weekly active rig count for Colorado stood at 17 through the second week of November. By comparison, the average weekly active rig count in Colorado was 10 rigs in 2020 and 2021, and 18 rigs in 2022. Assuming prices remain stable, the expectation is for rig activity to remain flat in 2024.

Horizontal drilling and hydraulic stimulation continue to be integral to Colorado's oil and gas activity. In 2010, only 5.6% of all Colorado drilling permits issued were for

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Natural Resources and Mining

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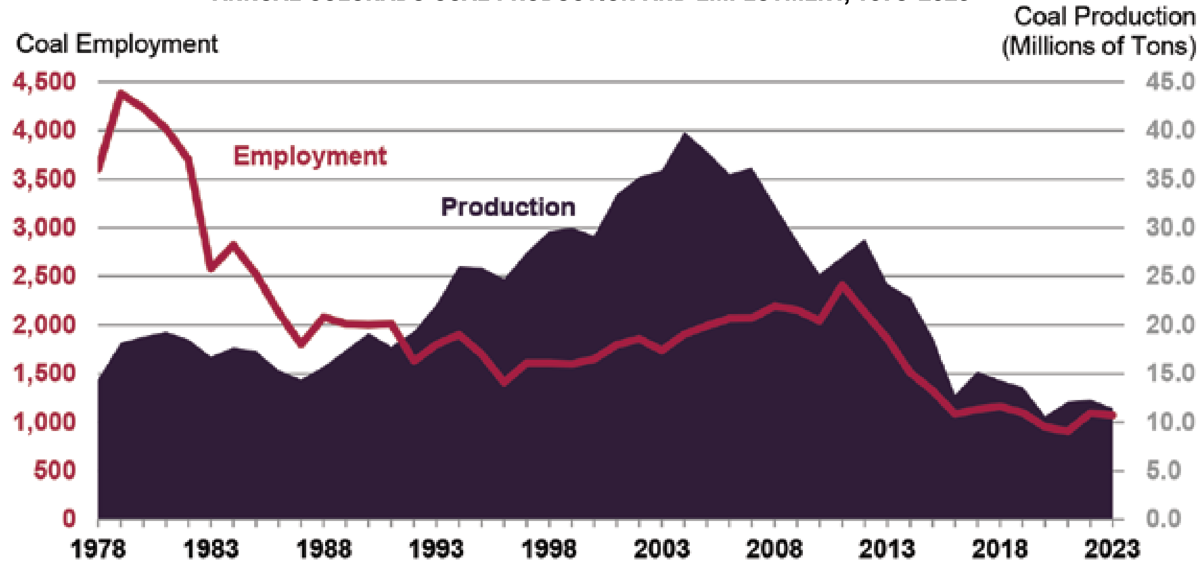
COLORADO NATURAL RESOURCES AND MINING EMPLOYMENT 2014–2024 (In Thousands)

Year	Employment	Percentage Change
2014	34.1	11.4%
2015	30.7	-10.0
2016	23.7	-22.8
2017	25.8	8.9
2018	28.6	10.9
2019	28.8	0.7
2020	21.8	-24.3
2021	19.8	-9.2
2022[a]	20.8	5.2
2023[b]	21.7	4.3
2024[c]	22.9	5.3

[a]Revised. [b]Estimated. [c]Forecast.

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

ANNUAL COLORADO COAL PRODUCTION AND EMPLOYMENT, 1978-2023



Source: Colorado Division of Reclamation, Mining, and Safety. Employment totals based on December levels, 2022 based on August.

horizontal wells. In 2020, that number had reached nearly 84% of all issued permits through mid-November 2023, noticed horizontal well starts totaled 571—85% of the state's total spud notices. Of these newly drilled horizontal wells, 87% are in Weld County, followed by 6% in Arapahoe County, and 5% in Adams County.

Coal

According to the EIA, Colorado contains a demonstrated coal reserve base of 15.5 billion tons, ranking it eighth in the United States. A total of seven mines operated in Colorado during 2022, and these mines have a combined recoverable reserve base of 281 million tons (EIA). Mining Colorado's relatively clean, high-quality coal reserves has helped utilities meet the stringent requirements of the Clean Air Act, as well as provide a supply of coal for industrial and steel-making industries. Coal production in the state peaked at almost 40 million tons in 2004. Since then, there has been a steady decline in production, bottoming at a low of 10 million tons in 2020 (EIA). As a result of lower demand, coal sales fell to an estimated $332 million in 2020. This steady decline in production is the result of many factors, including the closures of aging U.S. power plants, lower-priced natural gas power plant conversions, increasing environmental regulations, U.S. climate change CO2 reduction pledges, and, more recently, the pandemic. However, in 2021, Colorado coal production increased by 8%, to 10.7 million tons, then by 7.5%, to 11.5 million tons, in 2022, according to the Mine Safety and Health Administration (MSHA). Sales prices for coal soared in 2022, with total sales estimated at $747 million. This is attributed in part to the economy returning to normal following the pandemic, increasing natural gas prices, higher utilization rates at existing power plants, and Russia's invasion of Ukraine. Production ending in third quarter 2023 is about 7.9 million tons, with the expectation that the year-end total could achieve 10.9 million tons. This equates to a decrease of 5.5% compared to 2022 production. Colorado coal production in 2024 is forecast to be similar or slightly higher than 2023 as mines such as Foidel Creek and West Elk pursue continual market demand opportunities, although pricing is likely to decrease from that of 2022.

The scheduled government-mandated closure or conversion to natural gas of coal-fired plants along the Front Range and Western Slope will eventually phase out the mining of coal for power generation use in Colorado. This will likely happen within the next four to six years.

Exceptions to this may include those mines that provide fuel for industrial markets, mines that produce coke for the steel industry, those that may ship out of state, and mines that feed international thermal coal demand. Carbon technology is also advancing, and research institutions (e.g., the Department of Energy's CORE-CM initiatives) have already identified carbon-based products that can be used for road and building construction, soil amendments, carbon fiber products, and carbon batteries. Rare earth and critical minerals are also being assessed within Colorado coal-bearing strata.

Mines

Peabody and Arch Energy, two of the largest coal-producing companies in the U.S., operate mines in Colorado. International firms have also invested in Colorado as shown by Australian firm Allegiance Coal Ltd. and Mexican firm Grupo Cementos that operate mines in Las Animas and La Plata counties, respectively. The Denver area is also the headquarters of several coal mining companies, including Tri-State Generation and Transmission, Kiewit Mining, and Westmoreland Coal Company.

Currently, six coal mines operate in Colorado, producing bituminous and subbituminous coal for electrical generation, and to a lesser extent, in cement production. Arch Energy operates the West Elk Mine, located in Gunnison County, which is the last remaining operation in a once prolific area referred to as the Somerset Coalfield. It is an underground longwall operation and Colorado's largest producer that mined 4.4 million tons in 2022. The mine produces export-quality coal and will soon transition to another seam that comprises even higher quality coal. The King II Mine in La Plata County is owned by Grupo Cementos and is a small underground operation that extracts coal using continuous miners primarily for the production of cement. The mine extracted a total of 0.5 million tons in 2022 from a recently acquired federal lease. Deserado Mine, located near Rangely, is an underground longwall mine that is captive to Deseret's Bonanza Power Plant located across the border in Utah. The coal is transported to the power plant via a dedicated rail line. Deserado has finished mining west of its main mine entries and is currently extracting its second panel east of their main mine entries. Deserado produced 1.8 million tons in 2022. Peabody's Foidel Creek Mine, located in Routt County, is an underground longwall mine that supplies coal to the nearby Hayden Power Station, as well as other domestic customers. The mine has increased its workforce due to the recent market surge to realize higher production and additional markets. The operation mined 1.5 million tons in 2022 but has the capacity to mine much higher volumes of coal. The Hayden power station is planned for closure or possible conversion in 2026.

Colowyo and Trapper mines are the only operating surface coal mines in Colorado and are located in Moffat/Rio Blanco and Moffat counties, respectively. Both mines supply coal to the Craig Power Station. Colowyo ships the coal by rail, whereas Trapper is captive to the plant and hauls the coal directly by truck. The mines use draglines and shovels to strip the overburden. Approximately half of the coal production from each of the two mines originates from contract highwall mining operations. Approximately 1.7 and 1.4 million tons were mined by Colowyo and Trapper mines in 2022, respectively.

In 2020, it was announced that Tri-State Generation and Transmission would close its Colowyo mine by 2030. Colowyo recently opened its new pit at Collom, which is a federal lease acquired in 2016. Colowyo recently exhausted its South Taylor Pit and has moved one of its draglines to the Collom Pit. The Collom deposit contains extensive reserves of low sulfur coal that comprise the lowest mercury content in the United States. The

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COLORADO ELECTRIC POWER INDUSTRY GENERATION BY PRIMARY ENERGY SOURCE, 2013-2022
(In Millions of Megawatt Hours)

Year	Coal	Natural Gas	Hydroelectric[a]	Wind	Solar	Biomass	Petroleum	Other[b]	Total
2013	33.7	10.7	1.2	7.2	0.2	0.1	0.0	0.0	52.9
2014	32.5	12.0	1.8	7.4	0.3	0.1	0.0	0.0	53.8
2015	31.6	11.8	1.5	7.4	0.3	0.1	0.0	0.1	52.4
2016	30.0	12.7	1.6	9.4	0.5	0.2	0.0	0.1	54.4
2017	29.2	12.5	1.6	9.3	1.0	0.2	0.0	0.1	53.8
2018	26.4	16.4	1.6	9.8	1.1	0.2	0.0	0.1	55.4
2019	25.3	17.1	1.6	10.9	1.2	0.2	0.0	0.1	56.3
2020	19.5	18.2	1.5	13.4	1.5	0.2	0.0	0.1	54.1
2021	23.6	14.6	1.6	15.1	1.7	0.2	0.0	0.1	56.8
2022	21.7	15.6	1.7	16.7	2.4	0.2	0.0	0.1	58.4

[a]Includes pumped storage.
[b]Includes blast furnace gas, propane gas, other manufactured and waste gases derived from fossil fuels, non-biogenic municipal solid waste, batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, tire-derived fuels, and miscellaneous technologies.
Source: U.S. Energy Information Administration.

Natural Resources and Mining

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VALUE OF COLORADO NONFUEL MINERALS AND URANIUM PRODUCTION, 2014–2024 (In Millions of Dollars)

Year	Nonfuel Minerals	Uranium	Total
2014	2,110	0.0	2,110
2015	2,320	0.0	2,320
2016	1,340	0.0	1,340
2017	1,510	0.0	1,510
2018	1,680	0.0	1,680
2019	1,790	0.0	1,790
2020	1,620	0.0	1,100
2021	1,610	0.0	1,610
2022	1,870	0.0	1,870
2023[a]	1,860	0.0	1,860
2024[b]	1,800	0.0	1,800

[a]Estimated. [b]Forecast.

Sources: U.S. Geological Survey, Mineral Survey Reports; U.S. Energy Information Administration.

Trapper and Colowyo mines supply coal to the three-unit Craig Power Station. Unit 1 at the Craig power station is expected to retire as early as 2025. Unit 2 (Trapper feed) and Unit 3 (Colowyo feed) are scheduled for retirement within the 2028-2030 timeframe. Both Colowyo and Trapper mines have been nationally recognized for their ongoing reclamation.

New Elk Mine began operations in spring 2021. The mine extracted coal underground by continuous miners, and in 2022, produced 0.23 million tons of high volatile coking coal, according to the Mine Safety and Health Administration (MSHA). This coal, which is specifically used in the making of steel, was hauled by truck to a rail terminating at a Mobile, Alabama, port facility. The mine is located in the Raton Basin, which was a major supplier of coking coal in the past for the CF&I steel mill in Pueblo. As a result of decrease demand for metallurgical coal and their cash flow position, mine owner Allegiance Coal filed for Chapter 11 bankruptcy protection. It is currently classified as an idled mine by MSHA, and the company is currently seeking investors to restart mining. The Raton Basin contains the only viable metallurgical grade coal west of the Mississippi River.

Value

The total value of coal sold by Colorado mines fell from $1.1 billion in 2012 to $332 million in 2020. Based on EIA data, the average sales price of coal in Colorado during 2022 was $65/ton. By comparison, the average price for Colorado coal in 2021 was $46.02/ton. Due to higher prices, the total value of coal sold by Colorado mines in 2022 is estimated at $747 million, up 34% from 2021.

Royalties

The State of Colorado benefits from royalties, lease bonuses, rentals, and severance taxes paid by mining companies extracting coal on state-owned mineral leases. The federal government also benefits from royalties derived from mining of federal leases. Mine operators paid $22.3 million in FY 2022 in federal bonuses, rentals, and royalties, according to the Department of Interior. About half of the royalties are returned to Colorado in support of public education and other community enhancements.

Employment

According to EIA, coal mine average employee numbers for 2020, 2021, and 2022 were 1,118, 1,068, and 1,284, respectively. Mining employment numbers should decrease in 2023 due to the idling of the New Elk Mine. Services associated with coal mining areas account for significant local employment especially in towns, such as Craig, Hayden, Meeker, Oak Creek, Paonia, and Rangely. Other affected industries as a result of the retirement of the mines include those related to rail service, power plant operations, and mining industry supplies and services. In 2019, the Colorado General Assembly and Governor Jared Polis signed legislation creating the Office of Just Transition (OJT) to assist in the transition of mining employees and communities affected by the retirement of the coal mining industry in Colorado.

Coal Distribution

According to EIA, Colorado shipped 9.3 million tons of coal domestically. In 2022, Colorado shipped thermal and industrial coal to 17 other states, with Utah receiving 2.3 million tons. Colorado received 6.9 million tons of coal from Wyoming in 2022 (EIA).

Global coal production in 2022 struggled to keep pace with one of the largest annual increases in demand. Markets have been further impacted by Russia's invasion of the Ukraine. Russia was responsible for about half of the coal imports in the European Union in 2021, but that trading relationship ended with the European Union ban on Russian coal imports, according to the International Energy Agency. However, limited short-term fuel switching opportunities and increases in imported coal have eased demand pressures. Colorado's West Elk Mine has realized exceptionally high prices for export coal shipments during 2022. Exports from Colorado mines in 2022 totaled 2.2 million tons. Instability in the Middle East as a result of the Israel-Hamas conflict could impact world coal market dynamics in 2024.

Consumption and Generation

Coal was still the primary energy source in Colorado, accounting for 37.6% of the electrical energy generation fuel mix in 2022 (EIA). A total of six coal-fired power generating stations currently remain in operation in Colorado, having a combined 2022 electrical generation capacity of 3,804 MW (EIA). The remaining power stations are Comanche, Craig, Pawnee, Hayden, Rawhide, and Ray D Nixon. All of these generating stations are planned for retirement or unit phase retirement between 2025 and 2031. Fuel supply for these six power plants originated exclusively from Colorado and Wyoming coal mines.

Annual electricity generated at Colorado's six coal-fired power plants fell from 23.6 million megawatt hours (MWhs) in 2021 to 21.7 MWhs in 2022, according to EIA. Electric power-delivered fuel prices rose from $1.60/MBtu in 2021 to $1.91/MBtu in 2022.

Minerals and Uranium

Nonfuel mineral resources include metals, industrial minerals, and construction materials (e.g., aggregate, cement, etc.). The U.S. Geological Survey estimates that the total U.S. nonfuel mineral production value was $98.2 billion in 2022, about 8.6% higher than the 2021 estimate. In 2022, Colorado produced primarily cement, gold, molybdenum, sand and gravel, and crushed stone, with an estimated production value of $1.87 billion, or approximately 1.9% of the estimated total U.S. production value.

Metals mined in Colorado include primarily gold and molybdenum, with some silver. The Colorado Geological Survey estimates that the 2022 production value of gold and molybdenum was about $915 million. This is a 4.3% increase compared to the 2021 estimated production value of $877 million. This increase in value was due to the increase in molybdenum prices, as well as the combined molybdenum production at Freeport-McMoRan Inc.'s (Freeport) Climax and Henderson mines. Freeport is the world's largest producer of molybdenum, and in 2022, its Colorado operations accounted for approximately 33% of its U.S. molybdenum production. Molybdenum concentrate produced at the Colorado mines has high purity and is used in value-added chemical products.

The combined molybdenum production at the Henderson and Climax mines increased from 30 million pounds in 2021 to 33 million pounds in 2022, an increase of 10%. According to the U.S. Geological Survey, estimated annual average prices for molybdenum increased about 11.2%, from $16.01 per pound in 2021 to $17.80 per pound in 2022. Colorado was the largest U.S. producer of molybdenum in 2022. At the end of 2022, 17% of Freeport's estimated consolidated recoverable proven and probable molybdenum reserves were from the Henderson and Climax mines. Freeport estimated proven and probable reserves of 51 million metric tons, with 0.16% molybdenum at the Henderson Mine, and 151 million metric tons, with 0.14% molybdenum at the Climax Mine. At the end of September 2023, the total molybdenum production from both Colorado mines is about 22 million pounds, which is less than last year at 23 million pounds.

Founded in 1921, Newmont is the largest gold-mining company in the world, with operations in Africa, Australia, North America, South America, and Papua New Guinea. Its corporate headquarters are in Greenwood Village, Colorado. Production of gold at Newmont's Cripple Creek and Victor (CC&V) mine located in Teller County decreased from 220,000 ounces in 2021 to 182,000 in 2022. The estimated average gold price was $1,800 per ounce in 2022, with the estimated average price increasing nine months into 2023, to about $1,900 per ounce. Colorado was the 3rd-largest producer of gold in the United States in 2022, following Nevada and Alaska. Gold production at CC&V increased by about 7.2% in the first nine months of 2023 when compared to 2022. At the end of September 2023, the total gold production from CC&V was about 134,000 ounces.

Colorado produced and consumed approximately 57 million tons of aggregate (sand, gravel, and crushed stone) during calendar year 2022. The production of

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construction aggregate was slightly higher than the previous year's levels driven by active construction that occurred in Colorado. Early months of 2023 remained strong but slowing in the residential sector due to interest rates are currently delaying new starts and will impact the full year 2023 statistics. Forecasts for 2024 suggest somewhat lower levels of production in Colorado as a construction slowdown in the residential segment is expected to continue.

Local zoning regulations and land-development alternatives continue to have a negative impact on mining and permitting. These issues are expected to continue and to cause new crushed stone quarries and sand and gravel deposits to locate further from large population centers, where the material is needed.

As reported for several years, there was no uranium production in Colorado in 2023. According to the EIA, the total 2022 U.S. production of uranium was almost 10 times higher than 2021 but remained near all-time lows. Approximately 193,945 pounds of uranium concentrate was produced domestically in 2022. About 84% of this production was from the White Mesa Mill, located in Utah, and less than 50 miles from the historic Uravan mineral belt in southwestern Colorado. This area was historically the largest uranium- and vanadium-producing mining area in Colorado. This mill can also process other minerals, including vanadium and rare earth carbonate. During the first two quarters of 2023, nearly 10,000 pounds of uranium concentrate was produced domestically. This production was from in-situ leach plants located in Wyoming.

Most of the uranium used by U.S. commercial nuclear power reactors over the last several decades was imported from foreign countries. In 2021, 40.5 million pounds of triuranium octoxide was purchased by owners and operators of these nuclear power plants. According to the EIA, about 95% was purchased from foreign suppliers in both 2021 and 2022. The weighted-average price reported by the EIA for uranium increased slightly from $33.91 per pound in 2021 to $39.08 per pound in 2022. Average spot prices of uranium in 2022 were about $49.81 per pound and increased to an average of about $57.79 per pound through October 2023.

Renewables

Colorado's abundance of renewable energy resources includes wind, solar, hydroelectric, geothermal, and biomass. Data from the EIA show clean electricity resources accounted for 37% of Colorado's net generation in 2022. According to the Colorado Energy Office, 14 Colorado towns and counties have 100% renewable energy goals.

The 2023 U.S. Energy and Employment Jobs Report found that Colorado had an estimated 153,223 energy workers (5.4% of total state employment) in 2022, which includes 35,847 workers employed in energy efficiency. In 2022, Colorado ranked 18th nationally for clean energy jobs, with approximately 63,780 Coloradans employed by the industry, and ranked 16th for clean energy sector job growth. In 2022, 8,473 Coloradans were employed in the solar industry; 7,741 in the wind industry; 184 in geothermal; 1,331 in bioenergy/CHP; and 292 in hydroelectric energy.

Colorado was the first state to pass a voter-approved renewable portfolio standard (RPS) in 2004. The Legislature has increased requirements three times, with the present standard mandating that investor-owned electric utilities provide 30% of their generation from renewable energy resources by 2020, with 3% coming from distributed generation. This is one of the most ambitious renewable portfolio goals in the nation, and the Public Utilities Commission (PUC) states that the existing wind and solar installations already achieved this electricity goal, mostly through purchases by Colorado's largest utility, Xcel Energy. Notably, in July 2015, the Tenth Circuit Court of Appeals upheld the constitutionality of Colorado's RPS, saying it would not harm interstate commerce as a 2011 federal lawsuit had alleged.

In 2019, House Bill 1261, Climate Action Plan to Reduce Pollution, was passed into law, which required the state to reduce 2025 greenhouse gas emissions by at least 26%, 2030 greenhouse gas emissions by at least 50%, and 2050 greenhouse gas emissions by at least 90% of the levels of statewide greenhouse gas (GHG) emissions that existed in 2005. In 2021, the legislation was strengthened by Senate Bill 264, which set GHG emissions reductions for gas utilities from a 2015 baseline: 4% by 2025 and 22% by 2030. It also required investor-owned gas utilities to file a "clean heat plan" with the PUC to outline how they will meet these targets.

Further, Senate Bill 236, passed in 2019, required the state's qualifying retail utilities to submit a "clean energy plan" to meet the following clean energy goals: (1) reduce their carbon dioxide emissions 80% from 2005 levels by 2030, and (2) seek to provide energy generated from 100% clean energy resources by 2050. Numerous Colorado utilities have their own clean energy and emissions reductions goals. For example, Xcel Energy's Clean Energy Plan seeks to produce an estimated 85% reduction in carbon dioxide emissions from 2005 levels by 2030 in addition to being completely carbon-free by 2050. In 2023, the state passed Senate Bill 198, which changed Colorado's Clean Energy Plan process, requiring large power providers to demonstrate how they will reduce their emissions by 80% by 2030.

In January 2021, Colorado released its first Greenhouse Gas Pollution Reduction Roadmap, outlining how the state will meet its GHG reduction goal laid out in House Bill 1261. In 2023, Senate Bill 16 updated the emissions reductions goals, adding interim targets for 2035, 2040, and 2045, and increasing the 2050 target to 100%.

As of July 2023, residential electricity rates in Colorado were 14.22 cents per kWh. This falls below the national average of 15.91 cents per kWh and is the 3rd-highest in the eight-state Mountain West Region, which averages 14.08 cents per kWh. As of July 2023, Colorado commercial rates were 12.28 cents per kWh, less than the national average of 13.11 cents per kWh. EIA data show Colorado's industrial rate averaged 8.91 cents for July 2023, which is slightly higher than the national average of 8.45 cents.

Colorado lawmakers passed several consumer protection, bill assistance, and energy efficiency-related bills in 2020. Senate Bill 261 of 2021 added renewable energy storage as an eligible technology to meet the state RPS. Further, in April 2021, Governor Polis signed House Bill 1052 to include some pumped hydroelectric energy generation in the definition of "eligible energy resources" for purposes of meeting Colorado's renewable energy standard.

Colorado continued to pass clean energy legislation in 2022, including House Bill 1193, a bipartisan bill that expanded the Coal Transition Workforce Assistance Program Account to support family members or other household members of coal transition workers and to test innovative coal transition work support programs through a pilot program. Further, Colorado enacted House Bill 1249, which created a microgrid roadmap for improving electric grids in the state.

Colorado passed several other clean energy bills in 2023. House Bill 1281 creates a refundable income tax credit for using clean hydrogen; House Bill 1294 targets ozone pollution and air quality concerns from oil and gas operations; House Bill 1161 updates existing appliance standards regulations; and House Bill 1134 assists homeowners in replacing gas-fueled appliances with similar electric ones. Further, the state addressed reducing high customer utility bills through Senate Bill 291, which ended subsidies for connecting new properties to the gas system. The state also worked to expand electric vehicle (EV) charging through House Bill 1233, which requires that the state electrical board adopt rules to facilitate EV charging at multifamily buildings. Additionally, House Bill 1234 establishes a grant program within the Colorado Energy Office to assist local governments to streamline solar energy systems inspection and permitting.

In 2023, Colorado also focused on labor in the clean energy industry. Senate Bill 292 expands workforce standards for clean energy projects, requiring the use of prevailing wages and employment of registered apprentices. Further, House Bill 1074 will require the Office of the Future of Work to examine transitions for oil and gas workers, while Senate Bill 283 will make funds available from the Inflation Reduction Act and the state for communities to use for planning or grant-matching assistance.

Wind Energy

In 2022, Colorado ranked seventh nationally for total installed wind capacity, according to the EIA, and sixth for wind industry employment. In 2022, wind power accounted for 75% of the state's renewable electric generation (EIA). Cumulative wind power generating capacity has more than quadrupled since 2010. Currently, Colorado's total generating capacity is 5,136 megawatts, and an additional 380 megawatts are planned to be in operation by the end of 2024 as stated by the EIA.

In 2022, Colorado added 145 megawatts of wind capacity with the construction of the Panorama Wind Farm in Weld County. During peak construction, the project supported 185 jobs and will continue to provide nonconstruction employment now that the wind farm is operational, according to the Environment + Energy Leader. Most of Colorado's wind plants operate in rural areas with otherwise limited economic development opportunities, providing well-paying direct and indirect jobs.

The wind industry adds to local economies through lease payments to landowners, local income from taxes, wages of wind farm employees, and sales and use taxes from spending by these workers. The American Clean Power Association (ACP) found that annual land lease payments to landowners totaled $16.6 million in 2020. Per ACP, Colorado's utility-scale clean energy capacity generates almost $50 million in tax and land lease revenue each year, and as of 2023, nearly $14 billion of private investment has been made into clean energy in the state.

In addition to jobs at wind farms, Colorado is home to one of the nation's largest wind-turbine manufacturers, with Vestas blade, tower, and nacelle factories. Colorado also hosts smaller component manufacturers that supply the wind industry, such as Aluwind. Both CS Wind and Vestas have announced plans to expand their Colorado manufacturing facilities, supporting over 1,500 new jobs.

Solar Energy

Colorado is a leader in solar energy potential, with more than 300 sunny days per year. As of mid-2023, Coloradans get 6.8% of their electricity from solar, according to the Solar Energy Industries Association (SEIA). In terms of cumulative installed solar electric capacity, Colorado ranked 12th nationally in 2023, with more than 2,995 MW of installed capacity as of mid-2023. Over the next five years, SEIA estimates the annual installed capacity will increase by another 4,084 MW, the 11th-fastest growth rate in the nation. SEIA reported a total of 399 solar companies operating in Colorado in 2023. According to SEIA, the total investment in Colorado solar is roughly $6.1 billion, and installation prices have dropped 43% over the last 10 years. In Pueblo, Colorado, Xcel Energy is preparing to close two of three coal power units and replace 240 MW of the power with solar for the local steel mill. The solar plant is located onsite at one of Colorado's energy users—EVRAZ Rocky Mountain Steel—and is the largest behind-the-meter solar project in the United States and largest solar-powered steel plant in the world.

As of 2023, Colorado had over 81,000 individual photovoltaic (PV) installations, capable of generating over 1,755 MW of power, and capable of powering over 340,000 homes, according to ElectricRate. Like many states, the rooftop solar community in Colorado has been thriving. In 2023, Colorado has an estimated range of $2.91 to $3.93 per watt install price for residential PV systems, according to EnergySage.

Hydroelectric Power

For the past decade, Colorado's hydroelectric plants have been providing between 2% and 4% of the state's total electricity. In 2021, hydropower comprised 8% of Colorado's net renewable energy electricity generation.

In 2023, the EIA reports Colorado has 69 mostly small hydroelectric generating stations. These facilities have the

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combined capacity to produce 1,271 MW of power. Most of these stations are owned by the U.S. Bureau of Reclamation, but some are privately owned or operated by local mountain towns, such as Aspen, Nederland, Ouray, and Telluride. The Bureau of Reclamation owns 550 MW of hydropower in Colorado and estimates that there could be as many as 30 additional hydropower sites within the state, with the U.S. Department of Energy reporting 11 more potential sites. This renewable resource provides a predictable and seasonably variable source of electricity. The industry employs several hundred individuals for operations and maintenance. Colorado is second only to California in small hydro installations, and pumped storage hydropower is still the nation's number one source of energy storage, according to the Colorado Small Hydropower Association.

Geothermal Energy

Neither biomass nor geothermal energy provide even 1% of Colorado's electricity, but there is potential from both resources. The geothermal industry considers investment in Colorado a higher risk when compared to states with operating geothermal power plants and has stated that incentives are needed to reduce financial risks. Colorado offers state income tax credits that may help reduce risks associated with investment in renewable energy. Enterprise Zone Tax Credits are available in economically distressed areas of the state if projects were built before January 2021, which biomass and geothermal energy facilities could both take advantage of—as could other renewables.

Direct-use geothermal resources in the state continue to contribute to local economies on a very small scale and are used for heating domestic and commercial structures, including greenhouses and aquaculture, spas, and other bathing. The use of geothermal (also known as ground-source, or geoexchange) heat pumps continues to slowly grow in Colorado. While these heat pumps are not strictly an alternative energy source, they consume electricity very efficiently (using one-half to one-quarter of the electricity consumed by conventional heating and cooling systems).

In 2022, Governos Polis, as chair of the National Governor's Association, launched the Heat Beneath Our Feet Initiative to advance geothermal energy. Also in 2022, Colorado passed House Bill 1381, creating the Geothermal Energy Grant Program. The program was then expanded in 2023 by House Bill 1252 and authorized grants for retrofitting existing buildings.

Biomass Energy

Colorado has one generator using woody biomass exclusively—Evergreen Clean Energy's 11.5 MW project in Gypsum, Colorado, which generates electricity using beetle kill trees. The state also provides tax breaks for biomass generation from anaerobic digestion. Given Colorado's forest resources, there are other opportunities for electricity from woody biomass.

Contributors:
Chris Eisinger, Colorado Energy and Carbon Management Commission (Chair)
Alexandra Evans, Colorado State University
Todd R. Ohlheiser, Colorado Stone, Sand & Gravel Association
Mike O'Keeffe, Colorado Geological Survey
Alexander Papp, Coalgeo, LLC
Suzanne Tegen, Colorado State University
John Tobin, Natural Resources Education Program

Construction

In 2023, Construction activity is forecast to be $20.9 billion. The biggest changes are a drop in residential permits and an increase in nonbuilding construction, but overall, total construction value has fallen 12% from last year's activity. The forecast for 2024 is for a slight improvement, to $21.2 billion, in the volume of work, which is an increase of 1.6% in spite of a further drop in multifamily construction. Much of the high level of activity comes from completion of work started in a prior year and just put in place this year.

Official statistics as readjusted show an estimated increase in 2023 of 1.3% in construction-related employment, to 184,300 jobs. Experience and anecdotal observations confirm this growth and suggest that the headcount understates the activity. Every person who wants a job in construction can get a job in construction. There will be frictional unemployment as multifamily projects wrap up and different types of building projects start. The "silver tsunami" will see older workers retire but fewer young tradesmen take their place. A decline in employment of 2,300 jobs are projected in 2024 in the Construction industry.

The broad dynamics of the industry are a slow but stable residential market but strongly increasing demand in nearly all aspects of infrastructure. High interest rates for mortgages, commercial lending, and bonding will constrain a lot of work, mostly causing delays in permitting and starts but few cancellations. Governments at all levels within the state will collect more tax revenue, so spending on public goods will increase. The highly complex nonresidential building sector will have some subsectors in decline, such as retail and office, while other subsectors, such as industrial and medical, will spend more.

Residential

Single-Family Housing

Colorado's housing industry is slowing in 2023 as demand for new construction is constrained by high interest rates; slightly higher activity is anticipated by the end of 2024. The interest rate during September 2023 averaged 7.2%, up from 6.1% in September 2022 and a low of 2.9% in September 2021. According to Redfin, a national real estate brokerage, as of the fourth quarter of 2022, approximately 92% of Colorado mortgages had interest rates below 5%, the 2nd-highest share in the nation and well above the national rate of 82%.

In 2023, interest rate buydowns became an increasingly important part of builders' ability to sell homes. According to CoreLogic, Inc., the inventory of existing homes for sale in Colorado declined 10% from September 2022 to September 2023. Despite limited inventory in the resale market that would normally stimulate increased demand for additional new homes, Colorado's new home market remains sluggish, and builders rely substantially on incentives to draw traffic and support sales because of the lack of availability. Rising mortgage rates continue to deter prospective buyers across the state.

Throughout Colorado, like the rest of the nation, builders started the practice of buying down interest rates within months of rates rising to offset some of the impact of the rising interest rates and keep buyers interested in new homes. Rate buydowns range from a simple rate buydown for a year or up to the length of the mortgage—or other stepped increases over time such as the 3-2-1 buydown, where the borrower pays a lower rate over the first three years of the loan. These rate buydowns proved to be the most impactful way to combat high interest rates and to support home sales. Home builders have been successful at overcoming the lock-in effect for some of those otherwise unwilling to sell a home that is financed at a low interest rate and trade it in for a home that is carrying a higher interest rate. As rates continued to increase, however, a 5.5% interest rate could support more home buying. Rates above this point caused fear and induced further lock-in, with homeowners choosing to stay in their current house. The buydown rates offered by builders across the state are generally about 1.0 to 1.5 percentage points below the typical mortgage interest rate, so rising interest rates are likely to moderate the impact of this option to increase sales.

INDUSTRY SNAPSHOT
CONSTRUCTION

Nominal GDP, 2022 ($ Billions)	28.7
Real GDP, 2022 ($ Billions, 2017 Dollars)	21.8
2022 Real GDP Growth Rate	-5.7%
Total Employment, 2022 (Thousands)	183.0
2022 Employment Growth Rate	3.1%
Employment Growth National Rank	34
Share of Colorado Employment	6.4%
Share of National Employment	5.1%
Average Wage, 2022	75,574
Percent of Statewide Average Wage	100.0%
2022 Average Wage Growth Rate	6.1%

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics.
Note: 2022 employment includes revised estimates.

Another growing trend in single-family construction is the movement of building homes for rent instead of for sale. While Colorado is a laggard in this movement, with a limited number of build-to-rent (BTR) communities compared to areas in the south such as Texas, Florida, and Arizona, those that are built or leasing up have strong occupancy rates and lease-up paces. Studies done at John Burns Research & Consulting found that these new for-rent communities are expected to expand in popularity. These communities, though still relatively new to Colorado, may partially offset some of the slower demand for single-family for sale construction by capitalizing on the strong renter demand across the state. Renters of BTR homes tend to favor the idea of having a yard and living in a home without shared walls.

The number of single-family permits issued in Colorado in 2022 was just over 23,700. Colorado is on track to record 18,500 permits by the end of 2023. This is a decline of 22% year-over-year as interest rates rise and fewer homes start, including declines across the metropolitan areas in the state with the most active home

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RESIDENTIAL BUILDING PERMITS BY TYPE 2014–2024

Year	Single Family	Multifamily	Total Housing Units
2014	17,104	11,594	28,698
2015	20,025	11,846	31,871
2016	21,577	17,397	38,974
2017	24,338	16,335	40,673
2018	26,134	16,493	42,627
2019	24,756	13,877	38,633
2020	26,636	13,833	40,469
2021	30,246	26,278	56,524
2022[a]	23,728	25,111	48,839
2023[b]	18,500	20,200	38,700
2024[c]	19,400	18,500	37,900

[a]Revised. [b]Estimated. [c]Forecast.

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

construction—Denver, Colorado Springs, and Greeley. In 2024, a modest increase of 5% is expected, to 19,400 single-family home permits. The increase is expected to be supported by more migration into the state as well as a slight decline in interest rates.

Permit values for the constructed portion of new housing will increase by 3% in 2023, to $366,300 per unit, and another 3% in 2024, to $377,200. Two trends in home size are probably offsetting, and therefore, are not affecting the average per unit cost to construct a house. In suburban areas, some builders are reducing the number of rooms and floor plan areas in spec homes marketed to the higher-income buyers. In Denver by contrast, builders who are reducing the number of homes being built are dropping smaller, lower-end homes in favor of higher-end houses. Despite the increase in per unit valuation in 2023, the total value of single-family construction is expected to decrease 20% in 2023 because of the decline in permits and increase 8% in 2024 as construction increases again.

The future of new housing construction looks brighter in the long term. The population cohort of 1980s babies, those between 32 and 41 years old who are buying their first home or first move-up home, will make it a higher priority to move into homes for their growing families. Increased migration from the early 2020s also is supporting demand. Colorado remains an attractive destination for primary and secondary home options.

Multifamily Housing

Multifamily construction permits decreased dramatically in the past year as apartment builders have begun to respond to softening rental markets and are waiting to see to what extent the elevated number of units already under construction will impact the rental market. By year-end, 20,200 multifamily units are projected to be permitted, down 20% from a year earlier. In 2022, the City of Denver increased the mandate for developers to subsidize housing in new apartment complexes. Some of the suppression of new permit applications in 2023 was caused by developers accelerating their permit applications in 2022 in order to be exempt from the requirements.

Despite the decline in the past year, apartment construction has remained strong since the Great Recession. Historically, multifamily construction has accounted for less than 30% of total residential construction, which increased to approximately 40% from 2012 through 2021. In 2022 and 2023, the number of units of multifamily construction surpassed single-family permits for the first time in Colorado. Multifamily is expected to account for about 49% of residential construction in 2024.

Construction put-in-place has kept companies and labor busy in 2023, working to complete developments started in the prior year. The committee forecasts a further decline in multifamily permits in 2024, largely because apartment demand will be partially met by the abundance of units already under construction reaching completion. Approximately 40,200 multifamily units are under construction statewide as of third quarter 2023, according to CoStar Group, down from the third quarter record of 44,500 a year earlier. There continues to be a lot of multifamily

CONSTRUCTION EMPLOYMENT, 2014–2024 (In Thousands)

Year	Employment	Percentage Change
2014	142.2	11.5%
2015	148.8	4.6
2016	155.3	4.4
2017	163.7	5.4
2018	173.2	5.8
2019	179.1	3.4
2020	174.9	-2.3
2021	177.5	1.5
2022[a]	183.0	3.1
2023[b]	184.3	0.7
2024[c]	182.0	-1.2

[a]Revised. [b]Estimated. [c]Forecast.

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

units under construction, in part, due to the near record levels of multifamily permits issued in 2021 and 2022 and the extended construction times, although some supply constraints have eased. Expect 18,500 multifamily units to be permitted in 2024, an 8% decrease from 2023.

The large supply of recently completed apartments has contributed to rising vacancy rates, but demand for multifamily housing is expected to be supported by the increase in migration and because potential single-family home buyers simply cannot afford them and, therefore, continue to rent. During the third quarter of 2023, CoStar Group reported that vacancy rates in Colorado averaged 7.7%, up from 6.3% a year earlier. Rising vacancy rates have resulted in much slower rent growth; statewide, rents increased less than 1% year-over-year, to $1,704, as of the third quarter of 2023. Continued high demand for new apartments is offset by increased regulatory constraints from local governments and neighborhood resistance in some communities. Furthermore, high interest rates;

increasing land, labor, and construction costs; and lengthy approval processes will likely limit how many projects in planning will break ground next year.

Apartments make up about 95% of multifamily units built since 2010, with development of for-sale multifamily condominiums almost nonexistent. The imbalance is a result of developers' concerns about potential construction defects litigation and related insurance costs of for-sale condominiums. Despite recent state legislation intended to address the issue, condominium construction is slow to return, and builders report that financing for apartments is significantly easier to obtain than for condominiums. Some recent reports indicate that insurance costs for condominium construction are roughly three times higher than for single-family homes and apartments.

The construction value per unit is expected to increase in 2023 but at a slower pace than last year, because the highest inflation rate has moderated. For 2023, the average value per multifamily unit will increase approximately 3%, to $178,100, well below the 17% increase in 2022. The value per unit is expected to rise another 3% in 2024, to approximately $183,500. Developers have not altered the size or quality of units. Despite the rise in per unit valuation in 2024, total valuation for multifamily construction is expected to decrease nearly 6%, due to the drop in number of multifamily permits.

Nonresidential Building

The nonresidential building sector tracks both commercial and institutional projects. These include new and renovated offices, medical facilities, colleges and universities, retail, churches, schools, and government buildings.

The committee projects 2023 nonresidential building will total $5.5 billion, an 18% decrease from $6.7 billion in 2022. New project starts in Colorado in 2024 are projected to remain at $5.5 billion. Last year's number was inflated by late permitting of large industrial and manufacturing projects. Some of the increase is inflation in labor costs that have been growing by more than 5% each of the past several years. The conclusion is that the decline in the volume of construction was even higher on an inflation adjusted basis.

VALUE OF CONSTRUCTION BY TYPE, 2014–2024
(In Millions of Dollars)

Year	Residential	Nonresidential	Total Building	Nonbuilding	Total Construction
2014	$7,565.9	$4,350.9	$11,916.8	$2,438.5	$14,355.3
2015	8,659.0	4,990.8	13,649.8	3,036.3	16,686.0
2016	10,161.0	5,987.8	16,148.8	2,705.6	18,854.4
2017	10,361.8	6,154.9	16,516.7	2,975.8	19,492.5
2018	11,772.6	8,132.0	19,904.6	4,520.9	24,425.5
2019	10,851.0	5,161.5	16,012.5	3,158.9	19,171.4
2020	12,184.0	5,599.9	17,783.8	2,943.5	20,727.3
2021	15,001.4	5,681.5	20,682.9	3,518.8	24,201.7
2022[a]	12,945.4	6,715.4	19,660.8	4,746.9	24,407.8
2023[b]	10,373.7	5,500.0	15,873.7	5,000.0	20,873.7
2024[c]	10,712.6	5,500.0	16,212.6	5,000.0	21,212.6

[a]Revised. [b]Estimated. [c]Forecast.
Sources: Dodge Construction Network and the Colorado Business Economic Outlook Committee.

There are strong market forces on both sides of the 2024 forecast. Increases in construction activity are due to businesses continuing to relocate into Colorado and continued (even if slowing) in-migration into the state. Much of the in-migration is a highly educated working age demographic that in turn draws corporations. Metro area economic development agencies report continued strong prospects for corporate expansion and relocation along the Front Range. Increases in bioscience and demand for health care also are supporting construction activity. State and local government capital budgets are also strong because of various federal funding programs, as well as strong sales tax revenue. Higher university construction budgets have come to fruition due to large continuing research grants and donations.

Evidence of potential slowing in the nonresidential building sector is a decline of the AIA/Deltek Architecture Billings Index. The index measures the rate at which owners are hiring design professionals for new commercial buildings. The index declined rather dramatically in fall 2023. Another source of weakness is a reduction in the state's Building Excellent Schools Today (BEST) grant program, which has fallen to $100 million annually from $300 million. The lower BEST grant funding makes it more difficult for school districts to put together school building bond proposals for the ballot, which have seen lower requests. Voters in the November 2023 election approved $238.5 million in proposed school bonds, a level lower than recent years that is partly due to being an off-year election.

Interest rates are creating economic headwinds on nonresidential building activity. Development loan rates have

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Construction

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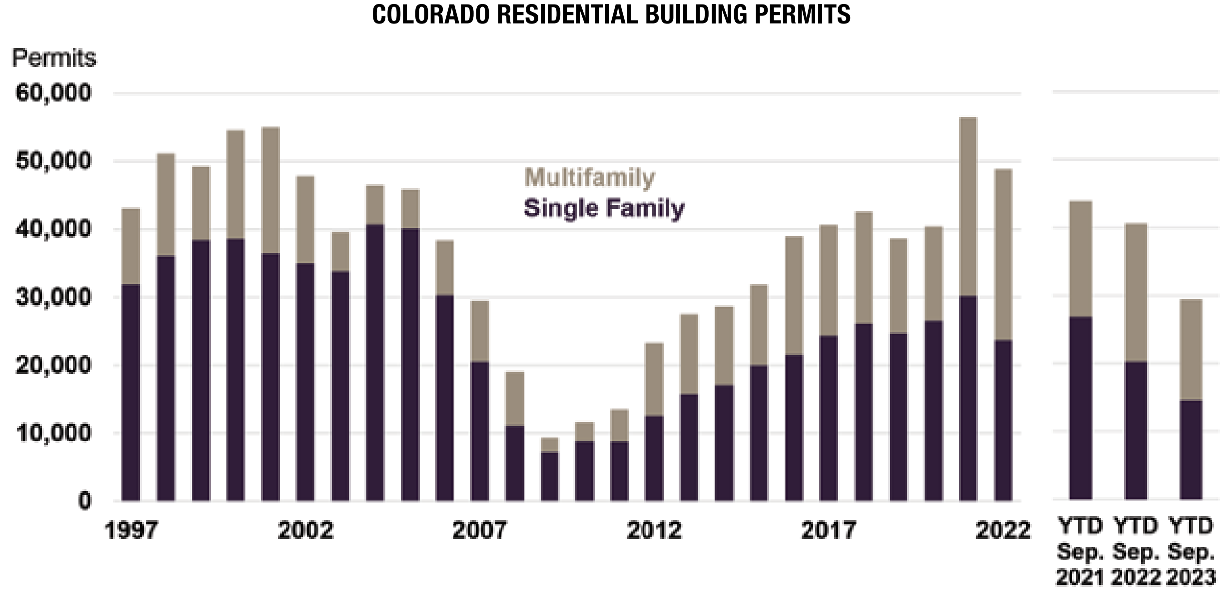
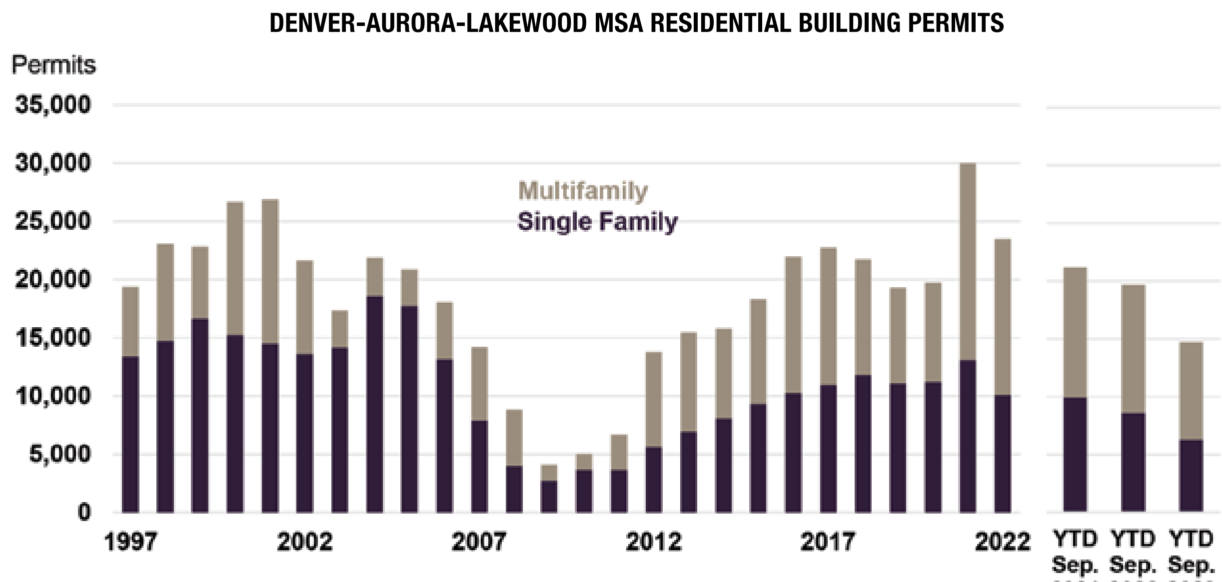




Source: U.S. Census Bureau.

risen to between 10% and 12%. Banks and other lenders have increased equity required for private development of commercial projects from 20% of project cost to as much as 40%. Increased project financing costs are causing "project slide," where developers delay the planned start of a project while alternative financing is secured or additional equity is raised. A number of project starts are projected to "slide" from 2024 to 2025.

Remote and hybrid work schedules are becoming institutionalized, requiring less office square footage for both current tenants and for relocating companies. This is reducing the number of office leases and build-outs based on newer work schedules.

Price increases of materials have slowed considerably, but uncertain and delayed availability and delivery of those materials continues. The industry continues to face a persistent skilled labor shortage. Part of the labor shortage is the accelerating retirement of many baby boomers in the trades, which is increasing demand for labor even at a static amount of construction activity.

Overall, construction project activity remains at a comfortably robust level, with numerous private projects in Metro Denver locations like RiNo and Brighton Boulevard, as well as commercial areas around the Denver airport and in the Tech Center. Cherry Creek is proving to be popular as a new office building location, with several offices permitted in 2023 and several more planned for 2024.

The decrease in nonresidential construction volume is the lack of mega projects like the DIA concourse and terminal expansions and the Gaylord Hotel project that occurred in recent years. Although no mega projects are anticipated to start before the end of 2024, a number are being planned that should push nonresidential building values back to the $6 billion range in future years. Manufacturing and related projects will also increase project totals, and several are clearing planning and zoning approvals in 2023 and will start construction beyond 2024. Amprius Fab chose Brighton for large-scale manufacturing of lithium-ion batteries with a silicon anode platform. DIA forecasts a need to expand operations from 80 million passengers currently to 120 million passengers in the foreseeable future and has started planning to build a new rental car facility and to add new concourses and a walking tunnel.

Nonbuilding

The nonbuilding subsector measures new construction of infrastructure projects. It includes highways, roads and bridges, drainage and flood control, water and wastewater facilities, electric power generation and transmission, reservoirs, mass transit, and similar projects.

After a record increase in 2022, infrastructure activity across Colorado in 2023 is expected to increase 6%, to $5 billion, partly due to inflation and high interest rates. One of the largest infrastructure projects started in Colorado in 2023 was the $700 million I-70 Floyd Hill project. The project began in the summer and is expected to last about five years.

One caveat is that construction statistics are recorded when projects are permitted, not as work progresses. When a large multiyear project begins, such as the Floyd Hill project, the volume of work is inflated in that year, while tracking volumes in subsequent years understate put-in-place activity.

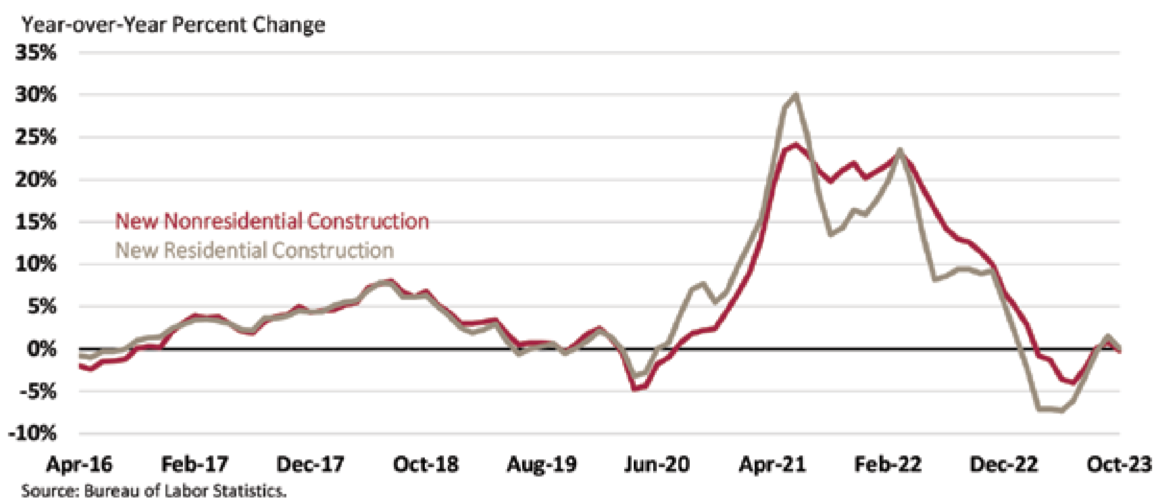
Spending by the Colorado Department of Transportation (CDOT) and local governments for transportation projects has leveled out and is expected to be sustained at the current level for the next few years. The 2021 federal Infrastructure Act provides Colorado with $4.01 billion to improve its roadway and bridge infrastructure network. The second installment of that five-year commitment is $692 million in FY 2023. Major road projects include $250 million for the Denver Colfax BRT Lane, the U.S. 287 realignment at $120 million, and the Colorado SH 119 at $115 million. CDOT is also advertising for two $100 million-plus projects on Vail Pass and U.S. 50. Counties and municipalities continue to record growth in tax receipts, and spending on local streets infrastructure will push higher in 2024. Work on the $1.5 billion Denargo Market mixed-use development in Denver's River North neighborhood will continue in 2024.

Demand for enhancements to water and wastewater projects has climbed substantially. Regulations for wastewater districts at first required higher treatment standards for operations of 2 million gallons per day. This was recently was expanded to all districts. In the drinking water regulation, attention and federal funding has newly been put on cleaning up PFAs ("forever chemicals"). The unmet, planned construction demand in the state for all water projects has climbed above $4 billion—a figure that is multiples of typical annual spending. Just as that demand has grown, the Infrastructure Act of 2021 practically eliminated the federal subsidies that passed through the State Revolving Fund and now that funding comes through requests made through Congressional earmarks, which raises uncertainty about next year's funding to meet the higher number of regulations. Small project funding through the existing 2023 state appropriations allocated more than $100 million to fund Colorado water projects, including $19 million for the continuation of the Platte River recovery implementation program and an additional $20 million for continued support for the Fryingpan - Arkansas project. Bonding by districts for unsubsidized new projects has become problematic due to the high interest rates. Additional water projects include Aurora Wild Horse Reservoir at $700 million and the South Platte Restoration at $500 million. In 2024, over $130 million will be available for construction starts.

Erection of solar and wind farms has meant that transmission lines must be built to convey the newly generated electricity to distribution points. That construction work continues to be significant, and energy-related construction is anticipated to add $590 million to nonbuilding activity in 2023 and $880 million in 2024.

With federal and state funding at a sustained level, nonbuilding activity is expected to stay strong and consistent throughout 2024 and unchanged from 2023, at approximately $5 billion.

CONSTRUCTION PRODUCER PRICE INDEX



Source: Bureau of Labor Statistics.

Contributors:

Katharine Jones, U.S. Department of Housing & Urban Development (Co-Chair)
Penn Pfiffner, Construction Economics, LLC (Co-Chair)
Michael Gifford, Associated General Contractors of Colorado
Tony Milo, Colorado Contractors Association
Chelsea Scott, John Burns Research and Consulting

Manufacturing

In 2022, the Manufacturing sector in Colorado posted its fastest pace of growth since 2015, increasing 2.5% and adding about 3,800 jobs. The faster pace of growth was welcome for a sector that faced several challenges during the pandemic recovery, including supply chain disruptions, rising costs, and tight labor markets. Although these pressures remain despite some easing, interest rates, shifts in consumer behavior, and other issues such as drought and water availability, have cropped up and impacted employment over the past year. The sector struggled in 2023 both nationally and regionally. In 2023, products sensitive to interest rates and building activity such as furniture, electronics and appliances, and nonmetallic minerals, have been dealing with slowing demand. Additionally, computer and electronic products manufacturers in the state have also struggled. In 2023, employment is expected to decline by 1%, or an estimated 1,600 jobs.

Over the next year, positive employment drivers are expected to coalesce for most of the state's subsectors and will help many companies begin to shake off the initial negative impacts of rapidly rising interest rates on spending and investment. Federal investment and incentives will boost employment in industries that support aerospace and defense. Further, the Inflation Reduction Act and the CHIPS Act are expected to boost the state's renewable energy and computer and electronic products manufacturers. In 2024, Manufacturing employment is projected to decline by 0.9%.

INDUSTRY SNAPSHOT MANUFACTURING

Nominal GDP, 2022 ($ Billions)	28.4
Real GDP, 2022 ($ Billions, 2017 Dollars)	25.1
2022 Real GDP Growth Rate	-1.8%
Total Employment, 2022 (Thousands)	153.0
2022 Employment Growth Rate	2.5%
Employment Growth National Rank	37
Share of Colorado Employment	5.3%
Share of National Employment	8.4%
Average Wage, 2022	82,600
Percent of Statewide Average Wage	109.3%
2022 Average Wage Growth Rate	2.3%

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

Note: 2022 employment includes revised estimates.

COLORADO MANUFACTURING EMPLOYMENT BY INDUSTRY 2014-2024 (In Thousands)

Industry	2014	2015	2016	2017	2018	2019	2020	2021	2022[a]	2023[b]	2024[c]
Food	20.6	21.6	22.2	22.8	23.3	23.8	23.7	24.5	25.7	25.6	25.5
Beverage and Tobacco	6.4	7.0	7.8	8.3	8.7	8.9	8.4	9.2	9.6	9.5	9.4
Printing and Related	5.4	5.5	5.5	5.5	5.3	5.0	4.3	4.2	4.5	4.4	4.3
Other Nondurables	16.0	16.7	17.1	17.4	17.9	18.7	18.6	19.2	19.3	19.0	18.4
Subtotal, Nondurable Goods	48.4	50.8	52.6	54.0	55.2	56.4	55.0	57.1	59.1	58.5	57.6
Nonmetallic Minerals	7.7	8.1	8.1	8.5	8.6	8.4	8.1	8.3	8.5	8.2	8.1
Fabricated Metals	15.6	15.4	14.7	14.7	15.2	15.2	14.6	14.3	14.5	14.8	14.5
Computer and Electronics	21.5	21.6	21.3	21.9	22.4	22.8	22.8	23.1	23.5	23.0	23.2
Transportation Equipment	8.8	9.3	9.6	9.8	10.1	10.8	11.2	11.4	11.7	11.5	11.7
Other Durables	34.6	35.9	36.4	35.4	36.0	37.0	35.1	35.0	35.7	35.4	34.9
Subtotal, Durable Goods	88.2	90.3	90.1	90.3	92.3	94.2	91.8	92.1	93.9	92.9	92.4
Total, All Manufacturing	136.6	141.0	142.7	144.3	147.5	150.5	146.8	149.2	153.0	151.4	150.0

[a]Revised. [b]Estimated. [c]Forecast. Subsectors may not sum to the total due to rounding.

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

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

Nondurable Goods

Nondurable goods include the production of goods that generally last for less than one year and comprise about 39% of manufacturing employment. By year-end 2023, employment in the nondurable goods subsectors is expected to decline modestly, decreasing 1% on average over 2022 levels. Continued growth in food products and beverages and chemical products will offset declines in printing and some other nondurable goods categories. The sector is expected to decline 1.5% in 2024 and lose 900 jobs.

Food Manufacturing

The largest nondurable goods subsector in Colorado is food manufacturing. Colorado food brands and copackers manufacture candies, baked products, snacks, tortillas, burritos, coffee, and animal feeds. They also process meat, grains, sugar, milk, cheese, and other dairy products.

Colorado has both large food manufacturers as well as many boutique manufacturers, often specializing in niche natural and organic products. In 2023, manufacturers of plant-based proteins experienced some layoffs. Battles over water are becoming more significant and may impact more food manufacturing, hampering growth. On a bright note, specialty food manufacturing has continued to grow at a good pace, with some snack bars even seen on the TV show, "Shark Tank." Inflation has continued to impact household spending power, which will likely limit future growth in more expensive boutique and sustainable food products. According to recent reports by McKinsey & Company, even with typically higher prices of sustainable products, consumers are still thinking about and spending on items that support their own wellness as well as that of the planet, along with social responsibility of companies.

In 2022, 96% of Colorado's food manufacturing exports were to Canada, Mexico, and Asia. Exports to South Korea, China, Japan, and Indonesia increased the most in 2022, while Mexico, Canada, and Taiwan were important markets that saw declines. Colorado food manufacturing exports still grew overall, totaling over $2.3 billion in 2022 and comprising 23% of all Colorado exports while remaining the largest export category for the state. Between 2021 and 2022, exports to Asia rose $189 million, primarily due to an increase in meat products. At the same time, exports to North America decreased by $85 million, primarily due to a decrease in meat products.

As with many areas of manufacturing, finding employees and keeping them has been a concern. One company in Fort Morgan is investing in affordable housing and childcare support in order to attract and keep workers. In 2022, food manufacturing employment did extremely well, gaining about 1,200 employees, which is the most in over 20 years. After such a great year, employment in this subsector is expected to decline modestly, losing about 100 jobs in 2023 and another 100 jobs in 2024, reaching 25,500.

Beverage Manufacturing

Firms in the beverage subsector produce soft drinks, ice, bottled water, beer, wine, liquor, and specialty drinks like kombucha, wine-seltzer, zero-alcohol beer, hopped tea, and ready-to-drink cocktails. Along with innovative nonalcoholic beverages manufactured in Colorado this year, there are a few new experiments in alcoholic beverages. Some Denver breweries used ChatGPT to create beer recipes, others are using wood barrels for unique flavoring, and MSU Denver is working on opening the Charlie Papazian Brewing Education Lab. Access to water is a potential headwind for this subsector, especially as most of the subsector employment is located along the Front Range, where population is growing, increasing the general need for water.

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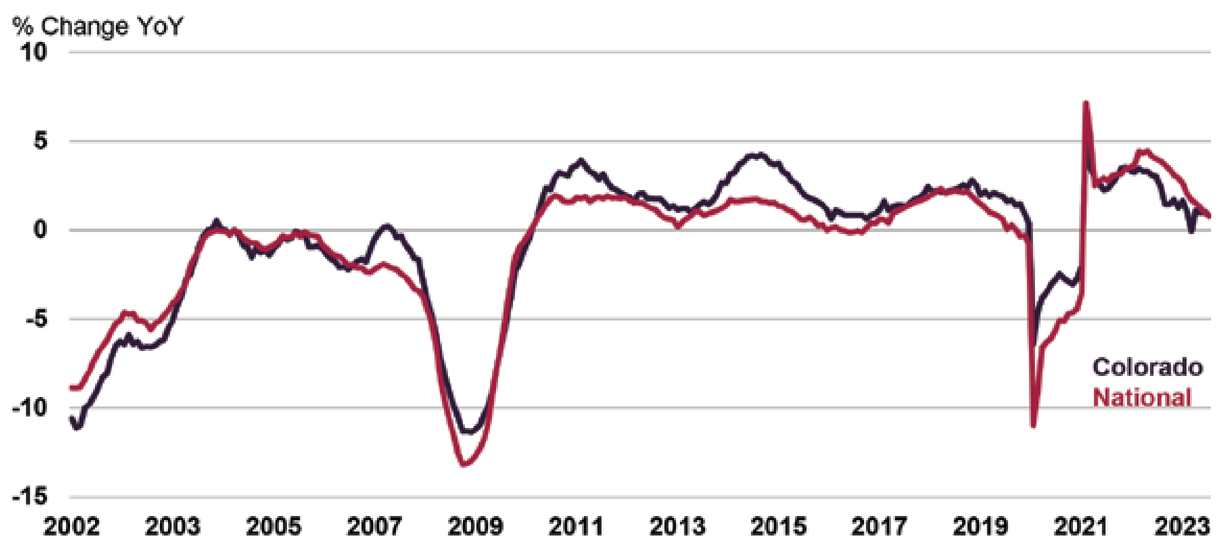
MANUFACTURING EMPLOYMENT GROWTH 2002-2023



Source: Bureau of Labor Statistics, Current Employment Statistics (Seasonally Adjusted).

Manufacturing

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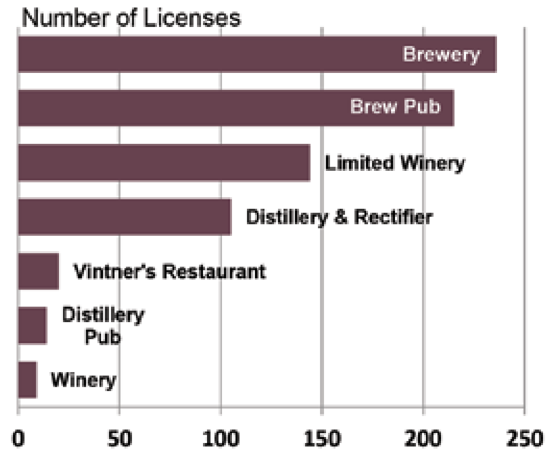
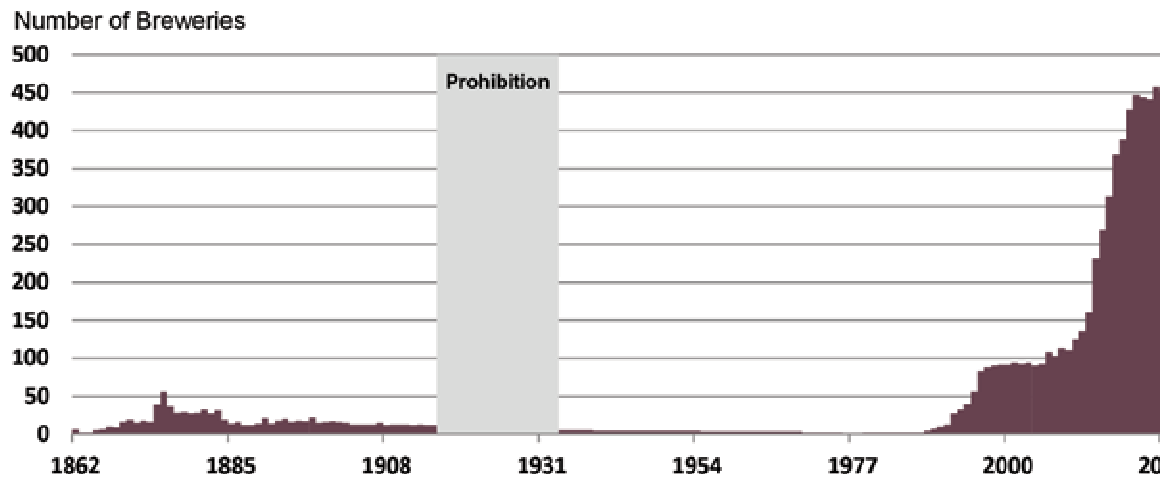
COLORADO BEVERAGE MANUFACTURING LICENSES, 2023



Source: Colorado Liquor Enforcement Division, All State Liquor Licenses. Total as of September 2023.

COLORADO BREWERIES 1862-2023



Sources: Colorado Brewers Guild and the Colorado Liquor Enforcement Division. Total includes brew pub and manufacturing brewery licenses. Total as of September 2023.

Craft brewers are located throughout the state, reaching even small towns. According to the Brewers Association, in 2022, Colorado remained fifth in the country for the number of craft breweries (440) and produced just over 834,000 barrels of craft brew, dropping from the 8th-highest production in the country to 10th. Quite a few craft breweries changed hands in 2023, keeping employment in this portion of the subsector fairly flat.

A government shutdown would present another potential headwind. If there is a government shutdown, the Brewers Association has pointed out that the Alcohol and Tobacco Tax and Trade Bureau (TTB) is "nonessential," and so it is unlikely to "approve labels, formulas, or brewers' notices," extending approval times and creating application backlogs. There could also be a delay on small business loans if the Small Business Administration (SBA) is closed.

The Colorado wine industry has continued to do well, and distilleries are on the rise with new projects in the works. Spirits accounted for over 42% of the U.S. alcohol revenue in 2022, according to the Distilled Spirits Council.

Colorado exports of beverages and tobacco products decreased 14.9%, from $11.7 million in 2021 to $9.9 million in 2022, as exports to Canada and France each declined by about $600,000. Exports to Canada make up 33% of Colorado's beverage and tobacco product exports, a dramatic drop from prior years. Overall, the beverage and tobacco products subsector saw more moderate employment growth of only about 400 in 2022. Employment is expected to decline modestly moving forward even with the gains expected in distilleries, losing about 100 jobs in 2023 and another 100 jobs in 2024 to reach 9,400.

Printing and Related

Colorado employment in printing and related products did surprisingly well in 2022. Growth was likely due to print solutions to supply chain issues and a post-Covid resurgence in more activities that use printed materials. After significant growth in 2021, printed product exports declined by 7% to $49.7 million in 2022. This is more in line with historical exports in this subsector. Asia accounted for 66% of printed product exports in 2022, with exports to China increasing $5.2 million, while exports to Japan decreased by $2.7 million. Exports to North America declined overall, with an increase of $700,000 to Canada but a decrease of $1.6 million to Mexico. The start of 2023 brought a drop in employment, with the closing of a significant printing plant in Pueblo. Employment in this subsector is expected to decline about 100 workers in 2023 and decline by another 100 in 2024.

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A Sip of Resilience: Colorado's Craft Brewing Renaissance

In the shadow of the Rocky Mountains, where the air is crisp and the skies stretch as far as the eye can see, a vibrant and dynamic industry thrives. Colorado's craft brewing scene, a hallmark of American craftsmanship and creativity, has undergone a remarkable transformation in recent years. As we raise a glass to the present state of this industry, we find a narrative of resilience, innovation, and community that reflects the spirit of the Centennial State.

Colorado's love affair with craft beer traces its roots back to the late 19th century when German immigrants brought their brewing traditions to the region. However, the true resurgence of craft brewing didn't occur until the late 20th century. In the 1980s and 1990s, pioneers like Boulder Beer Company set up shop in Colorado, igniting a craft beer revolution. Since then, Colorado has become a craft beer epicenter, boasting 456 breweries, ranging from small neighborhood taprooms to industry giants.

The Current Landscape

Fast forward to the present, and the Colorado craft brewing scene is thriving. The industry has not only weathered the storms of the 21st century but has also adapted and evolved. In many ways, it's a reflection of the resilient and innovative spirit that defines the state itself.

One of the defining features of Colorado's craft brewing industry today is its commitment to sustainability. Breweries are increasingly adopting eco-friendly practices, such as recycling spent grain for animal feed, using solar power, and reducing water usage. Ska Brewing in Durango, for example, has implemented an innovative wastewater treatment system that turns brewery effluent into irrigation water for local farms. This commitment to sustainability not only reduces the environmental impact but also resonates with Colorado's environmentally conscious residents.

Moreover, the spirit of innovation is another driving force behind the industry's current state. Craft brewers in Colorado are known for their creativity, pushing the envelope with unique ingredients and flavor profiles. Breweries like Crooked Stave in Denver are renowned for their experimentation with wild and sour ales, while others, like WeldWerks Brewing in Greeley, have gained fame for their hazy IPAs and pastry stouts.

Crafting Community

Beyond the beer itself, Colorado's craft brewing industry plays an essential role in fostering community. Breweries have become gathering places where friends and families come together to celebrate life's moments, from birthdays and anniversaries to casual after-work get togethers. The taproom experience goes beyond just sipping beer; it's about connecting with fellow beer enthusiasts and the local culture.

Furthermore, craft breweries often collaborate with local artisans, musicians, and food vendors, creating a microcosm of Colorado's vibrant cultural scene. Live music events, food truck festivals, and art exhibitions hosted by breweries contribute to the broader cultural tapestry of the state.

Crafting Resilience

The craft brewing industry in Colorado has faced its share of challenges, not least of which was the COVID-19 pandemic. When the pandemic hit, breweries were forced to pivot quickly. Many adapted by offering to-go sales, curbside pickup, and home delivery services. This digital transformation has created new opportunities for breweries to reach a broader audience and build brand loyalty.

However, it's important to acknowledge that not all breweries have been able to weather the storm. Some beloved Colorado breweries have had to close their doors or sell to larger beer conglomerates due to financial difficulties. These closures have left an indelible mark on the craft brewing community, reminding us of the challenges that small, independent breweries face in a competitive industry.

Expansion and Sanitas Brewing

Amid the challenges and closures, there are also stories of growth and expansion in Colorado's craft brewing scene. Sanitas Brewing in Boulder is one such success story. Originally founded in 2013, Sanitas Brewing has not only survived but thrived, becoming a staple of the Boulder beer scene.

In recent years, Sanitas Brewing has embarked on an expansion journey. They have increased their production capacity, allowing them to distribute their beers to a wider audience across the state and even beyond Colorado's borders. This expansion demonstrates the resilience and determination of Colorado's craft brewers to share their passion for beer with a broader audience.

Looking Ahead

As we look to the future of Colorado's craft brewing industry, there is reason for optimism. The industry has proven its ability to adapt, innovate, and remain resilient in the face of challenges. The craft beer culture in Colorado is not just about what's in the glass; it's about the people, the places, and the stories that make each brewery unique.

Colorado's craft brewing industry has also become a tourist attraction, drawing visitors from around the world. The state's breathtaking landscapes provide a stunning backdrop to brewery tours and tastings. As more tourists seek out the Colorado craft beer experience, it's likely to continue driving economic growth and job creation.

In conclusion, the current state of Colorado's craft brewing industry is a testament to the enduring spirit of innovation, sustainability, and community. Breweries in the Centennial State have not only survived but thrived, adapting to changing circumstances and continuing to produce exceptional beers that capture the essence of Colorado. As we raise our glasses to this ever-evolving industry, we celebrate the dedication of brewers, the support of local communities, and the enduring appeal of craft beer in Colorado.

Contributor: *John Carlson, University of Colorado Boulder*

Manufacturing

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Other Nondurable Goods

The other nondurable goods category includes textiles, textile products, leather and allied products, apparel, paper products, petroleum and coal products, chemicals, and plastics and rubber products.

In 2022, employment in the textiles, apparel, and leather and allied product subsectors averaged about 2,080 employees, up just 0.5% from 2021. As of Q1 2023, employment in these subsectors averaged about 1,940 employees, slightly down from Q1 2022, with employment projected to remain generally flat through 2023.

Paper products manufacturers employed about 1,250 employees in Colorado in 2022, with employment forecast to remain relatively flat through 2023 and 2024. Paper products employment contracted steadily throughout the last decade, yet Colorado's sector has stabilized, supported by manufacturing converted paper products into labels, laminates, and other packaging-related solutions, with growth attributable to the region's active food and beverage brands.

Petroleum and coal products manufacturing firms refine crude petroleum and coal into usable forms. This subsector has a small presence in Colorado, with just under 800 workers in 2022, a modest decline from 2021. Employment is expected to average just over 770 workers in 2023 and 2024.

Chemical products is the largest nondurable goods subsector, employing approximately 8,880 workers in 2022. After large gains over the past few years from more cannabis and pharmaceutical manufacturing, employment reversed course in 2022 and decreased 1.7%, the first decline in employment since 2012. In 2022, pharmaceutical and medicine manufacturing represented 61% of employment in the subsector and covered firms headquartered in Colorado such as Tolmar and Boulder Scientific Company. Positive company announcements have recently bolstered the state's pharmaceuticals industry following high-profile mergers and acquisitions for companies such as Inotiv. For instance, AGC Biologics, a Denmark-based biopharmaceutical company with facilities in Boulder, acquired an additional 622,000-square-foot manufacturing facility in Longmont that began full-scale operations in Q1 2022. The facility added an additional 30,000 square feet of Grade B cell therapy suites in August 2023. However, employment growth in the chemical products manufacturing subsector is expected to modestly decline in 2023 and 2024 due to economic headwinds.

Colorado plastics and rubber products manufacturing firms make a diverse mix of goods ranging from transmission belts to cell phone cases to credit cards to dog toys. In 2021, the subsector fully rebounded, and continued experiencing generally steady growth in 2022, with employment up 3.4%. In 2023, employment in the subsector is expected to decline, which is likely to continue through 2024. A downside risk for the subsector is labor shortages as firms struggle with finding employees with the right skills. Looking ahead, a positive anecdotal sign is emerging additive technology classes that are becoming more common in schools, which may boost local recruitment in the years to come.

Durable Goods

Durable goods comprise about 61% of employment in the Manufacturing sector and represent the manufacture of goods that generally last longer than one year. Durable goods employment is expected to decline 1.1% in 2023, driven by declines in most subsectors. In 2024, employment in the durable goods categories is expected to decline further, albeit more modestly, decreasing by 0.5%, or 500 jobs.

Nonmetallic Minerals

The nonmetallic minerals subsector includes industries like cement manufacturing, concrete products, lime and gypsum, and ceramics. Products like cement are largely consumed in state to take advantage of proximity to projects due to high transportation costs, and the subsector as a whole significantly supports building and construction. Some of the state's nonmetallic minerals manufacturing jobs support electronics, aerospace, defense, and medical applications, particularly for technical ceramics and glass. Data indicate employment in the subsector contracted from the end of 2022 to the first quarter of 2023 based on the Quarterly Census of Employment and Wages. The subsector has likely been impacted by flagging residential, and to some extent commercial, construction. In 2023, employment is expected to fall 3.5% to 8,200 jobs. Over the next year, employment is expected to decline further, albeit more modestly, partially offset by a modest increase in nonresidential construction, as demand for products supporting aerospace and defense grows.

Fabricated Metals

The fabricated metals subsector is one of Colorado's largest in terms of jobs, accounting for approximately 10% of total employment in the Manufacturing sector. Firms in the subsector transform metals into intermediate or end products, such as metal containers, tools and hardware, pipes and structural components, and other products used in construction and industry. Important fabricated metal processes are forging, stamping, bending, forming, and machining, and are used to shape individual pieces of metal. Other processes, such as welding and assembling, are used to join separate parts together. Manufacturers in this subsector may use one of these processes or a combination of both.

The fabricated metals subsector manufactures goods for several sectors critical to Colorado's economy, including the aviation and aerospace industries, the beverage industry, medical devices, renewable energy, and oil and gas. The subsector fell from a high of about 15,200 in March 2020 to a nine-year low of about 14,300 employees at the end of 2021. Employment in fabricated metals

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The Colorado Cannabis Market

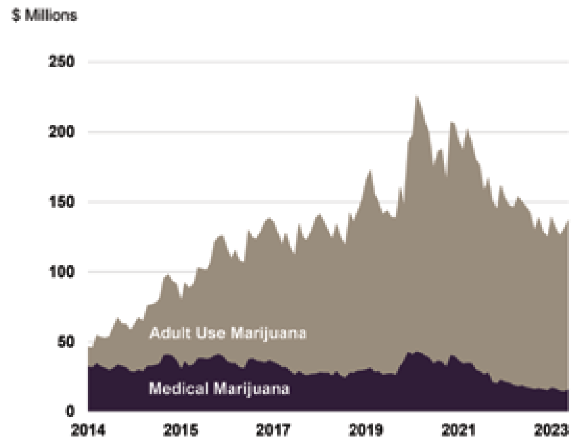
Colorado was an early adopter when it came to cannabis legalization, and the state continues to be a trailblazer. Cannabis for medical use was legalized in the state in 2000, only one of eight states to allow medical marijuana use at that time. Colorado then legalized cannabis for recreational use in 2012 (it went into effect in 2014), becoming one of the first states along with Oregon to do so. As of mid-2021, Colorado is one of 24 states in the U.S. that allows legal retail/recreational cannabis use and one of 38 states that allows for the medical use of cannabis. Now, Colorado is one of the few states in the U.S. to legalize recreational marijuana delivery and the consumption of social cannabis onsite.

Since the first retail stores licensed to sell recreational marijuana legally opened in Colorado in 2014 (the first in the world at the time), recreational marijuana sales in the state have increased over seven-fold since legalization to reach over $3.3 billion in 2022. Total annual marijuana sales (including both medical and recreational) have increased from $683 million in 2014 to $1.8 billion in 2022, observing a compound annual growth rate of 14.7% over the past eight years, according to the Colorado Department of Revenue, Marijuana Enforcement Division. Approximately $132.9 million of marijuana products were sold in the state in June 2022, up from $53.9 million in June 2014. Colorado had the 2nd-highest marijuana tax revenue in the U.S. in 2022, behind California.

Marijuana sales in 2022 totaled a record $1.8 billion, a 20.5% decrease from 2021, according to the Colorado Department of Revenue, Marijuana Enforcement Division. This is the first year of decline since 2014 with the following historical growth patterns: 2.3% in 2021, 25.3% in 2020, 13.1% in 2019, and 2.5% in 2018. A closer look shows that recreational sales fell by 15.7% in 2022, and medical sales decreased 42.9%. Marijuana sales are decreasing in 2023, with total sales year-to-date in September 2023 down 13% over 2022, to $1.2 billion.

Three-fifths of overall marijuana sales in Colorado occurred in five counties (total sales year-to-date through September 2023). Denver County led the way with 29.1% of total sales, followed by Arapahoe County (11.9%), Adams County (8.9%), Boulder County (7.6%), and Larimer County (6.7%). As of September 2023, there were 41 counties in the state reporting recreational marijuana sales and 11 reporting medical sales.

COLORADO CANNABIS SALES



Source: Colorado Department of Revenue.

As of 2020, dispensaries, restaurants, hotels, and other businesses can apply for cannabis consumption areas, where cannabis products may be sampled or consumed on site. A few new cannabis-friendly businesses have popped up in Colorado where customers can socially consume, including The Coffee Joint, Bodega, and Tetra 9. As of June 2023, there were a total of 916 active retail establishment licenses, down 3.7% year-over-year. The top five retail establishments hold 17% of Colorado's cannabis market share, and the top 10 account for 22%.

Marijuana prices have been decreasing since the initial introduction of recreational marijuana in 2014. The average price per gram of recreational marijuana flower was $4.83 in 2021, $3.84 in 2022, and $3.43 in 2023. The average price for medical marijuana flowers is typically lower than the recreational marijuana flower. As of June 2023, the current average price for a medical marijuana flower was $2 per gram.

Licensing in Colorado is experiencing a decline, which can be a significant factor in the decline of sales. The number of issued licensed in June 2023 was 685, a 10.7% decrease year-over-year. Similarly, the number of renewed licenses in June of 2023 has decreased to 514 renewing licenses. This is an 11.4% decrease from June 2022. The number of expired licenses has increased, recording 1,757 expired licenses in June 2023. This is an 8.7% increase from the prior year. The overall decreasing number of licenses available to sell cannabis products could be a contributing factor to the declines seen in sales through September 2023.

In 2023, the General Assembly decided on new marijuana rules across Colorado. These rules went into effect on June 7, 2023, and includes a new method for the Marijuana Enforcement Division to regulate and register hemp products that are potentially cannabinoids. Hemp- and marijuana-derived cannabinoids must be classified into the three categories of nonintoxicating, potentially intoxicating, and intoxicating. All three are considered marijuana products for the purposes of the retail marijuana sales tax. Over $1.6 million has been appropriated to the department in order to implement this act, with $1.2 million deriving from the General Fund and the remainder from the wholesale food manufacturing and storage protection cash fund. The regulation enforces the following:

- the power to prohibit chemical modification in the creation of intoxicating cannabinoids;
- proper classification of cannabinoids;
- proper labeling and advertising for hemp- and marijuana-derived products;
- production, testing, and record-keeping requirements; and
- prohibiting exports to states where cannabis is illegal.

After decreasing in 2023, market growth is expected to remain constrained in Colorado in 2024.

***Contributor:** Jayson Brubaker, Business Research Division*

Manufacturing

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rebounded slightly to 14,500 by the end of 2022, yet did not reach prepandemic levels.

The supply chain and labor shortages of the pandemic have accelerated the adoption of advanced technologies and processes such as automation, robotics, 3D printing, digitization, and other smart manufacturing technologies in this subsector, resulting in more efficiency, precision, and cost-effectiveness. These trends, along with increased demand in aviation, aerospace, defense, and clean energy technologies in Colorado, will continue to drive the industry forward in 2024 and the years to come. Despite the innovations and demand, the fabricated metals sector continues to experience supply chain challenges and labor shortages that other sectors are experiencing.

In Colorado, employment is expected to continue to increase in 2023 to 14,800 (2.1%) before slightly declining back to 14,500 in 2024. Factors potentially slowing growth of this sector are the shortage of skilled workers entering the manufacturing job market in Colorado, increasing the number of unfilled job openings, and material shortages resulting in higher prices for materials. These negative factors, however, can be mitigated by more deployment of automation and robotic technologies inside manufacturing facilities, and by connecting with apprenticeship programs and machining training programs available in high schools and community colleges that will increase the skilled manufacturing worker pipeline.

Computer and Electronics

The computer and electronics subsector includes industries such as communications equipment, audio and visual equipment, semiconductors, navigational equipment, laboratory measuring instruments, and optical media products, among others. Nearly half of the employment in the subsector comprises navigational, measuring, electromedical, and control instruments, an industry group largely connected to Colorado's aerospace and health care companies.

The beginning of 2023 continued a downward trend in employment in the computer and electronics subsector that started in the latter half of 2022. After peaking at 23,800 jobs in July 2022, the sector contracted for seven of the next eight months. In March 2023, the most recent month of data, employment stood at about 23,200, 2.7% lower than in July 2022. This reflects, in part, the broad dampening effects of the Federal Reserve credit tightening cycle that began in late March 2022. It is expected that 2023 annual employment will decline slightly to 23,000, which represents an annual contraction of 2.1% from 2022.

In 2024, it is expected that this downward trend reverses due to large-scale federal investment in advanced technologies through the Infrastructure Investment and Jobs Act, the Inflation Reduction Act, and the CHIPS Act. These three acts together will invest over $2 trillion in U.S. infrastructure and production capacity over the next decade, especially for advanced industries. The CHIPS Act will provide billions of dollars in grants to semiconductor manufacturers and supply chain companies that will catalyze hundreds of billions more in private investment.

Many stakeholders in Colorado are pursuing CHIPS Act incentives, planning projects with hundreds of jobs and millions of dollars. The initial effects of such projects should begin to be seen in 2024. As such, employment should increase by an expected 0.9%, reaching 23,200.

Transportation Equipment

Large aerospace companies dominate the transportation equipment manufacturing subsector, which includes the manufacture of spacecraft, satellites, and aircraft parts, as well as truck and auto parts, boat parts, travel trailers, and bicycles. The subsector is sensitive to international demand and federal spending on national defense and space exploration. The subsector faced challenges in the wake of pandemic-related headwinds, including supply chain disruptions and high inflation, dampening employment growth to 1.8% in 2021, down from 3.7% in 2020. Employment growth picked up again in 2022, to 2.6% as those headwinds slowly abated. Data indicate accelerating employment growth in 2023, with employment up by 4.8% through August 2023, compared to the same period in 2022. Lockheed Martin, which accounts for nearly half of Colorado's employment in the sector, has recently announced expanded activities in Colorado, including the opening of a new factory to produce small satellites as well as a multi-million-dollar contract to produce nuclear-powered spacecrafts. Colorado remains an attractive location for aerospace companies, and growth is expected to remain strong as defense spending ramps up in response to widening geopolitical tensions, assuming the federal budget impasse is resolved. Employment in the subsector is expected to grow 1.7% in 2024.

Other Durable Goods

Six subsectors comprise the remainder of Colorado's durable goods employment, including machinery, furniture, wood products, electrical equipment, primary metals, and miscellaneous goods. After a year of strong growth across the subsectors, data indicate that employment peaked for the group in the latter half of 2022. Many of the employment drivers for the other durable goods category emerging from the pandemic have subsided over the past year, including the surge in spending on household goods and drawdown of excess household savings. In many cases, spending on goods has been replaced by resurging demand for services. Combined with the rapid increase in interest rates that has increased the cost of financing, employment for interest rate sensitive industries and subsectors like wood products, furniture, and electrical equipment and appliances have been impacted in 2023. Although offset by some expected gains in machinery manufacturing, employment for the other nondurable goods category is expected to decline 0.8% in 2023 to 35,400 jobs.

Looking ahead, employment for interest rate sensitive goods categories is expected to stabilize as consumer spending patterns normalize and consumers adjust to the higher interest rate environment. More stable investment in housing may also help stem losses in the state's wood products, furniture, and electronics and appliances manufacturing subsectors. Federal investments are expected to boost renewable energy manufacturing in Colorado, supporting employment in machinery manufacturing and miscellaneous manufacturing, among other subsectors. Renewable energy credits in the Inflation Reduction Act are expected to boost investment and jobs in businesses that manufacture solar and wind energy. Further, strengthening health care demand following the pandemic is expected to boost companies supplying health providers with goods and equipment over the next year. ✜

Contributors:
David Hansen, Colorado Legislative Council (Chair)
Jennifer Hagan-Dier, Manufacturer's Edge
Adam Illig, University of Colorado Boulder
Elizabeth Ramey, Colorado Legislative Council Staff
Daniel Salvetti, Office of Economic Development and International Trade
Rebecca Wilder, Data-Driven Economic Strategies

Trade, Transportation, and Utilities

The Trade, Transportation, and Utilities sector is the largest provider of jobs in Colorado. This industry includes wholesale trade, retail trade, utilities, warehousing, and multiple facets of transportation (air, truck, transit, rail, pipeline, etc.). More than one-sixth of Colorado workers are included in this industry. The industry added 16,700 jobs in 2022, but growth slowed to an estimated 5,000 jobs (1%) in 2023, to a total of 508,200—a record level of industry employment. The sector is projected to grow by 5,300 jobs (1%) in 2024.

Trade

Wholesale

Projections for revenue in the national wholesale distribution industry suggest a slight decline of 1.4% in 2023 following the significant post-pandemic increases of 20.5% and 14.8% in 2021 and 2022, respectively. Of the 19 sectors considered in the wholesale distribution industry, 13 of them are projected to witness declines in revenue throughout 2023 with the largest drop-off being 13.6% in the building material and construction sector. Looking ahead, the industry is forecasted to return to positive revenue growth in 2024 with projections sitting at an increase of 3.3%.

Wholesale businesses employed an estimated 117,300 Coloradans in 2022, with 96% working for merchant wholesalers—firms that sell to retail outlets. The remaining 4,600 employees are employed by electronic markets and agents and brokers. More than 71,000 are employed by firms selling durable goods, including computers, peripherals, and electronic equipment. Businesses selling groceries and related products account for the largest share of the 40,000 nondurable wholesale jobs. Several large Amazon warehouses are included among wholesale employers in Colorado.

Wholesale employment has rebounded strongly from the pandemic, continuing to hit record levels in 2023 with growth expected to continue modestly in 2024. Industry pay in Colorado averaged over $106,000 in 2022—44% above the average pay for all industries. Signals from the Job Openings and Labor Turnover Survey (JOLTS) indicate a relatively smaller degree of labor demand in wholesale compared to other industries. The sector is expected to add 3,000 jobs in 2024.

Retail Trade

The retail trade sector in Colorado consists of a variety of establishments that sell merchandise, including grocery stores, health stores, furniture stores, clothing stores, sporting goods stores, automobile dealers, gas stations, and various other merchandising establishments. In 2022, this sector accounted for nearly 274,000 jobs in the state—nearly one-tenth of total statewide jobs—and recorded year-over-year job growth of about 2,400, or 0.9%. Growth in the sector lagged statewide job growth of 4.2%, and while retail trade jobs have recovered above prepandemic levels, they still lag pre-COVID trend growth. Slowing job growth in the sector following the pandemic is likely related to significant growth in online shopping as well as broader incorporation of automation into retail trade businesses. Looking forward, statewide job growth in the sector is projected to remain tepid, yet slightly positive in 2023 and 2024.

Colorado retail trade sales, excluding food services, experienced accelerated growth in 2021, at 15.4%, totaling $125.4 billion, as overall spending grew considerably during the pandemic economic recovery, and consumers shifted their spending habits toward buying a larger share of goods compared to prepandemic trends. In 2022, retail trade sales growth remained strong, yet decelerated to 8.8% as overall spending slowed, consumers fully reengaged with the services sector, and high inflation and rising interest rates resulted in demand destruction. Over the first half of 2023, retail trade sales growth has turned comparatively sluggish, recording 2.4% growth over the first six months of the year. The slowdown in retail trade sales is indicative of a broader spending slowdown, with many of the same spending drags from 2022 continuing to weigh on the sector in 2023. Growth in retail trade sales is projected at 2.2% statewide in 2023 and is forecast to rebound to some degree—though remain below long-term average growth—in 2024 at 3.3% growth.

INDUSTRY SNAPSHOT TRADE, TRANSPORTATION, AND UTILITIES	
Nominal GDP, 2022 ($ Billions)	81.6
Real GDP, 2022 ($ Billions, 2017 Dollars)	61.0
2022 Real GDP Growth Rate	0.0%
Total Employment, 2022 (Thousands)	503.2
2022 Employment Growth Rate	3.4%
Employment Growth National Rank	23
Share of Colorado Employment	17.5%
Share of National Employment	18.8%
Average Wage, 2022	63,734
Percent of Statewide Average Wage	84.3%
2022 Average Wage Growth Rate	7.0%

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics.
Note: 2022 employment includes revised estimates.

While overall Colorado retail trade sales growth has slowed, though remained positive, over the first half of 2023, certain subsector industries are performing at varying levels. Thus far in 2023, the subsector that has experienced the greatest contraction in sales is building materials, garden equipment, and supplies dealers, which has declined 12.2% over the first half of 2023, contracting from $5.7 billion to $5 billion. Similarly, the furniture and home furnishings subsector has also recorded a contraction in sales of 6.2% from $3.7 billion to $3.4 billion. These subsectors are some of the most exposed to the high interest rate environment, which has slowed the housing market, and thus, negatively weighed on sales in retail trade industries related to the housing market. Gasoline sales also saw a 7.5% contraction from $3.2 billion to $3 billion over the first half of 2023, largely due to lower gasoline prices compared to the first half of 2022.

Conversely, food and beverage stores have maintained positive sales growth over the first half of 2023 at 4.5%, from $10.9 billion to $11.4 billion, largely fueled by food inflation. General merchandise stores, which include establishments such as department stores, have registered

TRADE, TRANSPORTATION, AND UTILITIES EMPLOYMENT, 2014-2024
(In Thousands)

Year	Wholesale Trade	Retail Trade	Total Trade	Transportation and Warehousing	Utilities	Total TTU
2014	99.7	254.5	354.2	70.4	8.1	432.7
2015	103.2	262.1	365.3	72.2	8.2	445.7
2016	104.7	268.1	372.8	73.0	8.2	454.0
2017	106.3	270.8	377.1	76.1	8.1	461.3
2018	108.2	273.2	381.4	81.0	8.0	470.4
2019	110.4	272.3	382.7	87.0	8.2	477.9
2020	107.6	262.1	369.7	91.4	8.3	469.3
2021	110.1	271.5	381.6	96.4	8.5	486.5
2022[a]	117.3	273.9	391.2	103.3	8.7	503.2
2023[b]	122.3	275.3	397.6	101.6	9.0	508.2
2024[c]	125.3	276.1	401.4	103.0	9.1	513.5

[a]Revised. [b]Estimated. [c]Forecast.

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

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

sales strength at 8% growth, from $15.1 billion to $16.3 billion. Automobile dealer sales, while seeing slow growth over the first half of 2023, have outperformed in a restrictive monetary environment with high interest rates, recording 1.8% growth from $13.5 billion to $13.7 billion. This subsector is likely still seeing the effects of pent-up demand from supply chain issues during the pandemic, which is continuing to provide a financial tailwind to automobile dealers.

National retail trade sales growth, excluding food services, has experienced similar growth to Colorado in 2023, growing 1.9% over the first half of the year, buoyed by resiliency in automobile sales and sales growth in food and beverage stores. Overall real goods spending within personal consumption expenditures at the national level has exhibited strength, averaging 3.5% annualized growth on a quarterly basis over the first three quarters of 2023. Also, while national consumer sentiment remains below historical averages, the University of Michigan Consumer Sentiment Index stood at 67.9 in September 2023 compared to 58.6 one year prior—a 15.9% increase.

Despite the retail trade sector seeing slowing job growth and retail trade sales decelerating from highs reached during the pandemic economic recovery, the sector—albeit uneven—remains in a relative position of strength in the overall economy due to the resilient consumer nationally and in Colorado. However, in 2024—similar to 2023 —the Colorado retail trade sector is forecast to record slower jobs and sales growth compared to historical averages as tight monetary policy, sticky inflation in certain sectors, and dwindling household savings place a damper on potential growth.

Colorado Auto Sales

New motor vehicles have experienced a year of recovery in 2023, despite being plagued by inventory shortages and supply chain issues during a period that should have been a post-COVID rebound. In 2022, sales dipped to a decade low. While projections for 2023 show the market on a road to recovery, sales still lag behind those of the late 2010s.

The most recent data show that through the first three quarters of 2023, new vehicle sales amounted to 154,465, a 5.5% increase over 2022 numbers. Using seasonally adjusted numbers, this would predict total sales of 209,000 vehicles in 2023 and 220,000 in 2024. This would indicate that there are approximately 14 more months until the vehicle market would return to what the economy would consider normal.

Looking holistically at the new motor vehicle market, two factors weigh heavily on consumers. The most prevalent factor is steadily increasing interest rates. According to Experian, new car buyers with good credit (750+) were seeing average interest rates between 6 and 7% for new cars and between 11 and 12% for used cars. Buyers with average to poor credit are seeing rates in the double digits. By contrast, average interest rates have not exceeded 8% since 2000-2001. Capital One reports that for an average priced car, each additional 1% interest could mean a difference of $21 per month, or $1,500 over the course of the loan.

As a byproduct of rising interest rates, vehicle prices have had to slow their growth to keep mainstream buyers in the market. Whereas 2021 saw vehicles selling above Manufacturers' Suggested Retail Price (MSRP) for the first time in recent memory, those sales are becoming a relic of the past with the reintroduction of manufacturer incentives (for combustion and electric vehicles). Additionally, many of the most popular models had waitlists of between 8 and 24 months at this time last year. Many of those vehicles sit on dealer lots today ready to be sold. Only the newest models seeking to scale to full-rate production, or beholden to a very specific hard-to-find component continue to experience such delays. Many dealers report having a new car inventory of approximately 21 days' worth of sales. In prepandemic years, that number may have been 30-45 days; in 2022, it was often 10 days or less.

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Trade, Transportation, and Utilities

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RETAIL SALES, 2014-2024
(In Billions of Dollars)

Year	Total Retail Trade Sales[a]	Percentage Change
2014	$79.3	7.1%
2015	83.3	5.1
2016	87.9	5.5
2017	91.1	3.7
2018	95.4	4.7
2019	99.8	4.6
2020	108.6	8.9
2021	125.4	15.4
2022[a]	136.4	8.8
2023[b]	139.4	2.2
2024[c]	144.0	3.3

[a]Excludes food services. [b]Estimated. [c]Forecast.
Sources: Colorado Department of Revenue and the Colorado Business Economic Outlook Committee.

Slightly less predictable is the long-term impact on the availability of new cars attributable to the United Auto Workers strike occurring at several domestic production plants for Ford, General Motors, and Stellantis (formerly Fiat Chrysler Automobiles). At the time of publication, two plants' workers had ratified an agreement, with only General Motors still negotiating. The stoppage of production of new vehicles, especially some of those lines' most profitable models, will impact the availability for the next 12-24 months, jeopardizing the accuracy of predicted sales. Through the end of October, one estimate was that the strike to date had cost automakers almost $4.2 billion.

However, growth in Colorado has been neither linear nor in line with the rest of the country. Colorado's retail sales have been growing, but at a rate below the national average. Typically, the Denver Metro area would lead the way in growth. But at 4.4% growth, Denver trailed behind Northern Colorado (7.8%), the Western Slope (6.9%), and Southern Colorado (6.4%).

When we examine a market fragmented by fuel type, we see that state government, utility providers, and retailer/manufacturers are all leaning into vehicle purchase incentives to promote battery electric vehicles and plug-in hybrid vehicles. Congress rejuvenated the federal EV tax credit late in 2022, offering up to $7,500 for income-qualified purchasers. The state of Colorado extended its Innovative Motor Vehicle Tax Credit, which provides a $5,000 refundable tax credit to any purchaser of any battery-electric vehicle. The Colorado Energy Office recently introduced a Vehicle Exchange Program, where an income qualified consumer can trade in an older or higher-emitting vehicle for up to a $6,000 rebate on the purchase of a new battery electric.

The combination of these tax credits more than offsets the increase in price attributable to rising interest rates, but only for electric vehicles. This in part has contributed to Zero Emission Vehicles (ZEV) reaching a 17.1% market penetration in the third quarter of 2023. This keeps Colorado in the top five states in the country in terms of electric vehicle adoption. However, with the recent promulgation of California's Clean Cars II rule, the state will need to more than double that number, reaching 41% by 2027 and landing at 82% zero emissions by 2032. Despite an impressive 17% ZEV penetration this quarter, year-to-date numbers show that percentage amounting to 22,355 units sold. This would leave Colorado with approximately 720,000 units remaining to reach its 2030 goal of 940,000 ZEVs.

Interestingly, pure hybrid vehicles continue to sell quickly even without financial incentives. Of new vehicles registered in 2023, 9.2% were hybrid, proving the vehicle as a middle ground between combustion vehicle and battery electric. As the price of gas continues to hover around $4 per gallon, the popularity of hybrids will remain high.

Regardless of powertrain, Coloradans choice for type of vehicle has remained unphased. There is a clear choice for pick-up trucks and sport utility vehicles. In fact, the light truck segment reached 91.7% on the Western Slope, a new record for the state, while the lowest market penetration for light trucks was in Southern Colorado—at 84.2%. Rivian, which sells only electric pick-up trucks and SUVs, managed a 140% increase in sales this year, despite their overall sales paling in comparison to major manufacturers. Typically, higher gas prices are a deterrent for the sales of larger vehicles. But as fuel prices have hovered around $3.60/gallon throughout 2023, the market for larger vehicles remains unmoved. And notably, the western counties with the highest percentage of light duty trucks have the highest average gas prices in the state.

The used car market has been on a yo-yo trajectory this year. In the first quarter of 2023, the lingering supply chain shortage and lack of inventory caused used and wholesale vehicle prices to rise precipitously. Those numbers began to subside in Q2. However, rising interest rates—higher on used vehicles than new ones—caused many drivers to keep their current vehicles longer, avoiding higher payments. While this does temper demand slightly, it also deprives the used vehicle market of newer model used vehicles, which are typically the used market's best sellers.

Further, recent legislation has prevented cars that have had tampered emissions systems from being bought, sold, leased, or rented. Given the number of cars that were subject to catalytic converter theft in 2022, this may reduce the availability of high-quality used cars reentering the market after tampering under a previous owner. The absence of these cars would further increase demand in the face of diminished supply.

Transportation And Warehousing

The Transportation and Warehousing sector includes air, railroad, and water transportation; trucking; taxi services; urban transit; couriers; warehousing; and pipeline companies.

Warehousing

Fulfillment centers are not a new idea, and neither are warehouses, warehousing, or mail order (think JCPenny

COLORADO AIRPORT STATISTICS, 2013-2022
(In Thousands)

Passengers and Cargo	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Passengers (in thousands)[a]										
Denver International Airport (DEN)	52,556	53,473	54,015	58,267	61,379	64,495	69,016	33,742	58,829	69,286
Colorado Springs Municipal Airport (COS)	1,300	1,250	1,179	1,298	1,675	1,725	1,672	728	1,864	2,135
Aspen-Pitkin County Airport (ASE)	413	435	467	509	490	571	608	368	498	600
Montrose Regional Airport (MTJ)	169	175	205	230	245	268	316	202	377	466
Grand Junction Regional (GJT)	422	428	429	465	481	488	549	278	505	444
Eagle County Regional Airport (EGE)	334	330	314	328	309	348	380	286	404	430
Yampa Valley Airport (HDN)	184	184	188	215	193	200	212	176	300	394
Durango-La Plata County Airport (DRO)	386	388	374	376	374	379	391	199	400	366
Gunnison-Crested Butte Regional Airport (GUC)	62	63	69	70	65	73	72	58	78	104
Telluride Regional Airport (TEX)	13	7	0	0	5	4	11	7	13	24
San Luis Valley Regional/Bergman Field (ALS)	14	8	6	8	13	14	20	9	24	20
Pueblo Memorial Airport (PUB)	13	14	7	5	8	21	24	11	19	16
Cortez Municipal Airport (CEZ)	16	8	5	9	16	16	17	11	12	14
Fort Collins-Loveland Municipal Airport (FNL)	5	4	7	9	6	5	6	N/A	N/A	N/A
Total Passengers	55,888	56,767	57,264	61,788	65,262	68,607	73,293	36,075	63,323	74,299
Cargo, Freight, and Air Mail (in millions of lbs.)										
DEN Freight and Express	470	487	491	504	525	559	628	614	673	724
DEN Air Mail	29	33	55	47	60	54	44	47	58	50
DEN Total	499	519	546	552	585	614	672	661	732	774

Note: Excludes airports with few passengers.

[a]Passengers include enplanements and deplanements. For airports that do not report passenger traffic, enplanements from the Federal Aviation Administration are doubled to reflect estimated

Sources: Denver International Airport, Colorado Springs Municipal Airport, Grand Junction Regional Airport, Eagle County Regional Airport, Aspen-Pitkin County Airport, Durango-La Plata County Airport, and the Federal Aviation Administration.

catalog). Substitute mail order with ordering online and give people a taste of two-hour home delivery service—and so a revolution begins. From 2011 to 2016, employment in Colorado warehousing increased modestly (3.2% per year). In 2017, however, employment in this subsector jumped by 30.9% (from 7,036 to 9,207 people) and in 2018 it nearly doubled with further acceleration noted through 2022. At the end of 2022, approximately 24,000 Coloradans were employed in warehouses; many of them helping to facilitate a trend whereby consumers purchased more things online and received those items faster than they might have in the past.

The trend toward home delivery started well before the pandemic and yet uptake of this service was accelerated significantly by the pandemic. This initially took the form of people purchasing essential items online verses at the grocery store. And yet as the pandemic played out, those unable to leave their homes in pursuit of entertainment (vacations, movies, dining out) brought forward consumption of goods online (as a form of entertainment) and thereby reduced their attachments to brick-and-mortar establishments. This is evident in the rapid increase in warehousing facilities built (or reclassified) in Colorado from 2020 forward. The number of warehousing establishments in Colorado increased from 238 in December 2019 to approximately 283 in December 2022; that is nearly a 19% increase (4.7% annualized) in a sector of real estate that had only moved modestly since 2014. The increase in establishments reflected continued optimism on the part of online retailers and a willingness

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Trade, Transportation, and Utilities

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COLORADO ELECTRIC POWER CONSUMPTION 2014-2024 (In Millions of Kilowatt Hours)					NATURAL GAS (In Billions of Cubic Feet)	
Year	Nonresidential	Residential	Total	Percentage Change	Total Gas Consumption	Percentage Change
2014	35,304	18,093	53,397	-0.1%	479.0	2.4%
2015	35,731	18,385	54,116	1.3	466.9	-2.5
2016	35,968	18,834	54,802	1.3	441.0	-5.5
2017	36,215	18,615	54,830	0.1	438.1	-0.7
2018	37,163	19,287	56,450	3.0	485.7	10.9
2019	37,116	19,405	56,521	0.1	514.0	5.8
2020	35,567	20,483	56,050	-0.8	517.4	0.7
2021	35,726	20,625	56,351	0.5	483.2	-6.6
2022	36,473	20,834	57,307	1.7	503.5	4.2
2023[a]	36,100	20,170	56,270	-1.8	506.4	0.6
2024[b]	36,640	21,040	57,680	2.5	498.7	-1.5

[a]Estimated. [b]Forecast.

Sources: Energy Information Administration, Xcel Energy, and Colorado Business Economic Outlook Committee.

of companies (and investors) to expend capital to improve supply chains in pursuit of market share.

For example, Amazon constructed several build-to-suit fulfillment centers around Colorado (Thornton, Aurora, Englewood, Colorado Springs) during that time. The Colorado Springs Facility alone is reported to house approximately 3.7 million square feet of space. To put that in perspective, Denver industrial had approximately 247 million square feet of space before 2019 and currently (November 2023) has about 263 million square feet. That suggests 6.5% growth at a time when demand for other commercial real estate products was otherwise flat or contracting. Average asking lease rates for industrial space around Denver showed resilience during the pandemic but have softened slightly over the past year.

Higher borrowing costs that have fueled uncertainty have cooled the economy, as well as demand for warehouse space. Until market sentiment improves, and interest rates are shown to have turned a corner, even relatively new warehouse space may remain underutilized.

Employment projections for Warehousing and Storage for Colorado reflect a recent slowdown in growth in this industry; however, the longer-term projection (10-year) shows modest increases.

Using Quarterly Census of Wages and Employment (QCEW) data, Colorado's employment in Warehousing and Storage peaked in February 2022. This resembles the trend seen nationally.

From a labor point of view, the long-term projections for Colorado would be flat without an additional employment forecast from a large, partially built warehouse facility in Loveland. Amazon reaffirmed its commitment to completing the partially build structure back in June 2023, but the timing is uncertain and even if completed, employment ramp up would not be assured given current market conditions. While other Amazon, or Amazon-like, facilities may open over the next decade, it is especially difficult to anticipate what will happen around employment in this industry given its sudden increase in hirings and more tempered reversal. Forecasting employment in the warehouse industry is further obscured due to wider use of automation within the industry.

Air Transportation

According to the Bureau of Transportation Statistics (BTS), airlines carried nearly 606 million passengers year-to-date (YTD) July 2023, 15% above the same period in 2022, and just 1% below 2019 levels. Colorado is experiencing a strong rebound, significantly outpacing the U.S. overall, on an increase in passenger traffic volume of 11% compared to the same period in 2019.

The four largest U.S. carriers—American, Delta, Southwest, and United—all recorded profits for the third quarter 2023. However, U.S.-based ultra low-cost carriers (ULCCs) Frontier and Spirit reported losses. While 2022 saw outsized demand for domestic and close-in international travel (e.g., Mexico), which benefited all carriers, 2023 saw very strong demand for Europe and, increasingly, other long-haul destinations, which benefits legacy carriers that operate widebody aircraft. Overall, leisure travel continues to lead the recovery, and business travel remains approximately 15% behind 2019 levels.

Colorado has a total of 14 commercial service airports. Thirteen of the 14 airports had scheduled commercial passenger service in 2023; only Northern Colorado Regional Airport (FNL) did not have scheduled commercial flights. Three of Colorado's airports, Alamosa (ALS), Cortez (CEZ), and Pueblo (PUB), remain under the federally subsidized Essential Air Service (EAS) program.

Passenger traffic at Denver International Airport (DEN) year-to-date September 2023 increased by 12% compared to the same period in 2019. The state's 2nd-busiest airport, Colorado Springs (COS), has experienced a 38% increase in passenger traffic for year-to-date September 2023 compared to the same period in 2019. COS passenger traffic is 2.9% of DEN volume.

Across the state, most airports have exceeded 2019 passenger traffic volume. In percentage terms, Telluride (TEX), Steamboat Springs/Hayden (HDN), and Montrose (MTJ) have seen the most growth, with HDN and MTJ boosted by Southwest Airlines, which inaugurated service in December 2020. For YTD July 2023, only Aspen (ASE) and Pueblo (PUB) have reported declines in enplanements versus the same period in 2019 while traffic at Grand Junction (GJT) is flat.

Denver International Airport

DEN is owned and operated by the city and county of Denver. The city's Department of Aviation employs approximately 1,300 people at the facility. Year-to-date through September 2023, DEN's three largest carriers by total passenger traffic were United (47%), Southwest (31%), and Frontier (10%). In 2023, 23 carriers operated nonstop service to 214 destinations worldwide from DEN—187 domestic airports in 45 states and 27 international airports in 15 countries.

In 2019, DEN served just over 69.02 million passengers, ranking as the 5th-busiest airport in North America and the 16th-busiest in the world. In 2022, DEN eclipsed 2022 passenger volume by 0.4%, serving a total of 69.29 million passengers. In 2022, for the 2nd-consecutive year, DEN ranked as the 3rd-busiest airport in both North America and the world, the highest ever ranking for DEN.

DEN has set all-time monthly passenger traffic records for every month in 2023 through September. July 2023 was the first month in DEN history to surpass seven million monthly passengers and now ranks as DEN's busiest month ever; August 2023 also surpassed seven million passengers. DEN had the four busiest months in its history in 2023: July (#1), August (#2), September (#3), and June (#4), surpassing the previous all-time monthly high set in July 2019. For year-to-date July 2023, DEN ranks as the 3rd-busiest airport in North America and the 5th-busiest airport in the world.

For year-to-date September 2023, DEN's domestic passenger traffic has increased by 11% compared to year-to-date September 2019, while international passenger traffic has surged, growing by 25% and setting all-time records in every month of the year. After a nearly three-year hiatus, United Airlines resumed nonstop flights between DEN and Tokyo's Narita International Airport (NRT) in March 2023. This was the last nonstop international service to return to DEN following border restrictions and suppressed demand resulting from the COVID-19 pandemic.

A significant trend that has developed is a higher percentage of passengers using DEN for connecting flights. In 2019, 64% of DEN passengers were origination/destination (O&D) passengers—beginning or ending a trip at DEN—while 36% were using the airport to connect to another flight. For year-to-date September 2023, 58% of DEN passengers were O&D, while 42% were connecting. This is primarily driven by a shift in the makeup of Southwest Airlines passengers at DEN. In 2019, 28% of Southwest passengers were connecting to another flight. This number increased by 16 points to 44% for year-to-date September 2023.

In 2023, for the 2nd-consecutive year, DEN ranked as the largest operation in terms of seat capacity for three airlines—United, Southwest, and Frontier. DEN has accommodated the growth of these carriers through the addition of new gates. DEN's Concourse Expansion Program will be completed in 2024 when the Concourse A ground-load facility (GLF) opens; Frontier Airlines will operate in the 14-gate GLF. Construction in the Great Hall of Jeppesen Terminal to relocate security screening, update airline ticket counters, and provide enhancements to the overall customer experience is estimated to be fully complete in 2027-2028 with major portions of the project opening along the way.

Utilities

Ongoing conservation efforts helped drop electricity consumption in 2023 despite continued economic growth. Retail electricity prices were up 1.6%, with consumption down 1.8% to 56,270 million kWh in 2023. Residential electricity usage led the decline, down 3.2% as more workers returned to the office. Continued growth in electric vehicles sales and electrification of heating are expected to push up electricity consumption by 2.5% in 2024.

Capital investment to decarbonize emissions continues to be the theme across the utility industry led by several projects in Colorado. The Xcel Energy resource plan was filed in September 2023, with a recommended portfolio for an 85% carbon reduction and full exit from coal generation by 2030. The plan consists of 3,406 MW of wind, 1,969 MW of large scale solar, and 1,200 MW of distributed solar, and an additional $2.9 billion in transmission expansion to integrate solar in addition to the $1.7 billion Pathway Project already under construction, enabling 5.5 GW of renewables.

Xcel Energy also filed the Colorado Clean Heat Plan in August 2023 with a preferred portfolio that would cut greenhouse gas emissions 28% by 2030, with anticipated Colorado Public Utilities Commission approval in mid-2024. Tri-State Generation and Transmission Association started the process to apply for Inflation Reduction Act funding to achieve significant greenhouse gas reductions, clean energy additions, and stranded asset relief.

Colorado natural gas consumption grew 0.6% in 2023 to an estimated 509.5 BCF with prices down 20%. The push for electrification is expected to reverse the trend in 2024 with consumption forecast to drop by 1.5%. Utilities employment moved up by 300 jobs to 9,000 in 2023 and is expected to add another 100 jobs in 2024, with hiring for new initiatives offsetting retirements.

Contributors:
Tim Sheesley, Xcel Energy (Chair)
Gregory Fulton, Colorado Motor Carriers Association
Matthew Groves, Colorado Automobile Dealers Association
Laura Jackson, Denver International Airport
Brian Lewandowski, University of Colorado Boulder
Will Mixon, Colorado Office of State Planning and Budgeting
Pam Reichert, Denver International Airport
Tim Wonhof, Colorado Department of Labor and Employment

Information

Companies in the Information industry are responsible for creating, distributing, and transmitting information. In 2022, the Information industry added 3,300 jobs to total 79,500 jobs, the second year of growth following the COVID-19 pandemic. However, job growth softened in 2023 as software publisher employment weakened, long-run declines in traditional publishing employment and telecommunication industry employment continued, and film, television, and media employment remain subdued and below prepandemic levels.

Publishing Sector

The Publishing sector includes any firm that issues print or electronic copies of original works for which they own a copyright, excluding internet firms. Products include software, newspapers, periodicals, books, directories, databases, calendars, and greeting cards. Over the past two decades, the types of products produced by the publishing industry have diversified to include an increasing number of electronic and internet-based products, such as audio, downloadable files, digital books, podcasts, and mobile device applications. Along with increased consolidation and automation, the digital transformation of the publications industry has impacted employment in significant ways.

Software publishing has been a shining source of growth for the publishing industry, offsetting declines across most other subsectors since 2015. Yet, software publishing employment weakened in 2023 with tech industry layoffs prompted by a reevaluation of the business climate and a race to find cost-cutting measures to boost profits. Colorado publishing industry employment is expected to decline 2.5% in 2023 and 0.6% in 2024 as the long-run decline in traditional publishing continues, and as the software publishing sector recalibrates.

AI will impact the publishing industry in the years ahead and may contribute to job gains for some publishing tasks, including development of AI programs among software companies. Overall, however, AI is expected to further contribute to consolidation and automation in the industry.

Newspaper Publishing

Consistent with nationwide trends, Colorado continues to experience a long-run decline in the newspaper publishing industry. Newspaper readership has dropped over time as new and free digital information options have emerged. News sources have shifted from traditional news to web search results and social media feeds, and shifted from readership to audio and video content consumption. Lagging advertising sales and difficulties monetizing digital content amid plentiful free alternatives have pushed most local news publishers into extinction. The industry has seen dramatic restructuring and consolidation since the early 2000s. The COVID-19 pandemic exacerbated these trends in 2020 and 2021. Additionally, recent nationwide surveys conducted by the Pew Research Center and the Reuters Institute suggest that distrust of media and "bad news" avoidance have contributed to lower news consumption over the past five years.

The local news industry has become increasingly reliant on donations from foundations and other philanthropic organizations and the public. Additionally, federal and state public funding is on the rise to keep local journalism alive.

Colorado newspaper publishing employment is about a quarter of what it was in the early 2000s. In 2022, there were 144 private newspaper publishing establishments employing 1,800 employees. Further industry consolidation is expected in the years ahead, resulting in modest to moderate employment declines in 2023 and 2024.

Book Publishing

The book publishing industry experienced a boost in activity at the end of 2020 and into 2021 as consumers turned to reading as an indoor leisure option amid pandemic-related health concerns. As the pandemic has eased, industry activity has slowed. According to the Association of American Publishers, nationwide revenues to book publishers were down 2.6% in 2022 but remained above prepandemic levels. Year-to-date through August 2023, revenues are down 0.5% over the same eight-month period compared to last year. Revenues have fallen for paperbacks, mass market publications (smaller, less durable paperback books printed in large quantities), and eBooks. Partially offsetting weak sales elsewhere, digital audio showed a strong increase (15.4%) year-over-year, reflecting a growing consumer preference for listening to books instead of reading.

The largest Colorado book publishing employers are concentrated along the Front Range, with the largest establishments in Denver, Boulder, and Colorado Springs. Many local book publishers serve niche markets with a stable and even growing consumer base, including self-publishing and religious and spiritual publishing markets. Colorado book publishers are adapting with technological change and evolving consumer preferences for audio books and digital content. As of 2022, private book publishing establishments totaled 147 in

INDUSTRY SNAPSHOT INFORMATION

Nominal GDP, 2022 ($ Billions)	30.2
Real GDP, 2022 ($ Billions, 2017 Dollars)	32.7
2022 Real GDP Growth Rate	11.8%
Total Employment, 2022 (Thousands)	79.5
2022 Employment Growth Rate	4.3%
Employment Growth National Rank	40
Share of Colorado Employment	2.8%
Share of National Employment	2.0%
Average Wage, 2022	136,935
Percent of Statewide Average Wage	181.2%
2022 Average Wage Growth Rate	4.0%

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics.
Note: 2022 employment includes revised estimates.

the state employing 902 workers. Industry employment is expected to decline slightly in 2023 and 2024 as the publishing industry shifts further into multimedia publishing spaces.

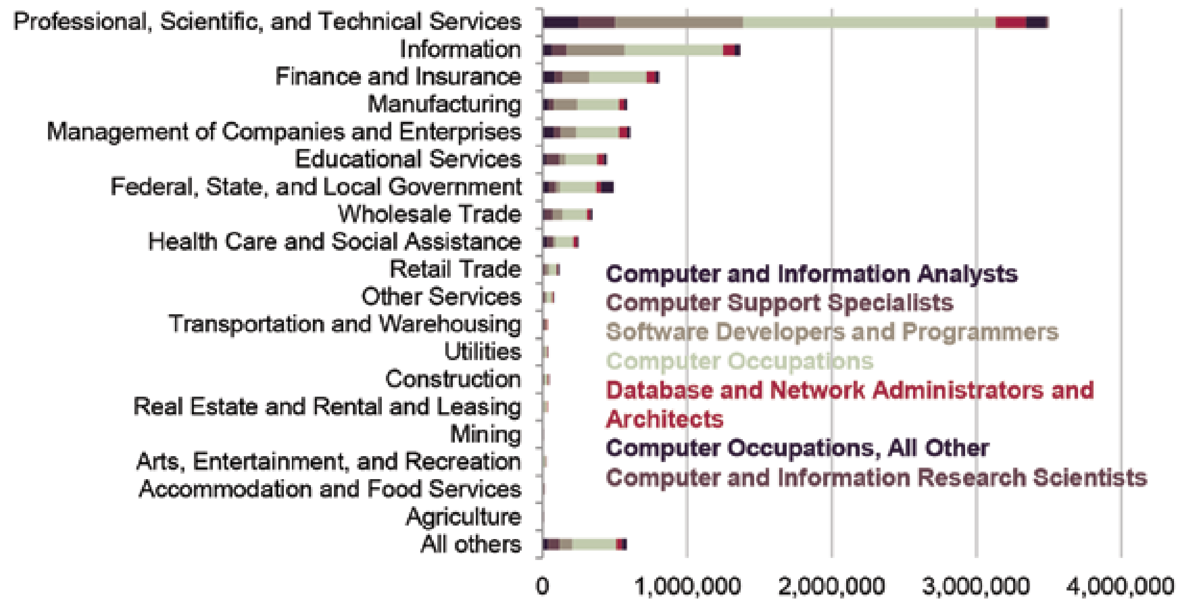
Software Publishing

The software publishing industry includes a wide range of products, including business analytics and enterprise software; database, storage, and backup software; design, editing, and rendering software; operating systems and productivity software; smartphone apps; and video games. (Note: The closely related custom computer programming services sector is included in Professional and Business Services.) Software publishers in Colorado range in size from small startups to major corporations with offices in the state, such as Cisco Systems, Google, Hitachi, IBM, and Oracle. Colorado has a high concentration of employment in the software industry (nearly twice the national average).

Fueled by organic, homegrown growth, as well as through acquisitions and company relocations, the sector has experienced rapid growth between 2015 and 2022. In 2022, employment levels exceeded the peak level experienced during the early 2000s' dot.com boom and peaked at about 20,000 jobs based on the most recent estimates published by the Bureau of Labor Statistics. Yet, employment growth has weakened along with other information technology jobs in other sectors. In early 2023, U.S. tech companies, including some prominent software publishers, announced layoffs in pursuit of cost-saving measures on recessionary fears, overhiring during the pandemic, and mounting investor pressures to maintain and increase profits. Software publishing employment is expected to fall slightly in 2023 and remain flat in 2024 as employers reevaluate the business climate.

AI technology is sure to impact the software publishing industry as Colorado-based companies pursue development of AI software and leverage its efficiencies for software development.

NATIONAL COMPUTER AND IT JOBS BY OCCUPATION ACROSS INDUSTRIES, 2022



Source: Bureau of Labor Statistics, Occupational Employment Statistics, May 2022.

Other Publishing

The publishing industry also includes companies producing periodicals, directories, mailing lists, and greeting cards. Like book and newspaper publishers, these firms have experienced a long-run decline in employment that began in the early 2000s. Digital technologies have replaced print media, and the industry has restructured and consolidated considerably. Some of the largest employers in these subsectors in Colorado provide marketing services through the collection of consumer data and consumer credit and loyalty programs. Ongoing consolidation in the industry is expected to continue in 2023 and 2024 as publishing further evolves into the digital realm.

Telecommunications

Employment in the Telecom sector declined by 2.8% (700 jobs) in 2022 after falling by 4.8% (1,300 jobs) in 2021. Approximately 24,800 people worked in the Telecom sector in 2022 across 794 establishments throughout Colorado. Nearly 53% of these establishments are located in the Denver Metropolitan Statistical Area (MSA); however, with many larger companies based in the metro area, over 70% of all Telecom jobs are in the Denver MSA. The sector includes large Colorado-based companies such as DISH Network and Zayo.

Since 2019, the Telecom sector has experienced an average annual employment decline of 630 jobs. The sector was significantly affected by the pandemic-induced

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recession, much like other sectors, and employment is still generally trending downward in 2023. In November 2023, DISH Network announced that it plans to layoff more than 500 Colorado employees by the end of 2023. Employment in the Telecom sector is projected to decrease through the end of 2023 and continue declining, albeit at a slower pace, in 2024.

Broadcasting and telecommunications are combined for real GDP reporting; this combined sector increased 18.3% in 2020, declined 1.3% in 2021, but increased 7% in 2022. In 2022, GDP in the telecom and broadcasting sector accounted for just 3.2% of the state total, up from 1.9% of the 2017 statewide GDP.

Employment in the Telecom sector has been on the decline since a high of 46,800 in 2001 and has observed a five-year compound annual growth rate (CAGR) of -1.1% and a 10-year CAGR of -1% (2022). Earlier in the decade, from 2001 to 2006, the sector's employment experienced a 39.7% decline as the industry shed 18,600 jobs. This trend was reversed for three years, from 2006 to 2009, as 2,000 jobs were added over this period. Job losses were again the norm from 2009 to 2012, with payrolls falling a combined 3,100, or 11.3% (with a considerable portion of this loss due to the cuts at CenturyLink after its merger with Qwest). Since 2013, Telecom employment has fluctuated, with three years of job growth and six of decline.

INFORMATION EMPLOYMENT
2014–2024
(In Thousands)

Year	Publishing	Telecom	Other	Total
2014	21.1	27.5	21.9	70.5
2015	21.2	27.0	22.8	71.0
2016	21.3	27.4	23.5	72.2
2017	21.8	26.1	24.4	72.3
2018	22.3	27.1	26.2	75.6
2019	22.8	26.7	27.6	77.1
2020	22.7	26.2	26.2	75.1
2021	23.9	24.9	27.4	76.2
2022[a]	25.7	24.8	29.0	79.5
2023[b]	25.1	23.9	28.6	77.5
2024[c]	24.9	23.2	28.4	76.5

[a]Revised. [b]Estimated. [c]Forecast.

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

The Wired and Wireless Telecommunications subsector, created in 2017 when wired and wireless carriers were collapsed into the same component sector, accounted for a majority of the Telecom job losses, with employment falling 1,049 positions in 2021 after declining 307 in 2020. Satellite telecommunications employment declined 6.2%, and other telecommunications employment declined by 7.9% in 2021 year-over-year (latest available data).

Broadband

Broadband has emerged as a critical component of economic development and is ever more important with increased remote work, online education, and health care. Economic research shows that the introduction and improvement of broadband services boost employment growth, reduce unemployment rates, and help attract and retain high value-added firms and workers. These impacts are particularly large in rural areas.

Approximately 91% of Coloradans have access to broadband at speeds of 100 Mbps or faster, ranking the state 28th in broadband access, according to BroadbandNow. However, only 37% of Coloradans have access to fiberoptic services. Additionally, unequal access to broadband across the state has created a digital divide. Broadband provisions in Colorado communities located outside the Front Range present unique challenges, and over 84% of the state's population lives in urban areas along the Front Range. Approximately 93% of rural Colorado had broadband access in 2022, up from 70% in 2017; the Funding for Broadband Deployment bill (HB 1289), which was signed by Governor Polis in 2021, is expected to get the state to 100% rural broadband coverage. Still, an estimated 3.9% of the state population, approximately 227,760 people, do not have access to a wired connection capable of 25 Mbps.

Smaller communities have been slower to engineer and deploy broadband utilities infrastructure, but they are catching up. Successful deployment in small towns, such as Red Cliff, Meeker, and Wray, provide innovative and inspiring examples for other communities to follow.

For example, a 481-mile fiber line from Georgetown to Rangely that serves a 10-county region and is run by the Northwest Regional Council of Governments became operational in May 2020. In November 2019, residents in smaller municipalities like Edgewater, Rico, and Mead, along with larger towns including Lakewood, Greenwood Village, and Parker, voted to approve the provision of municipal broadband or partner with the private sector to provide the service. In June 2021, Mountain View Electric Association, in partnership with Conexon Connect, announced a $190 million expansion of broadband services by bringing fiber broadband to rural portions of Arapahoe, Crowley, Douglas, Elbert, El Paso, Lincoln, Pueblo, and Washington counties. In July 2022, the Colorado Broadband Office (CBO) launched a new $170 million grant program to support broadband expansion and modernization through the state. The grant program was created as part of the American Rescue Plan Act (ARPA) for broadband expansion across the country.

Expanding broadband provision is a key focus of Colorado economic development, information technology, and local government capacity-building efforts. Colorado has developed a program through the Colorado Department of Local Affairs (DOLA) that has awarded over $20 million in matching grants since 2016 for a statewide investment of $34 million to numerous rural communities throughout the state, including Estes Park, Red Cliff, Park County, and Rio Blanco County, to help with strategic broadband planning and deployment of middle-mile broadband projects. There are

two broadband grant programs currently available in Colorado through the DOLA Broadband Program, including the Broadband Interconnectivity (HB21-1289) Grant Program with $5 million available to provide public institutions, private businesses, and citizens access to reliable broadband service, as well as the Broadband Planning and Infrastructure Set-Aside with $3.6 million available to support local governments in improving broadband services.

Broadband access allows many rural communities the potential to attract remote workers and location-neutral businesses that can help diversify the economic base, but there are many other benefits, including public safety and health care. Many rural areas of the state would benefit greatly from telemedicine and remote health care monitoring, which have the promise to reduce health care costs while improving health outcomes. In October 2020, the United States Department of Agriculture (USDA) announced the investment of $6.3 million in high-speed broadband in rural Colorado, and another $10.5 million in August 2021. This funding is part of the effort to provide broadband services to unserved and underserved rural areas and is part of the $550 million Congress allocated to the second round of the ReConnect Program. In January 2023, the USDA awarded an additional $48.4 million to Fort Morgan and Buena Vista to expand rural electric infrastructure.

In November 2021, the Infrastructure Investment and Jobs Act (IIJA) allocated $65 billion to expand broadband in communities across the U.S, create more low-cost broadband service options, and subsidize the cost of service for low-income households. Under the funding, each state is designated to receive a minimum of $100 million, with a focus on broadband expansion and affordability. In September 2022, the USDA announced $502 million in loans and grants to provide high-speed internet access for rural residents and businesses in 20 states. In Colorado, approximately $13.8 million will be allocated to the Delta-Montrose Electric Association to deploy fiber and connect 3,577 residents, 148 businesses, 1 educational facility, and 765 farms to high-speed internet in the counties of Delta, Montrose, and Gunnison.

In addition, under the IIJA, Congress appropriated $42.5 billion to the National Telecommunications and Information Administration (NTIA) to administer the Broadband Equity, Access, and Deployment (BEAD) Program. In June 2023, it was announced that $826 million would be allocated to Colorado over the next five years to help provide equal access to affordable, fast, and reliable broadband service across the state.

Telephone

Telephone, the legacy business for telecom providers, has been experiencing a protracted decline since the turn of the century. The Centers for Disease Control and Prevention, which tracks landline use to assure representative samples in its health studies, reported that 72.6% of U.S. households had only cellphone service in 2022, up from 68.7% in 2021, and from the 65.8% in 2020. According to this study, fewer than 26% of all households still had a landline, and about 1.3% had only a landline. According to Leitchman Research, the top telephone companies lost nearly 1.5 million subscribers between Q3 2022 and Q3 2023, compared to a loss of 500,000 subscribers in 2022

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and a loss of 50,000 subscribers in 2021. Improvements in VoIP services have allowed internet and cable TV providers to compete with traditional wireline telephone services. Additionally, many of these legacy providers have lost landline subscribers to wireless and other competitors that offer free or lower cost long-distance calling. The most viable telecom companies focus on higher margin business-to-business sales and have diversified into separate wireless, wireline, internet, cable TV, and providers of emerging cloud-based and data center technologies.

Television

Similar to the decline in land telephone subscriptions, pay-TV companies have been losing subscribers at a continued steep rate due to the uptick in video-on-demand services. A report from Leitchman Research revealed that major pay-TV providers in the U.S. lost about 5.9 million subscribers in 2022, compared to a loss of 4.7 million in 2021, continuing the declining trend observed over the last couple years. As internet speeds have become faster and more affordable in many markets, customers have been "cord-cutting" and leaving traditional cable and satellite services. Leitchman reported that 83% of U.S. households have at least one streaming video service from 15 top direct-to-consumer and subscription video services in 2023 (up from 52% in 2015), with 42% of all adults streaming a top subscription video on demand (SVOD) service daily.

Telecom companies are trying to stem this decline by using new technologies like high-definition, on-demand, online, mobile, multicasting, and bundling services like Disney+ with Verizon subscriptions or including Apple TV+ with hardware purchases from Apple. These technologies help develop alternative revenue streams for traditional cable companies; telecoms that provide both cable and internet might lose a cable subscriber through cord-cutting but can continue to sell internet services to the same household. Coincidentally, the top cable and telephone providers in the United States (which represent 96% of the market) added 840,700 net additional broadband internet subscribers in Q3 2023, compared to 670,000 in Q3 2022. Broadband subscribers in the U.S. now total nearly 113 million—an increase of 2.6% year-over-year; cable companies provided broadband service to 76.2 million, while telephone companies provided service to 36.6 million.

Wireless

The pandemic, coupled with ongoing advances in wireless communications, has caused consumers to continue to move away from landlines and pay-TV providers. As more content is delivered wirelessly, and with 5G (fifth-generation) mobile networks now being rolled out, telecoms are fighting to expand their spectrum to meet the demands of bandwidth-intensive consumers. Wireless providers invested $39 billion in 2021 to power these wireless networks, an all-time high. Approximately 325 million Americans are now covered by 5G, up from 315 million in 2022, according to CTIA. By 2030, 5G networks are estimated to contribute between $1.4 and $1.7 trillion to the U.S. economy and create between 3.8 million and 4.6 million jobs.

According to the FCC, the number of connected devices exceeds 442.5 million, or 1.3 devices for every resident in the United States. While a survey by Deloitte found that 38% of Americans added internet-connected devices to their homes during the pandemic, the average number of devices per U.S. household decreased from 25 to 21 devices in 2023. In addition, more than 50% of surveyed respondents said at least one household member was working from home at least some of the time, up from 45% in 2022. According to Pew Research Center, 97% of Americans own a cell phone and 85% own smartphones (up from just 35% reported in the first smartphone ownership study in 2011). Additionally, tablet computers are owned by 53% of Americans (up from just 3% in 2010), but this share has plateaued over the past four years perhaps due to the increased size of many smartphones. The uptick in ownership of these data-hungry devices and the increasing prevalence of smart-home Wi-Fi connected devices like thermostats, doorbells, and appliances has resulted in increased demand for spectrum, especially high-band.

The rollout of 5G networks will take some time to cover all of Colorado's population, but Denver and Colorado Springs residents now have 5G coverage. These 5G networks have the promise to be 100 times faster than the current 4G networks and about 10 times faster than 4G LTE networks. The deployment of 5G networks will likely take a number of years to build out; these networks are designed to work on an extremely high bandwidth above 20 GHz, but this high-spectrum band cannot travel more than a mile versus the current 4G LTE that can reach devices within a 20-mile radius. The build-out of 5G networks will require numerous small cells/antennas installed 30 feet above the ground, likely on existing utility poles or streetlights. A number of these towers went up in 2019 throughout Denver in public right-of-ways that run between sidewalks and roads. The deployment of these small cells has been occurring a few blocks at a time; it will take a few years before most big population centers in Colorado are covered.

Data Processing

The Data Processing, Hosting, and Related Services industry is made up of companies that provide infrastructure for hosting or data processing services, which may include web hosting, streaming services, or application hosting. With the booming Internet of Things (IoT) taking over every aspect of life, the increasing popularity of AI, big data, and data analytics, skyrocketing data usage, and the accelerated need of businesses to digitize business models, data centers and cloud services are in high demand. Some examples of Colorado companies include Pax8 and Ibotta.

The industry is quite large in Colorado, with 1,715 firms employing almost 16,500 people in 2022, and wages are above average, at $155,730. With the ongoing increase in data usage and cloud services, industry employment in the state increased 7.2% in 2022 year-over-year, one of the few bright spots in the Information sector. The

COMPETING WESTERN STATES OFFERING FILM INCENTIVES (FY 2023)

State	Incentive	Allocated Funds (Millions)
California	20-25% tax credit	$330.00
New Mexico[a]	25% film / 30% TV tax credit	$130.00
Montana	20-35% tax credit	$12.00
Utah	25% tax credit	$8.30
Oklahoma	35-37% rebate	$30.00
Wyoming	15-30% rebate	$9.25

Source: Colorado Office of Film Television & Media.

[a] New Mexico adds 5% for Film & TV Production in Rural Areas.

INCENTIVIZED VIDEO GAME PROJECTS 2014-2023

Number of Completed Projects	16
Incentives Paid	$4.2M
Number of Jobs Created	541

Source: Colorado Office of Film Television and Media.

COLORADO FILM INCENTIVE PROGRAM 2014-2023*

Number of Completed Projects	130
Incentives Paid	$30.3M
Total Cast and Crew Positions Created	6,077

Source: Colorado Office of Film Television and Media.

industry has observed a five-year employment CAGR of 8.6% in 2022, and employment in 2022 was 51.3% above 2017 levels. The growth in firms is more significant, with 12.4% growth in 2022 year-over-year and a five-year CAGR of 12.5%. Pax8, headquartered in Greenwood Village, Colorado, saw three-year revenue growth of 571%, ranking it No. 1,038 on the 2023 Inc. 5000. The outlook for the Data Processing industry is strong, as spending on public cloud services is projected to grow by 21.7% in 2023 worldwide (according to Gartner). According to JLL, Denver is expected to see continued growth in data center usage and space acquisition by technology and finance institutions. The majority of data center demand in the Denver market is driven by technology, health care, banking and financial services, telecom, and retail and e-commerce companies.

Film, Television, and Media

Impact of Colorado Film Incentive

In May 2012, the Colorado Legislature passed a law providing an incentive that allows for a performance-based rebate of up to 20% of qualified Colorado expenditures for films, television series, commercials, and video games produced in Colorado. Since the incentive's inception, the increase in inquiries and applications has been palpable; as of October 2023, $30 million in incentives has been paid or conditionally approved to productions. The Colorado Office of Film, Television & Media (COFTM) reports $185 million in actual and predicted production spend and more than 6,000 cast and crew hires from the start of the program through 2023.

Using a multiplier effect, it is estimated that approved productions have (and will) generate over $330 million in economic impact to 55 counties in Colorado. The multiplier effect was extrapolated from the University of Colorado's Leeds School of Business 2011 study *Economic and Fiscal Impact Analysis of Actual Film Budget Scenario on Colorado* and the 2015 study *Colorado Film Incentives and Industry Activity,* which were more recently updated to include more contemporary data.

Film Incentive Process

Funding for the Colorado Film Incentive is allocated through the Colorado State Legislature. COFTM receives funding for the film incentive program at the beginning of the fiscal year, which starts on July 1, and funding gets allocated to projects on a first-come, first-served basis. To receive a film incentive, projects must meet statutory requirements during the application process, including meeting minimum spends and hiring at least 50% Colorado resident cast and crew members. After completing an internal review process by COFTM, each project is presented to the Economic Development Commission (EDC). The EDC was created by the Colorado General Assembly to promote economic development in Colorado. It consists of 11 Colorado business leaders, with three members appointed by the Senate, three appointed by the House, and five appointed by the governor. This group must vote to approve each project before a purchase order or contract is initiated and principal photography may commence. After completion of the film, television show, commercial, or video game, a Colorado licensed certified public accountant, who has completed training with COFTM, must review and sign-off on the project's qualified expenditures. After an additional review by the COFTM analyst, a check up to the approved incentive amount will be issued to the production company.

Over the last decade, Colorado's content creation scene has benefited from high-profile productions from major film studios and reputable independent production companies, such as Universal Studios and Netflix. A few notable films include the Netflix original films "Our Souls at Night" (Robert Redford, Jane Fonda); "Amateur" (Josh Charles, Michael Rainey Jr.); "The Hateful Eight" (Quentin Tarantino); "Furious 7" (Vin Diesel, Paul Walker); "Cop Car" (Kevin Bacon, Cameron Manheim); "Dear Eleanor" (Jessica Alba, Luke Wilson); and "Heaven Sent," a family friendly Christmas film directed by Michael Landon Jr. In television, Colorado received notable screen time with the incentivized Bravo TV series, "Top Chef," which showcased the state's agricultural landscape in addition to scenery in Denver, Boulder, Aspen, and Telluride. Recently, Colorado incentivized an episode of "Hometown Takeover" featuring Fort Morgan, Colorado. Since 2018, there has been a trend in unscripted television

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productions, with COFTM incentivizing 18 projects produced locally to air on Food Network, PBS, Facebook Live, HGTV, and Velocity Channel.

Growth of the Gaming Industry

Colorado's video game industry has also been boosted by 16 incentives for video game projects since the inception of the program, including various series produced by Deck Nine in Westminster and Project Iris currently being produced in Boulder by Serenity Forge. Deck Nine's most recent release, "Life is Strange: True Colors," debuted in the top 10 highest selling games on Xbox in September 2021, according to the NPD Group, a global market information company, and has since gone on to win a prestigious Video Game Award and was nominated for multiple BAFTA (British Academy of Film and Television Arts) awards. It also recently received the prestigious Peabody award. Since the inception of the film incentive program, incentivized gaming projects alone are estimated to have spent (or will spend) $27 million in local qualified expenditures. The vast majority of this spending is made up of wages and payroll spending, and most jobs in the local video game industry have low turnover and pay above-average wages.

In 2023, the video game industry can be expected to continue its exponential growth, both among consumers and producers. Consumers had more opportunity for screen time during the COVID-19 pandemic, and many continue to look to video games as both an escape and a hobby. Local video game companies are part of the multibillion-dollar gaming industry. Because of the COVID-19 pandemic, they became adept at working remotely in a profitable industry, and many local companies are expanding their output and local workforce. The option for working remotely is also creating opportunities for local companies to find and work with talent outside of the Front Range. Deck Nine Games is currently working on a program to hire talent in rural Colorado, expanding its reach and bringing in skilled workers from other areas of Colorado.

Colorado Film and Television Industry in Decline

Production of commercials has become a large part of the state's film market due to Colorado's beautiful natural landscapes and reputable commercial crew base. Thanks to partnerships across the state with eight COFTM-activated Regional Film Commissions and local film liaisons, the office now has a better scope of commercial activity. Since FY 2019, Colorado has remained a key location for the commercial industry including content for Skullcandy (Denver) and Harley-Davison (Leadville and Pueblo), Subaru (Telluride), Shane Co (Westminster), as well as local campaigns for Colorado Great Outdoors (Durango) and the Colorado Lottery (Jefferson County). However, as Colorado's crew base continues to shrink due to the inconsistent nature of the state's incentive program, it is likely that the state will begin to lose this, typically nonincentivized, business.

Colorado's infrastructure is also declining. Rental houses, which supply commercial and film productions with camera, lights, electrical equipment and more, and soundstages, which provide adaptable filming locations, are key to any community's film industry and allow access to gear and space for both in- and out-of-state companies. Rental houses are attractive to out-of-state companies because they do not incur the added expense of renting gear that must then be shipped from and returned to another state. Soundstages provide controlled, professional filming spaces that can be manipulated and made to look like any environment a production wants to create or could not find locally. Unfortunately, due to reduced and inconsistent General Fund allocation for the incentive program, Colorado rental houses are seeing a decline in business, and many rental houses and soundstages have downsized or closed in recent years.

In the first five years of the state's performance-based rebate, steady incentive funding led to a substantial increase in film and television crew. At the same time, with fewer incentive dollars and a decrease in larger, out-of-state productions, Colorado's film and television workforce has begun to look for opportunities in other film-friendly states, such as New Mexico and Georgia. Increases in film incentives in Utah and Montana have also attracted projects looking to film in the region.

From the inception of the 20% performance-based rebate through FY 2023, the Colorado Office of Film Television & Media has been allocated a total of $20.6 million in General Fund funding for incentives. Though continued funding reflects the success of the program thus far, COFTM must compete annually for General Fund dollars. COFTM was allocated $750,000 in FY 2023, a return to FY 2020's funding level, though nowhere near competing western states. The COFTM allocation continued to shrink since the office was allocated $5 million in the third year of the program. As a result of lower funding allocations, COFTM made an effort to support Coloradans who live and work within the state by only awarding incentive dollars to in-state applicants between FY 2018 and FY 2020. Fewer funds have resulted in fewer incentivized productions and a lower impact on both the state's workforce and economy.

In November 2020, the Economic Development Commission awarded the film incentive program an additional $2 million in funding. In June 2021, thanks to the passage of HB-1285, COFTM was allocated another one-time infusion of $6 million. This funding, paired with receiving an increase in the long bill allocation to $1.25 million, resulted in COFTM entering FY 2022 with $7.25 million in available incentive funds. In May 2022, COFTM received an additional $2 million from HB 22-1408. Thanks to these additional funds, COFTM has had an unprecedented amount of incentive funding available in recent years. This has led to an unprecedented number of projects being supported through the film incentive and the attraction of various larger scale and higher profile projects, including George Nolfi's "Elevation," an $18 million feature film, and two HGTV reality projects: "Hometown Takeover" and "Rock the Block," as well as Amazon's "Coach Prime Season 2." The effects of increased incentive funding are clear; however, the effectiveness of the program depends on maintaining a consistent level of funding that can be relied upon by Colorado crew members and both in- and out-of-state producers. If the incentive continues to fluctuate year after year, productions will continue picking other states over Colorado for their projects, the local industry will not be able to support local talent, and the crew will continue to leave the state and not return, gutting Colorado of its skilled workforce and diminishing opportunities for future productions to film in the state.

The total Colorado expenditure associated with projects incentivized by COFTM dropped drastically in years in which the budget was cut. Similarly, the number of cast and crew positions associated with projects incentivized by COFTM dropped in years with decreased incentive funding. Productions that were funded in years with fewer incentive dollars available tended to be smaller, with budgets that could only support smaller crews. Both cast and crew positions and overall local production spending have increased in recent years compared to years with lower incentive budgets, thanks to additional funding for the incentive program from the Economic Development Commissions' Strategic Fund (in October 2019) and the Colorado Legislature in 2021 and 2022.

Changes to the Colorado Film Incentive and Its Future

The film industry is incentive driven. Production companies regularly make filming location decisions based on the production budget's bottom line and any financial support they may receive from local governments. Colorado is constantly in competition with nearby states such as New Mexico, Montana, Arizona, and Utah for film production opportunities, and other western states receive much higher levels of incentive funding. As a way to make Colorado more competitive, HB 22-1408 was passed in May 2022. The bill did three things: it provided $2 million in additional incentive funding, it allowed the executive director of the Office of Economic Development (of which OEDIT is part) to authorize the approval of an incentive in an amount that exceeds 20% of local expenditures, and it created a Film Incentive Task Force. The Film Incentive Task Force includes state legislators, representatives from local SAG-AFTRA and IATSE unions, a representative from the Motion Picture Association, a representative from a Colorado business school, and the state's film commissioner. The purpose of the task force is to determine how to make Colorado's film incentive more effective. The task force presented findings and recommendations, including a recommendation of $15 million per year for five years in the form of a refundable tax credit. The Legislature during the 2023 session created and passed HB 1309. HB 1309 created a $5 million one-year refundable tax credit for film, television, and media projects to utilize. It will be effective only during the 2024 calendar year. Without a guarantee of year-to-year funding, the current program still lacks consistency and creates a lack of sustainability for the industry.

Limited and inconsistent funding for Colorado's incentive program puts the local industry at risk and takes away opportunities from Coloradans. Inquiring production companies with budgets too large to be fully supported by Colorado's limited funds move their films to neighboring states that offer similar scenery and larger funding opportunities. Western states have significantly more funding available than Colorado. Many other states also have various additional incentives for productions that meet certain requirements, including filming in rural or economically disadvantaged areas, filming in certain cities or municipalities that have their own additional incentives, and relocating a television show to the state, among others. Some states have, at this point, well-established film incentive programs, while others are still catching up. Arizona is one of the latest states to create a film incentive program, funding their program at $75 million for 2023, $100 million for 2024, and $125 million per year from 2025 through at least 2043, when the bill is set to sunset. The film industry is incentive driven. Colorado's content creation activity will continue to reflect the incentive program's annual allocation.

In May 2023, the Colorado Legislature passed a new $5 milllion, one-year refundable tax credit effective for the calendar year 2024. It sunsets in 2034. Although this is a promising step forward in terms of an increased incentive, the single-year timeline continues to offer no sustainable path forward for large scale production commitments which benefit neighboring states.

Strike Impacts

In 2023, two major guilds, the Writer's Guild of America (WGA) and the Screen Actors Guild (SAG) went on strike against the Alliance of Motion Picture and Television Producers (AMPTP). Although not a lot of projects in Colorado are WGA, there are a significant number of SAG productions. Multiple productions that have received incentive awards or were in the process of applying for the program had to shift their production dates or pull out of the incentive program entirely. Independent productions, those without funding or association with the AMPTP, would apply and receive an interim agreement to commence production. Colorado productions were just beginning to resume production planning and activities once they received their interim agreements, but the effects have been felt in the Colorado community. Feature films will often have larger crews and longer filming periods than commercial shoots, so there is an effect on crew employment opportunities due to the strike. The strike was resolved in November 2023, and the full effects will be forthcoming.

Workforce Development, Regional Access to Resources, and Public Access Stations

Film, television, and media content creation depend on technological resources, such as gear and software. Creators can join the industry with or without a four-year degree. Aspiring creators can enter the industry

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regardless of whether they hold a four-year degree. Yet, when it comes to film, television, and commercial production, having access to equipment, software, and occasionally studio facilities is imperative. Although the entry point costs for professional production equipment has dropped significantly over the past 10 years, many new professionals do not have the capital to invest in a full gear and software package, and rental house options have dwindled significantly. There are only eight public access stations left in the state, leaving many regions in Colorado with little to no access to professional gear or training opportunities that are vital for community industry development. Without these localized resources, communities are unable to support a necessary element that modern businesses need. Rural communities have businesses and organizations that need content creation, from social media spots to branded content, to traditional commercials. Without access to gear, workforce development programs and Career Technical Education, regional communities are forgoing or outsourcing these content elements.

COFTM has initiated several workforce development programs aimed at rural communities to help develop local talent and connections to local resources to fulfill this community need of local content creation. The Film Exposure Program was created to bring gear and hands-on training to rural high school students. Over the course of eight weeks, students and school district teachers work with a local media professional to create scripted scenes at each school site. The scenes are then edited together to make a collaborative short film. In addition, each school site receives a basic gear package for continued use beyond the program. COFTM also launched a Production Assistant Workshop pilot program, which introduces students to career pathways in the film, television, and commercial industries. Additionally, COFTM will be launching a tiered internship program for college and university students to attend site visits, receive one-on-one mentorship, and internship opportunities with regional production companies.

Known Colorado public access stations include:

- Aspen GrassRoots TV Channel 12
- Fort Collins Channel 97
- Aurora KACT-TV Channel 8
- Denver Community Television
- Longmont LCT Channel 3
- Denver Open Media
- KSUT is a Tribal Media Center in Ignacio
- KBDI Channel 12 Colorado Springs

Contributors:
Kate Watkins, Bright Fox Analytics (Chair)
Arielle Brachfeld, Colorado Office of Film Television & Media
Adam Illig, University of Colorado Boulder
Brian Lewandowski, University of Colorado Boulder
Makayla O'Malley, Colorado Office of Film Television & Media
Donald Zuckerman, Colorado Office of Film Television & Media

Financial Activities

The Financial Activities industry consists of two sectors that comprised 6.3% of statewide employment in 2022: (1) Finance and Insurance, and (2) Real Estate and Rental and Leasing. Financial Activities underperformed other industries in 2023, shedding 2,300 jobs or 1.2% of total industry employment. The industry is expected to continue to decrease in 2024, but at a slower rate, decreasing 0.4%, or 800 jobs.

Approximately 67% of the employees in the Financial Activities industry work in the Finance and Insurance sector (i.e., banks, credit unions, securities and investment firms, insurance carriers, etc.). About 33% of the workers are employed in the Real Estate and Rental and Leasing sector, which includes real estate-related payroll jobs and companies that lease anything from real estate to equipment to formal wear.

FINANCIAL ACTIVITIES EMPLOYMENT 2014-2024 (In Thousands)

Year	Finance and Insurance	Real Estate and Rental and Leasing	Total
2014	107.8	46.1	153.9
2015	110.6	48.4	159.0
2016	113.6	50.2	163.9
2017	116.0	52.2	168.1
2018	117.6	54.0	171.6
2019	118.0	56.6	174.6
2020	118.6	54.2	172.8
2021	120.6	57.6	178.2
2022[a]	121.3	60.0	181.3
2023[b]	119.2	59.8	179.0
2024[c]	118.8	59.4	178.2

[a]Revised. [b]Estimated. [c]Forecast.

Note: Sum of the sectors may not equal the total due to rounding.
Sources: Colorado Department of Labor and Employment and Colorado Business Economic Outlook Committee.

Finance and Insurance

Capital Markets

A Generation of Economic Distortion

Economic inflection points cause confusing and difficult times in the capital markets, particularly when the environment was already at an extreme. Case in point, monetary policy in the United States has been dominated by a zero interest rate policy, otherwise known as ZIRP, since the end of 2008. The Fed Funds target rate has been at 2% or lower since April 2008 and only briefly rose above that level in Q4 2018 before ratcheting back down less than one year later in the second half of 2019 and a return to ZIRP in the face of COVID in March 2020.

According to the Federal Reserve Bank of St. Louis, over the last 40 years, there have been seven episodes of tightening monetary policy. In terms of absolute magnitude, this run from ZIRP to a 5.5% Fed Funds rate was the largest of the last seven episodes. Starting from a Federal Funds rate policy band of 0 – 0.25%, the first increase was to 0.25% to 0.50% on March 16, 2022, and continued to a target band of 5.25% to 5.5% reached on July 26, 2023. To understand the impact of such a move, one must consider the myriad ways that interest rates affect the economy.

The level of interest rates in an economy impacts the following, and this is far from a complete list:

- One means of determining the value of an asset (stocks, real estate, etc.) is via discounted cash flow analysis; the higher interest rates are, the greater the discounting rate of their future cash flows and vice versa. Higher interest rates reduce the value of future cash flows and as such, reduce the value of the asset being measured; lower interest rates have an inverse effect. Low interest rates were particularly supportive of high-growth companies with little-to-no earnings, as well as for capital intensive and/or highly leveraged companies (those that depend on borrowed money).
- When market interest rates are low, the cost of capital is similarly low, and this encourages borrowing.
- When market interest rates are high, the cost of capital is similarly high, and this discourages borrowing.
- When interest rates are low, cash is a dead asset and saving is discouraged.
- When interest rates are elevated, idle cash can generate cash flow, and there is an incentive to save.

INDUSTRY SNAPSHOT FINANCIAL ACTIVITIES

Nominal GDP, 2022 ($ Billions)	101.0
Real GDP, 2022 ($ Billions, 2017 Dollars)	86.8
2022 Real GDP Growth Rate	2.1%
Total Employment, 2022 (Thousands)	181.3
2022 Employment Growth Rate	1.7%
Employment Growth National Rank	36
Share of Colorado Employment	6.3%
Share of National Employment	5.9%
Average Wage, 2022	107,997
Percent of Statewide Average Wage	142.9%
2022 Average Wage Growth Rate	3.6%

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics.
Note: 2022 employment includes revised estimates.

If you are familiar with the Rule of 72, which is a simplistic rule of thumb to determine how long it will take for an investment to double in value based upon its rate of return, it is easy to see how a low interest rate environment can distort an economy and investor behavior.

The expected annual rate of return is divided into 72 to get an approximation of how many years it will take to double one's investment. In a low interest rate environment, which the U.S. economy has been in for an

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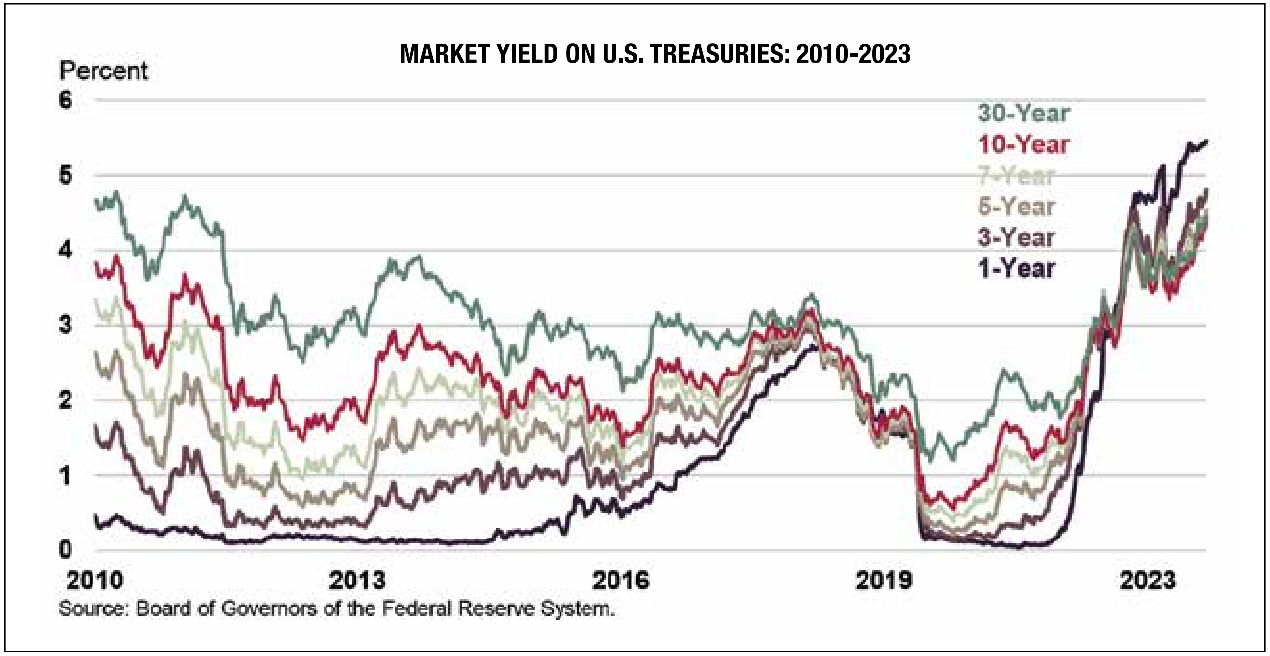
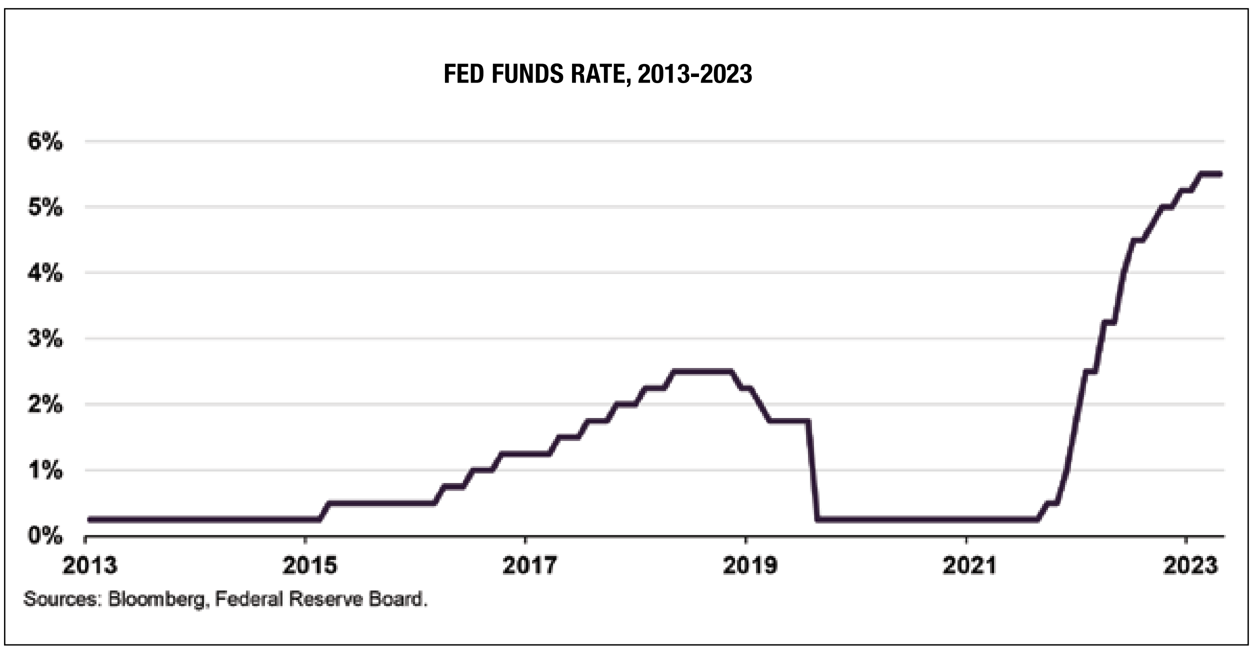


Source: Board of Governors of the Federal Reserve System.



Sources: Bloomberg, Federal Reserve Board.

extended period of time, an investment into a bond yielding 2% would suggest that at that compounding rate it would take 36 years to double one's money. At that rate of return, even the most diligent saver would be discouraged by the negligible return of low-risk assets. However, the average annual return of the S&P 500 stock index since inception is nearly 10% per year. At that rate of compounding return, one could expect to double one's money in a bit more than seven years.

In such a low interest environment, investors were highly incentivized to pursue riskier assets rather than to save money in a bank savings account or in U.S. Treasury notes/bonds. Conservative savers and less sophisticated consumers were either left behind or were compelled to take on financial risks they either were not comfortable with and/or that they did not fully understand.

As a result of the low interest rate environment, banks have benefited from a virtually free cost of capital. Banks have been paying little or nothing on deposits for the last 15 years. Now individuals and businesses with free cash flow have an incentive to save. It is now possible to receive 5% or more from money market funds and high yield savings accounts, with daily liquidity. This new elevated rate environment presents a challenge to banks and credit unions. Businesses and consumers are beginning to awake from their slumber and are recognizing that their deposits have value and cash management is now a value-add service. Presently, the average interest rate for savings accounts is 0.59%. Banks and credit unions have experienced an outflow of deposits fleeing to higher yielding options and are likely to experience further margin compression as they will need to increase the rate they pay for deposits in order to avoid further capital flight.

Inflection Point

In March 2023, Silicon Valley Bank suffered a run on the bank instigated by social media as detailed by Fortune's May 2023 article. The impetus for the bank run was due to a combination of a high percentage of large, uninsured

FINANCIAL MARKETS: STOCKS
2013-2023 YTD (Year-End Close)

	Index				Annual Percent Change			
Year	S&P 500	Dow Jones	NASDAQ	Russell 2000	S&P 500	Dow Jones	NASDAQ	Russell 2000
2013	1,426	13,104	3,020	849	13.4%	7.3%	15.9%	14.6%
2014	1,848	16,577	4,177	1,164	29.6	26.5	38.3	37.0
2015	2,059	17,823	4,736	1,205	11.4	7.5	13.4	3.5
2016	2,044	17,425	5,007	1,136	-0.7	-2.2	5.7	-5.7
2017	2,239	19,763	5,383	1,357	9.5	13.4	7.5	19.5
2018	2,674	24,719	6,903	1,536	19.4	25.1	28.2	13.1
2019	3,231	28,538	8,973	1,668	20.8	15.5	30.0	8.7
2020	3,756	30,606	12,888	1,975	16.3	7.2	43.6	18.4
2021	4,766	36,338	15,645	2,245	26.9	18.7	21.4	13.7
2022	3,840	37,147	10,466	1,761	-19.4	2.2	-33.1	-21.6
YTD Nov. 14, 2022	3,957	33,537	11,196	1,861	-15.5	-7.1	-29.4	-22.8
YTD Nov. 14, 2023	4,496	34,828	14,094	1,798	13.6	3.8	25.9	-3.4

Source: Yahoo! Finance. Note: YTD represents the growth year-to-date from the prior end-of-year close.

deposits, with more than 90% of them uninsured, according to Investor's Business Daily. This situation occurred because of the outgrowth of the complacency derived from the low/no interest earned on deposits for so many years, coupled with an impaired balance sheet caused by the rise in interest rates. The loans and investments purchased by banks and credit unions can be placed in two categories: held to maturity or available for sale. The difference between these two categories is that the former is not marked to market, meaning that the earnings of the depository is not impacted by movements in interest rates whereas those in the available for sale category have their values adjusted to reflect the current market environment. When interest rates rise, fixed rate loans and investments made in the previously low interest rate environment are worth less in the new, higher interest rate environment. When depositors at Silicon Valley Bank began withdrawing their money, the bank did not have sufficient liquidity in the available for sale bucket and was forced to sell assets in the held-to-maturity bucket, which made it necessary for the bank to mark those assets to their current market value and recognize the loss on their balance sheet. This tipped the bank into insolvency.

Moody's, a credit rating agency, estimates that U.S. banks may be grappling with $650 billion or more of unrealized losses in their securities portfolios. This balance sheet encumbrance is seen as reducing the ability of banks to make loans and makes them vulnerable to bank runs. This has led the FDIC to draft rules proposing that large regional banks (those with assets of more than $100 billion but less than $250 billion) issue $70 billion in new debt to bolster their resilience. However, a proposal has been floated, as reported by the *American Banker,* takes a page out of the tool chest derived in the Great Financial Crisis of 2008; namely, that a TARP 2.0 program be implemented. TARP 1.0 stood for the Troubled Asset Relief Program, and TARP 2.0 has been referred to as the Trapped Asset Relief Program. This program would be secured by the same securities that banks are currently pledging to lending facilities at their Federal Home Loan bank branch, but with more favorable terms. The goal is to reduce the cost of creating liquidity for the affected banks.

If we learned anything from the Great Financial Crisis, it is that while history does not necessarily repeat, it does rhyme. Many that experienced the S&L crisis of the 1980s had expected a similar policy approach to the failed banks during the Great Financial Crisis. While there were similarities to both crises, the policy approach taken by legislators/regulators was quite different. Similarly, in the fallout of the 2023 failure of Silicon Valley Bank, the Treasury Department brought out its big guns and designated Silicon Valley Bank as a systemic risk, which gave it the authority to unwind the institution and fully protect all depositors. Along with that, the Federal Reserve created a new Bank Term Funding Program, as reported by CNBC, saying that "This action will bolster the capacity of the banking system to safeguard deposits and ensure the ongoing provision of money and credit to the economy."

This suggests that regulators are prepared to throw significant piles of money at problems to ensure that a lack of liquidity does not become a contagion that infects other institutions and sectors of the economy. This pragmatic approach appears viable. Provided that as higher interest rates filter through the economy, hitting more interest rate sensitive areas first, such as finance and construction industries, will mean that there likely will not be too many large institutions failing at the same time. Were that to happen, it might overwhelm the response

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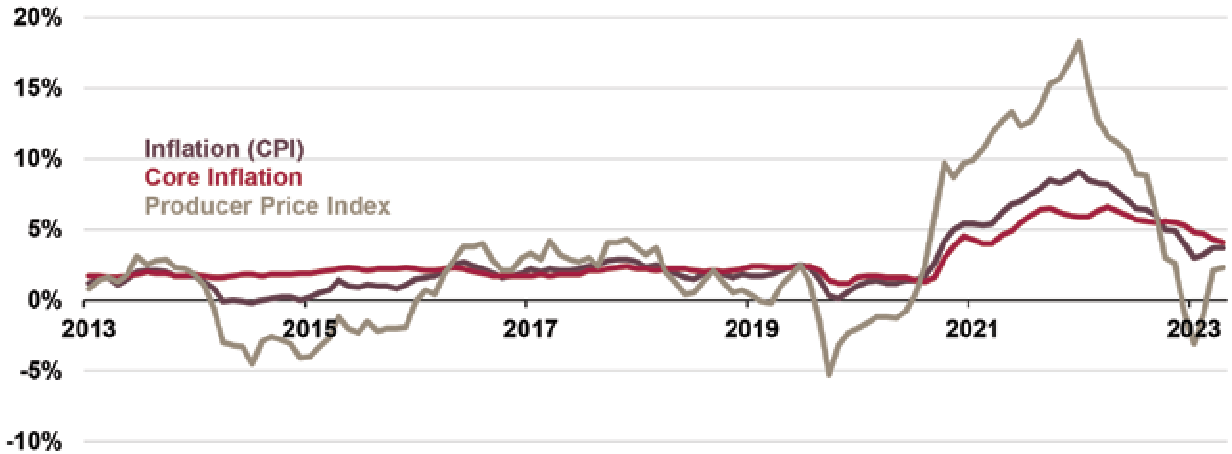
CONSUMER PRICE INDEX AND PRODUCER PRICE INDEX, 2013-2023



Sources: Bloomberg, Bureau of Labor Statistics.

HOUSING AFFORDABILITY INDEX, 1986-2023

Sources: Bloomberg, National Association of Realtors.

of regulators, let alone the current poorly functioning legislative body.

Inflation

Why did the Federal Reserve begin increasing interest rates in the first place? A surge in inflation that was above 5% in the summer of 2021, initially viewed as transitory by the Fed, proved to be more persistent. Russia's invasion of Ukraine in February 2022 further aggravated the inflation environment by creating disruptions in supply chains due to the conflict and economic sanctions. The U.S. inflation rate peaked at a rounded 9.1% in June 2022. This instigated the Federal Reserve's unprecedented tightening of monetary policy that began in 2022. As long as inflation is above the Fed's stated 2% target, and as long as the cost to borrow is below the rate of inflation, inflation will be prone to accelerate. Nevertheless, years of easy monetary policy has conditioned investors to expect the Fed to cut rates at the first sign of economic trouble. Consequently, market prices behaved as if they did not believe the messaging from the Fed and continued to price as if an easing of monetary policy was just around the corner.

Earlier in 2023, Fed Funds futures had priced in expectations for the Fed Funds rate to be 2.5% in 2025; in Q4 that shifted to expectations for the rate to be 4% in 2025, and the bias seems to be "higher for longer" as the messaging from the Fed has been for much of the last year. Current messaging from the Fed is that the policy rate will remain at 5% or higher in 2024. The Fed is attempting to dance between the raindrops without getting wet. It is attempting to orchestrate a soft landing for the economy by not over tightening, while maintaining restrictive monetary policy long enough to reduce the rate of inflation back to its 2% target.

Rolling Recession

How many times has the Fed successfully orchestrated a soft landing? A paper by Alan S. Blinder, Princeton economist and former vice chair of the Federal Reserve, said that the Federal Reserve has only managed to achieve one soft landing in the past 60 years. That was in 1994-95. That is not an encouraging track record, but one thesis that has been proposed is that the U.S. is experiencing a rolling recession. This is where some industries contract while the overall economy manages to stay above water. There is logic to the idea that the most interest-rate sensitive sectors of the economy and those that most depend on borrowed funds would suffer the effects of higher interest rates first. We have already seen a shedding of jobs from the home mortgage industry, and housing affordability has declined with the rise in interest rates to levels not seen since the 1980s.

However, due to reduced supply, home prices have generally held firm in the face of higher interest rates. The S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index is up year-to-date (YTD) at the time of this writing in early Q4 2023, but regional differences are substantial. One area that is currently viewed as uninvestable by most investors is the office commercial real estate market. Perhaps the poster child for excessive exuberance in the office sector that was fueled by a cheap cost of capital is the coworking spaces company, WeWork, ticker "WE." WeWork had a peak private market valuation of $47 billion by the time of its initial public offering (IPO) via special purpose acquisition company (SPAC) merger in 2021. In the aftermath of the shift to work from home following COVID, that valuation had fallen to $9 billion. In the fall of 2023, WeWork stock was trading at less than $1 per share, translating to a market capitalization of less than $50 million, and it filed for bankruptcy on November 6. Meanwhile, WeWork remains a major tenant in many metropolitan markets and the largest corporate tenant in the New York and London markets. WeWork has been negotiating lower rents, and a bankruptcy filing will likely accelerate this process. Given the state of the office market, landlords are not in a strong negotiating position. This will pile on additional stress for the office sector. As reported in a recent CoStar article, WeWork is currently being sued by an affiliate of MetLife for failure to pay its rent on 45,000 square feet of space leased in Denver's The Hub building in the River North neighborhood.

Adding to the stress in the office market is the volume of loans maturing on office buildings between 2023 and 2026. In Denver, 290 Class B office loans are set to mature, tied to 20 million square feet, representing nearly two-thirds of all upcoming office debt in the metro area, according to a recent article from *Mile High CRE.* In the age of work-from-home, the definition of Class A office space has evolved, and in a tight labor market, it takes Class A office space to compel employees to spend any time in-office. Class B office space is defined by older buildings, devoid of modern amenities and least equipped to deal with the pandemic-altered world. This wave of maturing loans is expected to see a surge of defaults, increasing stress upon lenders. This will put further downward pressure on prices in search of the level that attracts buyers that will likely repurpose the buildings or raze them to build something new.

Denver, like many central business districts, will be challenged as attempts to reinvent itself to bring vitality back to an area that was vibrant pre-COVID and that now resembles Denver in the 1980s and 1990s before it was an 18-hour city. While there will undoubtedly be stress during this transitional period, there will also be opportunity for those with the resources and vision to capitalize upon this significant shift in the office space market.

Other sectors of the economy on the front lines of vulnerability to the rise in interest rates are companies and industries with poor credit metrics. Those companies can be defined as ones that are members of the U.S. high yield index and the leveraged loan index. As the debt of the member companies of these indices must refinance/roll their debt, the reality of the current rate environment will undoubtedly take its toll. A research note published by the Fed, *Distressed Firms and the Large Effects of Monetary Policy Tightenings,* suggests that 37% of publicly listed firms may be in financial distress whether they recognize it or not. A recent note by Apollo's Chief Economist Torsten Slok suggests that total employment represented by the U.S. high yield index and the leveraged loan index could be in the vicinity of 19 million. However, one might suspect there could be an overlap between the two indices. Nevertheless, as higher interest rates filter through the economy in a higher for longer scenario, job losses could accelerate in 2024 as some of these distressed companies will likely slide into default and insolvency.

Opportunism and Dry Powder

A number of sayings come to mind at times of economic inflection. One is that it gets worse before it gets better. The other is a quote from Ernest Hemingway's novel, *The Sun Also Rises.* When asked, "How did you go bankrupt?" the response was "Two ways. Gradually, then suddenly."

Though significant clouds are on the horizon and 2024 is likely to be buffeted by periods of fear-driven volatility, many are lining up on the sidelines with mandates and money to spend, waiting for a dip in prices to opportunistically swoop in and acquire distressed assets or to fund loans to the most credit-worthy borrowers. With many waiting for prices to fall and money burning a proverbial hole in their pockets, the degree that prices actually fall is apt to be less severe than if the price correction were unexpected.

Interest rates are at a multidecade high and as a result, 2022 was the first year in decades in which no companies filed to become a public real estate investment trust "REIT." With that in mind, some might believe that now would be an odd time to launch a nontraded REIT. However, as reported by *Bisnow,* a wave of filings in the second half of 2023 were filed with the SEC to launch nontraded REITs. Unlike a publicly traded REIT that offers daily liquidity, nontraded REITs do not. They tend to take a longer-term view of the market and have limited liquidity gates that curtail the flight of capital. This alleviates the pressure on the REIT manager to maintain a large pool of liquidity to meet daily investor

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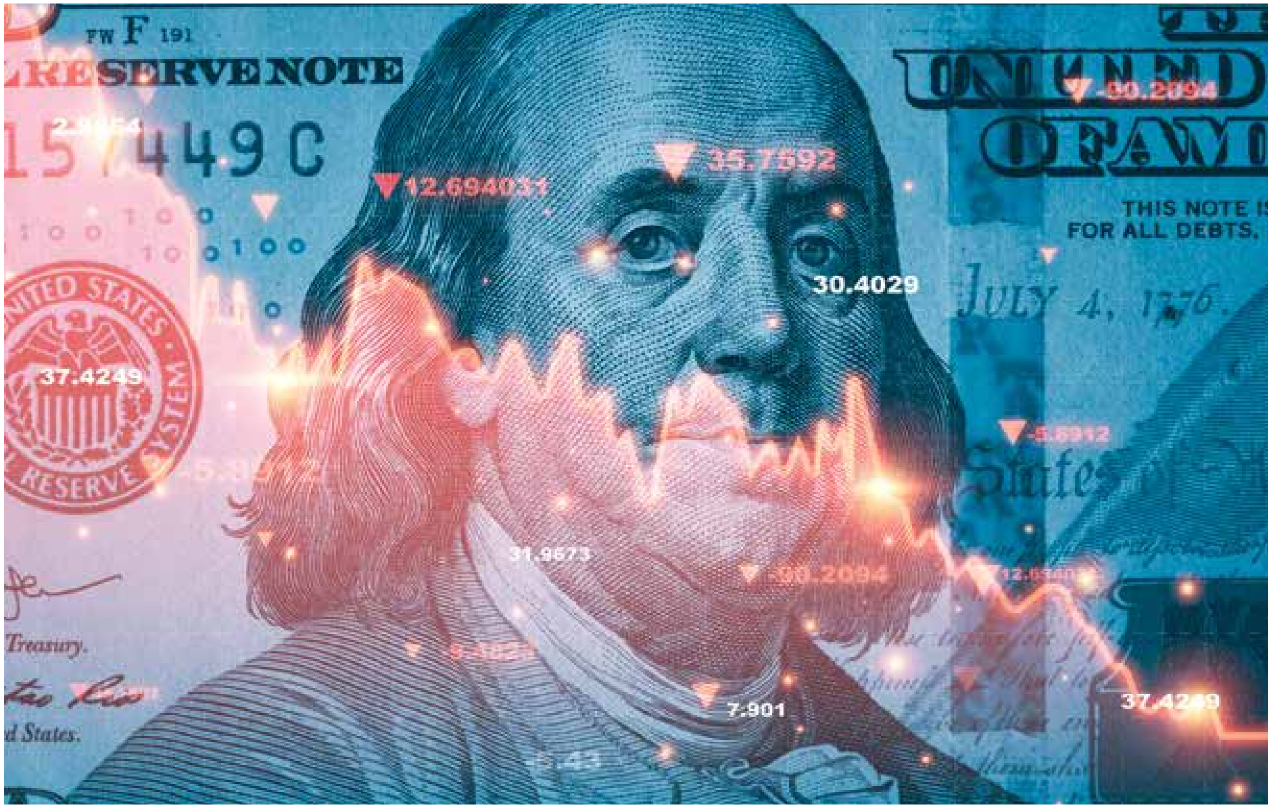


liquidity needs, or worse, that could force the sale of a building at an inopportune time to raise funds. Non-traded REITs are the domain of high-net-worth investors that are prepared to commit capital for a longer period of time and do not need daily liquidity.

Similarly, while traditional banks may be impaired in 2024 due to unrealized losses within their investment and loan portfolios, the shadow banks are prepared to step in and fill that need. A recent article in the *Wall Street Journal* titled “The New Kings of Wall Street Aren’t Banks. Private Funds Fuel Corporate America,” published on October 8, 2023, details the extent that banks have lost market share to Wall Street. Private credit funds have grown significantly within the alternative investment sphere. Though some of the largest players in this space may not be household names, firms like Apollo, Ares, and Blackstone, other relative newcomers like Fidelity, have joined the party as have many others. Like the non-traded REIT space, billions of dollars are lined up in the private credit space, eager to be put to work.

While 2024 may be economically bumpy—and buffeted by geopolitical events, conflicts, rising budget deficits, growing debt to GDP, and a presidential election—many billions of dollars are awaiting signs of economic distress to be opportunistically deployed. In theory, this should reduce the severity of price decline. Further, we have already witnessed signs of how government regulators and agencies are prepared to handle a reduction in market liquidity should we have a replay of the Silicon Valley Bank failure or other similar event. They will inject liquidity and/or make guarantees to assuage investor fears. The Fed may stay higher for longer, but that does not preclude some incremental easing in 2024 should inflation behave itself and hold below 4%. Meanwhile, after more than a decade of low interest rates for investors, bonds have become a more attractive asset class provided one remains cognizant of credit risk.

Commercial Banking

Of the 126 banks in Colorado, 71 are state-chartered, with in-state headquarters. Colorado banks remain strong. Commercial banks have total assets of approximately $206 billion, with the four largest banks holding nearly 55% of the market share in Colorado. Their Colorado deposits range from $19.6 billion to $35.7 billion.

During the pandemic, the banking industry saw a dramatic increase in deposits. As expected, those deposits are now decreasing. Total deposits for institutions in Colorado dropped from $205 billion in Q2 2022 to $187 billion in Q2 2023, an 8.8% decrease in deposits from the previous year. This decline was not unique to Colorado. U.S. banks lost $472 billion in total deposits (2.5%) in the first quarter of 2023—the largest decline since the FDIC began collecting quarterly data in 1984. This decline can be attributed to three primary factors: movement of funds by large depositors above the $250,000 per account threshold for federal insurance coverage, the absence of further pandemic-related PPP funds, and an overall slowing of the economy.

In an unprecedented turn, three national banks not located in Colorado with collective assets of $548 billion failed in quick succession in early 2023. Several unique factors contributed to these failures: lapses in basic risk management, disproportionately high uninsured deposits, large holdings of long-term securities that lost value as short-term interest rates rose, and, in the final analysis, questionable regulatory oversight and supervision. In the aftermath, small banks were hit particularly hard by large deposit outflows as worried depositors shifted cash to larger institutions.

Capital, Earnings, Loans, and Reserves

In spite of a challenging environment, commercial banks continue to be the most financially sound in the world. In 2023, U.S. banks held more than $2.25 trillion in capital to support all banking activities. Banks chartered in Colorado held about $6 billion in capital. Risk-based capital ratios have remained close to mean levels over the past several years.

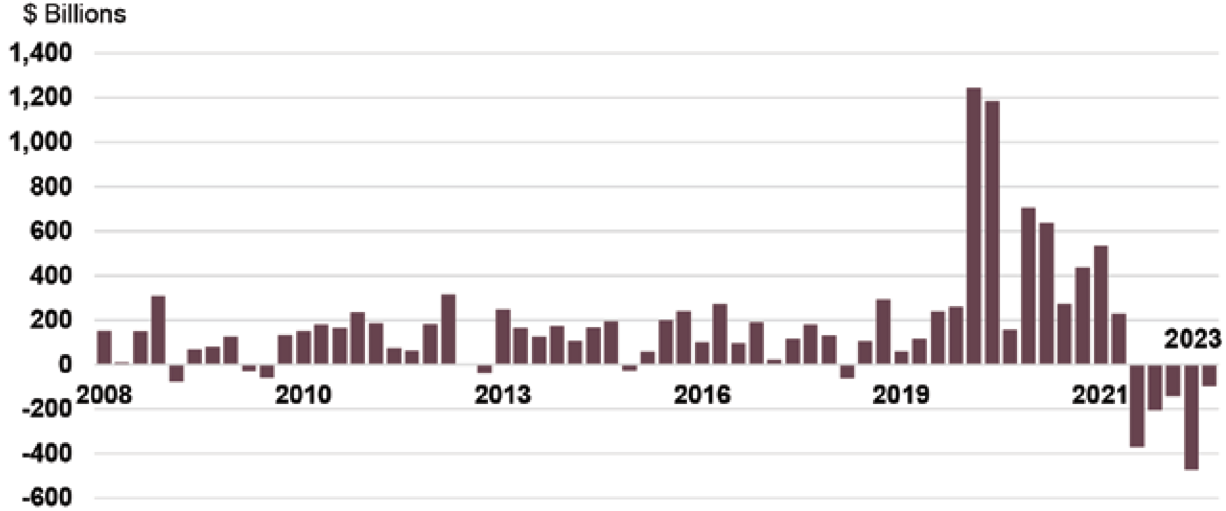
Net income for all FDIC-insured commercial banks and savings institutions increased $6.4 billion (9.9%) year-over-year as growth in net interest income exceeded growth in provision expense and noninterest expense.

While the industry actively reduced the amount of uninsured deposits in the first quarter of 2023, insured deposits increased by $255 billion in the same time period. Banks paid more to keep depositors, and those higher costs cut into net interest margins industry-wide, which declined by 7 basis points from the previous quarter, to 3.31%.

Year-over-year, loan growth in all major portfolios has been steady and broad-based. Nearly 90% of community banks reported loan growth over the last 12 months. In the second quarter of 2023, total loan and lease balances increased $526.8 billion (4.5%) year-over-year, while bank equity capital declined $9.5 billion from the prior quarter, led by a decline in other comprehensive income as higher market interest rates decreased the value of available investment securities.

Provisions for credit losses stood at $21.5 billion in the second quarter of 2023, up $10.4 billion from the previous year. The reserve coverage ratio for all insured institutions increased to 224.8% in the second quarter of 2023, the highest level since data collection began in 1984. The banking industry as a whole remains resilient and well capitalized despite higher interest rates and high inflation.

NATIONAL QUARTERLY CHANGE IN BANK DEPOSITS



Source: Federal Deposit Insurance Corporation. Includes all FDIC-insured institutions.

A Glimpse at Community Banks

Community banks represent 90% of FDIC-insured institutions and reported a $50.6 million (0.7%) increase in net income from 2022, to $7.1 billion in second quarter 2023.

Nationwide, the share of unprofitable community banks rose slightly to 5.1%. Pretax Return on Assets (ROA) fell 7 basis points from this time last year. The reserve coverage ratio for community banks is 38.4 percentage points above the ratio for noncommunity banks. Net charge-off rates for community banks remains low compared to the average over the past decade.

In recent quarters, community banks have decreased holdings of liquid assets to 16% of total assets as of June 30, 2023, down from a peak of 26% at year-end 2021.

Current expected credit losses (CECL) adoption resulted in an average increase of 3.76% to allowance for credit losses (ACL) balances at community banks in 2023, with larger community banks reporting more substantial increases. Banks with under $1 billion in total assets reported an average change in ACL of 3.08% compared to 7.53% for banks with assets between $1 billion and $10 billion in total assets. Larger banks tend to have larger consumer credit portfolios, such as credit card offerings, which are subject to larger allowance increases under the new standard.

In the third quarter of 2023, the Community Bank Sentiment Index stood at 86, indicating a moderately negative sentiment by community bankers across the U.S. Results from the same survey indicate the top concerns for community bankers at present are cyberattacks, government regulation, the federal deficit, the cost and availability of labor, and inflation. Inflation-driven increases to interest rates are putting pressure on banks' cost of funds and increasing unrealized losses on long-term securities.

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Interest Rates

Data released by the Federal Reserve in the third quarter of 2023 indicated a modest cooling of inflation following 11 interest rate hikes since March 2022, though the inflation rate remains above the Federal Reserve's target of 2%. In July of 2023, the Federal Open Market Committee raised its funds rate by a quarter percentage point to a target range of 5.25%-5.5%, with an expected terminal rate at or above 6%. Federal Reserve Chair Jerome Powell has said the central bank needs to see "below-trend growth" to be assured that inflation is cooling to the 2% target, according to *CNN Business.*

The federal funds rate is a key benchmark interest rate for banks and other lenders. Raising the rate increases the cost of the short-term loans most financial institutions need to operate normally. They pass those costs to their borrowers via higher interest rates on credit cards, real estate loans, business loans, and credit lines. Mortgage rates, which were historically low throughout most of 2020 and 2021, have increased steadily to the highest level since 2000.

Consumer Debt

Based on figures from the Federal Reserve Bank of New York, total household debt increased to $17.29 trillion in the third quarter of 2023, an increase of $3.3 trillion from the third quarter of 2019. Auto loans increased to $1.59 trillion, continuing an upward trajectory that dates back to 2011, while other balances, which include retail credit cards and other consumer loans, increased to $0.53 trillion.

Mortgage balances and home equity lines of credit (HELOC) were mostly flat, with mortgages at $12.14 trillion at the third quarter of 2023 and HELOC balances at $349 billion. Mortgage originations sit at $386 billion, an uptick from a nine-year low at the beginning of 2023, but down from $393 billion in the second quarter of 2023. The median credit score for newly originated mortgages increased by one point, to 770, in the third quarter of 2023.

Credit card balances saw the largest increase of all debt types, reaching $1.08 trillion. Credit card balances have seen eight quarters of year-over-year growth, while delinquency rates have normalized at prepandemic levels.

Outstanding student loan balances fell to $1.57 trillion. Federal student loan payments have been on hold for three years due to the pandemic but resumed in October 2023. Missed payments on student loans will not be reported to credit bureaus until fourth quarter 2024. Accordingly, less than 1% of student debt has been reported as 90+ days delinquent or in default. This number should remain low until at least the end of 2024.

The Biden administration is working swiftly to establish a new student loan forgiveness plan on the heels of the sweeping student debt relief initiative that the Supreme Court struck down in the summer of 2022. The replacement program currently under development will be created under the Higher Education Act, which has a "compromise and settlement" provision that former administrations have already relied on to forgive or discharge student loan debt in various circumstances and gives the Secretary of Education early-enactment authority. Under the Biden administration's original plan, rolled out in August 2022, more than 90% of borrowers would have seen their balances cleared or reduced. Roughly 10% of federal student loan borrowers will qualify under the new plan. Public hearings associated with the negotiated rulemaking process will conclude in December 2023, and draft regulations are expected to be released early in 2024.

With the resumption of student loan repayments for millions of Americans, household budgets may become strained, contributing to an economic slowdown heading into 2024.

Loan Demand and Fee Income

Net operating revenues (net interest income and noninterest income) declined 3.5%, to $252.5 billion, in Q2 2023, with noninterest income declining $7.8 billion and net interest income declining $1.4 billion from the prior quarter. Year-over-year, net operating revenue rose $24.5 billion as net interest grew $23.2 billion and noninterest income increased by $1.3 billion.

Per Federal Reserve survey data at midyear 2023, U.S. banks reported tighter credit standards and weaker loan demand from both businesses and consumers, evidence that the central bank's interest-rate hike campaign is slowing inflation as intended. While still weak, demand for auto loans has improved over the past 12 months. Demand for credit card loans remained relatively flat. Loan demand will likely remain modest given the current macroeconomic conditions and the high costs of borrowing. The industry faces downside risks from ongoing effects of inflation, rising market interest rates, and slowed economic growth.

Consumer Behavior

U.S. economic growth accelerated sharply, to 4.9%, in the third quarter of 2023, according to the Bureau of Economic Analysis. With a drop in inflation from its peak of 9.1% in June 2022 and a solid job market, and wages outpacing inflation for most of 2023, consumer spending has contributed to the fastest pace of economic growth in nearly two years. Economists who predicted a recession in 2023 have been surprised by the resilience of the economy.

Households have increased their use of revolving credit to support spending. According to the Consumer Financial Protection Bureau (CFPB), application volume reached a new peak in 2022. Credit card debt, which had been increasing every year since 2011, reversed course following the onset of the pandemic but has since resumed steady growth.

With the average minimum payment due increasing to over $100 on revolving general-purpose accounts, more users are incurring late fees and facing higher costs on growing debt. Credit card disputes spiked in mid-2020, declined in 2021, then rose again in 2022 as spending grew. Disputed transaction volume for mass market issuers was up to almost $10 billion in 2022, and chargebacks increased more than 80% from $3.2 billion in 2019 to $5.9 billion in 2022.

Aggregate limits on credit cards were increased by 2.5% in Q3 2023, and limits on home equity lines of credit were unchanged. The share of newly delinquent debt has increased for both credit cards and auto loans. Transition rates for both are above prepandemic levels. Approximately 4.7% of consumers have a third-party collection account on their credit report, with an average balance of $1,555.

Mergers and Acquisitions

The number of FDIC-insured commercial banks and savings institutions declined from 4,706 to 4,645 year-over-year from Q2 2022 to Q2 2023. Mergers and acquisitions activity continues a yearlong up-and-down monthly trend, with branch activity tracking toward a multiyear low due to lack of supply. Many banks and financial institutions have halted mergers and acquisitions while waiting for the market to stabilize and interest rates to level off.

A 2023 Deloitte report on activity in banking reported that total volume fell from 205 closed transactions totaling $76.6 billion in 2021 to 167 closed transactions totaling $22.6 billion in 2022. Average deal value fell nearly in half from $716 million in 2021 to $348 million in 2022. Total volume heading into Q4 of 2023 sits at 121 closed transactions with a median deal value of $59.6 million. This downward trend can be attributed to the fastest increase in the federal funds rate in over 40 years and damaged bank valuations caused by three significant national bank failures—Silicon Valley Bank, Signature Bank, and First Republic Bank—in early 2023.

Despite a sluggish 2023, banking experts see signs of increasing bank mergers and acquisitions in the near future. Smaller regional banks may be looking for competitive ways to scale as they continue to see deposit outflows and slowing loan growth.

Regulation

In a year that started with uncertainty about several outstanding regulatory issues, four separate lawsuits have been brought against the CFPB in an attempt to rein in what critics deem as gross overreach.

Litigation brought by the American Bankers Association (ABA) and the Texas Bankers Association questioning the constitutionality of the CFPB's funding mechanism (it does not go before Congress for an appropriation) was heard by the Supreme Court in early October, with a decision expected in the spring of 2024. The lower court ruled that the funding mechanism is unconstitutional.

Litigation was also brought against CFPB by the ABA, the Texas Bankers Association, and the U.S. Chamber of Commerce challenging the legality of recent changes made by the agency to the Unfair, Deceptive, or Abusive Acts or Practices examination manual. The U.S. District Court ruling in September makes clear the CFPB exceeded its statutory authority when it updated its exam manual and announced an open-ended and novel power to examine banks for alleged discriminatory conduct. This authority is nowhere to be found in the agency's mandate from Congress, as the court concluded. The judge agreed that the CFPB clearly exceeded its statutory authority under the Dodd-Frank Act (DFA). In addition, the judge upheld ABA's challenge to the exam manual on the grounds that it was the product of an unconstitutionally funded agency. The Court judgment included a vacatur of the agency action. It is unknown when this case will move to a higher court.

Another lawsuit brought forward by the Texas Bankers Association and the ABA questions if CFPB went beyond the Congressional approved scope regarding section 1071 of the DFA. The DFA granted CFPB the collection of 13 data points. The CFPB, by rule, would be collecting 81 data fields. A federal judge in Texas granted a limited injunction staying implementation of the bureau's Section 1071 small business reporting rule for members of the ABA and Texas Bankers Association until the U.S. Supreme Court rules on a separate challenge to the CFPB's funding structure. In late October, the Texas Court expanded the preliminary injunction to include all financial institutions covered by the rule.

The Kentucky Bankers Association brought a similar lawsuit with yet another victory for the banking industry. The judgment reads, "The Consumer Financial Protection Bureau is enjoined from enforcing the Small Business Lending Rule until the Supreme Court issues an opinion ruling that the funding structure of the CFPB is constitutional." It appears that the Court has granted a broader injunction against the CFPB on the enforcement of 1071 pending a ruling by the Supreme Court on the constitutionality of the funding structure of the CFPB.

In a bold move for Colorado, the state will opt out of the Depository Institutions Deregulation and Monetary Control Act (DIDMCA) for the first time since 1983. House Bill 23-1229 Concerning Consumer Lending was introduced late in the 120-day state legislative session. The bill intended to address supervised lenders licensed by the state administrator of the Uniform Consumer Credit Code (UCCC) and to have the state opt out of DIDMCA, which was passed in 1980. Sections 521-523 of DIDMCA empower state banks, insured state and federal savings associations, and state credit unions to charge the interest allowed by the state where they are chartered, regardless of where the borrower is located and regardless of conflicting state law—in short, authorizing the exportation of home state interest rates. Section 525 of DIDMCA gives individual states the authority to opt out of sections 521-523.

With the DIDMCA opt-out, all out-of-state state-chartered banks conducting business in Colorado are no longer allowed to import their home state interest rates into Colorado. Out-of-state state-chartered banks must abide by Colorado's 36% interest rate cap. Note, this legislation targets state-chartered banks; national banks are not impacted.

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The legislation exempts general purpose credit accounts, but does not exempt private-label credit cards that are limited to the Colorado 36% interest rate cap.

The effective date for the opt-out is July 1, 2024.

SBA and the Small Business Ecosystem

Small businesses are generally defined by the U.S. Small Business Administration (SBA) as independent businesses with fewer than 500 employees. They are considered a vital part of the American economy and workforce as determined by most measures.

This past year, SBA celebrated its 70th anniversary. For over seven decades, America's entrepreneurs have relied on SBA support to help start and grow their small businesses and for purposes of advocacy. The agency has provided trillions of dollars in support to small businesses and has helped millions of owners build capacity and advanced their views and concerns before policymakers.

In 2023, the agency continued its work to provide critical technical and financial resources to the over 33.2 million founders, entrepreneurs, and innovators, representing 99.9% of all U.S. private businesses that power the national and the Colorado economy.

While small businesses across the country and the state still face lingering pressures, including rising costs of conducting business and global uncertainty, recent trends show many small firms weathered the worst of the economic disruption from previous years, according to the SBA Office of Advocacy. However, the demand for capital continues to outpace supply. With lending standards being tightened and higher borrowing costs, some small businesses are straining to ride out the tougher credit conditions in the market.

End of COVID Disaster Relief Assistance

Over the last three years, SBA delivered more than $1 trillion in economic aid to over 22 million applicants nationwide via pandemic relief programs authorized and implemented under several pieces of federal legislation. In Colorado, this amounted to nearly $22.5 billion in aid to almost 340,000 awardees across all SBA economic relief packages. By the end of federal fiscal year 2023, all SBA-administered COVID disaster relief programs, plus all automatic deferments of disaster loans payments, effectively came to an end.

In addition to SBA disaster relief, from 2020-2022, there was a varied availability of financial support from other local and federal sources. By 2023, local small business disaster relief and resiliency funds, incentives, and programs, courtesy of the American Rescue Plan, were mostly deployed or depleted.

Small businesses were next faced with repayment of any unforgiven loan amounts, plus full debt service and accrued interest associated with pandemic disaster assistance, while still coping with other economic challenges. Some weathered better than others. SBA experienced a swell in demand both nationally and locally for hardship accommodations. In response, the agency made temporary servicing actions available to help reduce the threat of default, while small businesses worked to build revenues to healthier levels.

Small businesses also experienced further difficulties due to another wave of large natural disasters, requiring more capital infusion for reconstruction and reconstitution. SBA responded by making a 12-month initial payment deferment period permanent. This resulted in the waiving of payments for the first year for all new disaster loans beyond September 30, 2023.

Prior to the Marshall Fire in 2021 and its destruction in Boulder County, SBA's loan limits had not been adjusted in nearly 30 years to account for decades of inflation and rising construction costs. Therefore, in 2023, the SBA more than doubled the caps for its home disaster loan program to ensure that communities have access to more sufficient funding to help them rebuild homes, replace personal property, and reopen businesses when disasters strike. In addition, other gap disaster aid was deployed in Colorado after insurance proceeds, FEMA, SBA, and other sources were applied to reconstruction efforts.

Core (Traditional) Programs

In 2023, the SBA continued to provide much-needed access to capital via its three main core finance programs and through its Surety Bond Guarantee Program.

The flagship guaranteed loan program, also known as the SBA 7(a) loan program, provides government guarantees to authorized private-sector and community lenders to help mitigate risk and encourage more of those lenders to make loans to small businesses that otherwise may not qualify for conventional commercial financing at reasonable rates and terms.

The SBA 504 loan program is a low fixed interest rate, public-sector/private-sector partnership financing tool that assists small business owners with financing long-lived assets, such as real estate and capital equipment associated with their business operations.

The SBA also facilitates microloans in smaller increments up to $50,000 through designated intermediary mission-based nonprofit lenders to assist emerging small businesses that may be unable to secure financing from conventional sources to help those businesses start and grow.

In addition, SBA also guarantees bid, performance, and payment surety bonds issued by certain surety companies. Surety bonds help small businesses win contracts by providing the customer with a guarantee that the work will be completed. Many public and private contracts require surety bonds that are offered by surety companies.

Through its loan programs, the agency delivered over $34 billion in funding to almost 69,000 small businesses nationwide for fiscal year (FY) 2023. This represented an overall increase of nearly 11% in volume but a 2.8% decrease in dollars compared to FY 2022. There has been a steady progression of SBA loan activity returning to the prepandemic levels experienced prior to 2020.

Colorado's loan production is following that trend. Like FY 2022, the final FY 2023 loan approvals in Colorado were in alignment with prepandemic activity. Across all three SBA core finance programs—7a, 504, and

Microloans—at the end of FY 2023, a total of 1,739 loans were approved in Colorado for over $996 million. This was an increase of 13.9% in volume and 0.7% in dollars compared to FY 2022.

The utilization of SBA programs in Colorado was widely dispersed geographically. SBA 7(a) loans originated in 45 of Colorado's 64 counties. The top five counties in terms of 7a approvals were Denver, Arapahoe, El Paso, Jefferson, and Adams counties. SBA 504 loans were originated in 26 Colorado counties. In order of number of approvals: El Paso County, followed by a tie between Denver and Larimer counties, with Jefferson and Weld counties rounding out the top five in 504 loan approvals.

7(a) Lending Activity

Through a national network of participating lenders, the SBA's 7(a) loan program originated a total of 57,362 loans, providing almost $27.5 billion in capital to small businesses throughout the U.S. Compared to 2022, this was a 20% increase in volume and a 7% increase in dollars.

Colorado also experienced an 11% year-over-year increase in 7(a) loan approvals, from $770.4 million in FY 2022 to nearly $856 million in FY 2023. The number of loan originations also increased by 27.5% in Colorado, from 1,128 to 1,438. The average 7(a) loan size in Colorado decreased from $682,947 to $595,247 (-12.8%).

Not only has the 7(a) loan volume increased, but so has the number of lenders offering the product to Coloradans. A total of 144 different lenders made 7(a) loans in FY 2022 in the state. Huntington Bank was the No. 1 SBA 7(a) loan volume lender in the state for the second year in a row, with 227 approvals. Live Oak Bank led the state's lender rankings in loan dollars, with over $93.8 million approved.

International Trade

Subsets of the 7(a) product are financing programs focused on supporting international trade and primarily export activities. In FY 2023, 245 loans valued at over $490 million were approved for U.S. small exporters, supporting $1.4 billion in export sales and 5,280 jobs. This represented increases in production in loan numbers, dollars, and jobs supported compared to FY 2022.

In Colorado, there were once again four loans made totaling nearly $5.6 million, supporting almost $12.7 million in export sales and 35 jobs in FY 2023.

As world trade continues to absorb the shocks impacting the global economy, many federal, state, and local entities, along with trade associations, continue to work toward building capacity among the nation's exporters in preparation for any future global trade opportunities.

Per the U.S. Census Bureau, a total of 5,481 identified firms exported goods worth around $8 billion from Colorado in 2020. Of those exporters, 87.5% were small firms. Exports by small firms reached $2.3 billion, making up 29.6% of exports by identified firms. These figures suggest that there is an opportunity to bolster international trade efforts by small businesses in the state once barriers are lessened.

The SBA Office of International Trade continues to recruit additional lenders and provide small businesses with the resources needed to expand into trading and exporting. In support of the State of Colorado's global business development strategy, the SBA annually provides financial awards under the State Export Promotion Program (STEP). This funding can be used by state and territory governments to assist small businesses with export development. Individual small businesses can then apply for STEP awards from the state to be used to increase small business exports and their sales in international markets.

504 Loan Activity

As a program designed to appeal to small businesses looking to own rather than lease assets, such as commercial real estate and/or equipment, the SBA's 504 loan volume is highly dependent on demand and availability of financing for long-lived assets. Long-term interest rates also tend to greatly impact program utilization. With higher costs and interest rates in 2023 than previously experienced over the last five years and a perceived decline in demand for owner-occupied commercial real estate, the 504 loan program lagged in production across the country and in the state, in contrast to the growth in 7(a) lending.

Working through authorized certified development companies (CDCs), the SBA's 504 program delivered 5,924 loans worth more than $6.4 billion to small businesses throughout the country. This was a decrease of 36% in volume and 30% in dollars overall.

In Colorado, a total of 144 loans were made through the 504 loans program in FY 2023 compared to the 233 made in FY 2022, a decrease of over 38%. The total volume of 504 loan approvals also decreased from $216.6 million to $137.5 million (-36.5%) from 2022 to 2023. The average size of an SBA 504 loan in Colorado increased from $929,752 to $955,160, likely attributable to the higher costs of both real estate and construction.

Four different CDCs, paired with 60 first mortgage lenders, participated in 504 loans in the state in FY 2023. B:Side Capital was the No. 1 SBA 504 CDC lender, with 92 approvals totaling approximately $82.7 million. The first mortgage participation loans required as part of the 504 total financing packages added nearly $190 million in additional capital for Colorado-based small businesses. The most active first mortgage bank partner was FirstBank, participating in 22 deals, totaling $23.7 million in companion loans to the 504 projects.

Mission-based Lending

An important initiative for the SBA in 2022 and through 2023 was to increase the number of smaller loans. To bolster this initiative, the agency created a path for permanency in SBA lending for mission-driven organizations like community development financial institutions (CDFIs). These organizations have a track record of filling capital gaps in underserved communities but were previously participating in SBA lending through a temporary pilot program called Community Advantage.

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These lenders are securing permanency in the 7(a) Loan Program by becoming community advantage small business lending companies (CASBLCs). Federal FY 2024 will be a baseline year for gathering impact data.

Nationally, the demand increased once again for capital from SBA's microlending program. In FY 2023, $85.3 million in microloan funding went to 5,409 small businesses. This was a 6.4% increase in volume and a 1.8% increase in dollars over the previous year.

In Colorado, various community-based lending and local revolving loan programs compete in the same space, specifically targeting some of the same markets as the SBA microloan program. Colorado experienced a decrease in approvals in SBA microlending in FY 2023. In FY 2023, 157 microloans totaling $2.5 million were accessed by Colorado small businesses, a slight decrease in volume by 5.4%, but an increase in dollars by almost 8% year-over-year. The number of jobs created and retained slightly decreased from 1,138 to 885, while the average microloan size increased from $14,210 to $16,222.

Colorado has four approved SBA-designated intermediary lenders. The largest volume of microloans delivered in numbers and dollars in FY 2023 was through the Colorado Enterprise Fund, with 94 loans totaling over $1.2 million.

Surety Bond Guarantee

Continuing traction gained in FY 2022, the SBA's Surety Bond Guarantee Program made more positive strides in FY 2023. The demand for program assistance increased. A steadying of material prices, mitigation of supply chain challenges, and increased public and private contract awards created more opportunities for small businesses to compete for bonded contracts.

Nationally, SBA provided 9,265 bond guarantees totaling over $7.3 billion in contract value to small businesses. That represented an 11% increase in bond guarantee volume over FY 2022, and therefore catalyzed more job creation by small businesses through new bonded work. SBA helped small businesses bond more than $2.4 billion in awarded contracts. Nationwide, 1,886 small businesses were assisted by 32 active surety companies. Last year the agency increased the contract limit for its streamlined QuickBond Application to $500,000 to increase access to more small businesses. The average contract size in FY 2023 was $682,943.

The total number of surety bond guarantees in Colorado for FY 2023 was 167, an increase of 13% over FY 2022 values. The total contract value in Colorado at fiscal year-end 2023 was over $102 million in bond guarantees.

Generally, a healthy construction industry fuels demand for this type of access to capital. The increase in FY 2023 over 2022 suggests that the surety and construction industries are rebounding from the pandemic, supply chain challenges, and material costs. SBA expects the need and demand for its bond guarantees will continue to increase in FY 2024 as the construction and surety industries strive to fully recover. The forecast is for further improvement, especially as infrastructure projects funded under the Bipartisan Infrastructure Law (Infrastructure Investment and Jobs Act) become shovel ready.

Looking Ahead

Small businesses are still the driving force of economic stability in the U.S. and are powering local economies. They account for 44% of U.S. GDP, create two-thirds of net new jobs, and employ nearly half of America's private workforce workers. They also reinvest 68% of revenues to build and sustain communities.

The main macroeconomic concerns likely to impact continuing growth for small businesses in 2024 are inflationary pressures, costs of labor, and difficulty accessing affordable capital. These factors are likely aggravated by debt fatigue, encumbered collateral, and decreased debt repayment capacity as full principal and interest payments on disaster relief-related sources come due. Exporters may also have a slower path to full recovery and growth. They are strongly impacted by geopolitical conditions. This makes export promotion and financial support even more important.

A recent national independent survey, conducted in conjunction with Goldman Sachs, found that 78% of small business owners are anxious about accessing capital, while 53% were concerned they could not afford financing in the current interest rate environment. Of great concern was that 21% said they would close if credit does not become less restrictive.

While there are some lingering challenges, the U.S. is experiencing a small business boom. Postpandemic, the number of new small businesses in the U.S. spiked, and that trend appears to be continuing. The last three years have seen incredible new small business growth, with over 13 million new business applications nationwide. This small business boom is being led by women and people of color at a rate 65% faster than the prepandemic average. This small business boom has also seen the fastest creation rate of Hispanic-owned businesses in more than a decade, over 20% faster than prepandemic levels.

However, SBA recognizes that small businesses, particularly those owned by individuals in underserved communities who are highly entrepreneurial, face barriers in accessing capital needed to start or grow their businesses. The agency is making attempts to specifically address persistent capital access gaps for rural, veteran, women, and minority-owned businesses. SBA loan program improvements will increase ability to access funding to start up and grow through a broader network of lenders with streamlined lender procedures.

In a tightening credit environment, the SBA's lending programs deliver a market solution by offering government-backed loans with favorable terms to fill market gaps and get needed funding into small businesses. If long-term interest rates continue to increase, one benefit of using guaranteed programs is that SBA regulates the maximum interest rates that can be charged in exchange for the full faith and credit of the federal government backing these loans. Additionally, to try to offset the cost of borrowing due to interest rate hikes, for FY 2024, the SBA recently increased the incentive of fee-free lending for SBA loans of $1 million or less.

Small business has a large impact on Colorado. Per SBA's Office of Advocacy, the Centennial State is home to approximately 691,230 small businesses that comprise 99.5% of all Colorado business. Tracking performed through the U.S Chamber of Commerce asserts that Colorado experienced a 12.7% growth in business applications filed from 2022 to 2023. It ranks sixth in 2023 business applications per capita, and 7% of new businesses are projected to become employer businesses.

Small businesses have historically been a major source of new jobs. In Colorado, small businesses employ 1.2 million people, or 47.6% of Colorado employees. The Colorado Secretary of State's Q3 2023 analysis reports that Colorado's overall job growth grew 1.4% year-over-year in September. However, employers in the state are still trying to fill job openings. The supply-demand imbalance in employment appears more pronounced in Colorado than the U.S. With 99.5% of all private business classified as "small" in the state, this is a measure to watch.

Considering the unique macroeconomic environment, Colorado is still recognized as a great place to start and grow a small business. Every level of government, nongovernmental entities, trades, and private industry support small business development efforts throughout the state. Ongoing reinforcement of Colorado entrepreneurship will be critical to empowering resiliency, growth, and innovation—all crucial to the state's future economic condition.

Colorado Credit Unions

Despite continued interest rate hikes, a debt ceiling showdown, and a number of high-profile bank failures, the economy and Colorado credit unions have remained strong in 2023. Strong GDP growth, record employment, and elevated inflation have remained. While economic indicators remain strong, they have come down to a manageable level.

GoWest's baseline forecast is that the policy responses will eventually result in a recession, although it might not materialize until 2025. The committee's baseline forecast reflects a comparatively short and shallow downturn. It expects that the terminal unemployment rate associated with the Fed's policy response will be roughly 4.5% at year-end 2024. Importantly, Colorado unemployment trends have generally been following national norms. While unemployment is expected to rise, credit unions continue to grow and are continuing to see employment growth that should level off in 2024. Mortgage and commercial lending departments have had some redeployments to consumer lending and key account management. Overall, credit union employment has continued to rise throughout 2023, and that trend is likely to continue into at least the first quarter of 2024.

Colorado credit unions balance sheets have remained relatively strong throughout 2023 as auto loan portfolios continue to perform well. Payoffs are extending, but auto loans are still turning over relatively quickly, and while delinquencies have ticked up, they are still well below historical norms. Loan turnover is creating liquidity and is offsetting the slower deposit growth relative to loan demand. Liquidity is being reinvested in higher-yielding assets resulting in strong balance sheets despite the rapidly rising cost of funds. In addition, investments are continuing to roll off and are quickly reinvested into consumer loans where demand is strong, which is resulting in credit unions rolling up the yield curve. Credit unions have relatively low-interest rate risk compared to other types of lenders and have limited exposure to commercial real estate. However, significant defaults in this asset class would resonate broadly. The lack of loan demand in the residential real estate market has had a minimal impact on credit unions as auto lending continues to be the strongest lending sector for credit unions and auto loan demand remains strong.

Managing liquidity, rising cost of funds, higher losses, and growing operational expenses are top of mind for Colorado credit unions. Credit union deposit growth has been relatively flat in 2023, with loan demand far outpacing deposit growth. Credit unions' costs of funds have risen substantially in 2023 as credit unions turned to borrowings and have had to increase rates on savings to maintain deposit levels. The competition for deposits is expected to continue in 2024. At the end of 2023, approximately 35% of Colorado credit unions will be 90% loaned out and 15% will be over 100% loaned out. Due to the cost of deposits, most credit union leaders are focused on bringing in just enough liquidity to fund loan demand. Delinquencies and charge-offs are trending up but remain well-below historical norms.

Colorado Credit Union Future

Going forward, forecasts are for a 60% probability of at least one more interest rate hike as the Fed continues to work to meet its mandate of price stability. Inflation continues to come in higher than expected, retail sales have risen dramatically, unemployment remains low, and wages continues to rise. Many economists are anticipating that the next rate hike will be followed by a 12-month holding pattern that will continue through the election next year. However, the futures market is anticipating rate cuts much earlier despite continuous data that are contrary to that assumption.

Key Metrics

In the first half of 2023, Colorado credit union core deposits (nonmaturity deposits) have fallen by approximately $3 billion. Most of this run-off is attributed to consumer spending. While core deposits are dropping, they are still about $8 billion more than prepandemic levels, which translates to 30% more in transactional and base saving accounts postpandemic. The cost of funds has risen by more than 100 basis points in the past 24 months for Colorado credit unions, compressing return on average assets that have fallen to less than half of prepandemic levels. At the end of the second quarter, return on average assets was 0.43%. The 60-day delinquency rate

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has risen, but remains well below historical norms, and charge-offs of 0.41% continue to run below the 0.55% 30-year average rate in the state.

Sensitivity risk—Many Colorado credit unions have repositioned balance sheets, which has significantly lowered interest rate sensitivity over the past year. Both credit union professionals and supervisory authorities are tracking these trends closely, measuring, monitoring, and controlling this risk. In short, the industry reflects manageable exposures to interest rate risk and few significant concerns on the horizon.

Liquidity—Despite higher interest rates, the normalization of auto prices has resulted in strong new and used auto loan demand in 2023. While deposit growth has continued, loan demand has far exceeded deposit growth in 2023, which has resulted in a loan-to-savings ratio over 90%, a key indicator of liquidity. Colorado credit unions' borrowings have risen substantially to cover the mismatch in loan demand relative to deposit growth. There are very few excess deposits across all lending institutions, which is creating significant competition for deposits. GoWest is forecasting the cost of funds will continue to rise even if interest rate hikes level off, putting pressure on net interest margins over the next 18 months. All financial institutions are stress-testing balance sheets for both up and down rate scenarios, and many financial institution leaders are in unfamiliar territory as they have never managed through a competitive deposit market cycle.

Earnings rates (net income as a percent of average assets) averaged 0.62% during 2022 and have eased to 0.43% in the first half of 2023. Even with stabilizing market interest rates expected in 2024, it is reasonable to expect a bit more pressure on bottom-line results in 2024—though overall healthy earnings results should be prevalent.

Colorado credit union aggregate capital as a percent of assets started 2023 at 9.8% and finished midyear 2023 at an identical 9.8% of total assets reading. The sector's aggregate capital ratio thus remains nearly three percentage points higher than the level deemed to be "well capitalized" by regulatory authorities.

Colorado's 73 credit unions report membership growth. Overall, memberships increased by 40,000 between the end of 2022 and the second quarter of 2023, and credit union employment has also increased but employment growth has slowed.

Insurance

Insurance Industry

Holistic overview: Global trending and impact on the Colorado market

The insurance market for Colorado will serve as a microcosm and parallel many of the evolving macro global trends, particularly relating to increasing property insurance premiums. COVID-19 pandemic, evolving cyberthreats, inflation, and worsening natural disasters have fundamentally reshaped the insurance market. As a result, hardened conditions have pressed on for multiple years, prompting limited capacity, stricter underwriting standards, and rising premiums across many lines of commercial coverage.

The insurance market is cyclical and the hard and soft markets cycle about every five to seven years. According to data provided by the Council of Insurance Agents and Brokers, history tells us that the overall market is starting to come down gently from the hard market that started in 2018 and appears to have peaked at the end of 2020. These cycles affect the availability, terms, and prices of commercial and personal lines insurance products.

While relatively immune from catastrophic loss since the December 2021 Marshall fire, the recent Lahaina fire in Hawaii has served as a reminder that climate change will continue to make it excessively challenging to underwrite risk, thus driving up insurance costs for Colorado homeowners, according to the *Denver Post.* The U.S. homeowners' market has experienced losses since 2020 and AM Best, a credit rating agency, estimates underwriting losses for the first half of 2023 to exceed $24.5 billion. The insurance industry will be relegated to squeeze the consumer to keep up with loss trends.

Next year is an election year, which may create uncertainty for the stock market and returns on investments. Insurers generate their revenue through underwriting profits and an investment profit from the float in re-investing premiums. The historically low interest rates over the past few years have forced constriction in underwriting as there was limited opportunity to balance underwriting losses against investment gains.

While rising interest rates may offer more secure investment instruments for insurers, the insecurity in worldwide events including two present wars (Gaza and Ukraine) combined with the climate change issues, unknown impacts of AI, inflation increases, and transitioning employment models may minimize insurance company investment opportunities. This lower investment yield could result in continued premium increases overall.

The increased investment float from rising premiums may be countered by the tenuous real estate market. Insurance carriers and brokers have significant investments in real estate both direct through their own office space utilization, along with reliance on insuring companies that own significant property. As the real estate market continues to struggle with post-COVID office vacancies, widely accepted work-from-home policies, and higher mortgage rates, 2024 is not likely going to provide a strong investment return for insurance carriers in this realm. The Colorado insurance market consists primarily of numerous regional providers and branch officers of global participants. Companies are already reevaluating their office space needs, and the trend toward more spacious and accessible office space may lead toward moves from urban centers to suburban branches where parking and safety and security concerns may be controlled.

Property and Casualty Markets

General Liability: The year 2024 is expected to be a stronger year for liability insurance carriers as higher premiums and higher interest rates are improving overall industry results. Premiums are based on multiple factors, with a rate predicated, in part, on an insured's revenue, risk exposure, and loss history. Nuclear jury verdicts are impacting insurance premiums for all lines of third-party liability coverage, and insurers are factoring in accelerating legal and indemnification costs and passing the cost on to the insurance consumer. The committee projects that general liability insurance rates will increase 3%-8% in 2024.

Auto Liability: Relative to auto premiums, auto insurance continues to be unprofitable for insurers despite year-over-year rate increases since 2011. Colorado is adversely impacted by several trends, including a growing population resulting in increased driving density, and, according to the National Insurance Crime Bureau's (NICB) Hot Spots Report, the state continues to lead the nation with the highest overall theft rate, at 661 thefts per 100,000 people. Aligned with property replacement issues, supply chain concerns and labor shortages are impacting the repair and replacement of insured vehicles. In addition, the severity of auto-related accidents continues to rise, and along with this, comes ever-increasing medical costs for those injured parties. The committee projects that auto liability insurance rates will increase 9%-16% in 2024.

Property: Colorado is considered a high exposure area for risks of loss directly correlated with global warming trends, including wildfires and resulting flooding exposures from the loss of natural landscape mitigation. Further, hailstorm damage continues to decimate the Colorado property market, and homeowners will continue to see premium increases in 2024 as insurers continue to recover from the May 2017 storms that resulted in $2.4 billion in damage over a 45-minute period. Supply chain issues and inflation are detrimentally impacting the cost of goods and the ability to retain vendors and appropriate labor to keep pace on mitigation requirements for repair and replacement regarding insurable losses. The October 2, 2023, issue of *Insurance Journal* estimates Colorado insurance rate increases will approximate 30% in 2024.

The committee projects that property insurance rates will increase 20%-30% in 2024.

On May 12, 2023, Governor Polis signed into law the Fair Access to Insurance Requirements Plan (FAIR) (HB23-1288) designed to provide property insurance coverage for homeowners and businesses when coverage is unavailable through the traditional insurance markets due to elevated risk factors. This new legislation is supposed to go into effect on or before July 1, 2024, once the selected Fair Plan Association Board of Directors has established the plan of operation. The Fair Plan Program will help provide property insurance coverage for personal residences not to exceed $750,000 in value and up to $5 million in value for commercial property owners.

Workers' compensation insurance premiums, under the recent National Council on Compensation Insurance, will decrease 3.4% in 2024 after the Colorado Division of Insurance approved the reduction in November 2023.

Umbrella/Excess Liability: The last few years have been extremely difficult for the umbrella/excess liability market. Nuclear verdicts (jury awards exceeding $10 million) and social inflation have caused significant strain on jury claims, resulting in payouts that penetrate multiple layers of capacity for the umbrella market. According to Risk Placement Services, in 2022, awards from nuclear verdicts surpassed $18 billion compared to $9.1 billion in 2021 and $4.9 billion in 2020. Most common losses were from auto claims predominantly in the trucking industry, product liability claims, and claims in the construction industry.

Recent national legislative changes—particularly in Florida due to the 2021 Surfside condo collapse—may impact the national reinsurance market and could cause significant increases in lawsuits around the country. Time will tell whether such changes could impact other exposures, such as wildfires, that are prevalent in Colorado. According to the Council of Insurance Agents and Brokers, umbrella rates have stabilized after several years of premium increases exceeding 20%. While rates have been reduced due, in part, to increased competition, companies appear reticent to offer higher layers of coverage. This trend toward risk aversion may be amplified if the looming recession comes to fruition. The committee projects that umbrella insurance rates will increase 7%-14% in 2024.

Cyber Insurance: Evolving technology, increased threat vectors, and growing attacker sophistication have driven up, and will continue to drive up, both the frequency and severity of cyber incidents, resulting in an ongoing rise in cyber insurance claims and subsequent underwriting losses. Amid these market conditions, most policyholders have experienced higher cyber insurance rates throughout 2023. According to industry data, some insureds saw as much as 50%-100% rate increases, depending on their specific digital exposures and loss control measures. Multifactor authentication (MFA), endpoint encryption, and ransomware have become ubiquitous system controls required by insurers merely to be considered for coverage. Policyholders who fail to adopt proper cybersecurity protocols or experience a rise in cyber losses may continue to face rate increases and coverage limitations for the foreseeable future. The committee projects that cyber liability insurance rates will increase 8%-15% in 2024.

Health, Life, and Employee Benefits

Healthcare: The Colorado health insurance market has become increasingly competitive due, in part, to attrition as the state continues to lose insurers interested in conducting business in the state. Under the Colorado Option instituted in 2023, insurers are mandated to lower premiums while enhancing an array of services to comport with the Affordable Care Act. The Dobbs decision by the Supreme Court regarding reproductive rights will affect all 50 states, and Colorado has been recognized as a safe haven for those seeking services restricted in their home states. This situation may impact state social service costs.

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Recently, the FDA has approved weight loss drugs, including Eli Lilly's Tirzepatide, that may impact long-term medical trends. At present, the insurance industry has not committed to payment for these prescriptions. The committee projects that employers' insurance rates will increase 6%-8% in 2024

Employee Benefits: Nationally, major benefits employers are forecasting that employers will absorb more of the premium increase and pass a lower percentage on to employees because of the prevailing tight labor market. This should remain consistent in Colorado.

Summary: Some of the 2024 trends and takeaways include:

- Catastrophes, inflation, geopolitical conflicts, labor shortages, supply chain issues, and higher replacement costs for property and automobiles will continue to drive up premiums.
- Extreme weather events, such as hurricanes, hailstorms, tornados, and wildfires, will continue to increase, and in turn, will keep insurance carriers on their toes to push for even higher premium levels as they seek better combined loss ratios.
- Property and auto insurance will continue to be difficult to procure in Colorado. Insurers will be looking for customers to take on additional risk, such as additional deductibles, and implementing protective actions, such as installing fire-resistant roofs, fire-resistant plants, and roofing materials. The better maintained a property is, the better chance an insurance company will insure it, according to the *Colorado Springs Business Journal.*
- The impact of a recession could result in business owners making cash conservation decisions of lowering their insurance coverage and limits, thus impacting insurance company profitability.
- Runaway jury verdicts and increased litigation will continue to negatively impact insurance industry loss ratios, particularly impacting rates for umbrella and excess liability lines of coverage.
- The surging frequency and severity of natural disasters will continue to pose concerns with the property insurance market. Many climate experts estimate that natural disaster trends will continue to increase property losses in the future.

Real Estate and Rental and Leasing

Commercial Real Estate

Commercial real estate in Colorado continued to slow much like it has on a national scale since the second half of 2022 and through 2023. Transaction activity is expected to remain limited into early 2024 as both investors and sellers are forced to manage risk in the face of volatile interest rates, high inflation, and other concerns about the macroeconomic environment. Colorado's competitive advantages of continued population and job growth will allow the industrial, multifamily, and retail sectors to outperform U.S. averages, while the office sector undergoes adjustments to incorporate more hybrid work environments and a shift away from lower quality, obsolete buildings. Industrial and multifamily are modestly threatened by oversupply, but a drop in construction starts and permits will likely result in undersupply just a few years down the road. The increased cost of capital brought on by inflation will continue to moderate demand for commercial real estate from both an occupier and investor standpoint, while dampening construction activity until volatility and high interest rates subside.

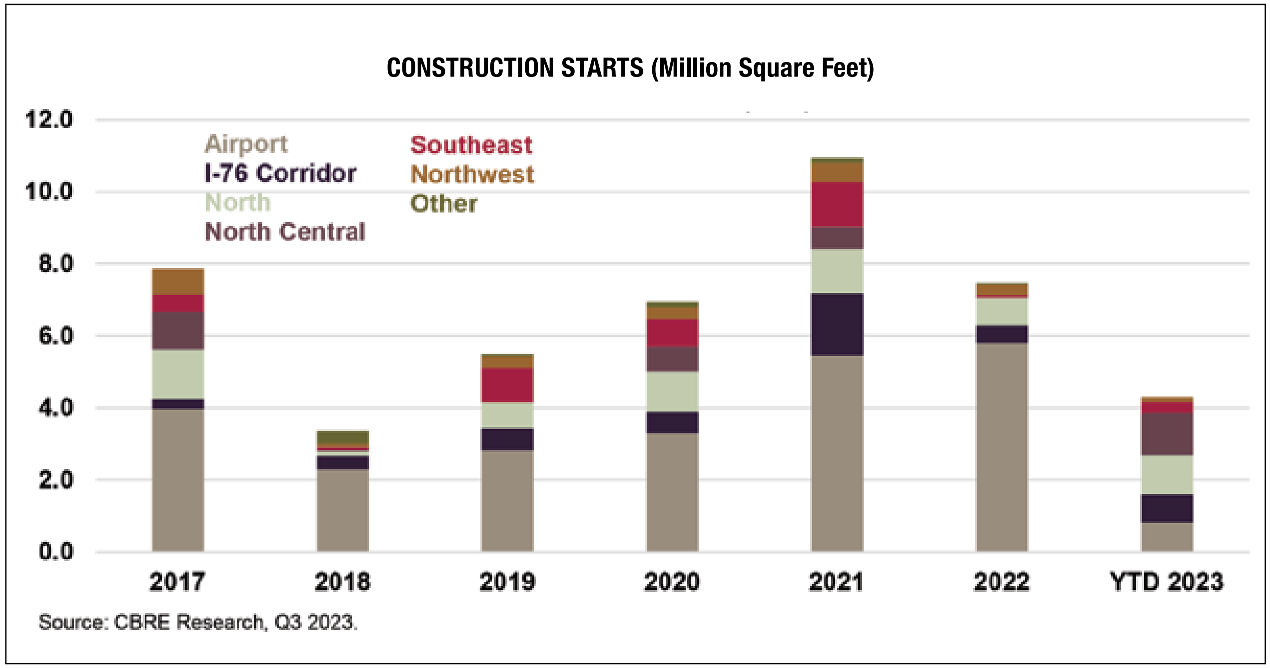
Metro Denver

Metro Denver's commercial real estate markets are on relatively solid footing despite increasing economic headwinds and rising interest rates. The office sector continues to both struggle and recover from pandemic-induced challenges, while growth in the industrial and multifamily sectors has reset to a more moderate pace, and retail fundamentals have officially turned a corner after years of pullback.

The unemployment rate increased to 3.3% in October 2023 from 2.5% in October 2022 in the Denver-Aurora-Lakewood MSA. Population in the Denver-Boulder MSAs increased by 481,000, or 17.2%, from 2010 to 2023. Net migration in the Denver-Boulder MSAs, according to the State Demography Office, is expected to reach nearly 16,700 in 2023, better than the two consecutive declines in 2021 and 2022 but well below the 27,000 annual average in the prior decade.

Additionally, a long list of accolades and high rankings attest to Metro Denver's diverse and innovative economy, talented labor pool, and high quality of life. The Denver Metro area is home to 10 Fortune 500 companies representing a broad range of industries. Notable companies on the list include Arrow Electronics, Dish Network, Ball, DaVita, and VF Corporation. Over 50% of residents in the Denver-Boulder combined MSA have a bachelors' degrees or higher, with 49.1% of the population from the millennial or Gen Z demographic.

Like most of the U.S., the metro Denver commercial real estate market has continued to slow over the past year, with the office market being the notable underperformer. However, multifamily, industrial, and retail markets remain on relatively solid footing and are outperforming many of their national counterparts.



Metro Denver's office market continues to experience challenges in its emergence from the hardships brought on by the pandemic and is facing mounting macroeconomic headwinds. Office occupiers are now feeling more comfortable making leasing decisions, but this has not translated to them occupying the same-size office or taking larger footprints. According to the Downtown Denver Partnership, employees' return-to-office ratio in downtown Denver in September 2023 was 56% of the September 2019 prepandemic levels. This marks a decrease from 61% seen in August. Looking ahead, 63% of U.S. respondents to CBRE's Global Live-Work-Shop Survey want to work in the office at least three days a week. Fewer than 7% want to be full-time remote workers. Survey results clearly indicate a flight to quality, with 32% of respondents relocating to better-quality space and 25% exploring that option.

In 2023, according to a Q3 2023 CBRE report, occupiers are still adjusting their portfolios, with negative 1.1 million square feet of total net absorption year-to-date through Q3. This marks a 124% increase compared to the negative 502,000 square feet year-to-date total in Q3 2022. Total office vacancy increased 220 basis points year-over-year, to 22.8%. Vacancy rates are expected to remain elevated above pre-COVID-19 levels until industries, such as technology, see a greater return-to-office headcount and a more positive economic environment. Sublease availability declined to 5.9 million square

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feet in Q3 2023, falling from the previous peak of 6.6 million square feet recorded in Q1 2023. The market average asking lease rate has continued to see a modest rise, increasing 1.3% year-over-year, to $32.53 per square feet full-service gross. The development pipeline totaled 2.1 million square feet across 12 properties as of Q3 2023. The market's most recent sizable completion was Schnitzer West's The Current, which spans 238,000 square feet of highly amenitized space in the River North submarket. In total, three projects delivered during the first three quarters of 2023, adding a total of 451,100 square feet of space to the market.

Leasing activity has continued its steady recovery after seeing 1.3 million square feet of leases transacted in Q3 2023, an increase of 11.5% quarter-over-quarter. Compared to Q3 2022, leasing activity rose 22.4%. The rolling four-quarter total was 4.4 million square feet, slightly higher than the prior quarter's mark, but 16% lower than the total from a year ago, again indicating that activity remains suppressed and volatile. Class A properties maintained their dominant market share in Q3 2023, with 950,000 square feet of transactions, or 76%, of total activity. Renewals accounted for a growing share of leasing activity in 2023 as expansion growth has stalled while companies navigate the remote work dynamic and right-size their office space. Notwithstanding these real estate challenges, Metro Denver continues to have a growing presence of finance, communications, health care, and energy companies. Denver ranks the No. 3 Best Market for Tech Talent and the No. 10 Best Market for Life Sciences Research Talent, according to 2023 rankings published by CBRE.

Following a solid 2022, Denver's industrial market experienced moderate growth through the first three quarters of 2023, according to a Q3 2023 CBRE report. Metro Denver posted over 447,000 square feet of positive net absorption in Q3 2023, pushing the year-to-date total to 2.7 million square feet, which is roughly 22% off the pace set at this time last year. The total volume was heavily impacted again by delayed space buildouts caused by longer lead times for materials and labor shortages while also seeing several sizable tenants vacating. Tenants continue to seek highly functional speculative space, highlighting the sustained demand for new industrial product in the Denver market. Total leasing activity declined in Q3 2023, with 2.1 million square feet transacted, a 45.1% decrease year-over-year. Historically, third-quarter activity over the past five years averaged just over 2.7 million square feet leased. While demand for new industrial product persists in Denver, leasing activity is expected to moderate slightly as the cost of capital and other macroeconomic headwinds come into play for occupiers and developers alike. The Denver industrial development pipeline saw a slight 7.9% bump in Q3 2023, with 36 buildings under construction combining for just over 8.9 million square feet of space. Through Q3 2023, Denver has seen just 3.9 million square feet of industrial product break ground, a 51.9% year-over-year drop in construction starts. As developers continue to manage risk and reassess the market in the face of macroeconomic volatility, speculative construction starts are likely to remain slow through the end of the year and into 2024. Nearly 41% of the product underway is currently precommitted, supported by the five build-to-suit (BTS) projects totaling over 3.4 million square feet. Out of the 5.5 million square feet of speculative space under construction, only 194,000 square feet (3.5%) is preleased. Notable projects under construction include Pepsi's 1.2-million-square-foot BTS and Dollar General's 919,000-square-foot BTS. Meanwhile, major speculative projects underway include the 624,094-square-foot Sun Empire–Building 1A and the 613,758-square-foot Lovett 76 Logistics Park. Due to a high volume of new, large spaces coming onto the market, availability rates in Metro Denver saw a considerable increase while vacancy rates remained flat in the third quarter. Total availability climbed a significant 160 basis points year-over-year, and vacancy rates illustrated a subtle 10 basis points increase year-over-year. Average asking rent reached $8.94 per square feet NNN in the third quarter of 2023, recording a modest increase of 1.9% quarter-over-quarter and a 4.2% increase year-over-year. (NNN refers to triple net leases, net of property taxes, insurance, and operating expenses.) Similarly, achieved rent increased 3% quarter-over-quarter and 1% year-over-year, to $8.70 per square feet NNN.

Denver's retail sector continues to see robust market fundamentals despite the numerous uncertainties brought on by the pandemic. The pandemic deterred in-person shopping and drove consumers to internet-based shopping, a trend that is continuing, but recent activity indicates an exponential uptick in tenant demand and the surprising strength of brick-and-mortar retail. For the first time in years, vacancies are down, rents are up, and more stores are opening than closing. Retail real estate's reversal of fortune follows a decades-long adjustment that included vendor bankruptcies and widespread vacant storefronts. Retail within office clusters and downtown continues to be impacted by fewer employees returning to work, but the pandemic-induced migration to the suburbs has accelerated activity among local retailers and smaller vendors that has pushed vacancy rates down to prepandemic levels.

The average retail asking rate in Metro Denver saw a healthy 1.8% increase, to $19.90 per square feet NNN quarter-over-quarter and a slight 0.4% uptick year-over-year, according to a Q3 2023 CBRE report. Direct vacancy remained relatively flat, increasing a subtle 10 basis points quarter-over-quarter, to 6%, which marks a 30 basis points decrease year-over-year. The metro's total availability rate increased a modest 20 basis points quarter-over-quarter, to 6.5%, but showed a 16.7% drop year-over-year in Q3 2023. The retail development pipeline saw an 18.7% increase in Q3 2023, with just under 487,000 square feet of space under construction. Precommitted retail projects remained a driving factor in the third quarter's activity, with Lifetime Fitness's 111,000-square-foot building in Golden and King Sooper's 103,000-square-foot building in Erie both still underway. Denver retail posted a delivery volume of over 74,000 square feet in Q3 2023, a 68.2% decrease from the second quarter and a 64.1% decrease year-over-year. As

Denver retail supply continues to tighten, new development will remain active as demand remains elevated. Just under 25,000 square feet of net absorption was recorded in Q3 2023, the 10th consecutive quarter of positive net absorption. The retail market remains driven by a strong resurgence in tenant demand and limited availability, and is displaying prepandemic levels of market fundamentals. High inflation, rapidly rising interest rates, and the prospect of a recession could potentially shift retail sector fundamentals once more in the coming future.

Following a record 2021 and first half of 2022, Denver's multifamily market continued to experience growth in the first three quarters of 2023, but at a significantly slower rate than the quarters following the COVID pandemic. Fundamentals continue to display resilience, despite record new supply coming online and uncertainty in the capital markets. The overall occupancy rate increased 20 basis points, to 94.3%, in Q3 2023, according to CBRE. The historical Q3 occupancy from 2000-2019 averaged 94.4%. Average effective rent increased to $1,934 per unit, or $2.22 per square foot, up approximately $20 per unit quarter-over-quarter and up $14 per unit year-over-year. Development activity appears to have peaked with few construction starts and high levels of deliveries. At the end of Q3 2023, 35,300 units were under construction spread across 139 properties. There were 2,959 units delivered in Q3 2023, pushing the 2023 year-to-date total to 8,873 units. While the development pipeline continues to shrink, deliveries are expected to remain elevated through 2024 as many new projects near completion. Net absorption was positive 3,326 units in Q3 2023 and 7,822 units year-to-date. Demand remained strong as Metro Denver recorded the sixth-highest Q3 2023 net absorption and the third-highest Q2 2023 net absorption across all markets in the U.S. Third quarter transaction volume totaled $1.05 billion, a significant increase of 126.7% quarter-over-quarter but down 12.4% year-over-year. Transaction volume in Q3 2023 was slightly more than the combined total for the first half of the year. The monthly cost of owning a home (includes a mortgage payment based off a 7.31% all in 30-year mortgage rate, property taxes, and private mortgage insurance as many first-time home buyers cannot afford a 20% down payment) compared to the monthly cost of renting reached a new record delta in September. It is now $2,293 cheaper per month to rent than own, which equates to annual savings of more than $27,000. Population growth, employment growth, record home prices, and rapid interest rate increases will continue to drive renter demand.

Regional Markets

Southern Colorado has outperformed many other Colorado cities in terms of both population and job growth. This is principally due to a lower cost of living relative to Metro Denver, strong employment sector, high rates of education, an engaged and business-friendly city government, and an attractive quality of life. In fact, Colorado Springs ranked ninth on U.S. News and World Report's "2023-2024 Best Places to Live," and is the No. 1 city in the U.S. for relocation by millennials. The Department of Defense continues to be the impetus for continued business and economic growth. Economic Development Center officials report that the aerospace and defense industry accounts for more than 40% of the Colorado Springs economy. More than 200 space, aerospace, cybersecurity, and defense companies employ 111,000 people, with an annual economic impact exceeding $10 billion in 2022. Rising interest rates and elevated construction costs have slowed the pace of new and otherwise speculative construction. Across most commercial property types, CBRE reports that rental rate growth accelerated 3% to 5%, leasing was active, and limited new supply reduced vacancies. Cushman and Wakefield reports that much of what used to be call-center type space is being converted to pure office space for defense users, a trend it expects to continue. With tight vacancies and checks on supply growth, most tenants entering the market will experience elevated lease rates and limited availability.

Northern Colorado has experienced rapid economic expansion. New construction to support population growth in communities along I-25 has occurred at a breakneck pace. Weld County, with a current population of 351,000, has experienced a 10-year annual growth rate of about 2.7%. Similarly, Larimer County, at 376,000 people, has experienced a 10-year annual growth rate of about 1.7%. It is projected that by 2050, Weld County will grow to 610,000 residents, and Larimer County will grow slightly slower, to 495,000 residents. This escalating growth drove the need to modernize the highway system with greater capacity and mobility options for residential and business areas, as well as freight transport and tourism destinations. In 2018, the Colorado Department of Transportation embarked on a $750 million roadway expansion from Berthoud to Fort Collins, and the project is expected to be completed in 2024. Commercial real estate development has been active, however, unlike larger metros, Northern Colorado has not overbuilt its commercial sector. As a result, CBRE notes that retail, office, and industrial properties have netted positive absorption, stabilized vacancy levels, and rising rents. A particular bright spot has been the industrial warehouse sector. Industrial rents are rising between 4% and 6%, and everything being delivered is getting leased. As long as there is tenant demand and rents can support new construction, developers will deliver. However, supply will be forcefully constrained by interest rates that are expected to remain higher for longer and increasing construction and labor costs are not expected to recede anytime soon.

Western Slope economic development officials have worked tirelessly for over a decade to transition the region's economy from the one trick pony of oil and gas development toward a more diverse economic base with the intention of creating jobs, wealth, and improving the quality of life. The Grand Junction Chamber of Commerce expressed optimism in early 2023 noting that "the diversification of our business industries is steadily allowing Mesa County to be more resilient during challenging economic times." The region is home to some of the most innovative and impactful manufacturing

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Financial Activities

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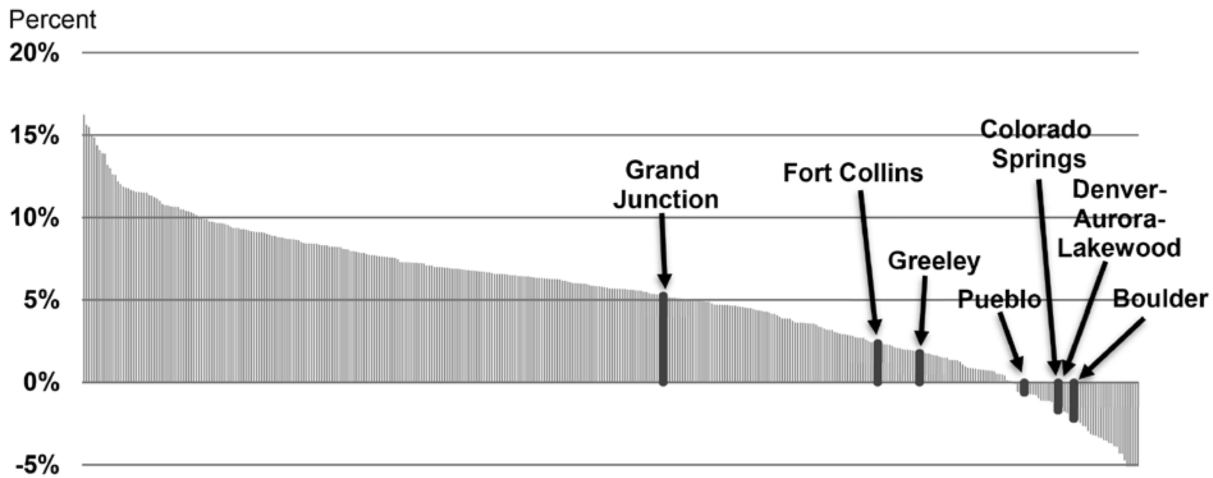
FHFA YEAR-OVER-YEAR HOME PRICE CHANGE BY MSA, Q2 2023



Source: Federal Housing Finance Industry, All Transactions Index (Not Seasonally Adjusted)

FHFA HOME PRICE INDEX Q2 2023

	Compound Annual Growth		
Colorado MSA	1-Year	5-Year	10-Year
Boulder	-2.2%	7.4%	8.5%
Colorado Springs	-1.2%	10.0%	8.6%
Denver-Aurora-Lakewood	-1.7%	8.2%	9.4%
Fort Collins	2.4%	8.4%	8.9%
Grand Junction	5.3%	10.8%	8.0%
Greeley	1.8%	8.6%	9.8%
Pueblo	-0.6%	10.9%	9.0%
Colorado	-0.4%	8.7%	9.1%

Data Source: Federal Housing Finance Agency, All Transactions Index (NSA), through Q2 2023.

companies in the country, such as West Star Aviation and CoorsTek, which previously announced expansion plans bringing additional jobs and investment to the area. As reported in the 58th Annual Colorado Business Economic Outlook, Mesa County was the first county in the state to recover all its prepandemic jobs, demonstrating positive momentum for the region's economic future and business climate. At midyear 2023, Bray Commercial reports that Mesa County's sales tax revenue had increased 2% from Q2 2022 but a startling 38% compared to Q2 2020. Commercial building permits were generally flat from 2022, while residential permits were down significantly, no doubt a result of rising interest rates and higher construction costs. The positive business environment is attracting national attention, but economic headwinds will dampen commercial real estate activity in the coming year.

Residential Real Estate

2023 Residential Real Estate Forecast

This year has been a confusing market for most real estate professionals. One house will sell immediately for at or above the asking price, while another house will sit on the market and undergo multiple price reductions without getting an offer. The buyers in this market are tapped out due to the meteoric rise in interest rates, and sellers have unrealistic expectations as they have witnessed an incredible sellers' market for the last five years.

Housing affordability continues to be a hot topic in the Front Range market. Boulder, Denver, Fort Collins, and Greeley rank as the most expensive noncoastal cities, with populations greater than 250,000 according to the *Wall Street Journal.*

Key metrics defining the Front Range Market, include:

- **Median Closed Price**—Looking at only median sales price, one would assume that the Front Range real estate market is healthy and sound given the modest 1% appreciation rate. However, the dramatic rise in interest rates should have caused an equally dramatic price reduction.
- **Active Listings—**Digging deeper into supply and demand provides insights that the market price of homes is being propped up by lack of supply.

New listings are down 12% for single-family homes/townhomes and condominiums. Closings are down 28% for September 2023 relative to September 2022. According to the *Denver Post,* the number of active listings in September 2023 is about half the September average going back to 1985. This reduced number of active listings is largely driven by interest rates. Most current homeowners have a fixed mortgage at a rate less than 5%. As a result, existing homeowners are not motivated to sell. Additionally, Colorado experienced a positive net migration, resulting in more buyers than sellers in the market, which propped up prices in spite of rising interest rates.

Because of high asking prices and elevated interest rates, buyers have no funds for remodeling projects (such as kitchen, bath, and basement remodels). That said, homes that do not check all the boxes (i.e., updated kitchen, bathrooms, finished basement) tend to sit on the market while homes that meet most of buyers' needs go under contract quickly.

Per the National Association of Realtors, the average days on the market increased from 19 to 31 days in 2023. This means that more homes are sitting on the market versus selling quickly. Home prices have not dramatically dropped as sellers have yet to alter asking prices.

- **Buyer Purchasing Power**—Buyers who find the right house are typically asking for interest rate buy downs rather than price reductions.

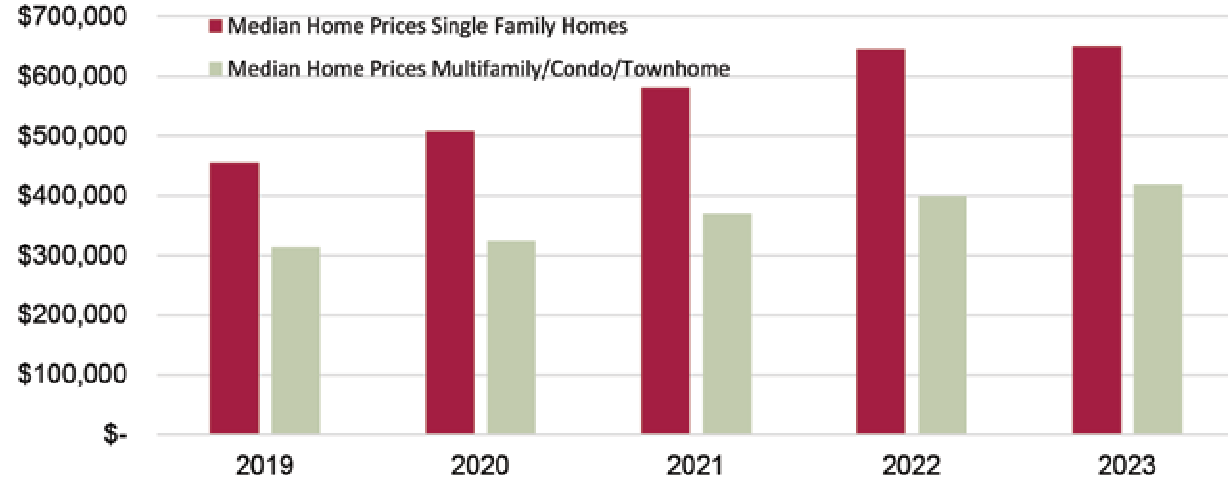
  Buyers' purchasing power eroded by $393 due to the 1% rise in interest rates. Many buyers were maxed out financially in 2022, and thus have been priced out of the market in 2023 as home prices held firm in spite of rising interest rates.

- **Residential Building Permits**—Clearly, this market is not sustainable; however, the only way out of this market is more housing stock. Housing stock comes in the form of sellers entering the market or builders increasing housing starts.

Per the U.S. Census Bureau, residential building permits are down 27.5% for the state of Colorado YTD in 2023. As a result, Colorado may not be able to build its way out of this situation; thus, the market must wait for interest rate relief.

Overall, 2024 should not bring significant changes to the market. As long as interest rates remain high and sellers are not under duress to sell, the market will continue to see tight inventory, which will keep prices from dipping dramatically.

MEDIAN HOME PRICE



Source: National Association of Realtors.

HOUSING AFFORDABILITY INDEX, 1986-2023

Sources: Bloomberg, National Association of Realtors.

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Financial Activities

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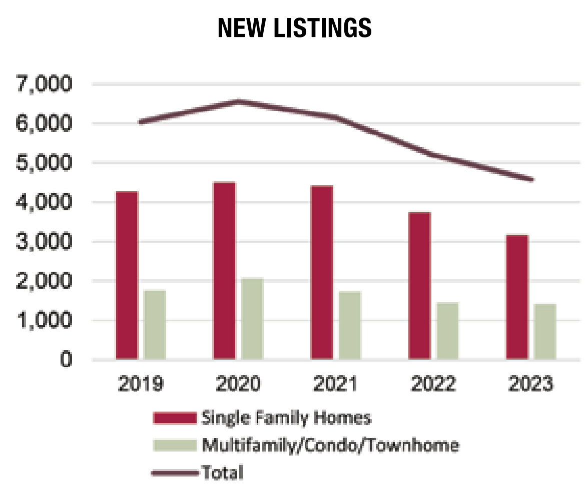


Source: National Association of Realtors.

Front Range Market Strengths

Denver and the Front Range cities continue to be highly desirable places to live. As a result, Denver is still seeing a positive net migration. Companies such as Palantir and Cloud Argonomics, according to Built in Colorado, continue to relocate headquarters to the Front Range, resulting in a healthy number of buyers seeking homes. Companies are attracted to Colorado's, geography (central location and easy access to markets), lifestyle, and cost of living (relative to coastal markets, i.e., Silicon Valley).

Front Range Market Challenges

Affordability remains the greatest challenge for the Front Range residential real estate market, and homelessness and crime, which have been on the rise, continue to be a headwind for the market.

Conclusions for Residential Real Estate Market

The supply and demand dynamics should continue keeping prices in the same range with modest price changes expected in 2024. The key to opening up supply in this market is a significant drop in interest rates. Some economists forecast a reduction in rates in the latter part of next year, which should provide some relief to buyers. Overall, 2024 should be a continuation of 2023.

Front Range Rental Market

The Front Range rental market has favored landlords; however, there are signs of a shift in favor of tenants. Asking rents remain high, but landlords are offering incentives, such as one month free rent to attract new tenants. Per Key Renter, rental leads dropped 10% in August, which indicates fewer renters seeking tenancy. The competition is mainly in the luxury rental market (A category) as many new luxury buildings have been completed and come online. The older B and C category buildings still favor the landlord as inventory in these categories remain low. Vacancy rates should be between 5% and 6% in the luxury market and 3%-5% in the B-C categories with modest rent changes expected. ✥

Contributors:
Ron New, WhippleWood Advisors (Chair)
Sean Breeze, Your Castle Realty
Steve Levine, CircusTrix
Richard Morgan, Kirkpatrick Bank
Jessica Ostermick, CBRE
Frances Padilla, Small Business Administration
Troy Sibelius, The Buckner Company
John Trull, Go West Credit Union Association
Jenifer Waller, Colorado Bankers Association
Patricia Wells, Colorado Bankers Association

Minority-Owned Businesses in Colorado

The substantial growth of minority contributions to the American economy, including Hispanic, Black, Asian, and women-owned businesses, underscores their pivotal role in shaping a robust economic landscape. This dynamic evolution is particularly evident in Colorado, where these diverse segments are becoming increasingly integral to the state's economic vitality. Recognizing the importance of fostering sustainable economic pathways for these demographics, it is imperative to prioritize their inclusion and empowerment.

The Role of the Minority Business Office of Colorado—The Minority Business Office (MBO) plays a pivotal role in this context, serving as a valuable resource dedicated to empowering minority business owners through connections, resources, and technical assistance. With a clear commitment to promoting equity, inclusivity, and economic growth, the MBO works to break down barriers and ensure that minority businesses have the tools they need to succeed, contributing to the advancement of Colorado's mainstream economy.

Minority-Owned Businesses' Persistent Challenges—Despite commendable efforts from organizations like the MBO and partners, minority-owned businesses still encounter persistent challenges that place them at a significant disadvantage. Gaining access to adequate financing and technical resources remains a substantial hurdle. Limited capital access can hinder the growth and expansion of minority-owned enterprises. Simultaneously, insufficient technical assistance can impede optimization of their operations. Moreover, the lack of capacity for effective outreach and awareness about available contracts and resources further exacerbates these challenges. In this context, the ongoing work of the MBO in providing educational opportunities and connectivity to essential resources is pivotal for overcoming these multifaceted obstacles.

Promising Opportunities in Key Industries—Amid these challenges, opportunities for minorities in Colorado are promising, particularly in key industries such as construction, hospitality, and services. These sectors offer avenues for minority businesses to thrive and contribute to the state's economic growth. The ethnic and cultural diversity within this segment stands as a distinctive advantage that can drive innovation and creativity in these industries. By fostering active participation and entrepreneurial development in these areas, Colorado can amplify its business fabric and job-creation capacity.

The Need for Comprehensive Data—To harness the full potential of minority contributions to Colorado's economy, comprehensive and accurate data are imperative. The absence of precise information can limit our understanding of their contribution. Gathering and analyzing accurate data will enable decision-makers to have a more clear and strategic insight. Furthermore, it will facilitate the implementation of effective policies and programs that further drive the growth and success of minority businesses, ensuring their contribution is fully recognized and valued in Colorado's economic landscape.

In summary, minorities in Colorado are not only an integral component of its economy but also a vital source of diversity, innovation, and creativity. Through initiatives promoted by the MBO, growth opportunities in diverse industries, and access to resources, Colorado is well-positioned to foster the prosperity of minority-owned businesses. With a solid vision and accurate data, the state can unlock the full potential of this segment, fortifying both its economy and its business fabric.

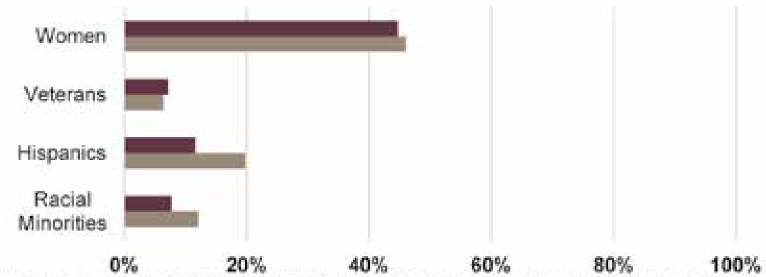
Contributor: *Antonio Soto, Minority Business Office, Office of Economic Development and International Trade*

BUSINESS COUNT BY OWNER DEMOGRAPHIC GROUP

Ownership	Without Employees	With Employees	Total Businesses
Female	222,000	30,479	252,479
Male	282,000	79,111	361,111
Owned equally by both groups	19,000	20,460	39,460
Veteran	33,000	8,229	41,229
Not Veteran	487,000	119,021	606,021
Owned equally by both groups	3,100	2,802	5,902
Hispanic	66,000	6,539	72,539
Not Veteran	455,000	122,181	577,181
Owned equally by both groups	1,600	1,334	2,934
American Indian and Alaska Native	1,800	838	2,638
Asian	20,000	6,515	26,515
Black or African American	19,500	N/A	N/A
Native Hawaiian and Other Pacific Islander	600	N/A	N/A
White	481,000	121,868	602,868
Hispanic or Racial Minority	104,000	14,985	118,985
White and Not Hispanic	417,000	133,144	530,144
Owned equally by both groups	2,400	1,926	4,326

Sources: Table published in the U.S. Small Business Administration, Office of Advocacy, 2022 Small Business Profile, Colorado. Table data from Annual Business Survey, 2018 (Census); Nonemployer Statistics by Demographics, 2018 (Census).

BUSINESS OWNERSHIP SHARE BY DEMOGRAPHIC GROUP



Source: U.S. Small Business Administration, Office of Advocacy, 2022 Small Business Profile, Colorado.

Professional and Business Services

Professional and Business Services (PBS) is a uniquely diverse supersector, aggregating activity across Professional, Scientific, and Technical Services; Management of Companies and Enterprises; as well as Administrative and Support, Waste Management and Remediation Services. Collectively, these sectors have consistently produced solid employment growth across Colorado, adding over 123,000 jobs since 2013, reaching a record 500,400 in 2023.

PBS remains poised to continue its long-standing tradition of growth across Colorado. The business-to-business focus inherent in PBS means productive work generally need not be face-to-face but can increasingly be sourced and managed remotely, offering more flexibility to employees and reducing overhead cost for offices and related expenses. The now ubiquitous work-from-home is seeing some pressure for a gradual return to offices, but many PBS employers have generally trusted their talent to serve clients and generate revenue, while largely avoiding layoffs and confrontations about work locations.

PBS employers are quite aware of the difficulty of recruiting and retention in this tight market. That said, some sectors are seeing emerging macroeconomic headwinds across Colorado, particularly labor-cost inflation and the increasing cost of living, as well as automation, outsourcing, and restructuring. As before, recruiting and retention will remain considerable challenges in most sectors, reflecting the tight labor market, with a sustained high level of unmet job openings. Nationally, PBS job openings per the Job Openings and Labor Turnover Survey (JOLTS) program grew to 1.9 million in September 2023, up from 1.8 million a year prior. PBS accounts for 17.9% of national job openings as of September 2023, down from 19.9% in April 2022. Nevertheless, in Colorado, the JOLTS data showed a 15% decrease of 34,000 openings from June 2022, to 193,000, in the same period in 2023. These survey data have been unusually erratic over the last year, perhaps due to significantly lower participation in the survey, leading to larger swings than had been the case over the last five years.

Overall, PBS employment grew by a record 6.7%, or 30,400 jobs, in 2022. Keeping with that trend but moderating, the committee projects PBS employment will grow another 3.4% to average 500,400 jobs in 2023. Despite any headwinds, growth will continue at a more moderate 2.9% in 2024, to total 514,900.

Colorado's PBS companies and job clusters are located largely along Colorado's Front Range, particularly between Fort Collins and Colorado Springs. This highly concentrated strip results from a strong networking effect between the client businesses situated there, as well

INDUSTRY SNAPSHOT
PROFESSIONAL AND BUSINESS SERVICES

Nominal GDP, 2022 ($ Billions)	75.2
Real GDP, 2022 ($ Billions, 2017 Dollars)	74.7
2022 Real GDP Growth Rate	9.8%
Total Employment, 2022 (Thousands)	484.2
2022 Employment Growth Rate	6.7%
Employment Growth National Rank	7
Share of Colorado Employment	16.9%
Share of National Employment	14.8%
Average Wage, 2022	104,530
Percent of Statewide Average Wage	138.3%
2022 Average Wage Growth Rate	5.5%

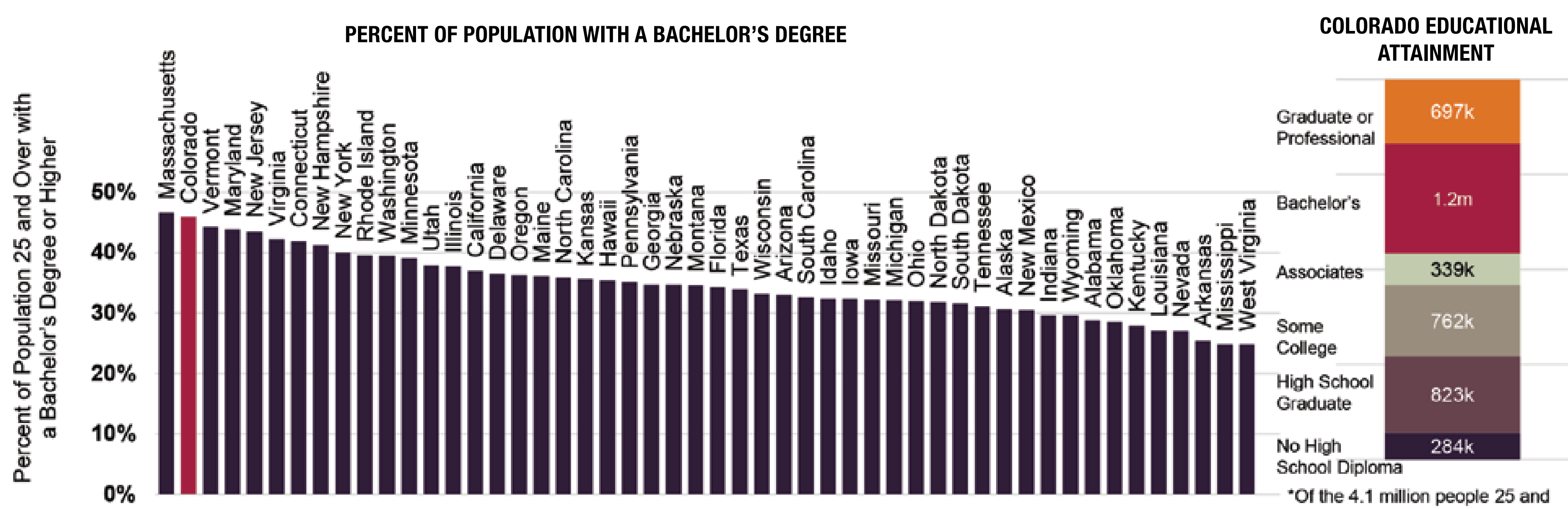
Sources: Bureau of Economic Analysis, Bureau of Labor Statistics.
Note: 2022 employment includes revised estimates.

TOTAL PROFESSIONAL AND BUSINESS SERVICES SUPERSECTOR EMPLOYMENT, 2014-2024
(In Thousands)

Year	Professional, Scientific, and Technical Services	Management of Companies and Enterprises	Administrative and Support and Waste Management and Remediation Services	Total
2014	196.7	35.5	154.1	386.4
2015	204.4	36.6	157.1	398.1
2016	209.8	37.4	158.2	405.4
2017	215.4	39.2	157.7	412.4
2018	224.4	40.8	158.3	423.5
2019	235.3	42.3	161.6	439.2
2020	239.3	41.9	149.3	430.4
2021	255.5	43.4	154.9	453.8
2022[a]	279.0	44.9	160.3	484.2
2023[b]	295.7	46.1	158.6	500.4
2024[c]	310.2	47.3	157.4	514.9

[a]Revised. [b]Estimated. [c]Forecast.

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



Source: U.S. Census Bureau, American Community Survey (2022 1-year estimates). Note: Population 25 and over.

*Of the 4.1 million people 25 and over in the Census dataset.

as the increasing supply of highly educated talent choosing to move to and reside in nearby areas.

The PBS subsector employers generally hire and retain highly skilled and highly educated workers who are compensated at above-average salaries. This is particularly true for the Professional, Scientific, and Technical (PST) and the Management of Companies and Enterprises (MCE) sectors, where average salaries remain in the $100,000 to $200,000 range. A precondition of PBS employment is often higher education and the associated degrees. According to the U.S. Census Bureau, educational attainment is increasing in Colorado. Between 2016 and 2021, the percentage of Colorado residents with at least a bachelor's degree increased from 39.9% to 44.4%, retaining Colorado's 2nd-place ranking in the United States.

While Colorado ranks highly on college attainment, particularly among people who have migrated to the state, challenges remain for Colorado's own high school graduates. According to the Colorado Department of Higher Education's 2023 legislative report, *Pathways to Prosperity: Postsecondary Access and Success for Colorado's High School Graduates,* 40.9% of Colorado's 2020 high school graduating class went on to enroll in a postsecondary institution immediately after graduation. This is down 5.6% from prior years, due in part to the pandemic lockdowns and difficult life choices that resulted. Even so, this is more than 10 percentage points below the 2021 national average of 61.8%. Of those who did enroll, 73% attended a four-year institution, but 29% enrolled in schools out of state—the highest ever recorded. This dynamic undermines the talent base for STEM and other skills needed to compete for the highest-paying PBS jobs.

Because most PBS work performed is not arduous physical labor, many engineers, technologists, accountants, attorneys, enterprise managers, and others can and do opt to work well past normal retirement age, helping ensure the stability of long-term employment in these positions across the state.

PBS clients and revenue sources are largely businesses, so the number of new business filings has proven a

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Professional and Business Services

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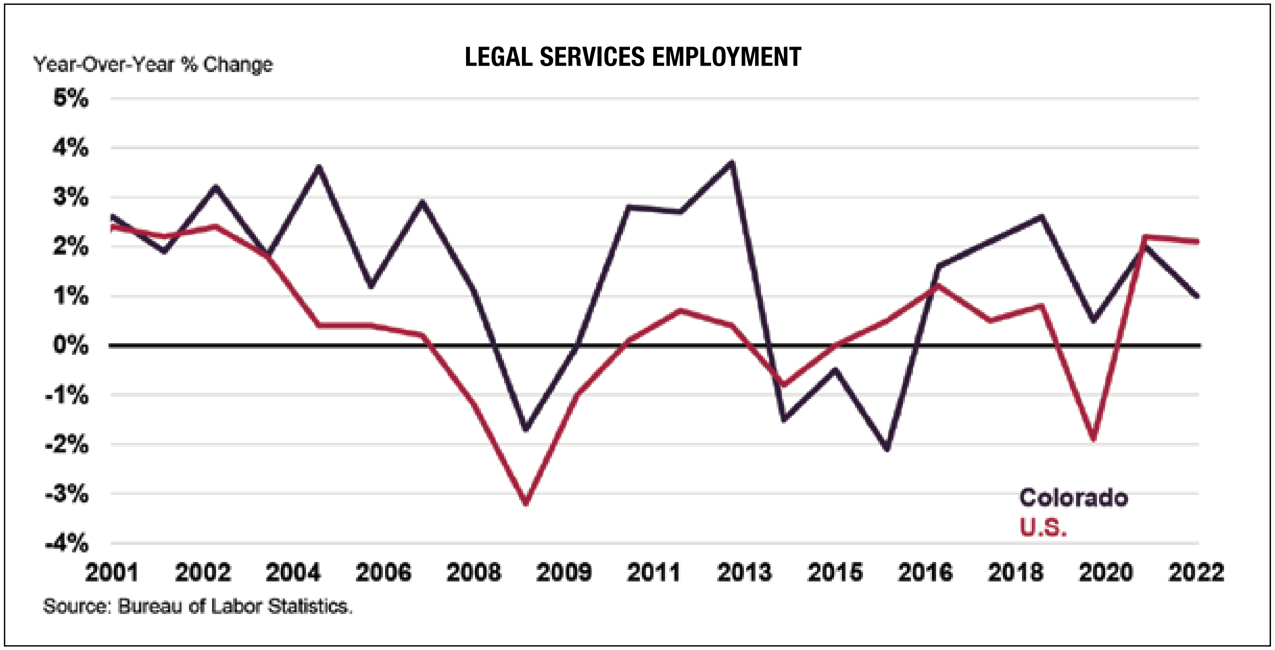

useful predictor of future PBS job growth. The Q2 2023 *Quarterly Business and Economic Indicators* report from the Colorado Secretary of State's Office shows new entity filings in Q2 2023 remained elevated, surging 39.1% year-over-year, but pulled back 1.6% from the record in Q1 2023. It is worth noting that a fee credit that reduced limited liability filing fees to $1 likely contributed to the surge in filings.

While forecasting the overall employment for Colorado is proving as challenging as ever, expectations for PBS are for continued, if moderated, job growth. These services sectors have generally avoided the ripples from macroeconomic challenges facing other sectors, including disrupted physical supply chains, record inflation, dollar appreciation, geopolitical risks, labor disruptions, etc. Nonetheless, challenges to businesses in other industries ultimately reduce the number of resources available and the aggregate demand for professional services and related technologies. As has been the case over the last decade, the committee expects PBS to successfully manage the challenges of globalization, automation, and commoditization.

In short, despite the cost-of-living headwinds, Colorado's quality of life, climate, outdoor recreation, and other benefits are still driving net in-migration, particularly among millennials employed in PBS coming from more populated areas around the country. These newcomers are disproportionately bringing the PBS skills required for the knowledge-based workforce of the future. Colorado companies remain ideally positioned to take advantage of the rapid growth of business professionals, scientists, technologists, and engineers in the state.

Professional, Scientific, and Technical Services

The Professional, Scientific, and Technical Services (PST) sector comprises establishments that provide services that often require high levels of expertise and training, including legal, engineering, computer design, and advertising services, among others. Employment in the PST sector increased a record 9.2% in 2022 year-over-year—by far the strongest sector within the overall PBS. Through September 2023, the sector averaged 293,000 workers, an increase of 5% over the average in September 2022. While employment growth has slowed, the sector is one of the strongest in Colorado's job market. The committee expects 2023's growth rate to be 6%. Continued employment growth across PST is anticipated for 2024, with an increase of 4.9%, yielding an average of 310,200 positions.

Legal Services

Legal Services jobs in Colorado have remained stable over the last 10 years despite the increase in Colorado's population and business activity. Coming out of the pandemic, the legal industry remains resilient with another strong year; however, the industry has not been shielded from all challenges. These include increasing efficiency, adoption of technology, outsourcing, and innovation in delivery models. Legal Services employment increased 2% in 2022, and average employment through September 2023 stood at 20,700, a 0.6% increase versus the same period last year.

With most popular areas of law—corporate and real estate—seeing higher demands than in prepandemic times, the legal industry is slowly growing, and with that, so is the demand for talent. Like most industries, the legal world has entered a highly competitive, complex, and evolving workplace market, resulting in incredibly high turnover in attorneys, with some firms losing a quarter of their associates last year. Studies show that this turnover is not quite what would be expected. Workload and compensation are generally the drivers, but in the postpandemic world, attorneys are increasingly more focused on intangible factors, like appreciation, recognition, and work-life balance.

Law firms continue to grapple with return-to-office planning, but roughly 40% of firms have permanently adopted a hybrid-work policy. However, the challenges every firm faces are project management and assignments, mentorship, and maintaining firm culture, especially in a hybrid or fully remote workplace. In short, while the pandemic increased activity related to commercial real estate, employment, and compliance, the broader forces of automation, globalization, and outsourcing are holding down the need for additional hiring across Legal Services in Colorado. That said, 2023 saw a small uptick in employment as the economy and businesses adjust to a nominal increase in Legal Services.

Over the past five years, Legal Services employment growth has fluctuated, from 0.5% to 2.6%. In this context, the committee expects this subsector to grow at 1.3%, averaging 20,900 positions in 2023. The committee expects moderating growth of 0.4%, or 21,000 jobs, in 2024.

Architectural, Engineering, and Related Services

Employment in the Architectural, Engineering, and Related Services (AES) sector has exhibited steady growth from 2016-2022, averaging 3.6% per year. The 2022 year-over-year increase in employment of 6.5% was an even stronger rebound from 2021. Steady growth has occurred from January 2023 through September 2023, with an average of 62,200 AES positions versus 56,100 in the same period in 2022, a 10.8% increase year-to-date compared to 6.5% in 2022.

From BLS, in 2022, the median pay for architects throughout the United States was $82,840, and the median pay for surveyors was $63,080. The median pay for engineers ranged from $83,260 to $132,360.

As a result of overall unusual conditions, challenges with staffing, and project delays, the committee expects continued growth of 8%, or an average of 60,600 jobs in 2023. While growth will increase as projects come online, the challenge of filling open positions will moderate potential growth in the year ahead. The committee expects continued 5.5% growth in 2024, resulting in an average 63,900 positions over the full year.

This subsector is experiencing record employment while at the same time a record number of jobs have remained open since the first of the year. Employers are still searching for employees in specific job roles and are using internal recruiting more than using employment agencies. These dynamics are anticipated to temper the increase of employment for this subsector in 2024.

One national 12-month leading indicator for vertical construction activity is the AIA/Deltek Architecture Billings Index, which registered a reading of 44.8 in September 2023, down from 48.1 in August. The September ABI score reflects a marked downturn in business conditions at architecture firms that shows hesitancy among clients to commit to new projects.

Appropriations for public infrastructure projects, such as environmental mitigation, roads, transit, bridges, water, wastewater, and drainage, will continue. The federal Infrastructure Investment and Jobs Act (IIJA) will continue to provide additional appropriations for transportation projects. Continuation of visible projects that will involve engineering design services and subsequent construction include interstate and state highway work around the Denver Metro area and the state. Improvements will continue at the Denver Stock Show Complex. Other infrastructure projects include the I-70 reconstruction from Golden to Vail Pass.

Private sector projects with design and construction starts in telecommunications, data centers, and energy and utilities showed strong growth in 2023. Growth is slower in other areas, including residential land development, and design and construction of some sectors of commercial real estate.

Most firms continue to work a hybrid schedule comprising a few days in the office with the rest of the week at home. Productivity also seems to remain at levels high enough for companies to continue this type of work and appears to be causing more vacant office space throughout portions of the Denver Metro area. Technology advancements have allowed more designers to work remotely. Future technology use of AI in civil engineering is not expected to overtake design processes.

As anticipated years ago, many of the elementary school districts in the Denver Metro area are consolidating schools as a result of declining enrollment due to the

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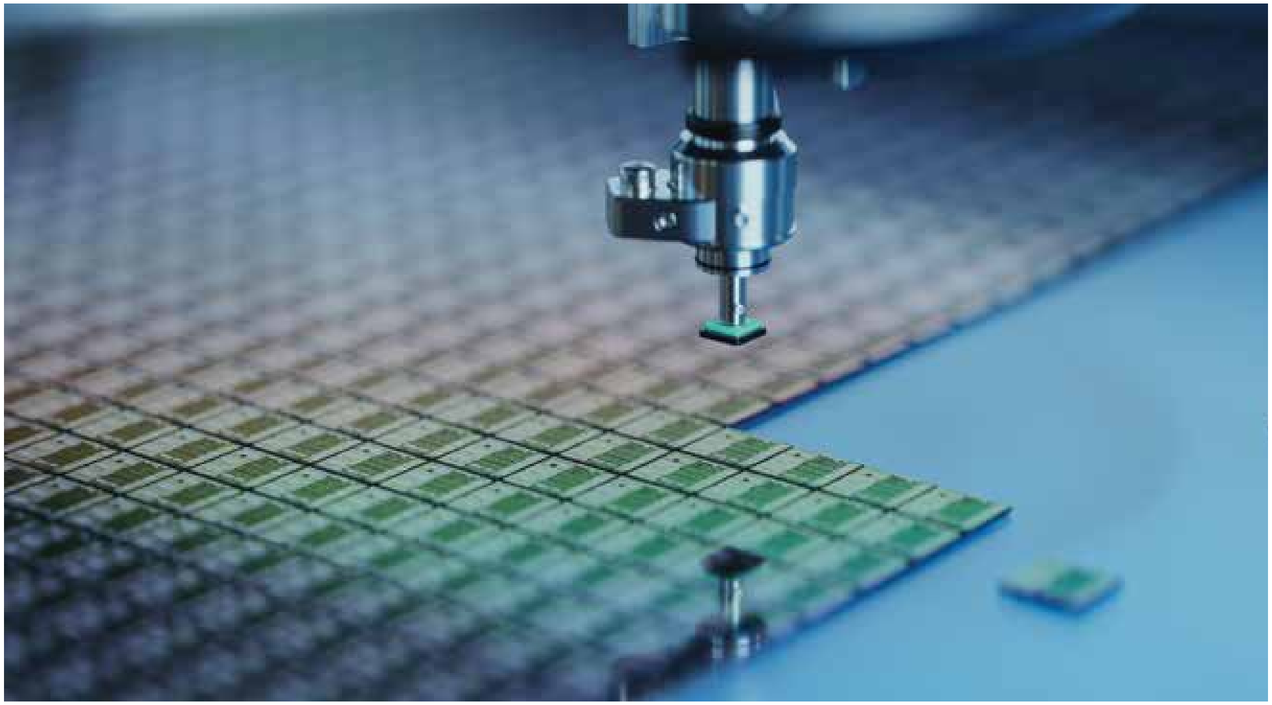
declining birth rate. Middle schools and high schools around the state will likely see a reduction in students. School boards will have to deal with additional consolidation. It is anticipated that colleges will be challenged by the end of the decade to maintain student levels as they are prone to the headwinds of fewer students due to lower birthrates and greater competition from technical universities and community colleges.

Computer Systems Design and Related Services

The Computer Systems Design (CSD) subsector has averaged 6.4% employment growth over the past nine years. Employment in the subsector increased by 13.5% in 2022 year-over-year, and average employment through September 2023 was 4.9% higher than the same period in 2022. Businesses within this subsector are primarily engaged in planning and designing computer systems that integrate computer hardware software, and communication technologies. Nearly all businesses rely on computer and information technology to effectively operate. Many businesses, however, lack the resources and knowledge to perform these functions internally so they hire out these services to firms within the CSD industry. Firms offering these services may also provide training and support for the users of the system, including onsite management and operation for clients.

The CSD industry is largely made up of highly educated and technically skilled workers. Many workers in the CSD industry are working as computer systems analysts, computer software engineers, and computer programmers. A strong talent pipeline is required to enable growth in this industry. Colorado continues to be a net importer of young, talented labor, contributing to faster CSD employment growth in Colorado compared with national CSD growth over the past five years.

According to CBRE's *2023 Scoring Tech Talent Report*, Denver is 10th nationally for a second year in a row as the best market for tech talent, with over 125,000 active positions. The report analyzes 13 metrics, including tech talent supply, growth, concentration, cost, completed tech degrees, industry outlook for job growth, and market outlook for both office and apartment rental growth.



Several factors across the CSD world are clearly driving company performance and strategy. AI, the cloud, and cybersecurity remain critical areas for new talent development and hiring across the sector. Companies are fiercely battling for the best and brightest resources, and the committee expects both hiring and compensation for these in-demand skills to continue to grow. That said, other areas, particularly hardware and services related to personal computers, are likely to see a drop in demand as the pandemic binge on new hardware wanes and inflation curbs these outlays. Even so, critical enterprise software investments will continue apace, at least to remain current with the overall business-to-business functionality that is now critical for most firms to interact and efficiently operate.

CSD experienced extraordinary employment growth of 13.5% in 2022, with a record 10,000 more jobs year-over-year. Monthly employment increased over the first half of 2023. These growth rates are unsustainable over the coming year given the macroeconomic headwinds that are challenging big technology firms and their clients and suppliers. In this context, the committee anticipates a 4.3% increase of 87,500 jobs by the end of 2023. Growth is expected to moderate in 2024 at a rate of 2.5% to average 89,700 jobs.

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Competing Through Regional Collaboration

It was the mid-1980s and economic development as a profession was coming of age. Cities and counties across the United States were becoming more intentional about attracting and retaining a sustainable tax base through corporate investment. At the time, economic developers across the country had primarily one mission: to attract jobs to their community. The philosophy was simple. Companies had the power to create jobs, and where they put those jobs people would move, earn wages, and support the local tax base.

The way this philosophy shaped the economic development culture was more complex. Professionals were rewarded for intense competition, developing programs, and inducements to lure companies from wherever they were to where someone else wanted them to be, regardless of the cost and benefit to the attracting community. This evolved to a level of cutthroat rivalry to win deals, such as upping the ante on risky tools like up-front cash incentives and free land, to more ruthless tactics like targeting companies to literally move across the street if it meant moving from one jurisdiction to another.

Meanwhile in Denver, a group of bold leaders were rethinking what was becoming a more and more unfulfilling, unrewarding, and unsustainable practice. Denver was known by the nation largely as a "Cow Town" in an "Ag State," which made sense given Colorado's robust agriculture economy. Colorado had recently experienced a devastating oil shale bust, crippling its economy and pushing unemployment rates to nearly 10%. However, enter a group of business visionaries with a simple but profound idea that would disrupt the economic profession and result in one of the most robust, long-standing and effective regional economic development organizations in the country: "What if we worked together?"

The infamous group, affectionately referred to as the "Crazy Eight," was led by pioneers like Tom Clark and Del Hock, who went on to form the Greater Denver Corporation, known today as Metro Denver Economic Development Corporation (MDEDC). Between 1987 and 1995, the organization effectively assembled nearly 40 previously warring economic development agencies and communities into a collaborative via a charter: the Metro Denver Code of Ethics. The regional partnership would move mountains, including as a genesis for world-class competitive infrastructure like Denver International Airport, clean air policy, a sustainable arts and culture tax, and bringing Major League Baseball to Colorado.

This collaborative spirit has permeated much more than just regional infrastructure, as it has imbued communities to work together regionally in support of local economic development efforts under the premise that a rising tide lifts all boats. Today, MDEDC supports a mega-region, working in partnership with 11 counties, which represent nearly 80 communities and nonprofits along the Colorado Front Range, from El Paso on the south to Larimer and Weld counties on the north. Taking "Metro Denver" and the "Colorado Front Range" to market globally for corporate investment carries a lot of weight in each brand recognition, efficiency, and a landscape boasting broad and diverse real estate development opportunities, ultimately resulting in a higher rate of success for projects to land in the region. From the state to the local level, regional collaboration results in more success for communities and the companies they are recruiting.

Annually, MDEDC hosts its Site Selection Conference, which brings in several top North American site selection consultants to showcase the region in partnership with communities across the Front Range. A common theme articulated by a panel of consultants at each year's feedback event is that collaboration is thematically Coloradan, referencing partnerships between industry, education, government, and nonprofits. More impressive though, is how authentic collaboration is among the economic development organizations. "You just can't fake it," said Courtney Dunbar, director of site selection, with Burns & McDonnell, one of the 2023 site selection conference participants.

SeonAh Kendall, director of economic health for the City of Fort Collins, serves as the Chairwoman of MDEDC's Front Range Economic Collaborative (FREC) board— an economic development professionals group, with representation across 11 counties. Kendall implores that regional collaboration allows practitioners to create an inclusive environment that promotes diversity as a great strength. Simultaneously, multi-jurisdictional regionalism lends itself to optimizing sharing of best practices and innovation to overcome difficult challenges, such as workforce shortages and pandemic recovery. "There is no either/or in this scenario, and no one community can address these challenges alone," says Kendall.

Within the FREC network, cities, towns, counties, and economic development organizations throughout the Front Range, including partnership with the Colorado Office of Economic Development and International Trade, work together under the Metro Denver Code of Ethics to process prospect requests. The system is framed by a protocol that ensures prospective businesses experience seamless and efficient support in site selection at any and all stages of exploration, nurturing a "no wrong door" philosophy. Whittling down potentially hundreds of location possibilities across the globe to one final qualified site can be very complicated, requiring detailed coordination between state, regional, and local partners. By coordinating, packaging, and delivering real estate, labor, infrastructure, utility and other custom data to prospects, the MDEDC simultaneously facilitates around 50 unique site selection projects every year representing an average of $5.3 billion in new capital investment and 12,000 new jobs.

This past July, the Colorado Springs Chamber and Economic Development Corporation announced the retention of United States Space Command Headquarters in Colorado Springs—a huge win for the region, with an estimated $1 billion annual impact on the state's economy. Those from outside Colorado may be surprised to learn that Metro Denver was extremely supportive of Colorado Springs' efforts to retain the operation, both financially and politically. But here in the region, it's par for the course, regardless of the 70 miles of separation between the two metros. According to Raymond Gonzales, president of Metro Denver EDC, "The retention of Space Command is an excellent example of our desire to support projects in any community, knowing that if it lands in our region, we all benefit."

Notably, the regional competitiveness model mastered by MDEDC still remains highly unique across the country and the world. Considering the trust required between neighboring communities to simultaneously compete, cooperate, and collaborate, it is difficult to replicate and sustain. Fostering regional collaboration requires ongoing and intentional engagement, good will, and reinforcement through communications and reporting. When done effectively, the reward is exponential value for the regional partners and their communities.

Contributor: *Daniel Ryley, Vice President, Corporate Attraction, Metro Denver Economic Development Corporation*

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Subsector Activity

Cognizant has 14 open positions across the Front Range in technology and engineering, corporate, digital, and IT infrastructure. Similarly, **Hewlett Packard** is currently posting 12 open positions across Colorado, with an emphasis in Westminster, Fort Collins, and Denver. Key positions include mechanical architects and generative AI data scientists.

Management, Scientific, and Technical

Management, Scientific, and Technical (MST) Consulting Services remains a growth subsector in PST, averaging 7.7% growth over the last 10 years. Employment increased by a record 15.1%, or 6,000 jobs, in 2022. Through September 2023, the sector increased 3.2%, adding 1,400 jobs on average. Holding this trend, MST employment is projected to grow an additional 3% in 2023. Growth is expected to moderate in 2024 at a rate of 2.7% to average 47,600.

Management consultancies continue to enjoy strong growth, both in headcount and revenue, with companies engaging outside experts for advice on adjusting to the new normal of return to work, hybrid, and remote-working arrangements. These changes impact several areas of the workplace, including human resources and process management, and influence workplace culture. New opportunities in technology, such as cybersecurity, artificial intelligence, and space, are offering consultancies new revenue and growth avenues. Many companies were forced to go completely digital during the pandemic but made those choices without significant input from staff and stakeholders. Now that the immediate pressure is off, many organizations are taking the time to reevaluate these arrangements with more input and deliberation, which has opened the door for consultancies and advisors to provide input as well. That said, inflation and a potential recession pose a risk to these professionals, particularly in the second half of 2024 when financial pressures may mean that cutting costs is more important than managing operational challenges.

Metro Denver dropped from the top spot to 4th in a list of best locations for adding jobs in science, technology, engineering, and mathematics (STEM), according to the 2022 STEM Job Growth Index from RCLCO and CapRidge Partners.

Subsector Activity

Colorado's aerospace industry is the 2nd-largest in the U.S., according to the Colorado Office of Economic Development and International Trade. A few companies that play a significant role in Colorado's Professional, Scientific, and Technology sector include:

Sierra Space, a subsidiary of Sierra Nevada, has raised more funding to develop the Dream Chaser to ferry its first cargo to the International Space Station. Sierra Space has teamed with Blue Origin to design and build this commercially owned and operated venture, which is expected to be up and operating by 2027. The company plans to start training astronauts to provide this platform for the development and production of pharmaceuticals, materials, and other commercial ventures in the low gravity of space, which is considered advantageous over the development in Earth's gravity. Based on recent trends, over 50% of additional positions from Sierra are in Colorado. In September 2023, the company announced that it had raised nearly $300 million in new funds in a round led by a trio of Japanese investors, which now values the space company at $5.3 billion. The fresh funds come as Sierra Space focuses on getting its Dream Chaser spaceplane flying.

Maxar, a Westminster-based space technology company, continues to play an outsized role in Colorado's PBS sector. Maxar operates imaging satellites and manufactures spacecraft and has recently reorganized and eliminated executive positions. The restructuring comes less than five months after Maxar, previously a publicly traded company, was acquired by the private equity firm Advent International in a $6.4 billion deal. Maxar is being restructured as two separate businesses: Maxar Space Infrastructure and Maxar Intelligence. Maxar Space Infrastructure will oversee spacecraft manufacturing. Maxar Intelligence will be responsible for the satellite imagery business, which was previously known as Earth Intelligence and led by executive vice president Tony Frazier.

Blue Origin, an aerospace company, expanded its new Highlands Ranch office in April 2023. According to CoStar Group, it now occupies three floors of one of the office towers off Lucent Boulevard overlooking C-470. The Highlands Ranch crew is involved in every mission Blue Origin is working on, including the mission to the moon. Blue Origin is quickly expanding its footprint in a race to keep up with its aggressive headcount growth. Blue Origin partner Sierra Space, a privately owned company with a hub in Louisville, signed two new leases in late 2022 in the Boulder area to add about 180,000 square feet to its national real estate footprint.

Boecore, an aerospace and defense engineering company that specializes in software development, system engineering, and cybersecurity, has decided to expand its operations in Colorado Springs. Boecore's expansion will create 620 new well-paying jobs in multiple industries, according to the *Denver Post.*

Infinity Labs, a firm that specializes in modeling and simulation, cybersecurity, and advanced research and development (R&D), has selected Colorado Springs for expansion, according to a press release from Governor Polis and the Office of Economic Development and International Trade in September 2023. The company plans to increase modeling and simulation support for Department of Defense clients, improving national security through innovation and new technologies

Management of Companies and Enterprises

Management of Companies and Enterprises (MCE) includes a very broad cross section of company headquarters and regional offices for businesses. The sector, which continues to represent less than 2% of Colorado's

overall employment, has produced average job growth of 3.4% over the past decade. This sector represents less than 10% of overall PBS industry employment. Diverse industries and products are represented by companies in this sector, including Vail Resorts, Antero Resources, Prologis, Ball Corporation, Arrow Electronics, Johns Manville, and Newmont Mining.

Employment in the sector increased 3.4% in 2022, and growth continued in 2023. This strong growth appears to continue the rebound from lower employment levels during the pandemic and returning to the earlier growth trends. The committee anticipates the sector will continue to grow 2.7% in 2023, totaling 46,100 jobs. A gain of 2.6% is expected in 2024, resulting in average employment of 47,300.

Job growth in this sector is driven by national and international economic conditions, as well as corporate headquarter relocations. Some of these relocations are driven by corporate officer preference, others by Colorado's business climate, while some follow preferences to locate in Colorado due to perceived recruiting benefits offered by the state's lifestyle and outdoor recreation opportunities.

Subsector Activity

SSI Venture, the retail arm of Broomfield-based Vail Resorts, closed 19 equipment rental and retail locations in Aspen, Telluride, and Snowmass Village, permanently eliminating 69 jobs. The closures leave a hole in the retail markets of those resort areas that are not part of the Vail group.

Newmont, the Greenwood Village-based global mining operator, expanded its portfolio of assets and projects with the $26 billion Newcrest acquisition.

Administrative and Support and Waste Management and Remediation Services

This sector comprises establishments that perform routine support activities for the day-to-day operations of other organizations. It includes office administration, hiring and placing personnel, cleaning, document preparation and clerical services, and waste disposal, among others. Sector employment represents 33% of overall PBS industry employment, with 160,300 employees in 2022, up 3.5% from 2021. Employment has lost its rebound from the pandemic low. Sector employment steadily declined in 2023, down an estimated 1% to average 158,600 jobs. A further decrease of 0.8% is expected in 2024 to average 157,400.

Employment Services

Employment Services jobs are related to hiring and placing personnel. The unsettled labor market in the United States and in Colorado has proven to be a barrier to hiring in this sector. While this sector typically served as an early indicator of future hiring trends, recent changes have made it particularly difficult to foresee the cumulative impact over the next year. Overall, this sector is fundamentally changing as companies are relying more on automation and internal recruiting resources versus the traditional path of outsourcing.

A key trend for this sector is an increase in competition both directly from other companies and from the numerous web services including Indeed, LinkedIn, and public-sector job boards.

The Employment Services sector has observed a loss of 4,500 jobs, or 9.7%, to average 46,100 positions through September of 2023. The sector had fully recovered from

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the pandemic but has regressed from mid-2022 through September 2023. However, with slower growth in 2023, the committee expects a 9% reduction and an average of 45,800 jobs. Consistent with this moderation, the committee expects no growth in 2024. This reflects the structural changes to the economy as employers shift toward internal recruiting and web-based services eroding the role of traditional recruiting companies.

Services to Buildings and Dwellings

The Services to Buildings and Dwellings subsector comprises establishments primarily engaged in providing services to buildings and dwellings to include extermination, janitorial, transportation, landscape care, and maintenance services. Employment averaged 47,100 in 2022, an increase of 2.2% year-over-year. While average employment through September 2023 was up 3.7% over the same period in 2022, employment has declined in recent months, matching historic seasonal trends.

The increase in modern technology to support new buildings requires new skills and talents that are driving the hiring of a younger, more technically oriented workforce. With the expectation of the impact from the pandemic receding, the PBS Committee expects employment in the subsector to grow 3% to average 48,500 jobs in 2023. Continuing moderate job losses are expected in 2024, with the subsector projected to shrink 0.5% to an average of 48,300 positions across the state.

Subsector Activity

Hospitality at Work (HAW) is a full-service commercial real estate company, overseeing buildings across the Front Range. Per T.J Tarbell, senior vice president of HAW, "Skilled labor availability is a challenge we've been dealing with for a few years. Thankfully, over the last 12 months, we've seen an increase in the number of qualified applicants for our skilled positions. I expect that trend to continue in 2024 as job growth slows and more workers re-enter the market. We expect market fundamentals to worsen over the next 12 months, as property owners deal with too much supply, slowing demand, and distress in the capital markets."

Support Services

Support Services aggregates outsourced professional services, such as document preparation, copy shops, call centers, travel agents, security, and other professional office functions. Employment in this sector declined 9% in 2023 year-over-year, marking the 9th year of continuous employment declines. The number of business support services jobs remains pressured by industry consolidations, globalization, automation, and programmed configured software as a service (SaaS), all of which saw increases during the pandemic. Given this dynamic, Support Services employment is projected to decline 9.5% in 2023, to average 14,500 positions. A continued reduction in employment of 7% is expected in 2024, yielding an average of 13,500. This is about 50% of the staffing level the sector saw at its peak in 2013.

Subsector Activity

Hotel Engine, a rapidly growing Denver-based business-to-business hotel booking platform, crowdsources demand from member companies to negotiate better rates on rooms. The company has 500 workers as of mid-2023 and is seeing increased revenue from smaller and medium-size companies but has not caught up with leisure travel quite yet, according to the *Denver Post.* Looking forward, one bright spot in the sector is the continued, albeit slow, resumption of business travel.

Waste Management and Remediation Services and Other

Jobs in this subsector include local hauling of waste materials; recyclable materials recovery facilities; remediating contaminated buildings, mine sites, soil, or ground water; and providing septic pumping and other miscellaneous waste management services. Waste management volumes generally trail demographic and consumer trends, aggregate societal activity, housing, and commercial growth.

This subsector is expected to see employment growth as these services are a trailing indicator of overall population growth and development. However, consolidation may be taking a toll, as well as shifts in commercial and residential activity following the pandemic. Given this context, employment is projected to drop 5.5% to an average of 43,300 in 2023. A continued decline of 4.1% in employment is expected in 2024, resulting in an average of 41,500.

Subsector Activity

Republic Services has been contracted to build and operate a new landfill in northern Larimer County near Wellington. The public-private partnership will help the county devote its time and resources to diverting more material from the solid waste stream. According to a county memorandum, the county and Republic Services have agreed in principle on a goal of diverting 50% of waste from the landfill by 2030. Republic, which purchased locally owned Gallegos Sanitation in 2021, would assume all of the costs to design, build, fund, operate and eventually close the landfill at the end of its life—estimated to be about 100 years—and a central transfer station for a minimum of 20 years. It would split the costs with the county on a new recycling center. It currently has over 40 positions open in Colorado, including drivers, technicians, billing staff, and landfill laborers.

PBS Sector Summary

Many subsectors of Professional and Business Services will continue to collectively support employment across Colorado's Front Range in 2024. Overall, the committee projects PBS employment will grow another 3.4% to average 500,400 jobs in 2023. Despite any headwinds, growth will continue at a more moderate 2.9% in 2024 to total 514,900. ✜

Contributors:
Brian Pool, Government Performance Solutions (Chair)
Ashley Cawthorn, Berg Hill Greenleaf Ruscitti, LLP
Mark Hamouz, P.E., Engineering Consultant
Adam Illig, University of Colorado Boulder
Michael Yeadon, Keysight Technologies

Education and Health Services

The Education and Health Services (EHS) supersector comprises private-sector education, as well as four private-sector health care and social assistance sectors, including ambulatory care, hospitals, residential and nursing facilities, and social assistance. This industry represents almost one in every eight jobs in the state of Colorado. More than 87% of industry employment is made up of Health Care and Social Assistance, while about 13% is related to Educational Services. EHS was impacted early in the pandemic as it faced similar shutdowns as the broader person-to-person services industry. Educational and Health Services employment increased an estimated 3.7% in 2023, adding 12,900 jobs. The industry is projected to increase another 2.6% in 2024 to total 375,700 employees.

COLORADO EDUCATION AND HEALTH SERVICES EMPLOYMENT, 2014–2024 (In Thousands)

Year	Educational Services	Health Care and Social Assistance	Total
2014	37.2	260.9	298.0
2015	38.6	274.7	313.3
2016	39.8	286.0	325.8
2017	40.5	293.6	334.1
2018	41.9	298.0	340.7
2019	43.5	304.2	347.6
2020	41.0	298.1	339.2
2021	42.8	304.9	347.8
2022[a]	45.3	308.1	353.4
2023[b]	46.2	320.1	366.3
2024[c]	47.3	328.4	375.7

[a]Revised. [b]Estimated. [c]Forecast.

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

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

Educational Services (Private)

Private-sector educational services can be classified as private not-for-profit, private for-profit, religious exempt, and private occupational, as well as private companies delivering training and development and other ancillary and support services. Public elementary and secondary educators are accounted for in local government; public higher education employees are accounted for in state government. Contributions to Colorado's employment come from many schools within the state's private K-12 and postsecondary institutions, the latter accounting for approximately one-third of all postsecondary enrollments. The largest employers in the private education services subsector come from private postsecondary education. Among Colorado's more prominent private schools are the University of Denver (DU), Regis University, and Colorado College, all listed as nonprofits. Two other large private for-profit schools have left the state in the last several years, including Johnson & Wales University and the University of Phoenix, which had final closures in 2021 and 2022, respectively. Overall, the sector is projected to increase 2.5% in 2024.

Changes in Profit and Nonprofit Private Colleges and Universities

In fall 2023, more than 340 private schools and colleges operated in Colorado. In addition to the three Department of Higher Education (DHE) nonprofit universities of the University of Denver, Regis University, and Colorado Christian University, are schools under the other two regulatory agencies of the Division of Private and Occupational Schools (DPOS) and the Degree Authorization Act (DAA). In 2023, under DPOS, there are a total of 270 schools, with 22 of those having their headquarters outside of Colorado. This total is up from 266 schools in 2021. According to the DPOS, its mission is to "implement the directives of the General Assembly, to provide standards for and to foster and improve private occupational schools and their educational services, and to protect the citizens of this state against fraudulent or substandard private occupational schools." Under DAA for the same period, there were approximately another 75-80 schools. The DAA oversees all other private for-profit institutions of higher learning under the auspices of the Colorado Commission on Higher Education.

Employment in the private education sector is driven by both business demand for continuing education programs and consumer demand for training that improves employment prospects and/or general quality of life. In the corporate and business sector, skill development of employees through learning curricula continues to play a critical role in developing competitive competencies of businesses, especially in the high tech and consulting arenas. Corporations consider reinvestment in their employees a required business-development function. Furthermore, certification within specific industries drives both corporate and consumer consumption of learning to remain competitive.

INDUSTRY SNAPSHOT EDUCATION AND HEALTH SERVICES

Nominal GDP, 2022 ($ Billions)	32.9
Real GDP, 2022 ($ Billions, 2017 Dollars)	29.5
2022 Real GDP Growth Rate	4.2%
Total Employment, 2022 (Thousands)	353.4
2022 Employment Growth Rate	1.6%
Employment Growth National Rank	37
Share of Colorado Employment	12.3%
Share of National Employment	16.0%
Average Wage, 2022	61,827
Percent of Statewide Average Wage	81.8%
2022 Average Wage Growth Rate	7.1%

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics.
Note: 2022 employment includes revised estimates.

Career Schools and Colleges

The private education sector also includes career schools and colleges that provide training in the trades and crafts, helping to meet a growing national demand. Career Education Colleges and Universities (CECU) provides training for high demand occupations being met by private schools, such as skilled commercial drivers, surgical technologists, electricians, nurses, construction workers, manufacturers, and others.

Among Colorado-based private accredited colleges approved by the DPOS are schools as diverse as the Auguste Escoffier School of Culinary Arts, the Empire Beauty School, and the Lang Institute for Canine Massage. The Bloom Institute of Technology headquartered in California and Spartan College of Aeronautics & Technology from Oklahoma are out-of-state schools that are approved to operate in Colorado.

Other Private Education in Colorado

Private-sector education extends beyond higher education. This sector includes private pre-K-12 education, as well as fine arts, language, and driving schools, among others.

According to Private School Review, for the 2023-24 school year, "there are 506 private schools serving 71,474 students in Colorado (there are 1,939 public schools, serving 880,586 students)." The publication noted that private K-12 educates 8% of students in Colorado (compared to 10% nationally). Additionally, *Private School Review* noted 370 private daycares and preschools serves over 53,000 students in the state.

Cautious Growth

Driving the cautious optimism for growth over the near term are several hurdles, including the following:

- The ability of all schools, private and public, to adjust to the changing demands of increased online coursework and reduced seat time following changes due to the pandemic.
- Regis University noted declining enrollments in early 2023. If enrollments do not rebound, decreases in employment levels are sure to follow.
- According to the *Denver Business Journal,* the University of Denver has approved $100 million for state-of-the-art STEM facility upgrades that are designed to improve facilities for current students and faculty. The facility upgrades could increase future enrollments and employment at the university.

Educational Support Services

Colorado's private education sector includes educational support services. One example is Pearson Education, which is a subsidiary of a multinational company headquartered in London. Among other software businesses in the learning and education delivery sector in Colorado is Amplifire, which focuses on a results-based learning platform for education, as well as health care and Fortune 500 companies.

As education companies such as these continue to create more content, learning technologies, and educational analytics opportunities, Colorado continues to be a strong player in the educational support field.

Summary

Education is in the midst of significant transformation and reform, including an accelerated increase in the adoption of online learning for all age levels. This heavy reliance on technology requires more strategic thought specific to pedagogy and instructional design and also provides tremendous opportunities for data-driven education. When big data can provide at-risk reports on behaviors, such as dropped classes within a week of course starts, an understanding of how students learn best, and the development of courses that are tailored to student needs in real-time, personalized learning is very close to becoming reality.

Health Care and Social Assistance

The private-sector Health Care and Social Assistance sector is a significant contributor to Colorado's economy. The sector employed an estimated 308,100 workers in 2022. That number is estimated to increase by 3.9% to 320,100 in 2023, and then to 328,400 in 2024 (2.6%). Of particular note, the Nursing/Residential Care Facilities subsector employment appears to be rebounding after a low point in Q1 2022 and has experienced employment gains in the latter half of 2022 and early 2023.

Population Trends

Aging

The State Demography Office estimates that Colorado is home to 5.9 million people in 2023. This number is expected to grow to 6.4 million by 2030. Colorado's population growth continues to be driven by individuals in the 65+ demographic, and in 2024, 16.8% of the population is expected to be Medicare eligible, up from 15% in 2020. The growth rate between 2020 and 2024 for this population is estimated at 14.7%. Colorado's share of population of children between the ages of 0 and 17 is expected to drop to 20.9% in 2024, down from 22% in 2020. By 2037, it is projected that the number of seniors in Colorado will surpass the number of children. This has significant ramifications to the health care landscape within the state.

Select Populations and Health Status

America's Health Rankings model identifies several factors that influence overall health outcomes, including clinical care, behaviors, physical environment, social factors, and economic factors. In the 2022 America's Health Rankings report, Colorado is ranked as the 10th-healthiest state. Colorado's top positive indicators include relatively low levels of economic hardship, obesity, physical inactivity, and insufficient sleep. The top negative indicators include adverse childhood

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Education and Health Services

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experiences, low birth weight, excessive drinking, not graduating from high school, and racial disparity in high school graduation. In the 2023 Senior Report, Colorado is ranked as the 3rd-healthiest state overall. Colorado seniors have fewer chronic conditions, are financially secure, and are more physically active relative to other states. Challenges for this population include high rates of suicide, low expenditures on community support programs, and a shortage of home health care workers.

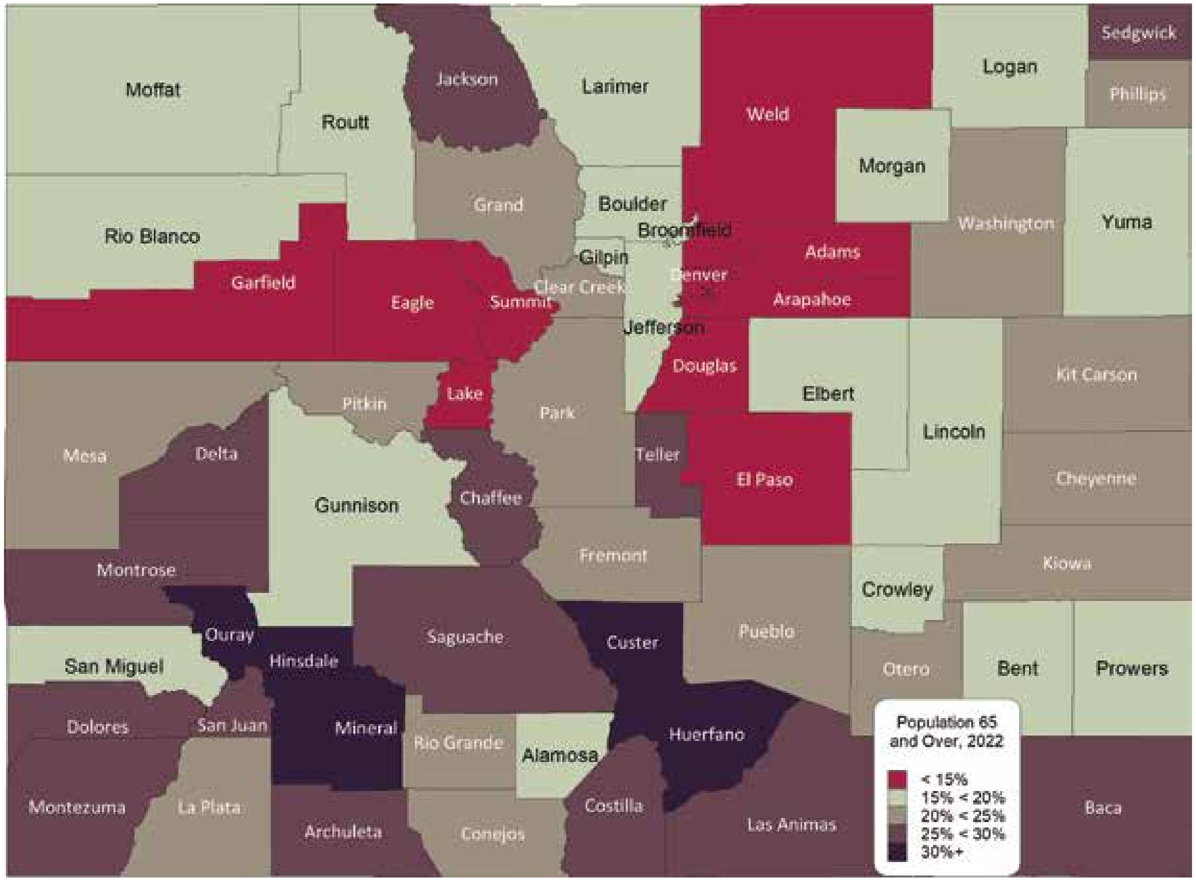
Behavioral Health

The pandemic strained the existing behavioral health landscape and surfaced many gaps in the state's behavioral health care provider workforce and infrastructure. Although the behavioral health care workforce has rebounded and continued to grow since the pandemic, provider capacity remains a constraining factor in meeting the needs of Coloradans. In response, the state of Colorado has passed several key pieces of legislation and continues to contemplate new initiatives. During the 2023-24 legislative interim, several committees focused on behavioral health challenges and needs, including the Child Welfare System Interim Study Committee, the Opioid and Other Substance Use Disorder Study Committee, the Treatment of Persons with Behavioral Health Disorders in the Criminal and Juvenile Justice Systems Committee, and the Statewide Health Care Review Committee. Interim committee bills have been made public and will be debated during the regular legislative session that begins January 10, 2024.

Substance Abuse

In 2022, 1,799 Coloradans died of drug overdoses—a 4% decline from 1,881 deaths in 2021, but a 22% increase from 2020, according to data from the Colorado Department of Public Health and Environment. This represents an age-adjusted death rate of 29.9 residents per 100,000, up from 24.9 per 100,000 in 2020. Colorado recorded a large increase (21%) in the number of overdose deaths due to opioids between 2020 and 2022, a category that includes opioid analgesics and heroin. These deaths made up nearly two-thirds of all drug poisoning deaths in Colorado in 2022.

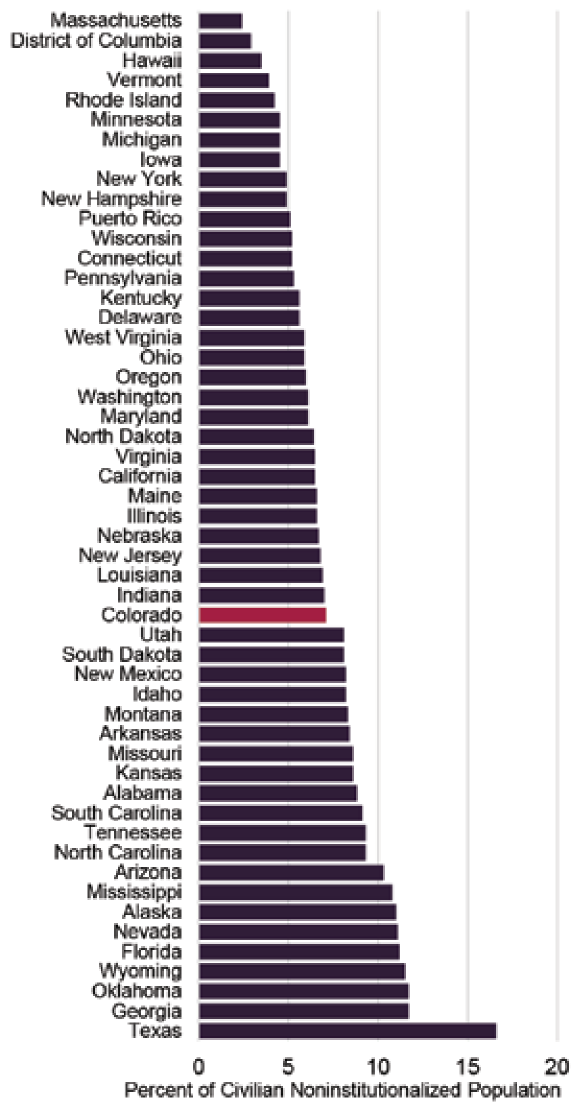
PERCENT OF POPULATION 65 AND OVER, 2022



Source: Colorado Department of Local Affairs, State Demography Office.

Fentanyl, a synthetic opioid 50 times more potent than heroin, can be deadly in small amounts and is a major contributor to fatal overdoses, according to the Centers for Disease Control and Prevention. In 2022, overdoses involving fentanyl made up about 81% of all opioid analgesic deaths. Between 2020 and 2022, the number of overdose deaths involving fentanyl nearly doubled, from 540 to 920. According to the Colorado Health Institute, there were 10 times as many overdoses involving fentanyl in 2020 as in 2016. Colorado legislators passed House Bill 22-1326 that lowers the amount of fentanyl eligible for a felony possession charge from 4 grams to 1, requires jails to offer medication-assisted treatment, and directs resources to treatment and harm reduction strategies, including testing strips and overdose reversal drugs.

UNINSURED RATE, 2022



Source: U.S. Census Bureau, ACS 1-year Estimates, 2022.
Note: Estimates from Colorado Health Institute differ slightly from Census estimates due to methodology.

Health Insurance Coverage

Health insurance coverage is categorized into a several product buckets, collectively referred to as the addressable market. Coverage options include commercial group (employer-sponsored), commercial individual, Medicare, Medicaid, and uninsured.

Commercial Group and Individual

Commercial group or employer-sponsored insurance provided health insurance for 49.8% of Coloradans in 2021 in small and large group plans. This number has dropped 7.9 percentage points from the high of 57.7% in 2009 reported in the 2021 Colorado Health Access Survey, but remains the primary avenue through which Coloradans receive coverage. Major insurers in Colorado include Aetna, Anthem, Cigna, Humana, Kaiser, and UnitedHealthcare.

The commercial individual market includes health plans for individuals who are not able to participate in state Medicaid or Children's Health Insurance Program due to income, are not Medicare eligible, and do not receive group insurance through their employer. This makes this health market responsive to factors influencing the other health insurance coverage options. In 2023, the public health emergency declaration extending Medicaid coverage during COVID-19 ended, which could shift more Coloradans into the individual market. However, the full impact of this will not be available until new addressable market data are released. Furthermore, individuals might already have insurance coverage from an alternative source or opt to remain uninsured due to the steep expenses associated with the individual market.

The individual market expanded in 2010 with the Affordable Care Act and became effective in 2014. The original law included an individual mandate requiring citizens to obtain qualifying health coverage. It also forced insurance companies to cover individuals with preexisting health conditions. People can buy individual insurance on exchange through Connect for Health Colorado or off exchange through agents, brokers, or directly from the insurance providers. Beginning in 2024, insurers in this market are required to offer a Colorado Option as mandated by HB21-1232. This option requires rate reductions and standard benefit packages, according to the Department of Regulatory Agencies. The individual market covered 6.3% of the addressable Colorado market in 2021, according to the Colorado Health Institute Colorado Health Access Survey.

Since 2014, the individual market in Colorado has gone through several changes as insurance carriers have dropped in and out of the market. Market share and profitability have been key concerns for these carriers. In 2023, six companies will offer insurance in Colorado, including Anthem (HMO Colorado), Cigna, Denver Health, Kaiser Permanente, Rocky Mountain HMO, and Select Health. Friday Health stopped offering health insurance on August 31, 2023, and Select Health is a new entrant to the Colorado market.

Beginning in 2024, undocumented immigrants residing in Colorado have a subsidized health insurance option through the OmniSalud pilot program with small group and individual plans. The state set aside $57.8 million, which subsidized coverage for about 10,200 enrollees, according to a recent *Denver Post* article. This cap was reached within the first five weeks of open enrollment—highlighting the level of demand for coverage among this population. Most (over 9,500) enrollees qualified for zero-dollar premiums through the plan, according to Connect for Health Colorado. In 2021, Colorado was home to about 166,000 individuals without documentation. Of those, about 88,000 (53%) were uninsured, according to an analysis conducted by the Colorado Health Institute. The OmniSalud program is now providing coverage for about 12% of this population. Colorado hopes to expand the enrollment cap with additional funding.

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Medicare

Medicare is a federally governed health insurance and covers individuals 65 and older and younger individuals who have specific medical needs. Traditional Medicare includes Part A and Part B. Individuals also have the option to purchase supplemental benefits (Medicare Advantage or Part C) through health insurance carriers.

The Medicare-eligible population has increased significantly in Colorado with the Medicare age-in of baby boomers. An estimated 16.8% of Coloradans are eligible for Medicare in 2024.

Medicaid

Colorado's Medicaid program, known as Health First Colorado, covers approximately 1.6 million people, which represents slightly more than one of every four people in the state. Among the enrollees, approximately 544,000 are children, 855,000 are adults without disabilities, and 172,000 are seniors and people with disabilities. Colorado also covers another 54,000 higher-income children and pregnant women through a stand-alone Children's Health Insurance Program (CHIP), known in Colorado as the Child Health Plan Plus (CHP+). The Department of Health Care Policy and Financing, which administers the Medicaid and CHP+ programs, is the largest state department by appropriation in Colorado, with expected expenditures of approximately $14.9 billion in state fiscal year 2022–23, including $2.9 billion from the State's General Fund.

Since the beginning of the COVID-19 pandemic, Medicaid caseload has changed rapidly. Between March 2020 and May 2023, Medicaid caseload increased by over 570,000 people, an increase of over 25%. A significant portion of this change has been due to a change in federal law. The Families First Coronavirus Response Act (Section 6008) conditioned a temporary increase in Colorado's federal funds rate on a commitment by the state to maintain eligibility for every person on the program through the duration of the public health emergency, regardless of changes in income or circumstances. In May 2023, this continuous coverage requirement ended, and the state began to redetermine eligibility for members who had previously been "locked in." As of September 2023, Medicaid caseload has decreased by 197,000 from the peak of 1.7 million in March 2023.

The state projects that approximately 315,000 people will lose Medicaid coverage in the year immediately following the end of the public health emergency (PHE). Approximately 100,000 members were disenrolled in the first two months of redeterminations during May and June 2023, according to data from the Colorado Department of Health Care Policy and Financing (HCPF). If disenrollment continues at this pace, enrollment could drop by more than 500,000 members by the end of the redetermination period. The state/HCPF is monitoring these trends closely and will incorporate the latest data into the enrollment forecast that is presented to the Joint Budget Committee in February 2024. Individuals who lose coverage and are unable to requalify would need to seek coverage through employer-sponsored insurance, on Colorado's health care exchange, or through other options—or drop coverage entirely.

While Medicaid caseload has begun to decrease, the caseload in the Children's Health Insurance Program is starting to increase. This was expected as individuals were "locked in" to the highest benefit category that they qualified for during the PHE. If at any point a person who would normally be in the CHP income range qualified for Medicaid, they were locked into Medicaid for the duration of the PHE. A person in this situation will likely have been redetermined by this point to no longer qualify for Medicaid due to income eligibility so they would "churn" from Medicaid to CHP. This is a very common phenomenon, and more of it is expected as redeterminations continue. This is also bearing out in the data. As of September 2023, CHP caseload is beginning to grow for the first time since the PHE. In periods of weaker economic growth, one would expect churn in the opposite direction CHP to Medicaid, but the combination of consistent economic growth, strong labor market, and the ending of the PHE continuous coverage requirement are all contributing to churn from Medicaid to CHP.

Uninsured

In 2021, Colorado's uninsured rate was 6.6%, essentially unchanged since major Affordable Care Act provisions went into effect in 2015, according to the Colorado Health Access Survey. The uninsured rates varied across the state, from 3% in Douglas County to 13.2% in the Upper Arkansas Valley. Uninsured rates are highest in the mountains, which also bear some of the highest private health insurance premium costs in the country.

Job loss impacts access to health insurance, with 42.7% of uninsured Coloradans reporting that they did not have coverage because someone in their family who had health insurance had lost or changed their job. At the same time, just one in nine Coloradans cited the loss of eligibility for Medicaid or CHP+ as the reason for being uninsured, down from one in three (29.1%) in 2019—an indication that the Medicaid continuous coverage provision implemented during the COVID-19 pandemic kept people from losing eligibility.

The Health Care Workforce

Health care jobs are not restricted to doctors and nurses. The health care system is tremendously complex and involves many support roles in IT and insurance. For every doctor in the United States, there are eight clinical professionals and eight nonclinical workers, according to one national estimate. Health care, therefore, drives employment across a wide range of occupations and skill levels. The primary employment segments in health care include ambulatory, hospitals, nursing and residential care facilities, and social assistance. In 2023 Q1 the private health care workforce was 315,000.

Key occupations across these groups include:

- Physicians
- Registered Nurses
- Licensed Practical and Licensed Vocational Nurses
- Home Health Aides

- Reception/Information/Office Services
- Dental Assistants
- Substance Abuse, Behavioral Disorder, and Mental Health Counselors
- Physical Therapists

Employment by Sector

Employment in the Ambulatory Health Services subsector was approximately 151,000 employees in Q1 2023. This subsector was one of the hardest hit employment subsectors early in the pandemic. The workforce decreased 9.9% in Q2 2020 from Q1 2020. However, it quickly rebounded, and Q4 2020 employment in this subsector exceeded Q1 2020. This subsector has continued to expand with a three-year growth rate of 7.1% between Q1 2020 and Q1 2023. Mental Health, a subset of Ambulatory Health Services, had approximately 7,000 employees in Q1 2023. This subset has grown at a rate of 100.5% between Q1 2020 and Q1 2023.

Employment in the Hospital subsector was approximately 61,000 in Q1 of 2023. This workforce decreased 3.4% between Q1 and Q2 2020 due to the pandemic. However, unlike the Ambulatory Health Services subsector, hospital employment numbers still have not rebounded. The Hospital subsector decreased 0.6% between Q1 2020 and Q1 2023. In addition to the impact of the pandemic on hospital services, value-based care initiatives focused on shifting care out of the hospital setting have put downward pressure on this subsector, shifting both services and employment into the Ambulatory Health Services subsector.

Employment in the Nursing and Residential Care subsector was approximately 41,400 in Q1 of 2023. This subsector experienced an 6% decrease between Q1 2020 and Q1 2023. A drop in employment occurred in Q2 2020 due to the pandemic and continued to fall to a low point in Q1 2022. However, beginning in Q2 2022 employment began to grow again and is expected to approach the Q1 2020 employment numbers by 2024. This subsector consists of many low-paying, low-skill, and high-stress jobs that have had to compete for employees with other sectors that are seeking entry-level skillsets. Relatively low availability of employees in Nursing and Residential Care is one of the challenges for the state in supporting its 65+ population.

Social Assistance is the last subsector that makes up Health Services. There were approximately 63,400 employees in this subsector in Q1 2023, a 3.4% increase in employment from Q1 2020. Like the other sectors in Health Services, Social Assistance saw a significant drop in employment in Q2 2020 because of COVID-19. Employment has been slowly picking up since that initial drop, but employment finally exceeded the Q1 2020 numbers in Q3 2022.

Other Trends in the Health Workforce

The COVID-19 pandemic had significant and lasting impacts on the health care workforce. Definitive Healthcare recently reported on health care providers who left the workforce in 2021. Of the 334,000 clinicians who left the workforce, 117,000 (34%) were physicians. Key factors influencing these departures include retirement, burnout, and other stressors related to COVID-19. In November 2023, the Health Advisory Board reported on the CDC's new campaign to address burnout in the health care workforce, including a workforce questionnaire and removing mental health questions from credentialing and licensing applications.

Health Care Delivery

Value-Based Care, Acquisitions, and Mergers

Health organizations, particularly those in the Medicare Advantage (MA) business, have been using acquisitions and strategic mergers to try to better support a value-based care strategy. In a value-based care strategy, health organizations take risk on patients. They receive a flat patient rate, adjusted for health characteristics of each member, and the health organization provides whatever health services are needed by that patient within that rate. Three strategies highlighted by Advisory Board include: acquisition to expand enrollment in Preferred Provider Organization (PPO) plans, acquisition of primary and specialty practices, and acquisition of in-home care companies.

One of the most notable health organizations to use acquisition to grow their PPO business is Kaiser Permanente. Kaiser has historically been an HMO closed-system model that has made growth difficult, particularly with the broader trend toward PPO insurance products. Kaiser announced that it would acquire Geisinger Health to form Risant Health in 2023. Risant will be a nonprofit corporation and will focus on acquiring even more health systems. Other notable joint ventures include Braven Health that combines Horizon BCBS New Jersey, Hackensack Meridian Health, and RWJBarnabas Health in the New Jersey market. Optum Care (part of UnitedHealth Group) and Walmart are also partnering to provide a MA plan beginning in Georgia.

The second strategy noted by Advisory Board is the trend in health care organizations purchasing primary and specialty care organizations. Optum Care acquired Kelsey-Seybold in 2022, which includes a primary care network, a specialist network, a cancer center, and ambulatory surgery centers in the Houston, Texas, market. In addition, Kelsey maintains risk contracts for MA as well as commercial lines of business. Primary care and specialist consolidation allows companies like Optum Care to better manage utilization of services and deliver a risk-based strategy by aligning the financial incentives for value-based specialist care. Other notable acquisitions include Walgreen's acquisition of Summit Health in 2022 and Oak Street Health's acquisition of RubiconMD in 2021.

Finally, health organizations have been acquiring health services companies that add diverse and sometimes overlapping services. The three models of care identified by Advisory Board in this space include special needs plans, senior-focused primary care, and home health. Recent

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examples include the CVS-Aetna acquisition of Signify and Oak Street Health in March 2023; Optum Health's acquisition of home health companies, including LHC Group and Amedisys in June 2023; and Humana's move into in-home health services, including primary care through CenterWell in August 2023.

Acquisition as a strategy for value-based care is most noticeable in the Colorado market with the Optum acquisitions. Optum currently owns physician groups in Colorado, including New West Physicians in Denver and Optum Care (formally Devita Medical Group) in Colorado Springs. Optum's recent purchase of the home health company LHC also has a presence in Colorado Springs.

Hospitals

Colorado hospitals are significant contributors to the state's economy, employing thousands of people in communities throughout the state each year. According to the Colorado Hospital Association, the state's hospitals contribute more than $18 billion to Colorado's economy each year.

According to the Colorado Department of Health Care Policy and Financing's January 2023 *Hospital Community Benefit Accountability Report,* Colorado hospitals invested $965 million in community benefits in 2020-2021. Of this total, the largest investment (55%) was toward programs to address health behaviors and risks, followed by free or reduced-cost health care services (25%), other investments that addressed community identified needs (12%), and programs that addressed social determinants of health (8%).

Pharmacy

Expenditures on pharmaceuticals is expected to grow 5.8% between 2014 and 2024, according to (Keehan, Sean P et al. "National health expenditure projections, 2014-24: spending growth faster than recent trends.)" This growth is attributed to factors such as health care coverage expansion including ACA, economic growth, and an expanding Medicare eligible population. Total drug expenditure for 2022 in the United States was $633.5 billion, a 9.4% increase over the prior year driven by utilization (5.9% increase), price (1.7% increase), and new drugs (1.8% increase). The costliest drugs in terms of overall expenditures include Adalimumab (arthritis and skin disorders), semaglutide (type 2 diabetes and weight loss), and Apixaban (blood clotting), according to Tichy, Eric M et al. "National trends in prescription drug expenditures and projections for 2023." Major drivers that continue to increase pharmacy expenditures include specialty and cancer drugs.

AI in Health Care Delivery

Artificial intelligence (AI) became a major policy debate across many industries in 2023 with the introduction of Chat GPT in late 2022. In the health care industry, AI can help with diagnosing and predicting disease, clinical decisions, monitoring patients, and improving communication with patients. The University of Colorado Anschutz Medical Campus is home to the Center for Health AI and the CU Department of Biomedical Informatics, entities committed to harnessing the power of medical data to drive innovation for improving patient care.

However, use of AI in health care decision-making can also have some drawbacks. Despite its potential to advance patient care, AI algorithms have also been known to amplify existing biases, which can lead to inequitable outcomes, according to the Colorado Health Institute. Further, a Pew Research Center survey conducted in 2022 found that 60% of Americans would be uncomfortable if their health care provider relied on AI for their medical care.

Public Policy

Colorado's 2023 legislative session include a diverse range of health care related bills. A significant number of bills passed by the General Assembly focused on health care, health insurance, behavioral health, and public health. Successfully passed bills include:

Mental health bills that successfully passed included SB23-176 to improve treatment for those with eating disorders, HB23-1003 to provide mental health screening for students grades 6-12, and HB 23-1236 to support implementation of the Colorado Behavioral Health Administration (BHA). Bills aimed at drug use and crime include HB23-1167, which provides immunity to individuals that call 911 to report a drug overdose for some drug-related crimes. Bills related to health care costs include HB23-1224, which makes changes to the Colorado Option insurance plans; HB23-1225 increases the drugs under the purview of Prescription Drug Affordability Review Board; and HB23-1215 disallows facility fees for outpatient preventative services. HB23-1243 establishes additional reporting requirements for hospital community benefit expenditures. HB23-1226 and SB23-252 are related to transparency. HB23-1218 addresses services that religious health systems may refuse such as abortion and medically assistance for end-of-life decisions. SB23-298 allows for public hospital partnerships to negotiate and pay for some services and supplies. Prescription drugs were addressed in HB23-1227, HB23-1201, HB23-1002, HB23-1130, and HB23-1183. Health coverage was addressed in HB23-1300 to provide continuous coverage for previously incarcerated adults and young children, regardless of their legal status. SB23-182 extends access to federal assistance to address ramifications due to the end of the public health emergency.

Bills in the national attention include those related to reproductive health and gun safety. Reproductive health services, including abortion services, were given further protection with the passage of SB23-188, SB23-189, and SB23-190. Gun safety regulations aimed at decreasing violence perpetrated using guns included HB23-1219, SB23-169, SB23-168, SB23-170, and SB23-279.

Finally, there were several bills that passed to try to begin to address systemic issues in the health care workforce including SB23-002, SB23-288, SB23-167, HB23-1071, and SB23-083. SB23-002 and SB23-288 impact reimbursement of community health workers and doulas. The remainder expanded the types of providers that can prescribe and/or dispense medication.

At the federal level, the 2024 final notice for Medicare Advantage and Part D rates set a three-year phase in period to adjust the growth rate factor used to calculate reimbursement to health plans, according to the Centers for Medicare and Medicaid Services. This is anticipated to put significant downward pressure on Medicare revenues due to decreased rates for star ratings (-1.2%) and risk model revision and normalization (-2.2%). Further, President Biden has released a health care agenda including expanded access to care, decreasing drug prices, and moving toward value-based care. The Value in Health Care Act of 2023 was introduced in July 2023 to revise alternative payment models and Medicare value-based care programs.

Conclusion

Health Care and Social Assistance sector employment exceeded Q1 2020 for the first time beginning in Q3 of 2022. Ambulatory care is the largest employment subsector and experienced a quick rebound and steady growth from the COVID-19 pandemic. The other subsectors have been slower to rebound. Social Services exceeded prepandemic levels for the first time in 2022. Hospital employment is expected to reach prepandemic levels in 2023, and Nursing/Residential Care Facilities is expected to recover in 2025.

Access to health care coverage in Colorado shifted in 2023 with two notable changes. First, Coloradans on Medicaid were required to provide documentation to keep their coverage beginning in May 2023 with the end of the public health emergency. Between May 2023 and September 2023, 187,000 people lost coverage in the redetermination process. Data are not yet available on where these people now receive health care coverage or whether they will move into an uninsured status. Second, Colorado began offering subsidized coverage for undocumented immigrants through OmniSalud. This program quickly reached its 10,000 cap and will need additional funding sources to expand. It covers an estimated 12% of the eligible population.

The 2023 legislative session included several new bills related to health care. Bills passed impacting mental and physical health access, protections for individuals seeking services, transparency, and affordability. The federal government revised the Medicare payment models for 2024 and President Biden had identified health care initiatives including expanding access, decreasing drug prices, and incentivizing value-based care. ✤

Contributors:
Kristina Kolaczkowski, Optum (Co-Chair)
Richard Thompson, National University (Co-Chair)
Emily Johnson, Colorado Health Institute
Emily Orr, Department of Health Care Policy and Financing
Emily Santich, Colorado Health Institute

Leisure and Hospitality

Employment Overview

The Leisure and Hospitality industry continues to see substantial job growth in 2023. This continued job growth is not surprising considering that the sector was hit hardest during the COVID-19 pandemic. In 2022, Colorado's Leisure and Hospitality industry employed 338,300 people, up 10.7% from the previous year. Growth in 2023 is estimated at 3.8%, or 12,700 jobs. Growth is expected to slow further to 1.4% in 2024, adding 5,000 jobs to total 356,000.

Although the gains in total jobs are notable, wages lag behind other industries in the state. According to the Bureau of Labor and Statistics (BLS), the mean hourly rate for employees in the Leisure and Hospitality sector is about $21 per hour compared to a mean of $34 per hour for all occupations in Colorado.

LEISURE AND HOSPITALITY EMPLOYMENT 2014-2024 (In Thousands)

Year	Arts, Entertainment, and Recreation	Total Accommodation and Food Services	Total Leisure and Hospitality[a]
2014	49.0	251.4	300.4
2015	50.8	262.0	312.8
2016	52.9	270.8	323.6
2017	55.4	277.8	333.2
2018	56.9	282.8	339.7
2019	59.1	286.3	345.4
2020	44.4	227.6	272.0
2021	50.3	255.4	305.6
2022[a]	57.0	281.3	338.3
2023[b]	58.8	292.3	351.0
2024[c]	59.5	296.5	356.0

[a]Revised. [b]Estimated. [c]Forecast.

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

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

Domestic Consumer Leisure Market – National Trends

In 2023, the domestic travel industry completed its post-pandemic recovery as visitation to destinations across the country largely exceeded 2019 levels. The pandemic left an indelible mark on all aspects of the travel industry. So even as travel volume and travel spending now exceeds prepandemic levels, there have been fundamental changes in the way people plan and book travel, in the way they experience destinations, and how destinations approach the visitor experience.

Nationally in 2022, according to Longwoods International, domestic overnight visitation exceeded 2019, a record year for most destinations, by a fair amount. Consumers not only continued to expend pent-up demand, but also established a new mindset that prioritized travel in a way the industry has never seen before.

The U.S. Travel Association (USTA) monitored all travel trends during the pandemic and showed a generally optimistic outlook for 2023 and beyond in its U.S. Travel Forecast Summer 2023 edition, the latest figures available. USTA predicts continued resilience of domestic leisure travel, though returning to more normal, prepandemic single-digit annual increases. In 2023, domestic leisure visitor volume is projected to end the year at 103% of 2019, and inflation-adjusted domestic leisure travel spending is projected to be 101% of 2019.

USTA is bullish about the recovery of the international leisure market, which picked up steam in the first half of 2023. In 2023, international leisure visitor volume is projected to be 84% of 2019, a steep increase over the 2022 year-end numbers (64%). Inflation-adjusted international leisure travel spending for 2023 is projected to be 73% of 2019, which is still a bit soft. Full recovery in international travel volume (compared to 2019) is expected to happen in 2025, but spending recovery is not expected until 2026. Both of these lags can be attributed to the slower-than-expected return of Far East travelers from Japan and China, as well as continued issues with visa wait times from several nonwaiver countries.

INDUSTRY SNAPSHOT LEISURE AND HOSPITALITY

Nominal GDP, 2022 ($ Billions)	25.3
Real GDP, 2022 ($ Billions, 2017 Dollars)	20.6
2022 Real GDP Growth Rate	12.9%
Total Employment, 2022 (Thousands)	338.3
2022 Employment Growth Rate	10.7%
Employment Growth National Rank	16
Share of Colorado Employment	11.8%
Share of National Employment	10.4%
Average Wage, 2022	33,884
Percent of Statewide Average Wage	44.8%
2022 Average Wage Growth Rate	9.0%

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics.
Note: 2022 employment includes revised estimates.

Tourism in Colorado

The Colorado Tourism Office (CTO) is a division of the Governor's Office of Economic Development and International Trade with a mission to inspire responsible and respectful exploration of Colorado. CTO achieves this mission by advancing collaborative partnerships with destination marketing organizations, local communities, and private businesses, and by focusing on inclusivity, innovation, and leadership to strengthen the tourism industry. Recognizing tourism as a vital economic driver, the CTO aims to promote sustainable travel experiences while balancing resident quality of life and safeguarding cultural and natural resources.

The Colorado tourism industry generated a record high of $27.7 billion in travel spending and 90 million visitors in 2022. According to an annual economic impact report

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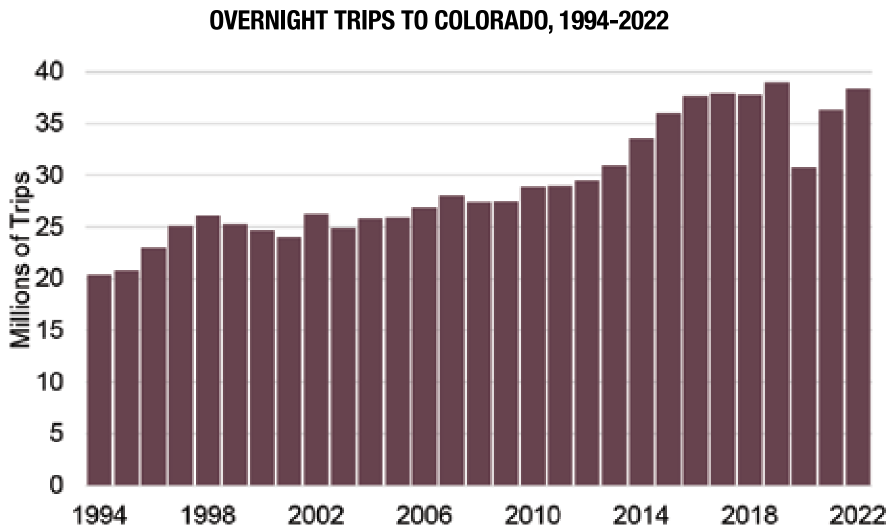
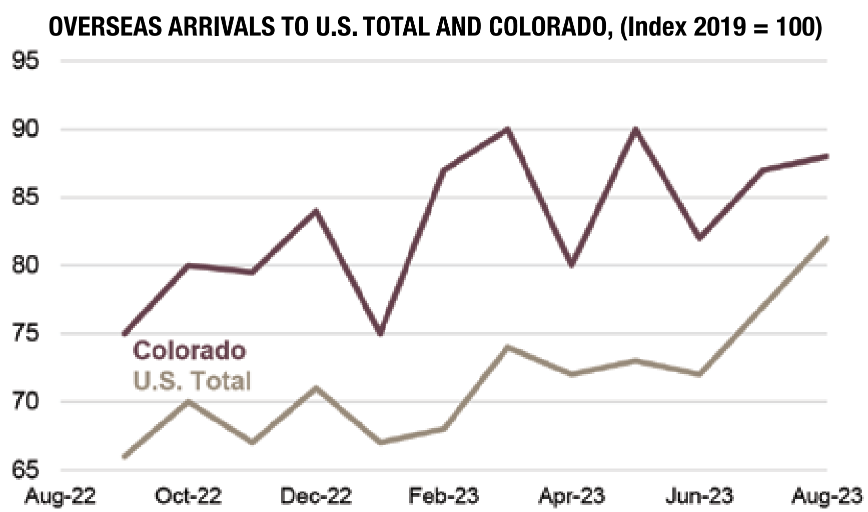
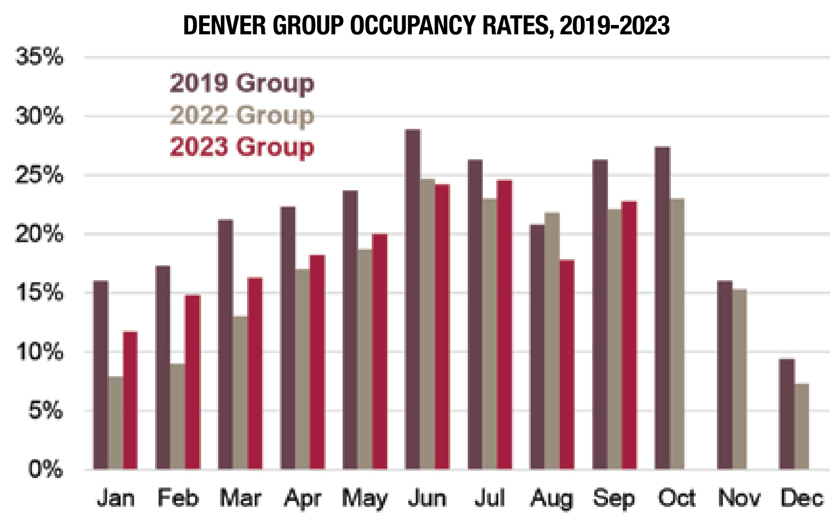


Source: Longwoods International 2022 Annual Visitor Study.

Source: Tourism Economics.



Source: National Travel and Tourism Office.



Source: Smith Travel Research.

Leisure and Hospitality

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developed by Dean Runyan Associates, travel spending in Colorado grew $5.6 billion from $22.1 billion in 2021 to $27.7 billion, in 2022, a 25% increase. More than 70% of that growth is attributed to the Denver Metro area alone.

Additionally, the Longwoods International Travel USA Report identified that visitation to Colorado increased by 5.8 million visitors from 84.2 million in 2021 to 90 million in 2022, a 6.5% increase. Notably, overnight visitation was still slightly down in 2022, with 38.4 million visitors compared to 39 million visitors in 2019.

State and local tax revenue also grew to a combined $1.7 billion in 2022, an increase of $300 million compared to the prior year. As a result, the tourism industry in Colorado contributed $760 in tax benefits for every Colorado household in 2022.

Direct travel-generated employment experienced a gain of approximately 15,700 jobs, with an industry total of 176,800. This was a nearly 10% increase in employment compared to 2021, with Accommodations and Food Services accounting for 57% of that gain. In 2022, every $1 million in travel-related spending resulted in six jobs for the industry. Overnight business trips grew by 58% in 2022 from 2021.

Insights into 2023 Colorado Tourism Industry Performance

Initial insights into 2023 tourism and hospitality performance indicate that statewide hotel performance continues to show strength and recovery against 2019 performance. Information provided from Smith Travel Research (STR) data details how January to August 2023 statewide hotel metrics are outpacing the January to August 2019 hotel metrics listed below:

- Occupancy 66% vs. 70% (-5.4%)
- ADR $166 vs. $139 (+19.2%)
- RevPAR $110 vs. $97 (+12.8%)
- Demand 20,700 rooms sold vs. 21,000 rooms sold (-1.5%)
- Revenue $3.4 billion vs. $2.9 billion (+17.4%)

Although statewide hotel performance remains strong in 2023, year-over-year (YoY) growth is starting to normalize after pent-up demand to travel has begun to subside after the high YoY growth years of 2021 and 2022. Additionally, this softening is causing mixed regional performance across Colorado.

Visitor travel preferences continue to shift from rural destinations toward larger cities and international travel. Nearly 40 million Americans flew abroad from January-July 2023, an 8.6% increase compared to the same time period in 2019. When looking at YTD September 2023 compared to September 2022, cities like Denver, Fort Collins, Loveland, and Longmont that were the most negatively affected by the pandemic are now relative winners within Colorado. Smaller, more rural areas, like Pagosa Springs, Gunnison, and Trinidad that experienced heavy growth during the pandemic are seeing that visitation recede.

Insights into 2023 Colorado Airport Trends

Overall, Colorado airports are following similar trends as observed in the hotel data, with the larger airports that were the hardest hit during the pandemic showing the most YoY growth. However, the growth percentages are slowing incrementally comparing YTD August 2023 versus 2022.

- Denver – YTD passenger traffic up 13.3% vs. 2022 and up 37.6% vs. 2021
- Aspen – YTD passenger traffic up 2.1% vs. 2022 and up 27.1% vs. 2021
- Colorado Springs – YTD passenger traffic up 5% vs. 2022 and up 30.2% vs. 2021
- Eagle County – YTD passenger traffic up 8.7% vs. 2022 and up 14.2% vs 2021

One notable exception within the airport data is related to Grand Junction airport, which experienced a 12.4% increase in passenger traffic during YTD August 2023 compared to a 3.1% increase in passenger traffic during YTD August 2022.

International Travel

International visitors remain Colorado's highest-value travelers, spending an average of $1,772 per person per trip while visiting the state in 2023.

International tourism to Colorado fared well throughout the pandemic and is recovering at a faster rate than expected. While U.S. borders were closed to most visitors during the pandemic, Mexicans could come into the U.S. via air. The Mexican traveler, traditionally a winter visitor, has now started visiting in the summer months as well, boosting overall visitation. The overseas visitor, the highest-value visitor, showed a strong return in 2022. A full recovery of visitors from North America is expected in 2023, with recovery from European travelers expected in 2024, and all other overseas travel expected to recover by 2025.

Looking beyond 2023, the Colorado Tourism Office will continue to target the international markets of Australia, Canada, France, Germany, Mexico, and the United Kingdom.

Key CTO Stewardship Initiatives

Destination Stewardship Education and Promotion— The Colorado Tourism Office defines destination stewardship as "support for Colorado destinations that balances quality of life for residents and quality of experience for visitors, while enhancing our environment and communities." A key destination stewardship initiative for Colorado is the "Do Colorado Right" campaign to educate both residents and visitors on traveling responsibly, enhancing the visitor experience while preserving the natural beauty of Colorado. By partnering with 9NEWS and influential figures like influencer and TikTok star Nelson Holland, the campaign promotes a holistic approach to harmonizing residents' quality of life, a strong visitor economy, and the protection of cultural and natural resources. As tourism pressure grows, the CTO and its partners work together to mitigate the negative impacts of tourism and strengthen the tourism economy, emphasizing the importance of responsible travel and destination stewardship.

Grants and Funding Programs—The CTO offers an array of grants and funding programs that play a vital role in supporting Colorado's tourism industry. The Tourism Marketing Matching Grant supports destination and industry association marketing efforts, while the Tourism Management Grant aids projects that enhance visitor experiences. These initiatives not only boost the economic impact of tourism but also foster collaboration among partners, strengthening Colorado's tourism brand and promoting sustainable growth in the sector. By providing financial support, the CTO's Grants & Funding team aims to enhance the visitor experience, sustain the visitor economy, and support local quality of life.

Destination Development Initiatives—Destination Development is a cornerstone of Colorado's tourism industry, focusing on enhancing visitor experiences, preserving unique destinations, and advancing off-peak tourism opportunities. Programs like the “Colorado Electric Byways” and “Colorado Dark Sky Mentor Certification” encourage sustainability, provide exceptional stargazing opportunities, and support local businesses. Additionally, initiatives like “Destination Blueprint” and the “Destination Development Mentor Program” foster collaboration, alignment with local strengths, and industry growth. These initiatives bolster Colorado's economic vitality, promote responsible and inclusive tourism, and enhance the visitor experience.

Industry Partnerships—The CTO thrives on strategic partnerships with industry entities, promoting responsible and sustainable tourism in the state. Notable collaborations include the “Care for Colorado Coalition” with Leave No Trace, which educates on preserving natural and cultural resources, the “Colorado Tourism Leadership Journey” for professional development, and the “CTO Learning Labs” for workforce training. The “Michelin Guide Colorado Partnership" showcases culinary excellence, contributing to economic growth, while the “Inclusivity in Travel Coalition” focuses on diverse audience experiences. These partnerships exemplify CTO's commitment to responsible tourism, industry leadership, and economic prosperity.

Tourism and Conventions in Denver

Denver’s travel industry is back. It has been several years since such an unequivocal statement could be made.

In 2022, growth had been strong but inconsistent, and myriad headwinds limited potential. While there are still several meaningful issues to face—everything from lingering concerns about Covid to dramatic increases in travel prices—a combination of record-breaking travel results reported by VISIT DENVER's partners at Longwoods International, favorable industry studies from domestic and global research partners, and strong internal sales and marketing indicators all combine to allow VISIT DENVER to feel the wind at its back for the first time in more than three years.

The previous version of this report stated that, “There is no new normal.” VISIT DENVER came to that conclusion based on the available information at the time, noting a period of tremendous opportunities that were paired with new and rapidly evolving challenges related

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not only to the pandemic, but also to volatility in the global economy, political upheavals, social justice, changing travel habits, and more.

Today, there has been welcomed stabilization across nearly all key sectors that impact the global travel business. Travel demand, particularly from domestic leisure audiences, continues to grow despite persistent concerns about travel prices and the looming threat of a recession. Demand in the group market continues to outpace earlier projections, with VISIT DENVER achieving lead volumes that exceed the organization's 2019 high-water mark. The international market has also surged back, particularly from North American and European destinations, as all international flights have been restored, with more on the way.

Travel remains a highly competitive global business, with domestic visitors indicating increased demand for international trips, especially with a strong dollar, and domestic destinations also putting out savvy marketing messages. The recovery in the meetings market brings with it new demand dynamics that have upended decades of booking patterns. While inbound international demand is rising, few countries have yet reached their 2019 travel levels. And the global airline industry continues to wrestle with service and staffing issues that can leave travelers frustrated.

In Denver, the travel product itself continues to evolve. Persistent crime and safety issues continue to impact the downtown area in particular, though significant progress has been made. Certain sectors of the industry, such as restaurants, continue to struggle with high food and labor prices and workforce issues, causing many closures and limited hours. Hotels, which have enjoyed high rates during the peak of the inflationary period, have not yet had their occupancy return to 2019 levels, primarily due to softness in the transient business market. Despite these headwinds, and with a new city administration in place, VISIT DENVER's outlook for 2024 is stronger than it has been in years.

A few 2023 highlights in Denver tourism include:

- Denver Nugget's successful NBA championship run and subsequent parade and rally was attended by an estimated 750,000 people.
- Michelin Guide expanded to Colorado, awarding 26 Denver restaurants.
- Denver hosted 367,525 delegates at the Colorado Convention Center, with an economic impact of $503 million.
- Large sporting events like rounds 1 and 2 of the NCAA March Madness tournament, USA Curling, and USA Fencing were held in Denver.
- Denver PrideFest received 550,000 visitors with another record-breaking attendance. Cherry Creek Arts Festival received 150,000 visitors and showcased more than 225 artists, while Denver Day of Rock took place on June 3, 2023 (one week later than in 2022).
- Taste of Colorado was modified this year with the newly created Taste of Colorado at ¡Viva! Streets Denver, across four Sundays throughout the summer, and Denver's largest-ever Ciclovía.
- The Denver Center for the Performing Arts returned to a full schedule in 2022 and continued in 2023.
- Red Rocks Amphitheatre maintained its full schedule of events, including Yoga on the Rocks and Film on the Rocks.
- The Denver Art Museum's Hamilton Building Collection Galleries reopened, with some of their most inclusive collections, including Arts of Africa, Modern and Contemporary Art, and Arts of Oceania.
- The 16th Street Mall Project is the first major renovation of this vital downtown corridor since its opening in 1982. The renovation is a component of Denver's overall financial plan for an equitable and sustainable economic recovery, and according to denvergov.org, is anticipated to support more than 1,800 jobs, generate more than $155 million in income for workers and nearly $380 million in sales for businesses, and have a regional economic impact of as much as $4 billion throughout the duration of the project. Expected completion of the project is fall 2025.

2022 Longwoods Visitor Study

VISIT DENVER has many ways to measure the impact of the travel industry on the city, but none are so eagerly anticipated as the Annual Visitor Profile from Longwoods International. Longwoods surveys domestic visitors 12 months a year and produces for its clients an annual report on visitation, spending, visitor demographics, and more. Their methodology is the industry standard for this kind of study, with a high degree of confidence and low margin of error. Longwoods has been researching the Denver visitor market since 1994.

In 2022, the latest figures available, Denver welcomed a record 36.3 million visitors, marking a 15% increase over 2021 and surpassing all historic tourism totals by a large margin. A record number of visitors also spent more money in Denver than ever before, generating $9.4 billion in tourism revenue, far beyond the previous record of $7 billion spent in 2019.

Overnight visitors totaled nearly 20 million, a 20% rise over the prior year. Growth was particularly strong in the domestic overnight leisure market, rising by 13% over the prior year to a new high of 16.7 million visitors.

Longwoods also studies the impacts of VISIT DENVER's efforts to target "marketable" visitors, the primary focus of the organization's promotional efforts. In 2022, these marketable visitors increased by 18% over 2021, surpassing 8 million for the first time.

Spending by overnight visitors increased in 2022 to $8 billion, a 45% increase over 2021. Among all traveler types, marketable leisure visitors spent the most at $229 per day followed by business travelers at $152 per day.

Longwoods International also conducted Return on Investment (ROI) research for VISIT DENVER's 2022 summer advertising campaign, its largest of the year.

The study revealed the strongest ROI numbers VISIT DENVER has ever seen, showing that the campaign generated 1.8 million incremental trips, generating $641 million in incremental visitor spending, and $72 million in state and local taxes. Measured against spending, the campaign generated an ROI of $167 in visitor spending and $19 in taxes for every $1 in advertising investment.

Key numbers for 2022 include:

- Denver welcomed 36.3 million total visitors in 2022, including 19.9 million overnight visitors and 16.4 million day visitors.
- Overnight leisure visitors totaled 16.7 million in 2022, a 13% increase over 2021.
- There were 8.3 million marketable leisure visitors in 2022, an 18% increase over 2021. This segment has the most discretion on where to vacation and responds to tourism marketing. This audience is the primary focus of much of VISIT DENVER's marketing efforts and spends more time and money in-market than any other leisure visitor type.
- Denver visitors spent $9.4 billion in 2022, including $8 billion from overnight visitors and an additional $1.4 billion in spending from day visitors. Total spending increased by 42.5% over 2021. Less than half of the increase in spending was attributed to inflation, according to Longwoods, with the rest representing organic spending growth.
- Denver overnight visitors spent nearly $2.3 billion on accommodations and $1.3 billion on food and beverages.
- Expenditures by overnight visitors on transportation reached nearly $2.7 billion. Retail purchases were $969 million, while overnight visitors spent nearly $685 million on paid attractions and other recreational and sightseeing activities.
- On average in 2022, the biggest spenders were marketable travelers, who spent $229 per day, followed by business visitors, who spent $152 per day. Day visitors spent $88 per day.
- Out-of-state overnight leisure travelers comprised 76% of visitors.
- The top five states sending vacationers to Denver in 2022, apart from Colorado itself, were:
    - California
    - Texas
    - Arizona
    - Florida
    - Kansas
- The top five cities outside of Colorado (all of which were a VISIT DENVER advertising market) that sent leisure visitors to Denver in 2022 were:
    - Los Angeles, CA
    - Phoenix, AZ
    - Dallas-Ft. Worth, TX
    - Chicago, IL
    - New York City, NY

Colorado Convention Center Expansion

The expansion of the Colorado Convention Center (CCC) remains on track. Voters approved the project in 2015, and in July 2020, the City of Denver selected Hensel Phelps and TVS Design as the design/build team for the project. City Council approved the contract in fall 2020. Construction started in June 2021 and a "Raise the Roof" kick-off ceremony and press conference took place in September 2021. The expansion will be completed by December 2023 and is expected to generate another $85 million in annual economic impact. Year-to-date, the convention center business is up 5% in 2024 and 38% in 2025, and more than $180 million of business has been booked for the future as a direct result of the new expansion space. In 2024, Denver will host 48 conventions, with an estimated economic impact of $476 million; however, it is possible these numbers will change.

VISIT DENVER has worked closely with ASM Global, the Denver Office of Transportation and Infrastructure (DOTI), and the contracted team to minimize the impact on existing business, while also continuing to book new business during construction. Both VISIT DENVER and ASM Global are focused on driving new business to the expansion space beginning April 2024.

Hotels

Hotel supply continued to grow in Denver even during the pandemic but leveled off as of August 2023. According to CoStar Group, pipeline properties are concentrated in the Central Business District (CBD) and east Denver areas of the Denver metro area.

In 2022, many downtown Denver hotels celebrated openings, as well as multimillion-dollar renovations.

In 2023, there were fewer hotels that came online, including:

- The Sonder Artesian, a 41-room property, opened in June 2023.
- Kasa RiNo Denver, a 24-room property in an existing building, began operation in April 2023.

There are more hotels in the pipeline in Denver, including:

- The Cambria Hotel Denver Downtown, a new 153-room hotel, will open in RiNo in March 2024.
- Populus, the 265-room hotel planned adjacent to Civic Center Park, will feature a roof-top terrace. The property will be the first carbon-positive hotel in the country and is scheduled to open in spring 2024.
- Offering only 18 rooms, the Urban Cowboy Denver will bring a unique new experience to Uptown in June 2024.

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Photo courtesy of Colorado Tourism Office/Brett Shreckengost.

- The Sonder Jefferson Park, a 93-room hotel, will open in December 2024.
- Courtyard by Marriott Denver Stadium will add 118 rooms near Empower Field at Mile High in early 2025.

This year started off strong compared to the devastating first quarter of 2022. As of June 2023, occupancy in Denver was down 6.8% versus 2019 but offset by a 12% increase in average daily rate (ADR) and 7.8% growth in room supply. Denver's revenue per available room (RevPAR) is up 4.3% over 2019.

According to CoStar, through June, group occupancy is still down 19.5% in Denver over 2019, but the rate is up 12.3%. Hoteliers, data experts, and planners all agree that demand for meetings and events at hotels has surged in recent months, though it is not even across hotel types or group sizes.

STR research is also showing that Denver's group market continues to grow each month, exceeding 2022 but still lagging 2019.

Recovery in International Tourism

International visits to Denver are expected to grow 31% to 485,000 in 2023, as forecasted by Tourism Economics, an Oxford Economics company. This equates to an additional 115,000 arrivals compared to 2022. International travel spending in Denver is forecast to grow 345.5% in 2022, to $400 million, an increase of $299.9 million compared to 2021.

Tourism Economics is forecasting Denver to recover its international visitors to 2019 levels by 2024 and projecting growth of 131.4% in international visits from 2022 to 2027 if all things remain the same (that there are no changes to Covid such as a stronger variant or economic or geopolitical forces that make traveling not viable for key markets in Europe, for example).

In addition, Tourism Economics is forecasting international nights in paid accommodations in Denver will grow 71% from 2022 to 2025 to a total of 2 million room nights.

Denver's largest source markets for 2023 are Canada (with 175,200 arrivals or 34% of total international arrivals), followed by the U.K., Mexico, and Germany.

According to Tourism Economics, Denver is outpacing comparable North American cities in international visitors in 2022 and 2024.

Tourism in Colorado Springs

In mid-2023, Visit Colorado Springs (VCOS) received data from the 2022 Longwoods International Travel USA Visitor Profile study that showed visitation and spending continued to rise over the previous year. Total visitation was 24 million people, up from 23.7 million in 2021, and total spending was $2.8 billion, up from $2.6 billion in 2021. Both numbers are also up over 2019, which was a record year prior to the pandemic.

Other findings from the 2022 Longwoods study include:

- The curve for seasonal trips seems to be flattening and efforts to promote the Pikes Peak Region as a year-round destination are effective: January-March visits (21%), April-June visits (26%), July-September visits (29%), October-December visits (24%).
- The top reason visitors (34%) came to the region was to visit friends and family members.
- 69% of overnight guests were repeat visitors, with 45% of them having visited in the last 12 months.
- 68% of visitors enjoyed outdoor activities during their trip compared to the U.S. norm of 48%.

Colorado Springs Lodgers and Automobile Rental Tax (LART) collections remained strong throughout 2023, though some months were slightly down over 2022. Through August, YTD 2023 collections were up 1.6% over 2022. While the region is not seeing increases as large as it did in the early pandemic recovery years (2021 and 2022), numbers like LART collections remain steady, and enplanements and passenger traffic at the Colorado Springs Airport have seen strong increases.

Two areas that continue to be slower to recover are business and international visitation. To help boost business travel, VCOS is leveraging a campaign financed by a $400,000 grant from the Colorado Tourism Office using American Rescue Plan Act (ARPA) funds. The campaign is targeting meeting and event planners and will run through 2024. VCOS also restarted international marketing with the Colorado Tourism Office, hosting international writers and participating in international campaigns throughout the year.

Highlighting accessible and inclusive travel opportunities continues to be a major focus for VCOS. The 2022 Longwoods study showed that 35% of visitors to Colorado Springs had a member of their travel party with a disability—compared to the U.S. norm of 20%. VCOS received a $20,000 grant through the Colorado Tourism Office, which has been put directly toward a partnership with WheelTheWorld.com. The partnership allows the region's bookable hotels and attractions that choose to participate to be evaluated for their accessible features and a listing created for users.

The region had many new business openings throughout 2023 including Lemon Lodge Ski Bar and Avenue Nineteen in Downtown Colorado Springs. Other openings at the end of 2023 and early 2024 are popular chain restaurants Shake Shack and Illegal Pete's. Iconic entertainment center Dave & Buster's will open in late 2023, and the Sunset Amphitheater (under construction on the north side of Colorado Springs) is planning to open in 2024. The construction of the new U.S. Air Force Academy Visitor Center was well underway in 2023, with no official grand opening date released yet. Hotel Polaris, a 375-room hotel under construction near the new visitor center, is scheduled for a late 2024 opening. The COS Airport has begun its "ElevateCOS" concourse modernization project, which will enhance aging terminal infrastructure, accessibility, and sustainability initiatives.

Colorado Springs is optimistic about the way 2023 will end and what 2024 holds.

Tourism in Grand Junction

Grand Junction is almost equal distance between Denver, Colorado, and Salt Lake City, Utah. It is approximately 264 miles to either major city from Grand Junction. The Grand Junction Regional Airport is the 3rd-largest airport in Colorado, served by United, Allegiant, and American Airlines. Amtrak operates daily stops in Grand Junction on the California Zephyr, traveling between Chicago and the San Francisco Bay area. Although Grand Junction area is a destination in and of itself, tourism continues to grow due to its convenient location to access other popular areas in Western Colorado.

Grand Junction's travel and tourism industry significantly contributes to the area's economic diversity. Visitor spending is 30% of the City of Grand Junction's sales tax revenue, according to three separate economic impact studies—Tourism Economics, an Oxford Economics Company; BBC Research & Consulting; and The Adams Group, Inc. Sales tax generated from the tourism industry provides funding for public safety, infrastructure, housing, and other city services while lowering the tax burden for residents and local businesses.

Visit Grand Junction, the City of Grand Junction's destination marketing organization (DMO), deploys marketing targeted toward potential visitors outside Mesa County to attract travel and tourism to the area. This provides a sustainable and consistent economy and enhanced quality of life for residents. Destination management principles are the foundation for Visit Grand Junction's marketing strategies. This is accomplished through collaboration with public land managers, responsible marketing strategies, and partnerships with area businesses and organizations.

A significant focus for Visit Grand Junction is elevating the brand while monitoring its net promoter score (NPS). The NPS measures customer loyalty and satisfaction and how likely they are to recommend a destination, company, product, or service to a friend or colleague. Strengthening the Grand Junction area's (Mesa County) brand elevates its prominence to attract Colorado Mesa University (CMU) students and diversified industries to the area.

Grand Junction's hospitality industry continues to exceed projections in 2023 and is expected to maintain a healthy pace in 2024. Much of this growth is due to the development of Grand Junction's destination brand, which has enhanced awareness of the Grand Junction area. The brand was developed through extensive research involving the community. Resident feedback emphasized the brand's commitment to honor the past, recognize the importance of art, represent the confluence of the rivers, and allow Grand Junction to be presented in a contemporary manner that speaks to the area's open landscapes and the unique spirit of the community. Creating a brand based on this input has

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encouraged residents to champion the brand, resulting in renewed confidence in the area.

Grand Junction's growing hotel occupancy rate, coupled with year-over-year increases in average daily rate, continue to support the hospitality industry and boost lodging tax revenue. Grand Junction's lodging tax rate is 6%, of which 4.25% is allocated to Visit Grand Junction for destination marketing and management programs. A 1% allocation goes to the Grand Junction Regional Air Service Alliance specifically to market, promote, purchase, and/or contract additional direct airline service for existing or new carriers to and from Grand Junction. The Grand Junction Sports Commission receives the remaining 0.75% to market, promote, solicit, and sponsor sporting activities, events, tournaments, and competitions.

Lodging tax collections for 2023 are projected to increase 16.5% above 2022, and collections for 2024 are projected to increase 4.5% above 2023. Hotel revenue is projected to increase by 4% in 2023 compared to 2022 and increase by 7% in 2024 compared to 2023.

In 2022, 2.1 million guests visited Grand Junction, a 2.6% increase compared to 2021. This is 6% higher than 2019. The majority of visits to Grand Junction are by younger travelers, with 76% being between the ages of 18 and 44 years. Additionally, 73% of the total households that visited Grand Junction have children under the age of 18.

Grand Junction hotel performance saw record-high occupancy and room revenue, driven by strong ADR in 2022 and 2023.

- In 2022, record-high hotel occupancy was attained in January, February, and March, while the remaining nine months had already set record occupancy in 2021. The average ending occupancy for 2022 was 65.1%. Grand Junction's 2022 occupancy was ahead of the U.S. by 4%, ahead of Colorado (including ski towns) by 1.2%, and even with Colorado (excluding ski towns).
- As of September 2023, Grand Junction's year-to-date hotel occupancy was 68.2%. This surpasses the U.S. by an average of 6.1%. Compared to the state, Grand Junction is ahead of Colorado (including ski towns) by 2.8% and even with Colorado (excluding ski towns). Grand Junction's hotels are forecasted to reach an average occupancy of 66% for 2023 and 69.1% for 2024.
- Although the winter season (November through March) experienced a lower occupancy, the past four winter seasons (2019-2020 season through 2022-2023 season) saw an average annual year-over-year occupancy increase of 5.2%. Visit Grand Junction's data indicate that the increase in occupancy will continue into the 2023-2024 winter season.
- Grand Junction hoteliers continue to see the results of applying effective revenue management strategies. Through September 2023, Grand Junction's year-to-date ADR is $109.58. In 2023 thus far, February, May, June, August, and September have reached record ADR each month compared to the prior years. Visit Grand Junction projects the 2023 ADR to average $110.12. The projected ADR for 2024 is $116. Opportunities to optimize room rates will continue to be an effective strategy for hoteliers.

A new hotel has opened in Downtown Grand Junction, with others in development. Under new ownership, the Historic Hotel Melrose has been fully renovated and reopened in October 2023. New hotels are planned for Los Colonias and Dos Rios along the Colorado River, which include additional boutique properties, RV lodging, glamping (luxury camping), and camping. Restaurants, spas, and retail stores are also planned for the riverfront. As evident from high occupancy rates, additional hotel inventory is needed to accommodate continued growth in tourism.

Short-term rentals continue to be popular in Grand Junction. As of September 2023, there are 265 compliant short-term rentals in Grand Junction.

Leisure and Hospitality employment in Grand Junction for 2022 increased by 3.9% above 2021's average employment and 1.3% above 2019's average employment, demonstrating continuous job growth. Leisure and Hospitality employment for 2023 is expected to be 1.3% above 2022's employment. Grand Junction's 6.4% job opening rate represents approximately 520 open jobs. Despite this positive recovery in Grand Junction, Leisure and Hospitality employment in the U.S. remains below its prepandemic level by 5.5% since 2019. The 6.3% job opening rate for the U.S. represents approximately 932,000 open jobs.

To support the Leisure and Hospitality workforce in the Grand Junction area, Visit Grand Junction has partnered with the CTO in its destination development initiative called the Destination Blueprint Program. This endeavor is designed to address key priority initiatives within Colorado's tourism industry, thereby supporting the residents of the destination. Visit Grand Junction chose to concentrate its efforts on advancing the tourism workforce and championing the value of tourism. This includes brand awareness to attract the workforce and professional development opportunities for tourism-related staff, and fostering a stronger community of workforce in the Grand Junction area. The program also integrates input from local stakeholder experts from the retail, hospitality, career education, lodging, activities, and restaurant industries, supplemented by existing data and research. At the conclusion of the program in 2024, Visit Grand Junction will receive an action plan that includes a series of recommendations identified during the course of the program to further attract and expand the tourism workforce, and other industries, in the Grand Junction area.

Business confidence in Grand Junction has seen a remarkable upswing in recent years. In 2022, the Grand Junction Economic Partnership (GJEP) focused its efforts on the proactive recruitment of business expansions and relocations in Mesa County. As a result, seven new businesses were welcomed, creating 83 jobs with an average annual wage of $56,244. Nine new business prospects are currently in development for 2023. Business confidence is also attributed to the addition of major retailers, the most recent being the announcement of Costco, slated to open in 2026. The presence of this retail giant not only brings convenience and choice to local and regional consumers but also signals a vote of confidence in Grand Junction's economic health. The ripple effect of such a significant addition often extends to other sectors of the local economy, boosting job creation and driving ancillary business growth. This, in turn, contributes to a more favorable climate for investors and fosters optimism among business owners.

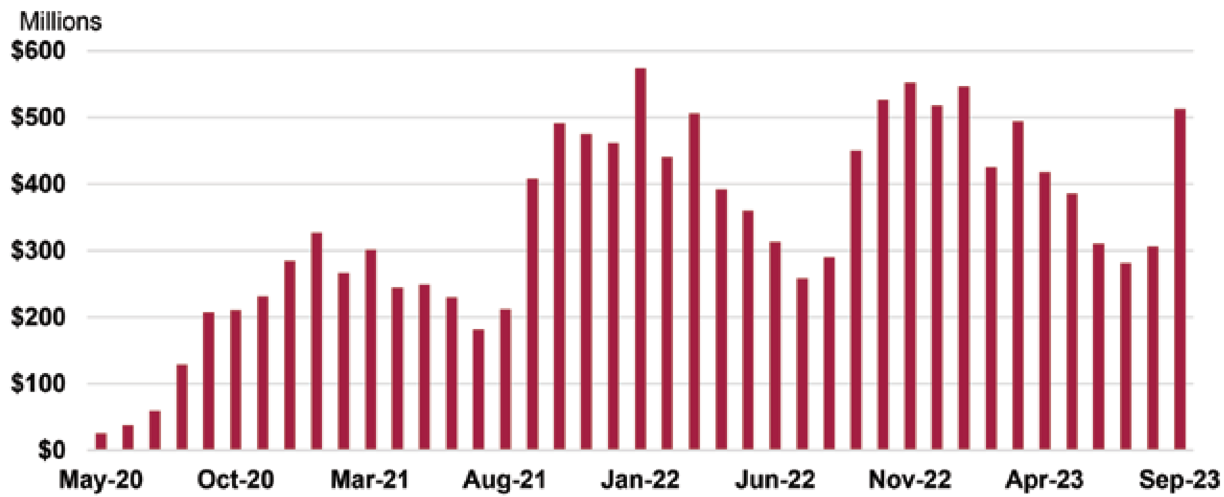
During 2023, Grand Junction welcomed 14 new food and drink establishments, with six additional new openings projected in 2024, resulting in a total of 255 establishments.

Arts and Culture

Colorado is home to some of the nation's top arts communities including Denver, Boulder, Glenwood Springs, and Steamboat Springs. These four communities are listed among the top 40 Arts-Vibrant Communities nationally in SMU DataArts' 2023 Arts Vibrancy Index. Across the state, Colorado's creative industries and cultural organizations play a key role in advancing the state as a cultural hub, through both social impact and economic activity. Not only does the state's creative economy contribute to a desirable lifestyle for the state's residents and workforce, but according to the BEA, arts and culture industries contribute 3.9% to the state's nominal GDP, representing nearly $16.9 billion of value added in 2021.

Across the state, communities of all sizes contribute to the state's creative economy. Colorado has 30 Certified Creative Districts spanning urban and rural communities, from Fort Collins to Trinidad, and Grand Junction to Sterling. The Creative Districts program, run by the Colorado Department of Economic Development and International Trade, provides support and funding to creative communities and seeks to increase jobs, incomes, and investments in creative places across the state.

COLORADO SPORTS BETTING WAGES



Source: Colorado Department of Revenue.

Many of the state's largest cultural organizations are concentrated in Metro Denver, which is home to the nation's 2nd-largest cultural funding mechanism. The Scientific and Cultural Facilities District (SCFD) is a seven-county tax district defined in state statute by the Colorado Legislature and approved by voters. It provides events and programming for nearly 13 million people, including both Colorado residents and visitors to the state. According to the 2022 SCFD Annual Report, in 2022, SCFD distributed $83 million in grants to nearly 300 organizations across Metro Denver, representing the largest amount granted in the district's 35-year history.

Another concentration of creativity can be found in the mountains of Western Colorado in a 331-mile region referred to as the "Creative Corridor." The rural towns making up the corridor (Carbondale, Crested Butte, Gunnison, Paonia, Ridgway, and Salida) provide a wide range of arts and cultural offerings for locals and visitors, alike.

Spectator Sports and Other Entertainment

Small but mighty, Denver is the smallest city in the country with five major professional sports teams, and the city has an estimated 6 million fans attend sporting events each year, according to the CTO and Denver Relocation Guide. The four sports venues located in downtown Denver and the surrounding area bring visitors and economic activity into the region and play a continued role in revitalizing downtown Denver. Empower Field at Mile High in downtown Denver is home to the Denver Broncos football team and had an average attendance of nearly 76,000 fans per game in 2022, according to ESPN. The stadium also hosts concerts, conventions, festivals,

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and more. Located less than a mile away, Ball Arena, home to three professional sports franchises (Denver Nuggets basketball, Colorado Avalanche hockey, and Colorado Mammoth lacrosse) hosts more than 250 events per year, including sporting events, concerts, and family events. Coors Field, home to the Colorado Rockies baseball, is also in downtown Denver, while the Colorado Rapids soccer team plays at DICK'S Sporting Goods Park in Commerce City.

According to data from the University of Toronto School of Cities and the Institute of Governmental Studies at UC Berkeley, Denver's downtown visits as of October 2023 reached 67% of their 2019 levels. This is compared to a national recovery rate of 74%. While the region is still working to recover to prepandemic activity levels, Denver's sports teams, and the venues that provide space for other entertainment offerings, are a key part of the region's recovery.

With the Stanley Cup win for the Colorado Avalanche in 2022 and NBA Championship win for the Denver Nuggets in 2023, Denver's professional sports teams provide substantial direct and indirect economic impact to the region. In addition to increased tourism and visitor spending, the success of a championship-winning team can lead to substantial economic benefits including increased retail sales, job creation, and investment in infrastructure. Further, the enhanced sense of community pride and unity supports a vibrant and collaborative community and other indirect economic benefits.

Economic activity for spectator sports in Colorado is not limited to the Metro Denver region. Colorado has hosted the Winter X Games in Aspen since 2002, featuring some of the world's best athletes competing in skiing, snowboarding, snowmobiling, and more. This event, broadcast worldwide, draws a massive audience, and includes musical performances and cultural events, making it an attractive event for fans of sports, music, and entertainment. Although the event had capacity restrictions in 2021 and 2022, the 2023 event drew a bigger crowd than expected, with ridership totals to and from the venue estimated at 17,939, up from 10,732 in 2022, but down from 32,756 in 2020, according to data from the Roaring Fork Transportation Authority. The X Games will return for its 23rd year in 2024.

COLORADO CASINOS
2013–2023

			Adjusted Gross Proceeds[a] (In Millions)			
Year	Casinos Open	Devices	Black Hawk	Central City	Cripple Creek	Total
2013	40	14,647	553	$68	$128	$749
2014	37	14,168	561	62	123	746
2015	36	13,823	596	66	128	790
2016	35	13,509	610	70	131	811
2017	34	12,958	621	72	135	828
2018	33	12,969	623	79	140	842
2019	33	12,848	613	80	141	834
2020	35	10,878	400	56	104	560
2021	33	10,568	728	83	165	976
2022	33	10,917	813	82	165	1,510
YTD. Sept. 2022	33	10,941	610	62	126	799
YTD. Sept. 2023	33	10,723	635	63	126	824

[a]AGP calculated on an annual basis, hence different from the state fiscal year.

Source: Colorado Division of Gaming.

Casinos

Over the last three decades, Colorado casinos have paid over $2.8 billion in state gaming tax revenues on over $20 billion in adjusted gross revenues. The gaming industry is taxed on gross revenues rather than net revenues and continues to provide significant funding for the recipients of gaming tax revenues. Gaming tax revenues annually support more than $14 million for community colleges, over $27 million for state historical restoration projects, over $15 million for tourism, $7.6 million for small business innovation, and over $30 million for mitigation of gaming impacts to state and local governments.

Like so many businesses in the hospitality and tourism industry, the steady economic growth that Colorado casinos and the gaming sector had experienced was abruptly halted with their closure in 2020 due to COVID-19. Despite a slow reopening with tight restrictions and limitations, customers have been excited to return to the mountain communities for entertainment. New ownership of properties and large investments in capital construction projects have increased the market, with additional improvements on the horizon.

For the fiscal year ending in June 2023, Colorado casino adjusted gross proceeds (AGP), which is defined as the amount wagered by players less payout from the casinos to all players, were over $1 billion. Gaming taxes paid to the state were nearly $173 million, reflecting a modest increase from last year.

Black Hawk continues to dominate the Colorado casino sector with 15 casinos, 6,156 devices, and a majority of the AGP. Cripple Creek has 12 casinos and 2,844 devices, and Central City has six casinos and 1,723 devices.

The inception of sports betting has proven to be an asset to the many Coloradans who avail themselves to sports and gaming as well as the many beneficiaries who enjoy the taxes paid by the casinos. Colorado voters approved a ballot referendum creating a 10% tax on net sports betting proceeds in 2019. These tax revenues finance the sports betting's ongoing regulation, a hold harmless fund for limited gaming recipients, gambling addiction services, and fund water projects and water-related obligations.

Despite the steady recovery from COVID-19, casinos continue to face obstacles including meeting adequate staffing numbers due to the labor shortage. Continued efforts to expand gaming to the Front Range, either by authorizing video lottery terminals and keno machines or instant racing machines at racetracks and other locations are ongoing.

Photo courtesy of Colorado Tourism Office/Brett Shreckengost.

Colorado Restaurant Industry

Restaurants are a driving force in Colorado's economy, creating hundreds of thousands of jobs, supporting career growth, and serving as the heart of our communities across the state. According to the National Restaurant Association, every additional dollar spent in Colorado's restaurants contributes $2.21 to the state economy, and every additional $1 million spent generates 16.8 local jobs. The past three years have been challenging for this sector, however, with restaurants facing mounting inflation, labor challenges, and legislative headwinds.

The restrictions and revenue losses that came with the COVID-19 pandemic have been replaced with increased operational costs, a return to the labor shortage rates of 2019, and growing concerns about the viability of the traditional restaurant model, particularly for full-service dining. Challenges include consumer tipping fatigue, rising menu prices, and legislative efforts to oversee the industry's scheduling and pay practices.

Economic Engines

The restaurant industry in Colorado surpassed its pre-pandemic 2019 high point—$14.5 billion in revenue and employing more than 280,000 workers—in 2021 with a total of $14.9 billion in sales, a 2.8% increase. In 2022, Colorado restaurant retail sales jumped to $17.1 billion, an almost 15% increase from the prior year. January to July 2023 retail sales in local restaurants rose to $16.9 billion, compared to the same period in 2022, when retail sales stood at $9.8 billion, showing a more than 53% increase year-over-year, according to U.S. Census Bureau data. Why this major jump in sales? It sounds like good news, but the truth behind the numbers tells a different story: inflation and wage increases are driving up menu prices, leading to the high nominal rates of growth in restaurant sales, yet profitability is getting squeezed. Nationally, when sales are adjusted for menu-price inflation, eating and drinking place sales were up 3% between the third quarters of 2022 and 2023. A busy restaurant is not always a thriving business.

Labor and Wage Challenges

The labor reality in Colorado restaurants is complicated at best, and directly tied to wages. Staffing was an industry-wide pain point before the pandemic, and, even as

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the state has regained its hiring momentum for Leisure and Hospitality, the industry faces many challenges surrounding wages and retention, amid an ever-expanding pool of establishments.

There are now approximately 304,700 workers employed in the Accommodations and Food Services subsector in Colorado (seasonally adjusted), representing 10.4% of the state's workforce. After the pandemic resulted in tens of thousands of Colorado restaurant employees being laid off or furloughed, the industry's workforce returned to prepandemic levels in 2022 and was up 7.4% year-to-date in September 2023.

By 2030, the National Restaurant Association estimates that Colorado restaurant and food service jobs will grow by 12.5%, translating to 38,000 additional jobs for a total of 341,500 industry employees.

Nationally, eating and drinking places—which account for nearly 90% of the jobs in the combined Accommodations and Food Services sector, according to the BLS—added a net 48,300 jobs in September 2023 on a seasonally adjusted basis, the strongest increase since January and the 33rd-consecutive month of employment growth in the U.S. restaurant industry.

These gains must be considered against the number of open positions in the foodservice sector, which show that there is still a labor shortage for the growing industry. Job openings in the Accommodations and Food Services sector topped 1.2 million on the last business day of September 2023, according to Job Openings and Labor Turnover Survey (JOLTS) data from BLS. For comparison purposes, in 2019, there were an average of 875,000 hospitality job openings in the United States each month.

According to a National Restaurant Association tracking survey conducted in September, recruiting employees is a top challenge facing the industry, outranked only by sales volume.

In Colorado, according to Lightcast data, annual food service sector job postings are currently down 29%. There were 38,304 unique postings in the food service sector from 1,345 Colorado employers between September 2021 and 2022, offering a $16.31 average hourly wage, and between September 2022 to 2023 and there were 28,472 unique postings from 1,188 employers, offering a $17.05 average hourly wage. Still, local operators report that recruiting and retaining employees remains among their top business challenges.

Wages in Colorado restaurants continue to rise and consistently outpace both national and statewide figures in other industries. According to the BLS, hourly wages for eating and drinking places rose 9.4% in 2021, 9% in 2022, and 6.1% through September year-to-date. According to an October survey of Colorado Restaurant Association member restaurants, labor costs across the state have increased for more than 95% of restaurant operators since September 2022, and hourly wages have increased by an average of 20%; one-third of local restaurants have increased wages by more than 20%, with some operators paying increases as high as 40% and 50%.

In Denver, average hourly restaurant wages are up 30%, according to the Denver Economic Development & Opportunity office. In another comparison, wage rates in Colorado across all industries rose by 5% year-over-year.

Minimum wage continues to escalate in Colorado, and in Denver in particular, where, as of 2019, the minimum wage rate is tied to inflation. The statewide minimum-wage rate for tipped workers has risen more than 27% since 2019, and in Denver, it has risen by more than 48%, costing businesses millions of dollars and forcing menu price increases, reduced staffing, and even restaurant closures. In fact, the Denver Economic Development & Opportunity office reports a 13% decline in eating and drinking establishments in the city since 2022—a loss of 222 restaurants—based on the number of Denver sales-tax filers.

In addition, in an October survey of Colorado restaurant operators, respondents reported that the state's anticipated 2024 minimum wage increase to $14.42 per hour (up from $13.65) and Denver's forthcoming increase to $18.29 per hour (from $17.29) will cost local operators an average of $78,977 annually.


Photo courtesy of Colorado Tourism Office/ Brett Shreckengost.

As a result of the 2024 minimum wage increases in Colorado, more than 86% of restaurant respondents will increase their menu prices, more than 66% will decrease staffing levels, almost 30% will implement a service charge, almost 20% will reduce hours of operations, and almost 12% will close a location or locations.

In May 2023, the city of Edgewater passed a minimum wage ordinance that set a $15.02-per-hour wage for 2024, with a phased increase to catch up to Denver by 2029. Boulder County commissioners are currently engaged in a public hearing process to boost its minimum wage to $15.69 per hour next year, in advance of a working group with Boulder, Longmont, Erie, and other municipalities. Those localities are forming a regional plan for minimum wage hikes beginning in 2025, according to the *Denver Business Journal.*

Yet few Colorado restaurants are advertising jobs at the state's current minimum wage, according to Lightcast data and anecdotal reports from local operators. With such a tight labor market and more restaurants opening daily, employers are forced to pay above minimum wage to attract and retain talent.

Inflationary Impacts

Inflationary pressures remain high in Colorado, and particularly in the Metro Denver area. While rates have cooled since 2022 when gas prices were the highest in a decade and annual growth in the local Consumer Price Index (CPI) for wholesale food items hit 8%, interest rates and the CPI continue to drive up wages and send operational costs ever skyward.

Nationally in August 2023, commodity food prices fluctuated, with potatoes up 24% and beef up 13% while chicken prices decreased by 18% and butter decreased by 12%.

As of September 2023, the CPI for food and beverages is up in the Mountain Region by 4.3% year-over-year, compared to the national CPI rate increase of 3.7%. In addition, the Denver-Aurora-Lakewood area CPI for food and beverages is up 3.8% year-over-year. High interest rates are also causing financial strain for restaurant operators, particularly those who took on pandemic-related debt.

While the national CPI for Food Away from Home, a proxy for menu price inflation, rose 6% in September compared to the year prior, the picture is much worse in Colorado. An August *USA Today* report, based on federal data, showed that Colorado's menu-price inflation rate is the highest in the country, at a whopping 24%.

With the cost of food, labor, energy, real estate, taxes, and more continuing to rise, the typical 3% to 5% profit margin that Colorado restaurants hope for is shrinking by the day.

Enhanced Technology

The growth and impact of technology in restaurant operations increases daily. In August 2023, digital orders for fast food were up 10% compared to February 2020, up 9% for quick service restaurants, and up 7% for full service. Technology is being utilized to streamline delivery operations, counter-service ordering, and reservations systems across the industry, among other innovations. Consumer acceptance of technology integration within the dining experience is growing, and greater emphasis on delivery, carry-out, alcohol, new business models, cost management, and technology will drive the industry in the near future.

Workforce Development Efforts

The Colorado Restaurant Association (CRA) and Colorado Restaurant Foundation (CRF) have supported local restaurants on several fronts in 2023, including workforce development through the CRF.

Colorado is proud to be one of the few states selected to implement certified apprenticeship programs, launched through a CRF partnership with the National Restaurant Association Educational Foundation (NRAEF). As of September 2023, more than 60 local apprentices were enrolled in the CRF's Registered Apprentice programs across 80 apprentice-employer restaurants and hotels; by the end of the year, 15 apprentices will have graduated from the program. The program is gaining ground and recognition, locally earning four 2023 Colorado Apprenticeship Annual Awards, and nationally earning multiple awards for the program, area participants, and CRF Program Director Stacy Griest.

The CRF also manages the Colorado ProStart High School hospitality education program with the CRA and the NRAEF, which trains juniors and seniors in restaurant/hospitality management, culinary arts, and business economics. It provides high school and college academic credit, scholarships, and work opportunities. In 2023, there were 1,200 Colorado ProStart students at 44 schools across the state. In 2024, the CRF will bring the program to eight additional schools statewide.

The CRF has also distributed more than $4 million in Angel Relief Fund emergency assistance grants to local restaurant workers since the pandemic began, and in 2023, distributed more than $200,000 in grants for both hardship and mental health care for employees, with local partner Khesed Wellness.

Lodging and Mountain Resorts

In 2020, the COVID-19 pandemic negatively affected the Denver lodging market given the implementation of travel restrictions, the temporary closure of the Colorado Convention Center, and a significant decrease in both leisure and commercial demand. As travel restrictions were rescinded, demand across all segments began to recover, with notable increases in occupancy and ADR in 2021. While demand had substantially recovered by year-end 2022, lagging meeting/group demand and the impact of new supply resulted in occupancy levels below those achieved from 2013 to 2019. Nevertheless, ADR reached a historical peak by year-end 2022, supported by the entrance of more highly rated new supply and an influx of pent-up leisure demand during the summer months. This recovery continued in the year-to-date September 2023 period, further supported by the continued strength of the leisure segment, the return of corporate travel, and the recovery within the meeting/group segment, with both occupancy and ADR illustrating growth when compared to the same period of 2022.

Compared to the overall statistics for the top 25 major metropolitan areas, as reported by STR, Denver's occupancy has recovered in line with the other major metropolitan areas but less from an ADR perspective. For the top 25 major markets, ADR was up $25 through September 2023, compared to the same period in 2019, while Denver's ADR only increased $15. Denver's year-to-date RevPAR through September 2023 was up 3.8%,

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compared to the same period in 2019, while RevPAR for the top 25 major metropolitan areas increased 9.2%.

This somewhat delayed recovery, driven nearly entirely by rate, could be attributed to several factors specific to Denver, such as the following:

- increased lodging supply;
- more limited luxury supply, compared to other major markets, which is the segment that has experienced some of the strongest ADR growth; and
- more competitive ADR positionings, as hoteliers focus on establishing a stronger demand base given lower group and corporate travel levels.

Nonetheless, the overall outlook for lodging performance in 2024 is positive given the continued development activity, the expansions at the CCC and Denver International Airport (DIA), and Denver's popularity as a tourist destination, which all bode well for future revenue growth within the hotel industry. Similar to 2023, HVS expects growth in 2024 to be driven primarily by ADR increases, with occupancy levels improving modestly.

Despite expectations for improving RevPAR levels in 2024, hotels in Denver will continue to be challenged by escalating labor and supplies costs, rising property taxes, and increasing insurance rates. As such, increases in revenue may result in muted growth for overall income and profitability in the industry.

Colorado mountain destination travel for winter 2023-24 will likely be more predictable than we've seen since the prepandemic 2019/20. Early bookings indicate that normalization trends that began earlier this year—where 'normalization' is the long-term stabilizing of year-over-year performance metrics—are continuing into the winter following a 2023 that has seen a significant reset take place. And while snow is always the single biggest factor in how winter plays out, these early days are pacing well with both last year's record and long-term trend expectations. That predictability includes a significant shift in school breaks before the Christmas holiday season that will impact supplier side performance across the travel spectrum, with the Monday holiday moving many K-12 schedules to not break until December 22. This will create challenges in filling the important busy pre-Christmas week, though those losses will be picked up in the first week of January as K-12 students return to school later.

Following 36 months of widely varying performance at both an industry and destination level, lodging data are beginning to settle into familiar and less-volatile patterns—'normalization'. Predictably, the snow-driven momentum of the strong 2022-23 winter season, which got an assist from waning public health-concerns, was unsustainable into summer. Dramatic gains in room rates, which were building upon already historic highs in the prior winter, were on the books to carry into the summer 2023 season, but economic forces moved to the forefront as the winter season waned and snow was no longer an offset to inflation and consumer price sensitivities. The result was a long-awaited, market-forced calming of what have been volatile and widely varying performance metrics since late 2020. Room rates, the most notable of the outlying metrics since jumping dramatically in the spring of 2021, began to soften in February of this year, largely in response to downward pressure on booking volume and room nights that manifested in early summer season declines in occupancy. However, the breadth of the normalization goes beyond rate, occupancy, and revenue, with such metrics as booking pace, available room inventory, booking lead times, length of stay, and variances in arrival and departure days settling into low single-digit variances for the first time in almost three years. This stability allows proactive planning to replace the recent reactive nature of destination travel, puts more power into hand of planners and revenue managers, and allows for predictability, even as destinations continue to struggle with major strategic and tactical issues such short-term rental oversight and workforce housing.

The early forecasts for summer 2023 were troubling, with advance ADR at Colorado mountain resorts as of February 28 up a sharp 10% versus 2022, while occupancy was down 12% and revenue down 3%. As the snow incentive of the strong 2022-23 winter season waned, economic and competitive forces came to bear, and summer consumers were either looking for lower rates, shorter stays, or travel alternatives, including international options that appealed on the strong U.S. dollar. The result was a six-month drawdown in year-over-year rate until, by the end of summer, ADR had settled into a subinflationary decline of 1.1%. Consumers responded to the softening rate and summer occupancy finished down 1.2%, with RevPAR down a moderate 2%. Over the same period, booking pace—a measure of bookings made over a certain period compared to last year—also settled into less-volatile patterns, with summer booking pace averaging a gain of 3.5% over bookings made in the same period last year. Length of stay, which inflation was forcing downward from 2022 pandemic highs, finished down an average of just 0.09 nights per stay versus last year, a vast improvement from the >1.25 average night declines recorded prior to March. Lastly, rental inventory available for leisure stays appears to have halted a decline that began in 2021 as owners changed how they used their units. And so, while the summer season has finished down slightly, it is also delivering conditions that are predictable, sustainable, and most importantly aligned with consumers' expectations and needs across a broad spectrum of the marketplace.

As of mid-October, Colorado mountain destination travel lodging occupancy for the calendar year is up 1.2% versus 2022, with a 7.4% gain in ADR driven largely by sharp double-digit increases in the peak winter months of January and February, while RevPAR is up 8.6%, again driven by the first two months of the year. All metrics have since settled into low single-digit variances, including negative values, and projections suggest 2024 will finish with occupancy up a slight 0.8% versus 2022, while

Photo courtesy of Colorado Tourism Office/Andrew Maguire.

ADR will finish between 2.5% and 4% higher than last year, and RevPAR will be between 3.5% and 4.5% higher.

Outstanding but at the operational forefront of Colorado mountain travel are the critical issues around both workforce housing and short-term rentals, which vary broadly from destination to destination in both severity and approach to resolution, and it is expected that both issues will play out for the foreseeable future as policy works its way through the system to implementation and consequence. But they are also issues that are now a part of a short-term status quo and are ongoing rather than new disruptors; it is also worth noting that both are mirrored across the national travel industry. Staffing levels, while still below 2020, are higher this year than last, allowing for an increase in lodging capacity and flatter rates that are below national inflation make mountain travel a more competitive product. Overall, the outstanding characteristic of 2023 is the normalization of business over the course of the year, even as revenue numbers sit at or near even compared to last year. Palatable rates are resulting in predictable booking patterns, lengthening stays, better spread of visitation, and engagement across all destination resorts and at all price points.

Outdoor Recreation

Colorado has long been a haven for outdoor enthusiasts, with its stunning landscapes and a myriad of recreational activities. Colorado's natural playground not only caters to outdoor enthusiasts but also significantly bolsters the state and local economies.

Outdoor Recreation Economy

The outdoor recreation industry is a diverse sector encompassing a wide range of activities and businesses related to outdoor leisure. According to the Bureau of Economic Analysis (BEA), the outdoor recreation industry contributed 1.9% of the nation's GDP in 2021, equating to $454 billion. This industry encompasses a broad spectrum of activities, from camping and hiking to skiing and snowboarding, as well as businesses involved in outdoor gear manufacturing, retail sales, tour operations, and guiding services. Notably, 25% of this national figure originates directly from the Leisure and Hospitality sector.

Colorado benefits significantly from the outdoor recreation industry, contributing $11.6 billion to its annual GDP and supporting over 125,000 direct jobs in 2021. Within this economic contribution, 31.6% stems from the Leisure and Hospitality sector. However, while the outdoor recreation industry is vital to Colorado's economy, it is essential to consider that, as a percentage of GDP, other Rocky Mountain states have a higher proportion of their economy tied to outdoor recreation.

In terms of employment growth, Colorado experienced a respectable 13.4% increase in outdoor recreation employment, although this growth rate was lower than all of its neighboring Rocky Mountain states.

The BEA has not yet published data for 2022 or 2023. However, current trends in outdoor recreation, including state and national park visitation, suggest that Colorado's economy will likely continue to benefit from this industry.

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Photo courtesy of Colorado Tourism Office/Brett Schreckengost.

Public Lands

In 2022, the Colorado State Legislature introduced the "Keep Colorado Wild Pass," available for purchase since January 2023. Priced at $29 (less than half the cost of an annual park pass) as an opt-out vehicle registration fee, this pass grants Colorado residents access to all 43 state parks. In the coming year, Colorado Parks and Wildlife (CPW) is expected to provide insights into the revenue generated by this pass, which will enable a closer analysis of its impacts on state park visitation and the broader outdoor recreation economy. If CPW's projections are realized, there should be subsequent economic benefits to the state's outdoor recreation economy, particularly in communities located near state parks.

While state park visitation has gradually declined since its peak during the pandemic in 2020, it remains 20% higher than prepandemic levels. During the pandemic, Colorado's governor and CPW promoted outdoor recreation, especially visits to state parks. As a result, during Covid lockdowns, state park visitation saw record highs.

Visits to Colorado's national parks and those sites administered by the National Park Service remained relatively stable even in the face of temporary closures for maintenance and upgrades at specific locations. Moraine Park Campground in Rocky Mountain National Park was closed in 2023 for construction and upgrades, and the Wetherill Mesa area and associated Ancient Puebloan sites at Mesa Verde National Park were also closed in 2023 for road upgrades and waterline maintenance. Despite the temporary closures, overall visitation remained largely unaffected.

The addition of the Amache National Historic Site in Granada, Colorado, although not expected to draw a large number of visitors, could have positive economic effects on the small community due to increased travel.

Skiing Industry

The U.S. and Colorado ski industries both enjoyed a banner season in winter 2022-23. Both set a 2nd-consecutive record for skier visits, and the margins of the gains this winter were unparalleled.

Turning first to the U.S. ski industry, the nation's 480 open and operating downhill ski areas recorded 65.4 million downhill skier and snowboarder visits in winter 2022-23, leaping ahead of the previous record of 60.7 million visits in 2021-22 by a margin of 4.7 million visits. This marks the greatest jump in visits over a previous record since visitation was first estimated in 1978-79, and far surpasses the previous record gain of 2.7 million visits set in the 2000/01 season.

Colorado, likewise, soared to a new peak in visits by a record margin. The state's 33 downhill ski areas recorded 14.8 million skier visits in winter 2022-23, up from the previous record of 13.8 million visits set in winter 2021-22, a gain of just over 1 million skier visits. This exceeds the previous record gain of 893,000 visits set in winter 1974-75, when the industry was in its early boom years.

The growth enjoyed by both the U.S. and Colorado ski industries last season was fueled in large part by excellent snow conditions in the western half of the country.

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COLORADO PUBLIC LAND VISITS
2014–2024
(In Thousands)[a]

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023[a]	2024[a]
Colorado State Parks[b]	11,900.0	13,200.0	14,296.0	15,398.0	14,924.0	14,891.4	19,474.4	19,938.0	18,121.7	17,872.4	17,196.1
National Parks and Sites											
Bent's Old Fort NHS	24.6	26.2	31.9	26.4	23.6	21.7	12.4	21.6	26.1	20.5	19.9
Black Canyon of the Gunnison NP	183.0	209.2	238.0	307.1	309.0	432.8	341.6	308.9	297.3	320.8	382.9
Colorado NM	419.9	588.0	391.1	375.0	375.5	397.0	435.6	499.8	480.4	482.0	465.9
Curecanti NRA	931.4	944.7	982.5	1,041.4	931.5	836.0	921.6	1,043.7	992.7	995.0	1,009.6
Dinosaur NM[c]	185.4	215.9	225.2	233.8	225.0	221.2	195.5	266.1	259.8	157.1	225.1
Florissant Fossil Beds NM	63.3	69.1	73.6	71.8	79.6	77.3	61.1	75.1	67.2	63.7	71.4
Great Sand Dunes NP	271.8	299.5	388.3	486.9	442.9	527.5	461.5	602.6	493.4	516.0	612.9
Hovenweep NM[c]	11.8	15.4	18.9	17.6	17.9	15.6	8.7	11.8	12.5	14.7	13.5
Mesa Verde NP	501.6	547.3	583.5	613.8	563.4	556.2	287.5	548.5	499.8	501.2	409.4
Rocky Mountain NP	3,434.8	4,155.9	4,517.6	4,437.2	4,590.0	4,670.1	3,305.2	4,434.8	4,300.4	4,189.2	4,535.0
Sand Creek Massacre NHS	7.4	5.9	6.8	6.5	6.0	5.7	4.2	6.2	4.8	5.8	5.3
Total Visitors to Parks and Sites	6,035.0	7,077.2	7,457.4	7,617.5	7,564.4	7,761.1	6,034.9	7,819.1	7,434.4	7,266.0	7,750.9
Bureau of Land Management	7,536.0	7,694.0	7,739.0	8,310.0	8,708.0	9,553.0	12,507.0	10,602.0	10,373.0	11,733.7	12,231.0
National Forest[d]	27,000.0	27,000.0	27,000.0	26,100.0	31,000.0	31,490.0	31,490.0	31,490.0	31,490.0	31,490.0	31,490.0
Total Public Land Visitation[e]	52,471.0	54,971.2	56,492.4	57,425.5	62,196.4	63,695.5	69,506.3	69,849.1	67,419.1	68,362.1	68,668.0

[a]2023 is forecasted with limited data and 2024 is estimated based on trends. 2020 data was not included in the trend analysis for 2021.

[b]State parks managed by Colorado Parks and Wildlife.

[c]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.

[d]Yearly visitor numbers were not available; reported numbers based on limited data.

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

Note: Yucca House National Monument does not report visitations, therefore it is not included.

Definition: NHS = national historic site, NP = national park, NM = national monument, and NRA = national recreation area.

Sources: Colorado Parks and Wildlife, National Park Service Visitor Use Statistics, Bureau of Land Management, National Forest Service and Colorado Business Economic Outlook Committee.

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The industry has also benefited from continued interest in outdoor recreational activities and pent-up demand for travel that was spurred by the COVID-19 pandemic. The ski industry both nationwide and in Colorado has also benefited in recent years from generally favorable economic conditions, continued innovations in lift ticket and season pass offerings, substantial resort investments that have enhanced resorts' capacity and the quality of the experience, increased retention of older participants in snowsports, and more flexible work arrangements, which have helped disperse visitation to nonweekend and nonholiday periods.

Colorado resorts have also benefited from strong air service to mountain airports and DIA, improvements to the I-70 corridor, improved staffing levels following the pandemic, continued recovery in international markets following the pandemic, and a visitor profile that is diverse in age, geographic origin, ability level, and frequency of participation in snowsports.

While Colorado ski resorts enjoyed resounding success in 2022-23, it is also worth noting that its competitors in other western states also did well, and in some cases even better. Four of the other five states in the National Ski Areas Association's Rocky Mountain Region set new visitation records last winter (Idaho, Montana, Utah, and Wyoming; New Mexico fell short of a record).

While Colorado resort skier visits climbed 7.4% year-over-year, taxable sales in resort communities also rose. Across a mix of eight resort communities (Aspen, Breckenridge, Frisco, Snowmass Village, Steamboat Springs, Telluride, Vail, and Winter Park), state taxable sales rose 4.8% in winter 2022-23 (November-April) from 2021-22, slightly outpacing the 4.1% gain in the state as a whole. Additionally, state taxable sales in these communities have leaped by a cumulative 57.7% from the pre-Covid 2018-19 winter season (aided by an especially large gain in the 2021-22 winter season), far outpacing the 40.8% gain statewide over the same period.

The summer period is also important to ski resort communities, accounting for a lower, secondary peak in economic activity. Spending in the same eight communities rose 2.7% in May through July from 2022 to 2023, slightly ahead of the 2.5% gain statewide. Cumulatively, spending at the resorts jumped 50.9% in May through July from 2019 to 2023, outpacing the state's 35.2% gain over the same period. The industry has invested significantly in new summer outdoor recreational offerings since the passage of the 2011 Ski Area Recreational Opportunity Enhancement Act, which allows for more recreational uses on public land. In addition to helping resort economies, these offerings have likely helped redirect and relieve some of the recreational and visitation pressure that is impacting many areas of Colorado's mountains.

Looking ahead to the winter 2023-24 season, resorts have several reasons for optimism. Season pass sales have been strong, lodging bookings for the upcoming winter were solid as of fall 2023, and scheduled seats on flights to most Colorado mountain resort airports and to DIA are currently up from last winter. While inflation and interest rates are high, the U.S. economy so far continues to defy expectations of a recession, with a strong labor market and strong consumer spending. Additionally, international markets are likely to continue to recover as pandemic-era travel restrictions fade into memory.

As always, weather and snow conditions can also provide positive or negative momentum to the season. In its October 19, 2023, U.S. winter forecast, the National Oceanic and Atmospheric Administration (NOAA) predicts that Colorado is slightly favored for above-average precipitation and near-normal temperatures for the December–February period. Observing strong El Niño conditions, NOAA is also predicting drier and warmer conditions across much of the northern U.S., and wetter conditions across much of the south.

The long-term prospects for the industry remain positive. Colorado maintains a preeminent position within the skiing industry, accounting for by far the largest number of visits, as well as being home to many of the largest and most renowned resorts. Colorado has benefited from a strong reputation for an outstanding combination of ski terrain, lift infrastructure, consistent and reliable snow conditions, guest service, scenery, community character and amenities, and travel accessibility, among other attributes. Ski resorts also continue to improve and expand their infrastructure, enhancing the guest experience and increasing their operating capacity. Colorado is also home to the headquarters of the continent's two largest resort operators—Vail Resorts and Alterra Mountain Company—further cementing the state's standing as the epicenter of the U.S. ski industry.

Even as it continues to cultivate its strengths, vigorous competition from ski resorts in other states and from other vacation and leisure options, climate change, concerns about congestion and travel delays along the I-70 corridor, and worries about maintaining staffing in challenging housing market conditions remain key challenges for Colorado resorts.

Contributors:
Tony Gurzick, Grizzly Peak Consulting (Chair)
David Becher, RRC Associates
Katy Black, HVS
Jill Corbin, Colorado Tourism Office
Elizabeth Fogarty, Visit Grand Junction
Tom Foley, Inntopia
Allison Kohn, VISIT DENVER
Denise Mickelsen, Colorado Restaurant Association
Melanie Mills, Colorado Ski Country USA
Hayes Norris, Colorado Tourism Office
Peggi O'Keefe, Colorado Gaming Association
Doug Price, Visit Colorado Springs
Richard W. Scharf, VISIT DENVER
Hanna Scovill, Metro Denver EDC
Alexea Veneracion, Visit Colorado Springs
Tim Wolfe, Colorado Tourism Office

Photo courtesy of Tim Atkinson.

Other Services

The Other Services supersector comprises establishments that provide services not specifically categorized elsewhere in the employment classification system. As a result, the businesses under this category are highly fragmented and diverse. Car washes, beauty salons, religious organizations, funeral homes, grantmaking foundations, and labor unions are some of the industries included in Other Services. In addition, the supersector includes businesses that provide maintenance and repair for agriculture, construction, mining, and forestry machinery and equipment. Industry growth is influenced by the economy, demographics of the Colorado population, disposable income, and consumer confidence. The sector fully rebounded in 2021 as the economy recovered and experienced generally steady growth in 2022 and 2023.

Employment growth is expected to continue into 2024, albeit at a slower pace, due to a few major factors: customers have resumed visiting face-to-face businesses again, such as salons and pet care services; a growing national consensus around workers' rights and that the economy should work for everyone could provide a historic opportunity for unions; and elevated used car prices and higher interest rates are causing car owners to hold onto their cars for longer, increasing maintenance. Employment in the Other Services sector is projected to increase 2.1% in 2023 year-over-year to reach 125,700 jobs, then increase 1% in 2024 for a total of 127,000 jobs.

OTHER SERVICES EMPLOYMENT, 2014-2024 (In Thousands)

Year	Repair and Maintenance Services	Personal and Laundry Services	Religious, Grantmaking, Civic, Professional, and Similar Organizations	Total
2014	23.4	25.2	52.3	100.9
2015	24.7	26.3	53.2	104.2
2016	25.0	27.8	54.5	107.3
2017	25.5	28.7	54.4	108.6
2018	26.0	29.4	55.6	110.9
2019	26.7	30.3	57.7	114.8
2020	25.4	25.9	59.0	110.4
2021	26.5	28.5	62.8	117.8
2022[a]	28.7	30.2	64.2	123.1
2023[b]	29.7	31.0	65.0	125.7
2024[c]	30.4	31.3	65.3	127.0

[a]Revised. [b]Estimated. [c]Forecast.

Note: Due to rounding, the sum of the individual items may not equal the total.
Sources: Colorado Department of Labor and Employment, and Colorado Business Economic Outlook Committee.

Religious, Grantmaking, Civic, Professional, and Similar Organizations

Industries in the Religious, Grantmaking, Civic, Professional, and Similar Organizations subsector group are establishments that organize, support, and/or promote various professional, social, and political causes. These organizations account for the largest portion of the Other Services supersector, employing 53% of the Other Services employees in 2022. Establishments in this subsector include various labor unions, nonprofits such as the Denver Dumb Friends League, the Boy and Girl Scouts organizations, and the United States Olympic Committee, as well as social advocacy and political organizations. The outlook for donations is strained in 2023 as donor counts have decreased, perhaps as a result of continuous inflationary pressures on households. According to the Fundraising Effectiveness Project, the number of donors decreased by 3.8% in Q1 2023 compared to Q1 2022, largely driven by a decline in large donor and new donor segments. This marked the 7th-consecutive quarter of year-over-year decline in donor participation.

INDUSTRY SNAPSHOT OTHER SERVICES

Nominal GDP, 2022 ($ Billions)	11.1
Real GDP, 2022 ($ Billions, 2017 Dollars)	8.9
2022 Real GDP Growth Rate	2.2%
Total Employment, 2022 (Thousands)	123.1
2022 Employment Growth Rate	4.5%
Employment Growth National Rank	23
Share of Colorado Employment	4.3%
Share of National Employment	3.7%
Average Wage, 2022	52,431
Percent of Statewide Average Wage	69.4%
2022 Average Wage Growth Rate	8.3%

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics.
Note: 2022 employment includes revised estimates.

While membership has been declining for decades, labor unions could start to gain ground heading into 2024, helping the sector. The pandemic has appeared to have brought workers' rights, needs, and desires into the limelight, perhaps shifting the balance between the employer-employee relationship. Consequently, several high-profile labor strikes have been in the national spotlight in recent months, including the Screen Actors Guild-American Federation of Television and Radio Artists (SAG-AFTRA) and the Writers Guild of America strike, the United Auto Workers strike, and the Kaiser Permanente strike. According to data from the Bureau of Labor Statistics, 6.7% of employees in Colorado were union members in 2022, ranking 33rd in the nation, and up from 6.5% in 2021.

After adding 3,800 jobs in 2021, employment growth remained strong in 2022. Employment growth in 2023 generally matched historic trends, with a fluctuation in employment growth in the first quarter of the year, followed by employment increases in the second quarter. Employment reached 65,000 in September 2023, up just 0.3% year-over-year, but 14.4% above levels seen in January 2020. Through the end of 2023, the sector is expected to continue steady growth, ending the year with an average of 65,000 employees and year-over-year growth of 1.2%. Looking to 2024, the sector is projected to grow by just 0.4%.

Repair and Maintenance

The Repair and Maintenance sector encompasses businesses that provide repair and maintenance services for automotive, commercial machinery, electronic equipment, and household goods. This subsector has typically been buoyed by the increasing average age of vehicles, pushing up demand for vehicle repair and maintenance. While the repair and auto industry has generally recovered from the pandemic, a number of factors that drove the pandemic boom for the industry still exist today. Higher interest rates are tempering new car sales, and while used car prices have declined in recent months, they still remain elevated from historic levels, both contributing to car owners keeping their old cars for longer and going in for more tune ups.

After national retail sales for motor vehicles and parts dealers grew 22.5% in 2021, sales moderated, and were up 3.3% in 2022, according to data from the Census Bureau. Sales remained steady in 2023 and were up 3.7% in September year-to-date. While the future outlook for this sector is positive, industry players report new technology and training will be needed for the repair and maintenance of electric and zero-emission vehicles, which will be increasingly mandated for new cars in the coming years.

The sector continued strong growth through 2023, reaching historic levels within the year. As of September 2023, employment stood at 28,800, up 4.8% year-to-date. Employment in this subsector is expected to average 29,700 in 2023, a gain of 3.6% year-over-year, and 30,400 in 2024, an increase of 2.4%.

Personal and Laundry Services

Industries in the Personal and Laundry Services sector are vastly diverse. They include firms that provide services such as hair, nail, and skin care; death care (i.e., funeral homes and cemeteries); dry cleaning and laundry (including coin-operated); pet care (except veterinary); photofinishing; and parking lots. While this sector was the hardest hit within the Other Services supersector during the pandemic, employment improved in 2021 and fully rebounded in 2022. By year-end 2022, employment was up 7%, but slowed in 2023. Employment in the sector declined to 29,600 employees in September 2023, down 2% year-to-date, and the lowest level since September 2021. The sector is projected to grow 2.5% in 2023 to average 31,000 jobs, followed by a 1.1% gain in 2024 to average 31,300 jobs.

Contributor: *Adam Illig, University of Colorado (Chair)*

Government

Representing 16%, or nearly one in six jobs in the state, the Government supersector includes federal, state, and local workers. Government activities include a variety of services, ranging from space research and technology to public safety, program administration, and education. Government employment increased 2.8% in 2022 as the sector continued to recover from the pandemic. While the sector continued its recovery in 2023, government entities at all levels were impacted by many of the same lingering challenges faced by other sectors, including labor force shortages, supply chain issues, and increased costs. In 2023, government employment in Colorado increased 4.1% (18,700 jobs) and is projected to increase 2.3% in 2024 to total 482,400.

Government employment declined in 2020 and 2021 as the sector continued to be impacted by the pandemic. While the sector steadily recovered over the following two years, government entities at all levels have been impacted by many of the same challenges faced by other sectors, including labor force shortages, supply chain issues, and increased costs.

Federal Government

In 2022, total federal government employment in Colorado was 53,300, which was a 1.7% decrease from 2021. This decrease brings federal employment back to 2019 levels, in part, from the winding down of 2020 Census work. In 2023, federal government employment is expected to increase by 2.8%, to 54,800, and add another 500 jobs (1%) in 2024, mostly due to moderate hiring in relation to administration and management of federal programs created and funded during the COVID-19 pandemic. The Coronavirus Response and Consolidated Appropriations Act (2021) provided $900 billion in direct economic assistance for American workers, families, small businesses, and industries, as well as $2 trillion in spending from the 2020 Coronavirus Aid, Relief, and Economic Security (CARES) Act. Some of this funding has been idle for the last couple years as federal agencies developed or enhanced many domestic programs, with a significant portion going toward infrastructure, planning, and preparedness-related programs.

While beginning to wind down, significant funding is still being spent from the American Rescue Plan Act (ARPA) of 2021 (the COVID-19 Stimulus Package), which provided $1.9 trillion in economic stimulus to speed up the country's recovery from the economic and health effects of the COVID-19 pandemic. The economic and employment recovery from the pandemic continues to be fairly robust, supported through the ARPA funding. This is reflected in a surge in consumer spending that was concentrated in certain goods sectors and put pressure on supply chains and the labor supply. This led to price increases across many sectors of the economy in 2021 and 2022. In 2023, these inflationary pressures are moderating but are still a concern for policymakers. In late 2023, foreign military engagements created additional concerns about new inflationary pressures and government spending on these efforts. This will continue to be an area policymakers will monitor closely in 2024.

INDUSTRY SNAPSHOT GOVERNMENT

Nominal GDP, 2022 ($ Billions)	54.4
Real GDP, 2022 ($ Billions, 2017 Dollars)	46.7
2022 Real GDP Growth Rate	2.4%
Total Employment, 2022 (Thousands)	452.8
2022 Employment Growth Rate	3.3%
Employment Growth National Rank	4
Share of Colorado Employment	15.8%
Share of National Employment	14.5%
Average Wage, 2022	68,036
Percent of Statewide Average Wage	90.0%
2022 Average Wage Growth Rate	4.2%

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics.
Note: 2022 employment includes revised estimates.

GOVERNMENT EMPLOYMENT IN COLORADO, 2014–2024 (In Thousands)

Government Sector	2014	2015	2016	2017	2018	2019	2020	2021	2022[a]	2023[b]	2024[c]
Federal	52.1	52.8	53.5	53.5	52.9	53.1	54.7	54.2	53.3	54.8	55.3
State	109.6	112.8	116.5	121.2	125.9	130.2	126.4	124.2	129.5	135.0	138.2
Local	246.3	250.9	258.2	261.9	266.8	271.8	259.1	260.2	270.0	281.7	288.9
Government	407.9	416.5	428.1	436.7	445.6	455.1	440.2	438.5	452.8	471.5	482.4

[a]Revised. [b]Estimated. [c]Forecast.

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

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

The Government Accountability Office (GAO) has been monitoring how states and local governments have been spending their Coronavirus State and Local Fiscal Recovery Funds (SLFRF). More than half of the funding has been obligated, and less than half has been awarded as of March 31, 2023. States have reported obligating 60%, or $118.3 billion, and have spent $88.2 billion of the SLFRF. Localities reported obligating 54%, or $67.5 billion, with 38%, or $47.9 billion, in awarded funds. States and localities spent the vast majority of these funds to replace lost revenue due to the pandemic. For example, states have spent funds on essential government services, such as corrections, public safety, and social services. Reporting compliance has also been a concern, with about 14% of localities covering $3 billion in SLFRF awards that did not submit a report to the U.S. Department of the Treasury as required. Treasury has begun following up with notices of noncompliance.

The GAO has identified four areas that federal agencies should improve to make sure access, use, and oversight are conducted in the most responsible way possible. Capacity is an issue to focus on to make sure that localities have the ability to apply for and manage grant administration and oversight of spending. The GAO is encouraging federal agencies to streamline grant management requirements that can often be duplicative or burdensome. Addressing this issue would eventually reduce the burden on recipients and provide flexibility for grant recipients. Transparency is an important area to address so that Congress and the public are able to understand where and how federal funds are being spent. Finally, the GAO is looking to federal agencies to implement more internal controls and oversight to make sure they are awarding and managing federal grants in the most efficient and effective ways possible.

The Congressional Budget Office's (CBO) 2023-2033 Budget and Economic Outlook Report shows an expected budget deficit of $1.4 trillion in 2023. This deficit is equivalent to about 5.4% of U.S. GDP in 2023 and is expected to continue higher to 6.1% of GDP in 2024 and 2025. The general forecast shows budget deficits increasing over the next 10 years and rising to $2.7 trillion by 2033. The longer-term effect of these deficits is that the federal debt is expected to increase each year for the next 10 years, rising from 98% of GDP in 2023 to 118% of GDP in 2033, a trend that continues to be concerning.

The Federal Reserve continued to increase interest rates in 2022 with hopes that inflation would gradually slow in 2023 as pressures ease from pandemic-related economic factors. However, tighter monetary policy in 2023 has continued and has slightly increased unemployment and significantly tightened the real estate market. This short-term economic pain is expected to subside with the Federal Reserve expecting inflation to slow over the next couple of years and return to the long-run goal of 2%. As growth becomes steady and markets rebalance, interest rates are expected to moderate.

Despite these projected macro trends, short-term ups and downs in the economy are beginning to change some economic projections. The CBO expects weaker real GDP in the second half of 2023 but is looking at a stronger growth path from 2024-2026. Recent projections also show higher near-term inflation in 2023 and 2024 as some sectors of the economy remain impacted by high supply chain prices and labor shortages that were expected to recede in the beginning of 2023. The GAO's America's Fiscal Future-Fiscal Outlook shows similar trends to CBO estimates, and both agree that the current fiscal path is unsustainable over the long term. Key drivers of revenue and debt will need to be addressed to change the current course.

Demographic trends continue to be a key determinant for the long-term economic outlook. The CBO's Demographic Outlook: 2023-2053 shows that the U.S. population will increase from 336 million people in 2023 to 373 million people in 2053. The key driver for population growth remains net immigration. It is predicted that this

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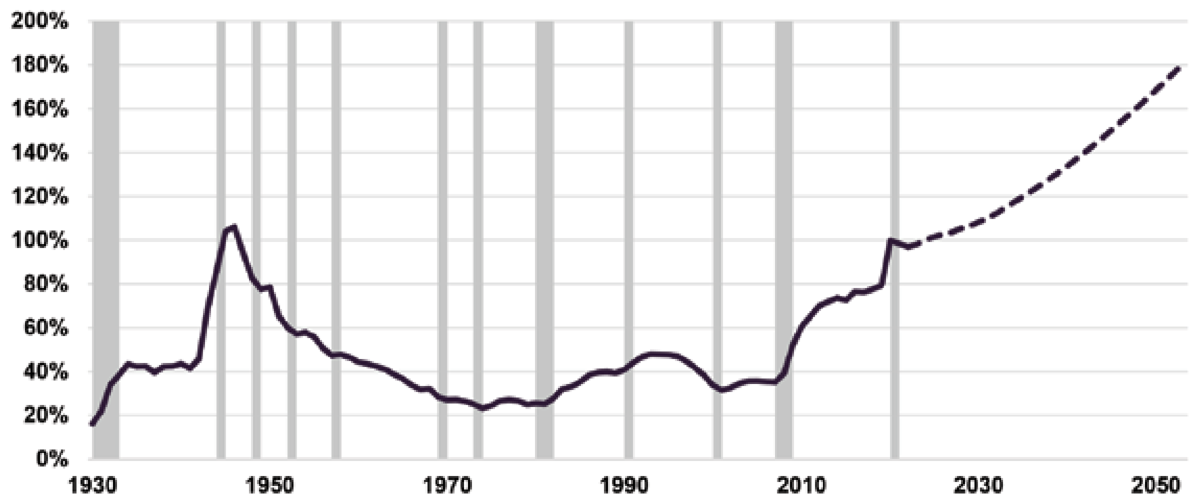
U.S. FEDERAL DEBT AS A PERCENTAGE OF GDP



Source: Congressional Budget Office, June 2023 report The 2023 Long-Term Budget Outlook. Note: Shaded areas represent recessions.

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factor will account for all population growth starting in 2042. The U.S. percentage of the population over the age of 65 continues to grow and puts pressure on Social Security and Medicare. As the growth of this population segment continues relative to the working-age population, concerns will continue about the viability of these federal programs.

Federally funded science and research centers located in the state continue to generate significant employment and economic impacts. Colorado has 33 laboratories that receive significant federal funding—one of the highest concentrations of federally funded science and research centers in the nation. These laboratories employ an estimated 7,800 direct workers and 9,820 indirect workers who earn a total of $783 million in wages and benefits and generate approximately $2.6 billion in annual economic impact to Colorado. The National Renewable Energy Laboratory (NREL), for example, reported that in FY 2019 it had an economic impact in Colorado of $875 million. These labs also contribute to the state's high-tech industries, stimulating significant tech-transfer opportunities for higher education and area companies in critical areas, such as renewable energy, space science, and natural resource management.

State Government

The state government consists of a variety of public sector activities, such as higher education, law enforcement and security, road and other public infrastructure construction, and a range of government administrative services. In many communities across the state, state government is the largest employer with competitive wages and benefits. After two years of declining employment numbers, state government employment is starting to recover from the pandemic-induced contraction. In 2022, 5,300 jobs were added in state government, which represents a 4.3% increase over 2021. A rebound in public higher education employment drove 87% of that growth as 2022-23 school year total enrollment held stable and grew for nonresident students, who typically pay much higher tuition rates, in both 2021-22 and 2022-23.

Noneducation state employment, which represents most state executive, legislative, and judicial branch employment, grew at a more anemic pace in 2022, adding just 700 jobs. Calendar year 2022 represents two state budget years: FY 2021-22, which ends June 30, 2022, and FY 2022-23, which begins on July 1, 2022. Between the two fiscal years, the Colorado General Assembly increased full-time equivalent (FTE) positions by 1.2%; however, total appropriated FTE is much higher than actual employment levels. State government suffered from labor market tightness across the state during both 2022 and 2023. Understaffing was particularly acute in the mountain regions of the state where housing costs are highest, leading to regional shortages at the Department of Corrections, the Department of Transportation, and somewhat in the Department of Public Safety. With inflation and labor shortages pushing wages up, the state is often not able to keep up with market-driven wage pressures due to resource constraints and the annual appropriation process. Average weekly wages in 2022 for state employment were $1,364, while private sector employment paid an average of $1,378. The average difference is not significant; however, if you compare the skills and education required by position, the state typically pays less than the private sector and less than other levels of government. During a time of high inflation, the lower wages may be causing some attrition on state payrolls, outweighing the longer-term benefits of stable state government employment.

Federal funding coming into the state helps bolster these numbers, along with a rebound in higher education enrollment. After adding an estimated 5,500 jobs in 2023, state employment is expected to rise in 2024 by 3,200 jobs (2.4%). New state programs in the Department of Labor and Employment, the Department of Public Health and Environment, and the Department of Early Childhood Education are all driving the increases.

Higher Education

Employment in Colorado's public higher education system accounts for approximately 56% of total state government employment. These workers include both part- and full-time faculty and nonfaculty staff. In 2021, job growth in Colorado's public higher education sector declined by 4.5% as state universities and colleges continued to deal with the disruptions from the COVID-19 pandemic. Employment improved in 2022, growing by 5.8%, but growth moderated in 2023, with September 2023 year-to-date employment up just 0.2% from 2022.

Nationally, community colleges are starting to recover from enrollment declines during the pandemic but face several headwinds. According to the Community College Research Center, community colleges are more susceptible to economic shocks and face long-term enrollment challenges as more students choose to bypass community college and opt to enroll at a four-year college.

While many of Colorado's higher education institutions, especially community colleges, struggled with lower enrollment as a result of the pandemic, some institutions recovered in 2022 and 2023. Annual headcount enrollment for the Colorado Community College System, which tracks data on 13 community, state, and junior colleges, increased 3.7% year-over-year for the 2022-2023 academic year. This marks a moderate improvement from the prior 2021-2022 academic year, but enrollment for these institutions still remains 7.1% below the 2019-2020 academic year.

Similar enrollment trends were evident in four-year public institutions. Preliminary student enrollment estimates for the University of Colorado Boulder in fall 2023 indicated 1.8% growth from the prior year, and the Colorado School of Mines experienced 2.7% growth in fall 2023.

Public higher education institutions in Colorado have seen their budgets restored and increased above prepandemic levels, but state higher education employment is expected to only modestly improve in 2023. Historically, employment in public higher education is countercyclical as the demand for new credentials increases when fewer job opportunities are available.

Local Government

County Government

As the 2023 calendar year ends, local governments must certify their assessment rates and 2024 local government budgets. County budgets are used to fund first responders, infrastructure, transportation, public health, and other essential services.

Since one-time ARPA funds are nearly depleted, counties are forced to face the question of how to continue to pay for the services provided with these funds, such as food assistance, workforce support, and infrastructure maintenance.

Counties rely mostly on property taxes for their revenue and can raise and lower their mill levies depending on the amount of relief their constituents need and their budgets can support. The tremendous spike in market values for residential and commercial properties that have occurred since June of 2020 (three months into COVID-19) were realized on January 1, 2023, for property tax dependent local governments (counties, schools, special districts, junior colleges, and cities). During the 2023 General Session, the Democratic Party and Governor Polis brought forward SB23-303/Proposition HH that would have made several changes to property assessment rates and the backfill amount local government receive from the state. This bill passed the Legislature but failed on the ballot, resulting in Governor Polis calling for a special session on property taxes in early November. With local government budgets and assessment rates needing to be certified by December 15, 2023, local government budgets have been left up in the air. If local government budgets are not sufficient to cover the costs of all essential services, they then begin to face the difficult decision of choosing which services to cut, and how deeply, for the next year.

As Colorado faces an affordable/attainable housing crisis, counties are in a unique position because they deeply understand their communities' needs, plans, land use, infrastructure, and community development. The state of Colorado is facing a housing crisis due to many reasons, such as the COVID-19 pandemic, low interest rates, supply chain issues, and short-term rental use increases. Colorado has a unique structure of urban, rural, and rural resort communities that all need affordable/attainable housing, but face different barriers to addressing the crisis, such as funding, material, and workforce availability, infrastructure, and permitting. Teachers, police, and first responders are among those targeted for affordable/attainable housing. Without these housing options, counties could face even greater worker shortages, and that in turn, impacts the essential services counties provide. For example, when a fire ignited in Park and Teller counties earlier this year, it took fire fighters an hour to respond because they cannot afford to live in the counties they serve.

As counties await the future of property taxes, counties continue to do their best to be responsive to their constituents (especially their pocketbooks) and provide the services their constituents have come to expect and need.

Municipal Government

Looking toward 2024, Colorado Municipal League anticipates a slowing economy, resulting in flat or declining sales tax revenue, to be the greatest economic challenge for municipalities. Continuing challenges for cities and towns include affordable housing and homelessness, unfunded street and road maintenance, and unfunded water and wastewater improvements.

Unlike counties and special districts, most Colorado municipalities rely on sales and use tax as a primary source of revenue. Flat or declining sales tax revenue, including real estate sales, impacts municipalities on many levels. Less revenue availability means less money available for projects and operations, potentially forcing municipalities to cut services or rely on reserves to continue providing such services. Additionally, inflation has continued to increase costs for capital projects. Municipalities report that the combination of a slowing economy and high inflationary factors create a potential for a reduction in services.

Housing affordability remains a top challenge for municipalities across Colorado. However, despite flat or declining revenue streams, many municipalities plan to increase their investment in housing projects to combat an affordability crisis in their communities. As a result, many municipalities are anticipating coupling large investments in housing, much from reserve funding, with a "belt-tightening" approach for expenses in the next budget year. Several cities and towns are seeking to combat the popularity of short-term rentals by asking voters to support increases in lodging taxes to fund affordable housing projects, as well as bypassing moratoria on short-term rental licenses. Growing concerns about increasing homeless and unhoused populations are also present among municipalities, especially in the Denver Metro region. Many municipalities have invested in affordable housing solutions and support for unhoused individuals and expect to allocate additional resources for these populations in the future.

Municipalities also identify lack of childcare as an ever-increasing challenge for communities to attract and retain workers, including municipal employees. Several municipalities in rural resort areas have chosen to open their own daycare facilities for municipal employees to try to combat such shortages and improve worker retention.

While many municipalities experienced significant recovery in sales and use tax in 2022 driven by pandemic recovery and price inflation in goods and taxable services, 2023 paints a different picture. As inflation slows, many municipalities are seeing slower, or even negative growth in sales tax. Taxable sales of consumer goods, in particular, appear to be retreating from the strong growth experienced by many municipalities over much of 2022.

Increasing labor participation has somewhat improved the employment picture for many local governments, especially those that have been able to adopt a hybrid or fully remote work model. Whereas many municipalities have

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struggled to attract even one or two qualified candidates for open positions, more recently, many job postings are attracting multiple qualified applicants. Many of the same challenges persist from prior years, namely, the high cost of living and the difficulty municipalities have in offering wages that are competitive with other employers.

Special Districts

Special districts are a form of local government in Colorado that date back to early mining communities when residents of such camps sought mechanisms to join together to efficiently and effectively provide essential services. Special districts of one form or another have been utilized since that time. The general source of statutory authorization (and limitations) is the Special District Act (Article 1 of Title 32 of the Colorado Revised Statutes). There are many types of special districts organized under the Special District Act, including, but not limited to, the following: Ambulance Districts, Fire Protection Districts, Health Service Districts, Metropolitan (Metro) Districts, Park and Recreation Districts, Sanitation Districts, Water Districts, Water and Sanitation Districts, Health Assurance Districts, Mental Health Care Service Districts, Tunnel Districts, and Forest Improvement Districts. Further, other types of special districts are organized and operating under other statutory arrangements, including Business Improvement Districts, Cemetery Districts, Conservation Districts, Downtown Development Authorities, Federal Mineral Lease Districts, Irrigation Districts, Library Districts, Local Improvement Districts, Pest Control Districts, Public Improvement Districts, Regional Transportation Authorities, Special Improvement Districts, Water Conservancy Districts, and Water Conservation Districts. Currently, special districts in Colorado total 3,329.

Many special districts in Colorado have nontax sources of revenues, such as rates, user fees, and service charges. Some special districts, such as those providing water or sewer services, rates, or fees, may comprise the majority of district revenues—and, as such, some of these districts may have been structured as government enterprises for

which the voter-approval provisions of Taxpayer Bill of Rights (TABOR) do not apply. However, for most special districts, property tax is the primary source of tax revenue. Additionally, a handful of districts may impose a sales tax. While property tax is a relatively stable source of tax revenue, assessing, levying, and collecting the tax is a two-year process; therefore, for special districts it can be very difficult to absorb new or unexpected expenditures. Further, as explained below, statewide tax policy changes and proposals to the property tax system have impacted future property tax revenues and created uncertainty in the stability and adequacy of property tax revenue.

Like their county and municipal counterparts, TABOR provisions apply to special districts and require voter approval for taxes and debt. Prior to voter approval of Amendment B at the 2020 statewide general election, a constitutional provision, referred to as the Gallagher Amendment, interacted with TABOR to maintain or reduce residential property tax revenue, commensurate with market increases. In a post-Amendment B Colorado (which repealed the provisions of the Gallagher Amendment that set a ratio calculation for residential property assessment), the Colorado General Assembly has authority to set property tax assessment rates in statute (the authority to make such statutory changes is also a constitutional power reserved for the people of Colorado under Article 5, § 1 of the state constitution). To that end, citizen proponents filed a proposed statutory measure in the spring of 2021, Proposition 120, which failed at the statewide election on November 2, 2021. After the process for Proposition 120 commenced in 2021, the Colorado General Assembly introduced and passed Senate Bill 21-293 (SB21-293), which created additional classifications or categories of property assessment rates by dividing the two general categories of property (residential and commercial) into multifamily residential, single-family residential, agricultural, commercial, oil and gas, renewable energy production, and lodging. SB21-293 heralded a new type of property tax policymaking by the Colorado General Assembly: the division and subdivision of property classifications. While there are open questions under the uniformity provision of the Colorado State Constitution about these subclassifications, the fiscal result of adopting new statewide subclassifications is certain: subclassifications that lower the assessment rate of properties will reduce tax revenue. SB21-293 blunted the potential negative fiscal impact of Proposition 120 had voters approved it. Per the fiscal note, SB21-293 was estimated to reduce property tax revenue to local governments in property tax year 2022 by $193.1 million and $209.5 million in property tax year 2023.

This interest in changing property tax on the state level, although the tax is only levied locally, continued in 2022 and 2023. The Colorado General Assembly introduced and passed Senate Bill 22-238 (SB22-238), which extended the two-year temporary property tax assessment rate reductions in SB21-293 to property tax year 2024. SB22-238 also included a mechanism for state revenues to backfill, in whole or in part, the local government losses for a single year, property tax year 2023, of the combined three years of local government revenue reductions in SB21-293 and SB22-238.

In 2023, the Colorado General Assembly introduced and passed Senate Bill 23-303 (SB23-303) during the final week of the legislative session. The impetus for the third proposal in as many years was to address concerns that the 2023 revaluation cycle captured residential values at the height of the market in June 2022, and estimates from assessors (in advance of the August 2023 abstract of values) reflected that potential increase. SB23-303 referred several of its provisions to statewide voters for their consideration on November 7, 2023, assigned as Proposition HH, starting in property tax year 2023 for a 10-year period that could be extended by the General Assembly thereafter, the following: assessed value reductions in addition to those provided in SB21-293 and SB22-238; new exemptions from the actual value of residential property; expansion and portability for the senior exemption program; new preferential subclassification of properties; a new process for local governments (except for home rule municipalities and school districts) to spend and retain property tax revenues above inflation; and, authorizing the State of Colorado to retain and spend above the Ref C cap (inflation and population growth) by adding a 1% inflator and specifying that additional revenues retained will be applied as revenues accrue to a statutory formula of local government backfill, $20 million of state rental assistance, and to the state's obligations under the School Finance Act.

Looking into 2024, Colorado's special districts are working to provide essential public services while managing the challenges of a dynamic economy and revenue uncertainty. Without the benefit of receiving federal recovery funds from the ARPA, for which no direct federal or state allocation was provided, many special districts are still recovering from revenues lost, or additional burdens shouldered, during the most intense periods of the COVID-19 crisis. Further, while some of the supply chain issues impacting government contracting and procurement have eased somewhat, inflationary pressures on capital projects and equipment are likely here to stay. At the least, and even with inflation being regulated, special districts are rebasing budgeted expenditures and increasing the overall cost of capital projects, equipment, and vehicles. Further, since higher interest rates will continue in the near to far term, increased capital project and equipment costs—paired with any necessary public financing thereof—may cause the delay or may prevent the delivery of necessary infrastructure or capital improvements. Such delays of capital projects or other related expenditures, over time, increase the overall costs of operation, maintenance, and replacement of public infrastructure. Finally, most state and federal employment data continue to demonstrate a labor market that favors employees; therefore, the competitive market is prolonging the public workforce issues for special district employers, requiring the consideration of additional compensation and benefits to recruit and retain employees.

PK-12 Education

Colorado public school districts educate nearly 860,000 students in kindergarten through 12th grade. In the 2023-24 school year, preschool students were removed from the state's public education system and placed under the Colorado Department of Early Childhood. Funding was decoupled from the School Finance Act, and all oversight of early childhood education was placed under the governor's office, with the exception of students receiving special education services that remain under the oversight of the Colorado Department of Education as required under federal education law. This change was authorized by HB 22-1295 in the 2022 Colorado legislative session.

Funding for public schools comes from three main sources of revenue: local property tax, state funding, and federal dollars. The state share is primarily from income and sales tax revenues flowing through the state and then to districts. While federal education law is well established and sets strong requirements for public education, federal dollars are typically a relatively small overall component of the annual funding of public schools. Since March 2020, K-12 public education, like many sectors of the economy, has experienced dramatic changes in the delivery of services, labor force availability, and revenue fluctuations.

Funding of education in Colorado compared to the national average has declined since 1992, despite such actions as Amendment 23 to the Colorado State

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Government

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Constitution in 2000 and the passage of cannabis sales taxes to support education. According to 2020-21 data from the Census Bureau, Quality Counts, and NCES, Colorado spends between $1,440 and $2,300 less than the U.S. average, an increasing trend since the early to mid-90s when the gap was less than $500 per student. Many school districts have turned to increasing local property taxes to support education, but due to the wildly disparate property values within Colorado school districts, the ability to generate revenue is a function of property values, as well as the local voters' willingness to support public education with additional property tax dollars. These disparities are a result of residential development, nonresidential development, oil and gas resources, property valuations, and the number of students in a district.

2023 Impacts—District noninstructional operations have been greatly impacted by the shifting economy and widely reported in national news outlets. The labor shortages in nearly all support areas within school districts include bus drivers, food service workers, childcare providers, custodians, and maintenance workers. These shortages create upward wage pressures and strain the system when community expectations for services remain at an all-time high. Some districts have resorted to eliminating bus routes or implementing rolling cancellations. Historically, districts have been able to rely on temporary staffing services to fill some of the gaps, but those temp agencies are experiencing similar hiring challenges and are not always able to provide as many workers as in the past.

Inflation continues to prove challenging for Colorado school districts. Funding increases for 2023-24 were based on calendar year 2022 Denver-Aurora-Lakewood MSA inflation of 8%. Continued high inflation is impacting current fiscal year spending as prices for goods and services continue to climb after funding was increased. Planned spending patterns are being modified to address any near-term shortfalls by redirecting resources or reducing planned activities.

High prices of owner-occupied and rental housing units continue to drive both student enrollment declines and labor shortages for school districts. Although the local conditions vary widely across the state, this is particularly acute along the Front Range. Areas with some affordable housing or growth in lower-priced single-family homes have seen less impact.

2024 Outlook—The outlook for 2024-25 is relatively stable; however, lingering fiscal and operational headwinds will persist. Statewide enrollment in 2024-25 is projected to decrease by over 2,700 students, or 0.3%, from 2023-24. This decrease continues a declining trend given the significant 3.3% enrollment drop recorded in October 2020. Student enrollment growth across the state has dropped from growth of 2% in 2008 to 0.1% and 0.2% in 2018 and 2019. This trend of declining enrollment is a result of declining birth rates and rising housing costs. This decline is projected to continue within Colorado in the coming years and is consistent with national trends, indicating a 1% annual decline in the K-12 student population.

While enrollment is projected to decrease, funding will be supported by the inflationary increase in the School Finance Act and the statutorily required elimination of the Budget Stabilization Factor, a mechanism used to reduce the state's obligation to PK-12 public education funding when other budget choices are made by the state legislature. Certainly, enrollment projections vary by specific school district and region, with varying degrees of growth and decline. The projected maximum decline is nearly 17% and growth of nearly 10%. Among the 10 largest districts, this spread is a decline of 2.5% to growth of 2.7% and a net decline of nearly 4,000 funded pupils. Governor Polis's 2024-25 budget proposal, released on November 1, 2023, reduces (improves) the Budget Stabilization Factor by $141.2 million, eliminating the reduction as required by 2023 legislation. The per pupil funding inflationary increase of 5% is based on the Office of State Planning and Budgeting (OSPB) September 2023 Economic Forecast. This proposal totals a funding increase of $564.1 million for K-12 education. This totals an average of $705 per pupil more than 2022-23 funding.

Overall, school district spending will decline significantly in the 2024-25 school year, with the September 2024 deadline to spend American Rescue Plan ESSER III. This short-term funding has allowed districts to respond to student learning loss, the growing pediatric mental health crisis, as well as address some demands of aging capital infrastructure, like HVAC systems or minor facility improvements. The funding cliff will be noticeable if those ESSER III resources were allocated for ongoing expenditures or high-impact interventions that set a level of expectation with families and staff for ongoing services. There is growing concern about the negative impact created by the removal of the programs and services added with these federal resources.

The required inflation adjustment to the School Finance Act will soften but not eliminate the impact of rising costs and enrollment declines. The upcoming FY24 state revenue forecasts in December 2023 and March 2024 will indicate where the Legislature is able to set the budget for K-12 education in 2024-25 and give an indication of the ability of the state to continue providing the expected funding levels into the future. Within the confines of the resources allocated by the Legislature, districts across the state will be contending with labor shortages, wage pressures, and inflationary costs outstripping the funding increases. However, within these fiscal constraints, an environment of high expectations remains for educators to prepare students for the 21st century economy. With an uncertain near-term future, districts will bolster reserves and fund balance to the extent possible as state funding for K-12 tends to lag an economic downturn.

Fixed Income Markets – Local Government

During 2023, the allowable investment options for local governments in Colorado experienced higher yields. The Federal Open Market Committee (FOMC) remained aggressive by raising the Fed Funds rate throughout the year to try to curb inflation. After experiencing historically low interest rates through the end of 2022, local governments were able to capture higher interest income as a result of the aggressive approach from the FOMC. Although the Fed Funds rate is expected to plateau in late fourth quarter 2023 or first quarter 2024, the windfall of interest income has benefited local governments' investment strategies. All indicators point toward a pause by the FOMC, followed by the possibility of lowering the Fed Funds rate by the end of 2024 into early 2025.

As of October 2023, the short end of the yield curve continues to be inverted, which historically signals an upcoming recession. Six-month Treasury Bills yielded more than 5.2% throughout October 2023. During the same time period, five-year Treasury Notes averaged 4.8%. As of the end of September 2023, rates on daily liquid investments, such as Local Government Investment Pools and Money Market funds, were all yielding above 5%. Public Deposit Protection Act-approved bank deposits lagged the other C.R.S 24-75-601 approved liquidity options, with an average statewide yield of 4.25%. The spread between bank deposit rates and allowable securities will narrow as the Fed Funds rate stabilizes.

Local governments should remain cautious about expecting the current rate environment and FOMC policy to continue through the entirety of 2024. Inflation is calming to targeted levels, which will impact the strategy implementation by the FOMC. Local governments can lock in the current yields by going out the yield curve to the allowable maturity levels dictated by C.R.S 24-75-601. Focusing on the yields of daily liquid funds and Fed policy should remain at the forefront during 2024.

Public Finance Landscape

Throughout 2023, local governments experienced the highest cost of issuing debt in the last 15 years. Due to the aggressive Fed Funds increases by the FOMC, the interest payments needed to issue bonds rose sharply in 2023. The current rate environment will continue to burden local governments issuing debt throughout 2024. Relief in borrowing costs is expected near the end of 2024 and the first half of 2025.

Although the credit ratings for local governments in Colorado remain above the national average, many local governments are reluctant to issue bonds. With the pandemic in the rear view, the investment grade ratings for Colorado governmental entities remain strong and are expected to continue the trend in 2024.

The acceptance of Colorado taxpayers voting for increased mill levies or issuing debt is expected to remain tight through 2024. During the historically low cost of borrowing environment over the last decade, taxpayers in Colorado have approved above-average funding for capital projects within their communities. Many Colorado residents are still experiencing record cost of living expenses and are expected to carry that burden to the voting box for the next two years. Local governments may have to rely on reserve funds to move forward with large projects. ✥

Contributors:
Jennifer Pinsonneault, City of Boulder (Chair)
Brittney Becerra, Colorado Counties Inc.
Dianne Criswell, Special Districts Association of Colorado
Justin Fazzari, Sanborn Geospatial
Ben Mendenhall, Consultant
Meredith Moon, Metro Denver Economic Development Corporation
Heather Stauffer, Colorado Municipal League
Bill Sutter, Boulder Valley School District
Joel Wagner, City of Boulder

International Trade

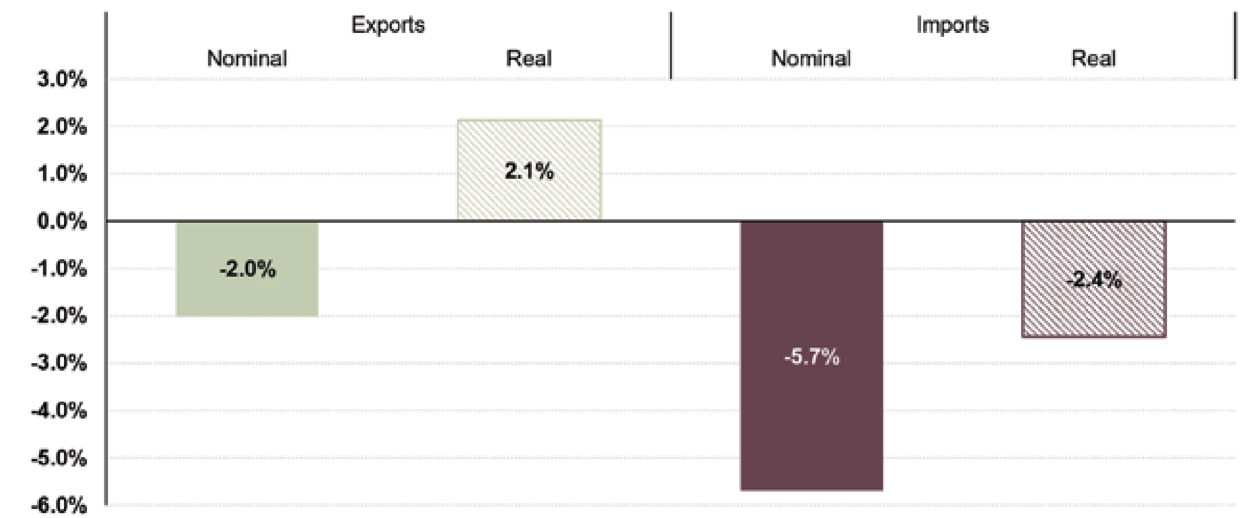
United States

International trade is a tale of two trends, closely intertwined with persistent, though slowing, inflation. For example, U.S. nominal goods exports declined over the last year, while real good exports increased. Given the historic high inflation rates of 2022, slowing inflation rates of 2023 have contributed to a nominal decline in year-to-date (YTD) goods exports and imports for the United States. Estimates from the U.S. Census Bureau (Census) and the U.S. Bureau of Economic Analysis (BEA) report goods exports and imports decreasing nominally YTD in September by -2% and -5.7%, respectively, and seasonally adjusted. Alternatively, real goods exports increased by 2.1% YTD and real good imports decreased by only-2.4% YTD through September. Finally, services exports and imports increased by 7.9% and 3.2%, respectively, in YTD comparisons.

The decline in nominal export growth yet increase in real export growth can be better understood when looking at the U.S. export and import price index 12-month changes. The U.S. export price index in 2022 had nearly 10% or greater growth compared to the same time last year through September 2022. In 2023, every month except for January had a decline in the export price index compared to the same month in 2022, to date. This deflation of the U.S. export price index shows how there can be nominal decline in exports but real growth. The U.S. import price index follows the same trajectory but had smaller highs and lows in 2022 and 2023, respectively, thus resulting in some deflationary pressure but not enough to reverse nominal declines.

Based on this growth, national goods exports total value should reach $2 trillion, and goods and imports $3.2 trillion by the end of 2023—the first time this series exceeded $2 trillion and $3 trillion was in 2022, respectively, and this trend is expected to continue in 2023. Nonetheless, the YTD goods and services deficit decreased $147.4 billion, or 20%, from the same period in 2022.

COLORADO GOODS EXPORT MARKETS SEPTEMBER 2023 YTD



Source: U.S. Bureau of Economic Analysis (BEA).

MONTHLY IMPORT AND EXPORT PRICE INDICES

Source: Bureau of Labor Statistics.

The declines in nominal trade are in part a product of 2022's record-breaking trade volumes. BEA commodities export and import price indices grew by 41% and 24.8%, respectively, from April 2020 to their peak in June 2022. These high-flying records overstated real growth in trade volume as they did not account for the extreme inflationary environment of the last couple of years and had much stronger upward price pressures than the consumer price index (CPI). During the same time period (April 2020 to June 2022), the U.S. city average CPI grew by only 15.3%. From June 2022 to September 2023, commodity price indices have moderated downward by -9.8% and -5.3%, respectively. In that same timeframe, the CPI continued to increase 3.9%, contributing to the measured decline in nominal goods trade.

In 2023, there has also been a moderation in shipping prices as supply chain disruptions continued to recover and international transportation and logistics systems improved. Not surprisingly, the global supply-demand mismatch led to a nearly eight-fold increase in the price of shipping containers that also peaked in April 2022. The Freightos Baltic Index: Global Container Freight Index, for example, showed that international freight rates grew from a stable multiyear average of about $1,400 in mid-2020 to over $10,000 in August 2021 and $11,000 in September. These elevated rates (on average, just below $10,000) remained until April 2022, when they began a sustained downward trend. This downward trend has continued into 2023, with rates dropping to $2,200 for the first few months before decreasing to about $1,500 in July and $1,048 in October, falling below prepandemic averages.

Air freight, facing similar but unique issues, also saw extreme price increases in the first half of 2022, with the BEA reporting that September 2022 levels were still 79% above March 2020. September YTD air freight price indices have fallen by 13.9% for exports and 32.8% for imports, also following the trend of moderating inflation pressures.

MAJOR DESTINATIONS FOR COLORADO EXPORTS OF MANUFACTURED GOODS, MINERALS, AND AGRICULTURAL PRODUCTS, 2019-2023 YTD
(In Millions of Dollars)

Country	2019	2020	2021	2022	Sep 2022 YTD	Sep 2023 YTD	Percent Change	Country Share of Total
Canada	$1,446	$1,284	$1,591	$1,717	$1,306	$1,433	9.7%	18.4%
Mexico	1,059	1,048	1,420	1,442	1,084	1,182	9.1	15.1
China	524	504	921	916	700	640	-8.6	8.2
Switzerland	201	183	296	726	483	618	27.9	7.9
South Korea	542	521	606	768	579	550	-5.1	7.0
Malaysia	468	525	522	497	373	366	-1.9	4.7
Japan	399	400	448	494	374	342	-8.6	4.4
Netherlands	331	300	246	311	232	296	27.4	3.8
Taiwan	232	222	268	249	190	196	3.4	2.5
Germany	280	305	289	289	239	172	-27.8	2.2
United Kingdom	243	202	226	260	188	160	-15.0	2.1
Philippines	152	102	138	162	125	135	7.7	1.7
France	170	106	181	191	152	122	-19.4	1.6
Australia	123	152	144	158	121	121	0.7	1.6
Brazil	109	113	134	134	93	121	30.1	1.6
Total Top 15 Countries	6,280	5,967	7,430	8,314	6,239	6,455	3.5	82.7
All Other Countries	1,817	2,208	1,643	1,980	1,504	1,350	-10.3	17.3
Total All Countries	$8,097	$8,174	$9,073	$10,294	$7,743	$7,805	0.8%	100.0%

Source: U.S. Census Bureau.

By BEA principal end-use categories, industrial supplies made up the largest share of national goods exports September YTD in 2023, accounting for 35.9%. This includes petroleum products and preparations, which alone accounted for 10.1%. Capital goods was the next largest category, at 29.6%, followed by consumer goods, at 13.1%. Of the six BEA principal end-use categories, two showed declines in real terms, with foods, feeds, and beverages declining by -8.2% and industrial supplies by less than 1%. Other goods saw the largest real increase, 24.1%.

For goods imports, industrial supplies made up the largest share of nominal value, at 35.3%, taking the top spot from capital goods of the prior year. The capital goods category was not far behind, at 29.1%. From September 2022 to September 2023, all categories decreased

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International Trade

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TOP 15 COLORADO EXPORTS, 2019-2023 YTD
(In Millions of Dollars)

Description	2019	2020	2021	2022	Sep 2022 YTD	Sep 2023 YTD	Percent of Total
Meat	$1,257	$1,357	$1,839	$1,938	$1,481	$1,344	17.2%
Precision Instruments	1,313	1,168	1,258	1,406	1,021	1,113	14.3
Industrial Machinery	1,188	1,123	1,164	1,361	1,023	1,090	14.0
Electrical Equipment	1,145	1,205	1,314	1,295	965	1,087	13.9
Aircraft/Spacecraft	336	866	335	529	411	381	4.9
Prec. Stones and Metals	18	22	25	284	185	283	3.6
Articles Of Iron Or Steel	272	191	290	355	290	263	3.4
Organic Chemicals	98	103	247	392	269	227	2.9
Plastics	200	213	253	278	209	185	2.4
Aluminum and Articles Thereof	147	200	265	279	212	141	1.8
Pharmaceutical Products	120	189	122	137	104	140	1.8
Vehicles	130	117	144	179	132	137	1.8
Misc Chemical Products	103	105	132	138	98	113	1.4
Photo/Cinematographic Goods	191	122	173	114	90	87	1.1
Food Industry Residues & Waste			95	74	58	75	1.0
Total Top Fifteen	6,517	6,980	7,655	8,757	6,547	6,666	85.4
All Others	1,580	1,194	1,418	1,537	162	1,139	14.6
Total All Commodities	$8,097	$8,174	$9,073	$10,294	$6,710	$7,805	100.0%

Source: U.S. Census Bureau.

except for automotive vehicles, consumer goods, and other goods, which increased by 15.9%, 5.2%, and 6.9%, respectively. In real terms, the same three categories grew by 12.4%, 3.7%, and 24.1%, respectively.

For the nation's goods export destinations YTD, the European Union took the top spot, accounting for 18% of nominal value, seasonally adjusted (with the Netherlands, Germany, and France representing the largest country destinations within the bloc at 3.9%, 3.8%, and 2.1%, respectively). Canada held the top country spot, accounting for 17.2% of nominal value, followed by Mexico, at 15.7%. China was the 3rd-largest country destination, at 7.2%, followed by the Netherlands and Germany. Although exports to Saudi Arabia grew by a large percentage—31.4%—they remained small in relative magnitude. Belgium and the Netherlands experienced the largest country growth, at 13.3% and 11.9%, respectively.

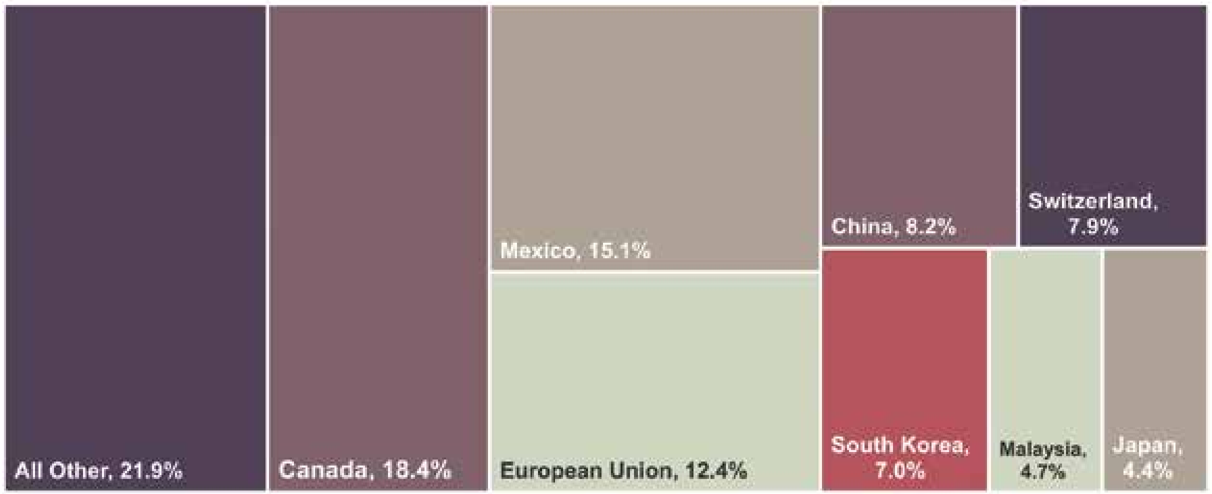
For import sources, the EU was also the top spot, accounting for 18.5% of nominal trade, led by Germany (5.2%), Ireland (2.7%), and Italy (2.3%). Mexico was the largest country import partner, with 15.2% of the volume, followed by China at 13.8%, and Canada at 13.3%. Singapore also showed a large percentage growth in imports, at 34.8%, while still having a modest share (only 1.3% of all import volume). Notably, imports from China declined by -24%.

By major service categories, other business services accounted for the largest share of service export value September YTD 2023, at 25.5%. Financial services and travel were the next largest, at 17.4% and 17.3%, respectively. Travel was the fastest-growing category in nominal terms, increasing by 30.8% from the same period in 2022. While still significant growth, this is smaller than 2022's growth of over 100%. Two categories fell compared to their YTD values in 2022: construction (-51.7%) and charges for use of intellectual property (-4.1%).

For services imports, travel was the largest category, accounting for 20.5%, followed closely by other business services (20.1%) and transport (19.8%). Like services exports, travel grew by a healthy 34.4%, though still down from the more than 100% growth it experienced from 2021-2022. Four categories saw a decline from 2022, with charges for intellectual property use falling by -23.4%, followed by transport services (-11.2%), construction services (-10.6%), and insurance services (-5.8%).

Data on services trade with partners are published only through the first half of 2023. The EU was both the top destination for services exports and top source for services imports, accounting for 24.8% and 24.6%, respectively, of total value through the first half of the year. For exports, the United Kingdom was the top country destination at 8.6%, followed by Ireland (8.5%), Canada (7.8%), Switzerland (5.6%), and Japan (4.3%). For country import sources, the top five included the U.K. (11.1%), Canada (6.9%), Germany (6.3%), Mexico (6%), and Japan (5.3%).

COLORADO EXPORT MARKETS SEPTEMBER 2023 YTD



Source: U.S. Census Bureau.

Colorado

Official state trade estimates at this time do not include services trade values. Some unofficial third-party estimates suggest that services exports in Colorado are about twice the size of goods exports. Given the importance of outdoor recreation and tourism to the state's economy, it is likely that a strong share—likely stronger than that of the U.S. as a whole—is travel. The most recent passenger traffic reports for Denver International Airport (DEN) from September 2023 show that the number of international passengers has grown substantially (9.2% year-over-year increase) since September 2022, and 15.3% from September 2019 levels. As noted in the Leisure and Hospitality chapter, in 2023, DEN had the four busiest months ever on record, occurring from June through September. In addition, financial, telecommunications, and other business services trade are all strong sectors in the state, and likely saw gains in 2023 at a similar pace as the nation. As such, Colorado service exports and imports, while not officially recorded, have likely reached their prepandemic levels.

For goods trade, total export values nominally increased in September YTD by 0.8%, while total import values nominally decreased by -12.6%. If YTD trends hold, 2023 annual export values will reach $10.5 billion and import values $20 billion. The first year that exports exceeded $10 billion and imports $20 billion was 2022.

Like national estimates, inflation overstates these values. This report applies the BEA commodity price indexes that conform to sections of the harmonized tariff schedule (HTS) to nominal Colorado estimates from Census and BEA, accessed through WISERTrade, a data platform that aggregates trade data from U.S. and foreign statistical government agencies, to estimate changes in goods export and import volume. To note, the U.S. Bureau of Labor Statistics releases export and import price indices on a monthly basis for a selected category of goods. Where those categories could be crosswalked with Colorado's HTS commodity groupings, the price index relative to the specific grouping was used. Otherwise the "all commodities" price index was applied.

For exports, YTD trade through September 2023 is 5.2 percentage points higher than 2022 in real terms, for a real growth rate of 5.9%. For imports, YTD trade is nearly identical in real terms as in nominal for a real decline of -12.5%. For reference, the real annual growth from 2010 to 2019 averaged 1.8% for exports and 2.2% for imports, making 2023 another strong year for exports. Colorado is similar to the U.S. in that real YTD export trade growth is higher than nominal when comparing 2022 to 2023 but differences in Colorado's composition of trade commodities from the U.S. explain different impacts of the conversion to real terms.

The top five product groupings by HTS sections account for about 65% of Colorado's total export value for September 2023 YTD and include meat (17.2%), precision instruments (14.3%), industrial machinery (14%), electrical equipment (13.9%), and aircraft and spacecraft (4.9%). Most of these groupings contain a diverse array of products, but some of the specific commodities that stand out for volume include beef, pork, electronic integrated circuits, processors and controllers, medical devices, orthopedics, optical radiation instruments, heterocyclic compounds, machinery and parts for manufacturing semiconductors, civilian aircraft/spacecraft and parts, and tanks and rails of iron and steel. Of these top five section groupings, meat products saw a decline in YTD values through September of -9.3% and aircraft

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International Trade

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INTERNATIONAL STUDENT ENROLLMENT AT SELECT COLORADO INSTITUTIONS

University	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Percent Change
University of Colorado Boulder	1,910	2,163	2,614	2,951	3,424	3,654	3,789	3,886	3,174	3,263	3,469	6.3%
Colorado State University	1,598	1,793	2,148	2,305	2,495	2,501	2,416	2,446	2,021	1,906	1,863	-2.3%
University of Colorado Denver	1,348	1,617	1,463	1,446	1,051	1,068	1,398	1,288	1,067	1,088	1,353	24.4%
University of Denver	1,590	1,457	1,690	1,688	1,494	1,404	1,278	1,122	902	771	906	17.5%
Colorado School of Mines	660	767	823	875	800	818	856	866	720	682	711	4.3%

Sources: Institute of International Education, annual Open Doors report.

of -7.3%, while the others ranged from 6.6% to 12.7% in nominal growth. The precious stones and metals category, which was sixth in nominal value, saw tremendous growth, at 53%. (This commodity experienced dramatic growth of 787% in 2022, which was likely a single contract or delivery rather than the emergence of another strong commodity for the state. However, the commodity continues to experience substantial growth in 2023 and has not yet fallen back to 2021 trends.)

The top five export destinations accounted for about 56.6% of Colorado's nominal exports September 2023 YTD, with the top two, Canada and Mexico, accounting for one-third alone. However, when taken as a bloc, the EU was Colorado's 3rd-largest export destination, with 12.4%. China, Switzerland, and South Korea completed the top five, with 8.2%, 7.9%, and 7% of volume, respectively. Of the top five, Switzerland saw the fastest nominal growth, 27.9%, while the nominal growth rates of Canada and Mexico were at or below 10%. Notably, exports to China and South Korea declined by -8.6% and -5.1%, respectively.

The top five product groupings by HTS sections accounted for 61.3% of Colorado's total nominal import value September 2023 YTD. The top two commodity groupings of electric machinery and fuel each captured 18.4% of Colorado's nominal import values YTD. The other categories that completed the top five were industrial machinery (11.8%); precision instruments (8.9%); optical, photo, measuring, medical and musical instruments (9%); and aircraft/spacecraft (3.7%). The top three product groups saw a decline in September 2023 YTD change, ranging from -29% (electric machinery) to -5.5% (industrial machinery). Precision instruments grew by 7.8% and aircraft/spacecraft imports grew by 18.5%.

The top five import sources accounted for 58.5% of Colorado volume YTD, with the top, Canada, accounting for 30% alone. Canada was followed by China (11.1%), Mexico (7.2%), Switzerland (5.2%), and Taiwan (5.1%), but when taken as a bloc, the EU took the third spot, at 14%. Notably, almost all of the top five sources saw double-digit declines ranging from -31.6% (Taiwan) to -11.7% (China). Only Switzerland maintained growth from September 2022 YTD but that was a marginal 1.1% growth.

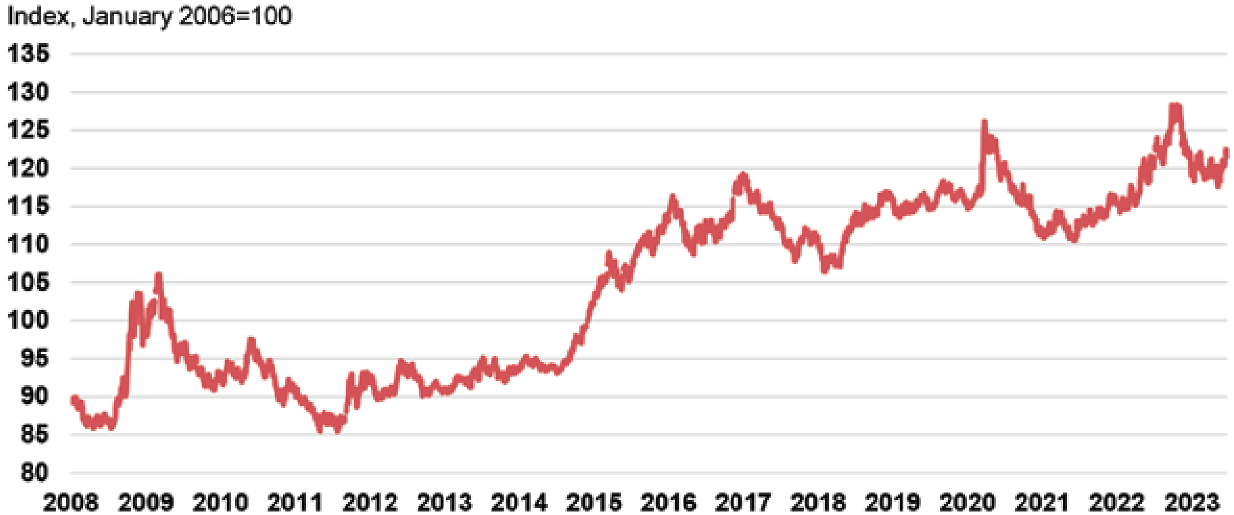
International Students in Colorado

In 2023, the U.S. Department of Commerce for the first time included education in its National Export Strategy, noting that the export of education leads to expenditures in the U.S. by international students who come to the United States to study. The report further cites the skills and experience that international students can bring to the U.S. workforce. Similarly, for Colorado, international students are both a direct economic benefit and a contributor to the state's national and global competitiveness. Colorado has always attracted top science and engineering students, many of whom contribute to the almost $2 billion in innovative research at Colorado's research institutions.

Academic year 2022–23 saw a strong recovery from the COVID-19 pandemic, with the total number of international students studying in Colorado increasing by 6%, to almost 10,000. These students contributed $360 million to Colorado's economy. The five institutions with the most international students are the University of Colorado Boulder, Colorado State University, the University of Colorado Denver, the University of Denver, and the Colorado School of Mines.

Colorado's numbers reflect national trends, with the United States as a whole experiencing the fastest growth rate of international students in several decades from academic year 2021–22 to 2022–23. Of note, as of 2023,

NOMINAL BROAD DOLLAR INDEX



Source: Board of Governors of the Federal Reserve System, Not Seasonally Adjusted.

India has surpassed China as the source of the most international students both in Colorado and nationally. This change reflects the increased interest among Indian students, as well as Chinese families looking to countries other than the United States to send students, due likely both to more high-quality opportunities in other English-speaking countries and the broader political tensions between the United States and China. For Colorado, India and China are followed by Kuwait, Saudi Arabia, and South Korea.

Outlook 2024

The Impact of Global Growth

International trade is affected by global demand abroad, often measured by GDP growth. Historically, as global GDP slows abroad, consumer demand abroad slows as well, which is a drag on Colorado and U.S. exports to the world. As the worldwide economy bounced back quickly from the pandemic recession, global GDP grew 6.3% in 2021. In 2022, however, growth slowed to 3.5%, and there are signs of further slowing economic growth due to a continuation of existing trends that include tightening monetary policy, geopolitical events, and slowing consumer demand for goods.

According to the International Monetary Fund (IMF), global GDP is expected to grow 3% in 2023 and stabilize at 2.9% in 2024, which is about a half percentage point slower than the three years preceding the pandemic recession. This continued slowdown is largely a result of the IMF's expectation that advanced economies will slow to 1.5% and 1.4%, respectively, in 2023 and 2024 after above prepandemic growth of 2.6% in 2022. Meanwhile, emerging markets are expected to grow 4% in 2023 and 2024, only a slight decline from 2022 growth of 4.1% and 2017–19 averages of 4.3%.

The largest drag on emerging market growth is a slowing Chinese economy, which faces headwinds from a real estate downturn, demographic imbalances, and local government debt issues. Despite these economic drags, China is expected to see a modest improvement due to inventory destocking and stabilizing exports, which implies higher expected economic growth in 2023 than the 3% realized in 2022. In other developing Asian countries, India is expected to maintain elevated growth in 2023 and 2024, while smaller nations in the region like Mongolia and Cambodia are expected to accelerate from 2022 growth rates. Additionally, developing Europe adds a boost as conflict areas of Ukraine, Belarus, and Russia are expected to emerge from recessions.

However, advanced economies are expected to slow as fiscal and monetary policy dampens spending and investment and the energy market continues to negatively impact the European continent in particular. Oil and gas prices remain a risk to the EU and the U.K. due to constrained access to supply, as does a shift in access to credit following the European Central Bank hiking cycle. All together, developed Europe is expected to grow quite modestly in 2023 but rebound in 2024 as risks begin to fade. Meanwhile, in Japan, wage growth has slowed significantly in recent months, limiting consumer demand. In both Japan and the euro area, debt service ratios may be on the rise, but they are still relatively low by historical standards, which limits risk.

Similarly, in the U.S., credit default ratios are currently relatively low, providing greater confidence that a recession can be avoided domestically. If access to credit and the appetite to borrow remain at existing levels, it is possible that existing capital investments can continue

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International Trade

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to support production sufficiently to inspire continued export growth opportunities. Overall, a relatively low recession risk domestically compared to recent expectations, combined with an expected stable, growing global demand, is likely to result in continued growth in the value of both U.S. and Colorado exports to the world.

Monetary Policy and Strength of the U.S. Dollar

The exchange rate impacts international trade flows as it changes the relative cost of goods at home and abroad. A relatively strong dollar makes foreign goods relatively cheaper domestically, but it also increases the cost of exports abroad, which could limit foreign demand. While stable global demand provides increased opportunities, a side effect of relatively tight monetary policy is its potential impact on the relative strength of the dollar.

Given persistently elevated inflation and a still tight labor market providing above-average job and wage growth, the Federal Reserve has shifted to a more hawkish stance over the past year, with the upper bound of the Federal Funds rate currently sitting at 5.5%. Additionally, the Fed has communicated an expectation to hold rates higher for longer in order to slow demand, and thus inflation. However, there are international secondary effects of U.S. monetary policy choices as hiking policy rates may strengthen the dollar if it is not occurring in sync with foreign banks' monetary policy efforts. While inflation is largely a global concern, central banks around the globe may also consider their currency depreciation as they make policy decisions, though this would likely be a 2nd-order priority.

Internationally, the banks of Argentina, Russia, and Turkey have had more substantive policy actions out of step with the rest of the world due to domestic economic issues, while China has largely unchanged monetary policy as it is focused on fiscal levers. However, other countries have broadly followed a similar pattern to the U.S. as inflation has largely been a global concern. With that being said, central banks in Latin American countries like Brazil, Colombia, and Mexico had to hike rates more aggressively over the last two years to combat inflation. Meanwhile, Asian central banks have largely faced lower inflation and thus banks of Japan, Thailand, and Malaysia have had smaller reaction functions than the U.S. during this hiking cycle. However, there are countries in Asia like Indonesia and the Philippines that focus more heavily on maintaining exchange rate stability and thus have hiked rates more similarly to the U.S. despite Indonesia's inflation rates being relatively low while the Philippines above-target inflation might otherwise call for additional hikes.

Going forward, advanced economies, with the exception of Japan and many emerging economies, are also looking to end their hiking cycles soon if they have not already. Some emerging market economies that started their hiking cycles earlier, like Brazil and Chile, have already started easing policy rates. But overall, many advanced economies and larger trading partners have had policy reaction functions that are similar or less restrictive than the U.S., and similarly to the U.S., those central banks are likely to hold policy rates in restrictive territory through 2024 in order to allow the full effects on inflation to pass through to the respective economies. While the paths may be similar to the U.S., the way credit conditions affect economies will not be uniform as there are different portfolios of adjustable-rate mortgages in different housing markets as a higher share of adjustable-rate mortgages make households and businesses less willing to spend and invest.

Given that U.S. monetary policy tightening is generally in line with or more restrictive than other advanced economies tends to imply that the U.S. dollar should appreciate (or strengthen) against currencies abroad. This pattern has generally held to form over the last two years as the Nominal Broad Dollar Index (DXY) reached new record highs during 2022. While there was a bit of a retreat during the first half of 2023, the DXY still remained elevated above prepandemic norms, and the index has again picked up steam in the second half of the year as the U.S. has made a more hawkish long-term shift.

Going forward, the similar policy reaction functions to the U.S. will mean that monetary policy should not drastically change the relative strength of the dollar going forward, though there will be some variation if those steps are slightly out of line. That being said, there is an elevated risk of weakness of the dollar due to the increasing debt to GDP ratio that is largely a result of the recent and current fiscal and monetary policy path.

CHIPs Act and Inflation Reduction Act (IRA)

In an effort to combat the decline in the U.S. global market share of the semiconductor supply chain, which had fallen from 40% of semiconductor manufacturing capacity in 1990 to 11% in 2019, Congress authorized a series of initiatives called the Creating Helpful Incentives to Produce Semiconductors for America (CHIPS) as part of the FY 2021 National Defense Authorization Act. The initiatives include incentives to boost investment in domestic manufacturing capacity and increase research and development in microelectronics and semiconductors in the United States.

Additionally, the Inflation Reduction Act (IRA), which President Biden signed into law in August 2022, aims, among other initiatives, to boost domestic manufacturing capacity, increase procurement of key supplies either domestically or from free trade partners, and increase research and development into new energy technologies. In conjunction with the CHIPS Act, the IRA aims to increase U.S. innovation and competitiveness. These bills are already starting to show a meaningful impact on economic growth compared to consensus expectations. Specifically, investments in nonresidential structures tied to computing and green technology sectors are outpacing modest expectations from economists who viewed high interest rate costs as a larger impediment. ✜

Contributors:

Rachel Rose, Colorado Office of Economic Development and International Trade (Chair)
John Addison, Colorado Department of Agriculture
Bryce Cooke, Office of State Planning and Budget
Denise Froning, World Trade Center Denver
Karen Gerwitz, World Trade Center Denver
Inta Morris, Confluence Strategies, LLC
Macie Murcray, Colorado Office of Economic Development and International Trade
Anthony Russo, TradeHub International

Around the Region

The western region of the United States is made up of Colorado and its neighboring states of Arizona, Kansas, Montana, Nebraska, New Mexico, Utah, and Wyoming. This section compares currently reported economic activity in these states and their top metropolitan statistical areas (MSAs) as measured by total employment, employment growth, unemployment rate, average annual pay, and GDP.

Nearly every state in the region showed positive 10-year employment growth. Utah and Arizona recorded the highest average 10-year employment growth rates of 2.9% and 2.3%, respectively. In September 2023, all of the regional states posted year-over-year job gains with Wyoming, New Mexico, and Arizona posting the largest increases of 2.7%, 2.1%, and 1.9%, respectively. Montana saw the lowest employment growth of just 0.6%. Colorado was the leading state in the region in average annual pay, personal income, and GDP. Regarding MSAs, the Cheyenne MSA, Kansas City MSA, and Salt Lake City MSA posted the largest year-over-year employment increases of 2.6%, 2.3%, and 2.1%, respectively, in September 2023.

In terms of real GDP growth, Arizona, Nebraska, and Colorado saw the largest year-over-year increases of 3.2%, 2.7%, and 2.2%, respectively, in Q1 2023. In 2021, the

REGIONAL STATES								
September 2023 Total Employees (In Thousands)	3,172.4 Arizona	2,917.8 Colorado	1,726.0 Utah	1,449.1 Kansas	1,046.5 Nebraska	871.1 New Mexico	518.2 Montana	293.0 Wyoming
Employment CAGR September 2013 - September 2023	2.9% Utah	2.3% Arizona	2.0% Colorado	1.4% Montana	0.7% New Mexico	0.6% Nebraska	0.5% Kansas	0.0% Wyoming
Employment % Change September 2022 - September 2023	2.7% Wyoming	2.1% New Mexico	1.9% Arizona	1.8% Utah	1.6% Kansas	1.5% Nebraska	1.4% Colorado	0.6% Montana
Unemployment Rate September 2023 (Not Seasonally Adjusted)	4.0% Arizona	3.7% New Mexico	3.2% Colorado	2.9% Wyoming	2.8% Kansas	2.7% Montana	2.6% Utah	2.1% Nebraska
Average Annual Pay 2022	$74,432 Colorado	$64,733 Arizona	$61,173 Utah	$57,276 Nebraska	$56,320 Wyoming	$56,178 Kansas	$55,262 New Mexico	$54,514 Montana
Personal Income Q1 2023 (Millions of Dollars)	$456,187 Colorado	$449,109 Arizona	$209,519 Utah	$184,336 Kansas	$132,532 Nebraska	$113,387 New Mexico	$71,624 Montana	$44,800 Wyoming
Personal Income Q1 2023 (Per Capita)	$77,833 Colorado	$76,812 Wyoming	$67,192 Nebraska	$63,122 Montana	$62,699 Kansas	$61,452 Utah	$60,499 Arizona	$53,627 New Mexico
GDP Q1 2023 (Millions of Current Dollars)	$502,026 Colorado	$479,759 Arizona	$259,291 Utah	$220,402 Kansas	$170,145 Nebraska	$124,480 New Mexico	$67,785 Montana	$47,420 Wyoming
Real GDP Percentage Change Q1 2022 - Q1 2023	3.2% Arizona	2.7% Nebraska	2.2% Colorado	1.9% Montana	1.9% Utah	1.8% New Mexico	1.1% Kansas	1.0% Wyoming

Sources: Bureau of Economic Analysis, Colorado Department of Labor and Employment, and Bureau of Labor Statistics (CES, QCEW, and LAUS data). [a]Not seasonally adjusted. Unless noted, all data is seasonally adjusted. Based on preliminary data.

Salt Lake City MSA led the MSAs in the region with the biggest increase, with 7.1% in 2021 (most recent available data), followed by the Denver-Aurora-Lakewood MSA (7%) and the Phoenix-Mesa-Chandler MSA (6.9%). All regional MSAs recorded year-over-year gains in 2021.

In 2021, Colorado's $74,432 average annual earnings exceeded all states in the region, followed by Arizona, with $64,733. Denver-Aurora-Lakewood led the region with above-average annual pay levels exceeding $82,000. This far surpasses other MSAs in the region, which fall below $70,000.

REGIONAL METROPOLITAN STATISTICAL AREAS

September 2023 Total Employees (In Thousands)	**2,377.5** Phoenix-Mesa-Scottsdale	**1,596.3** Denver-Aurora-Lakewood	**1,144.6** Kansas City	**828.2** Salt Lake City	**412.6** Albuquerque	**306.8** Wichita	**193.2** Lincoln	**48.1** Cheyenne
Employment CAGR September 2013 - September 2023	**2.7%** Phoenix-Mesa-Scottsdale	**2.6%** Salt Lake City	**2.0%** Denver-Aurora-Lakewood	**1.3%** Kansas City	**1.0%** Albuquerque	**0.6%** Wichita	**0.5%** Lincoln	**0.4%** Cheyenne
Employment % Change September 2022 - September 2023	**2.6%** Cheyenne	**2.3%** Kansas City	**2.1%** Salt Lake City	**2.0%** Albuquerque	**1.9%** Phoenix-Mesa-Scottsdale	**1.7%** Lincoln	**0.3%** Denver-Aurora-Lakewood	**0.2%** Wichita
Unemployment Rate September 2023 (Not Seasonally Adjusted)	**3.8%** Phoenix-Mesa-Glendale	**3.5%** Albuquerque	**3.3%** Denver-Aurora-Lakewood	**3.1%** Wichita	**2.7%** Kansas City	**2.7%** Cheyenne	**2.6%** Salt Lake City	**1.9%** Lincoln
Average Annual Pay 2022	**$82,550** Denver-Aurora-Lakewood	**$69,909** Salt Lake City	**$67,583** Phoenix-Mesa-Scottsdale	**$64,346** Kansas City	**$56,723** Albuquerque	**$55,617** Cheyenne	**$54,828** Lincoln	**$54,704** Wichita
Personal Income 2022 (Millions of Dollars)	**$310,170** Phoenix-Mesa-Chandler	**$253,166** Denver-Aurora-Lakewood,	**$140,120** Kansas City	**$82,410** Salt Lake City	**$49,613** Albuquerque	**$37,810** Wichita	**$20,649** Lincoln	**$5,958** Cheyenne
Personal Income 2022 (Per Capita)	**$84,788** Denver-Aurora-Lakewood	**$65,085** Salt Lake City	**$63,417** Kansas City	**$61,840** Phoenix-Mesa-Chandler	**$60,299** Lincoln	**$59,148** Cheyenne	**$58,165** Wichita	**$53,954** Albuquerque
GDP 2021 (Millions of Current Dollars)	**$316** Phoenix-Mesa-Chandler	**$253** Denver-Aurora-Lakewood	**$154** Kansas City	**$118** Salt Lake City	**$49** Albuquerque	**$41** Wichita	**$22** Lincoln	**$7** Cheyenne
Real GDP Percentage Change 2020 - 2021	**7.1%** Salt Lake City	**7.0%** Denver-Aurora-Lakewood	**6.9%** Phoenix-Mesa-Chandler	**5.1%** Albuquerque	**4.7%** Cheyenne	**4.3%** Kansas City	**3.1%** Lincoln	**2.8%** Wichita

Sources: Bureau of Economic Analysis, Colorado Department of Labor and Employment, and Bureau of Labor Statistics (CES, QCEW, and LAUS data). [a]Not seasonally adjusted. Unless noted, all data is seasonally adjusted. Based on preliminary data.

Around the State

COLORADO METROPOLITAN STATISTICAL AREAS

September 2023 Total Employees (In Thousands)						
1,596.3	323.4	209.0	184.8	111.3	66.3	64.0
Denver-Aurora-Lakewood	Colorado Springs	Boulder	Fort Collins	Greeley	Grand Junction	Pueblo
Employment CAGR September 2013 - September 2023						
2.4%	2.3%	2.0%	2.0%	1.9%	1.0%	0.8%
Fort Collins	Colorado Springs	Denver-Aurora-Lakewood	Greeley	Boulder	Grand Junction	Pueblo
Employment % Change September 2022 - September 2023						
3.1%	2.2%	1.5%	1.0%	0.6%	0.3%	-0.2%
Fort Collins	Colorado Springs	Boulder	Greeley	Grand Junction	Denver-Aurora-Lakewood	Pueblo
Unemployment Rate September 2023 (Not Seasonally Adjusted)						
4.3%	3.4%	3.4%	3.3%	3.3%	3.0%	2.9%
Pueblo	Greeley	Colorado Springs	Grand Junction	Denver-Aurora-Lakewood	Boulder	Fort Collins-Loveland
Average Annual Pay 2022						
$88,068	$82,550	$64,265	$62,140	$61,638	$53,406	$52,443
Boulder	Denver-Aurora-Lakewood	Fort Collins	Greeley	Colorado Springs	Grand Junction	Pueblo
Personal Income 2022 (Millions of Dollars)						
$253	$47	$32	$25	$21	$9	$8
Denver-Aurora-Lakewood	Colorado Springs	Boulder	Fort Collins	Greeley	Grand Junction	Pueblo
Personal Income 2022 (Per Capita)						
$98,553	$84,788	$67,849	$61,217	$58,860	$54,654	$47,208
Boulder	Denver-Aurora-Lakewood	Fort Collins	Colorado Springs	Greeley	Grand Junction	Pueblo
GDP 2021 (Millions of Current Dollars)						
$253	$44	$33	$24	$22	$7	$7
Denver-Aurora-Lakewood	Colorado Springs	Boulder	Fort Collins	Greeley	Grand Junction	Pueblo
Real GDP Percentage Change 2020 - 2021						
7.9%	7.0%	7.0%	6.6%	5.1%	3.7%	-6.7%
Boulder	Denver-Aurora-Lakewood	Fort Collins	Pueblo	Colorado Springs	Grand Junction	Greeley

Sources: Bureau of Economic Analysis, Colorado Department of Labor and Employment, and Bureau of Labor Statistics (CES, QCEW, and LAUS data). [a]Not seasonally adjusted. Unless noted, all data is seasonally adjusted. Based on preliminary data.

Boulder County

Boulder County continues to recover from impacts of the COVID-19 pandemic and the Marshall fire. In 2023, the county experienced population and employment growth, reflecting its underlying economic strengths including an award-winning quality of life, a highly educated workforce, leading research institutions, and a collaborative environment that supports innovation and entrepreneurship.

Employment and Wages

Since reaching a high of 10.1% in June 2020 during the COVID-19 pandemic, the unemployment rate in Boulder County decreased to 2.1% in September 2022. In 2023, unemployment began the year at 2.5% and became slightly volatile throughout the year, increasing to 3.3% in July, but declined to 3% in September. This compares to the state unemployment rate of 3.2% and the national rate of 3.6% (both not seasonally adjusted).

Employment in the Boulder Metropolitan Statistical Area (MSA) increased 3.8% in 2022 year-over year. Continuing that trend, employment in September 2023 was up 1.5% year-over-year, representing a gain of 3,000 jobs, according to the Bureau of Labor Statistics CES data. The area's large concentration of jobs in sectors with higher-than-average wages contributes to above-average incomes for area residents. Census Bureau data show the 2021 median household income for Boulder County residents was $92,466, compared to $80,184 for Colorado residents and $69,021 for U.S. residents.

Financial Services and Venture Capital Investment

Boulder County continues to represent a significant share of the state's financial institution deposits and venture capital investment. The high concentration of advanced technology and entrepreneurial activity in Boulder County continues to fuel venture capital investment in local early-stage companies. Boulder County venture capital investments totaled $1.9 billion through Q3 2023.

Leading Industries and Sectors

The Boulder County economy continues to benefit from a diverse mix of businesses, with high concentrations of employment in the Professional and Technical Services and Information industries, and in growing sectors including aerospace, biotechnology, information technology, natural and organic products, outdoor recreation, and tourism.

Professional and Technical Services— The Professional and Technical Services (PTS) industry represents the largest employment base in Boulder County and a concentration of employment that is 2.5 times the national average. PTS represents 34,375 employees in the MSA, or 17.8% of all jobs. There are approximately 5,800 firms in the industry representing nearly 31% of Boulder area employers. The PTS industry in the area experienced a 4.9% compound annual growth rate (CAGR) in employment and 9.4% CAGR in firms from 2019-2022.

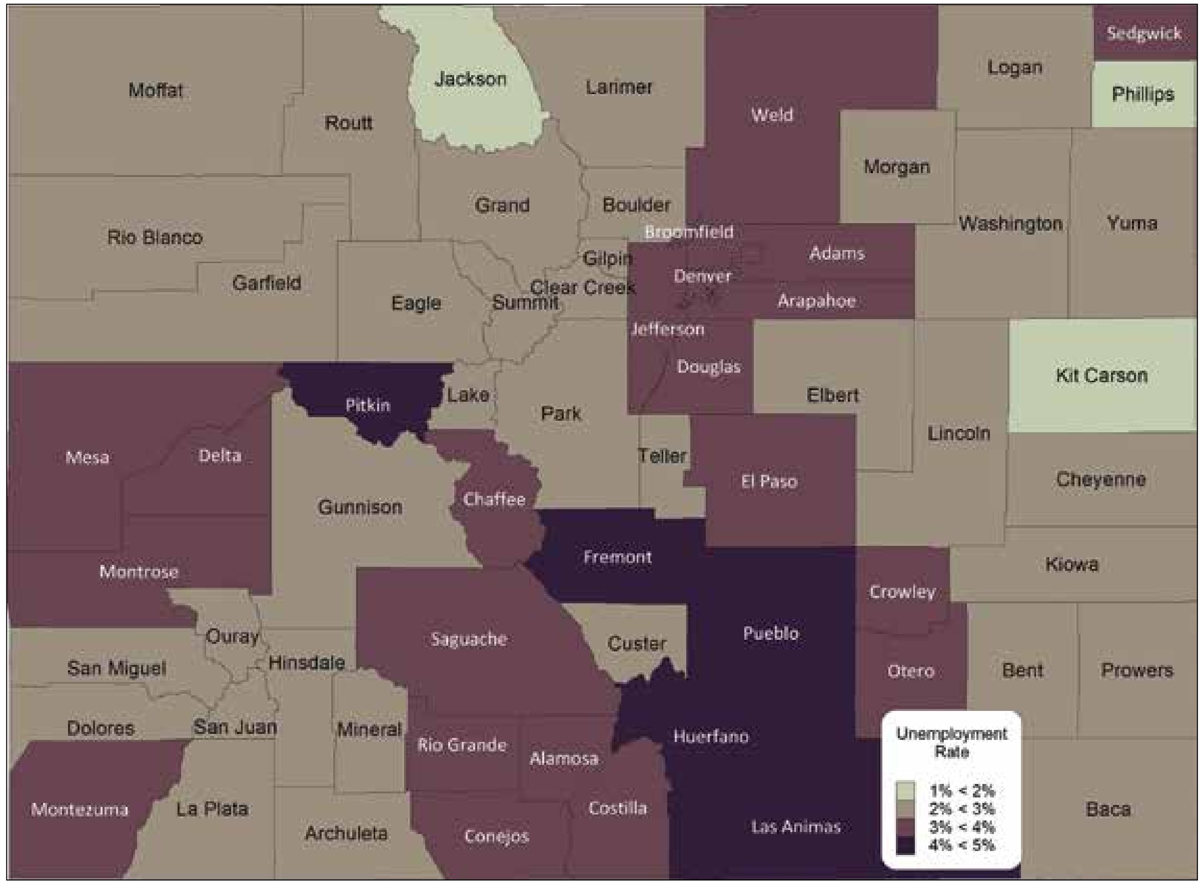
Information—The Information industry is an eclectic mix of businesses that includes motion picture and music producers and distributors, radio and television network programming and broadcasting, telecommunications, and data processing. The Information sector in Boulder County has a much stronger employment concentration than the nation, with employment 2.4 times the national average. Wages in this industry are the highest of any industry and more than double the average for all industries in Boulder County. The Information industry in Boulder County experienced a 3% CAGR in employment and a 9.1% CAGR in firms from 2019-2022.

Aerospace—Colorado enjoys the highest concentration of private aerospace workers in the nation and Boulder County represents 23% of the state's aerospace employment. The University of Colorado Boulder offers internationally recognized aerospace research and education programs and is the top public university for NASA research funding. Several federally funded labs in the area, including the Laboratory for Atmospheric and Space Physics (LASP), the National Oceanic and Atmospheric Administration (NOAA), and the National Center for Atmospheric Research (NCAR), conduct research in space.

The Metro Denver Economic Development Corporation estimates that aerospace in Boulder County represents an employment concentration over 16 times the national average. Notable aerospace companies in Boulder County include Ball Aerospace, Blue Canyon Technologies (a subsidiary of Raytheon Technologies), Custom Microwave, EnerSys, Lockheed Martin, Northrop Grumman, Redstone Aerospace, Sierra Space Corporation, and Special Aerospace Services. Aerospace companies in the Boulder area are adding employees and several recently added or plan to add lab, manufacturing, and office space.

Bioscience—Approximately 17% of bioscience jobs in Colorado are located in Boulder County, representing an employment concentration of 3.4 times the national average in the pharmaceuticals and biotechnology sector and 6.3 times the national average in the medical devices and diagnostics sector. The University of Colorado Boulder is home to the BioFrontiers Institute, a program designed to facilitate interdisciplinary research and expand Colorado's leadership in biotechnology, and the university attracts major research funding and generates numerous startups.

UNEMPLOYMENT RATE BY COUNTY, OCTOBER 2023



Source: Colorado Department of Labor and Employment, LAUS (Not Seasonally Adjusted).

Over the past few years, Boulder County has attracted significant investment in new or redeveloped space for bioscience companies and was ranked 10th among the nation's top life science markets based on the availability of real estate for bioscience companies. Nearly 3 million square feet of laboratory space is planned, in development, or recently completed. In addition to developments by BioMed Realty and Conscience Bay Company in Boulder and Sterling Bay in Lafayette, individual

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Around the State

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companies such as Medtronic in Lafayette, Umoja Biopharma and Biodesix in Louisville, and AGC Biologics in Boulder and Longmont are investing in new or expanded facilities.

Clean Tech—Boulder County has a significant presence in the clean-tech industry, which includes renewable energy, energy efficiency, energy research, engineering, and consulting services, supported by the Renewable and Sustainable Energy Institute (RASEI)—a joint institute between the University of Colorado Boulder and the National Renewable Energy Laboratory (NREL)—and other national labs that are leaders in climate research. In addition to clean-tech businesses such as Also Energy, Envision Energy, Gravity Renewables, Namaste Solar, Siemens Gamesa, Solid Power, and Uplight, the area continues to be a center for renewable energy innovation and startup activity. The concentration of employment in the clean-tech industry in Boulder County is over four times the U.S. average.

Information Technology—The tech industry in Boulder County dates back to the 1960s when IBM established a facility in Boulder. Today, the area has a wide range of technology companies in cybersecurity, data storage, digital marketing, quantum computing, software, and more. Boulder County continues to provide an environment and resources that attract tech startups, workers, and capital investment and is home to many technology accelerators and mentorship programs. The employment concentration in the IT-software industry in Boulder County is more than three times the national average. Tech companies with a significant presence include Agilent Technologies, Apple, Google, IBM, Micron Technology, Microsoft, Qualcomm, Seagate Technology, and S&P Global.

Natural and Organic Products—According to the 2020 Naturally Boulder Economic Impact Study done by CU Boulder's Business Research Division, the natural and organic food industry in Colorado contributes $3.1 billion to the state's economy and supports approximately 22,150 jobs. Many natural and organic products businesses started in Boulder, and the area remains an important center for the industry. Boulder County is home to Aurora Organic Dairy, Boulder Organic Foods, Celestial Seasonings, Chocolove, Fresca Foods, Hope Foods, Justin's, Made in Nature, Meati Foods, Organic India, and many more natural and organic products businesses.

Outdoor Products and Recreation—Boulder County has a high concentration of manufacturers, distributors, retailers, marketing and media, and other businesses focused on the outdoor products and recreation industry. Widely recognized as an industry hub, the area is home to the Outdoor Industry Association, and many outdoor industry businesses are headquartered or have a facility in Boulder County, including Active Interest Media, Backcountry Access, Crocs, Dynafit, Fjällräven, Gaiam, HEAD, La Sportiva, Newton Running, Pearl Izumi, Scarpa, Scratch Labs, Sea to Summit, and Spyder Active Sports.

Tourism—A popular destination that receives national media attention, the Boulder area is known for its recreational and cultural amenities, special events, and impressive choices of entertainment, shopping, and dining options. While the sector continues to recover from impacts of the COVID-19 pandemic, employment in Leisure and Hospitality increased by 31.3% between September 2020 and September 2023.

Contributors:
Jennifer Pinsonneault, City of Boulder
Austin Brown, City of Louisville
Erin Fosdick, Longmont Economic Development Partnership
Jill Mendoza, Town of Superior
Matt Wiggins, Boulder Economic Council

Kit Carson County

Drive along Interstate 70 on the eastern plains and see the renewable energy development that reaches from Elbert County east to the Kansas state line. Clear evidence on the left and right of the highway proves renewables are a hot commodity. Kit Carson County (KCC) has a good share of the red lights, blinking for safety, against the dark sky. Drought conditions, low-paying jobs, high agricultural input costs, and limited housing options remain on the list of challenges for this agricultural-driven economy.

Agricultural producers are negatively impacted by the irrigation wells shutdown to facilitate Colorado's plan to meet the Colorado River Compact with neighboring states. Reverting to dryland farming from irrigated crops may spark innovation in crop production with assistance from other partners like higher education. High input costs and lower crop production will have a ripple effect on agricultural-related businesses and the typical Main Street operations. According to the Colorado Demography Office, agricultural-related jobs made up 41.2% of the total jobs in Kit Carson County for 2022. The neighboring counties also have a larger share of jobs related to agriculture, so Kit Carson County is in good company.

In October 2023, home selling prices averaged $283,000 in Kit Carson County, according to Redfin.com. Remote work makes the rural county attractive to urban residents and future home buyers as internet connectivity is robust and housing is more affordable. Being supported by good schools, consistent health care, and safe neighborhoods also make the county attractive. Home listing prices are more reasonable compared to urban prices. In the west end of Kit Carson County, houses are sold to retired couples and first-time home buyers as housing in Denver and Colorado Springs exceeds the household budget for many.

After peaking at 4.3% in June 2020, the unemployment rate of 1.8% (not seasonally adjusted), in September 2023—one of the best in the state—remains much lower than the state unemployment rate of 3.2% and the national rate of 3.6%. According to the Bureau of Labor Statistics (BLS), Quarterly Census of Employment and Wages, there were 2,927 employees in the county in 2022, an increase of 2.1% year-over-year.

From 2021 to 2022, average annual wages increased 6.1% in Kit Carson County, spanning every major sector, according to the BLS, Quarterly Census of Employment and Wages. Average annual wages in Kit Carson County were $44,271 in 2022, 40.5% below the state average of $74,432. Developing high-wage jobs with benefits must become a priority for business and industry to be able to fill vacancies and retain staff.

Kit Carson County's population projections from the Colorado Demography Office estimate a slight decrease from 6,978 in 2022 to 6,965 in 2023. In 2021, 21% of the county's population was age 65 and over, which did not change from the previous year. Projections show the aging population will continue to grow through 2050 if amenities and quality of life are available in the rural county. If the amenities such as health care, grocery stores, entertainment, and housing remain stable or increase, the possibility of aging in place is appealing to the elderly population.

As in years past, Kit Carson County remains open for business and welcome development as is demonstrated by the land available for sale in multiple towns. Housing is available but is sometimes seen as pricey for the average wage earner, so affordability is key. Renewable energy provides temporary good-paying positions, but those will end eventually as development ceases. Until that occurs, Kit Carson County businesses and residents will buckle in for the long haul as they are committed to rural Colorado.

Contributor: *Candace Payne, East Central Council of Governments*

Mesa County

Mesa County, also known as the Grand, is nestled between the snow-capped Rocky Mountains and the arid Moab Desert on the Western Slope of Colorado. This picturesque county boasts a population of 158,534 residents. Grand Junction stands as the largest metropolitan hub in this area, serving as the most prominent city between Denver and Salt Lake City, Utah. Positioned at the confluence of the Colorado and Gunnison Rivers and conveniently situated along I-70, Grand Junction serves as a vital economic and cultural center for the region.

While many Mesa County residents find employment in Grand Junction, they may choose to reside in one of the neighboring communities, each with its own distinctive character. To the west, the City of Fruita graces the valley's edge, while on the eastern side, the town of Palisade nestles at the foot of the Grand Mesa. These three municipalities, complemented by smaller communities like DeBeque, Collbran, Mesa, Mack, and Loma, collectively comprise the rich tapestry of Mesa County.

Gross Domestic Product—Mesa County's real GDP increased 3.7% year-over-year in 2021, after declining 2.4% in 2020.

Wage Trends—Average annual wages in Mesa County increased 10.2% year-over-year, to $55,848, in 2023, according to the Q2 2023 Mesa County Economic Update from the Colorado Mesa University Davis School of Business. The median household income in Mesa County decreased year-over-year by 1% from 2020 to 2021, with a $63,531 median household income level reported in 2021.

Employment and Labor Force—The Mesa County labor market is following the trend of the national labor market and staying strong. Nationally, nonfarm payrolls continue to increase, fighting the recession narrative virtually every month. Locally, employment gains are not as strong as national gains but are trending toward a new 10-year high in fall 2023. According to the Q3 2023 Mesa County Economic Update from the Colorado Mesa University Davis School of Business, in September 2022 employment was estimated to be 75,562, while the August 2023 number was 75,518. The total labor force was sitting at 78,400 in August 2023.

Sales Taxes—Mesa County sales taxes held steady comparing October 2022 to October 2023, up only 1.1%. City sales and use tax data are not updated through October; however, a 2022 to 2021 comparison shows an increase of 10.2% in Grand Junction.

Rural Jump-Start Mesa County—In 2023, two businesses were accepted into the Rural Jump-Start program in Mesa County. This makes a total of 28 businesses that have been approved since the program's inception in 2015, making Mesa County a state leader.

Fruita-based Spartan Drill Tools announced expansion plans with a new manufacturing division in Grand Junction in addition to its existing facility in Fruita. The expansion will utilize innovative processes new to Colorado with the purchase of a $1.4 million friction welder supporting the manufacture of its new small-diameter drill pipes and tooling. A total of 26 new primary jobs are anticipated, along with a capital investment of up to $2.7 million with the setup of the new facility.

Skyhook Solar is a manufacturer of industrial-grade, transportable solar generators that power EVs, shared micro-mobility, communications, and power resilience. Skyhook Solar has been in the R&D stage for the past two years, and the firm's need to scale justified a relocation to Grand Junction to establish a new fabrication plant. Within the first few years of operations, 38 new primary jobs are expected.

Health Care—Health care is Mesa County's largest industry, making up over 18% of the county's total employment as of Q1 2023. Of the top 10 employers in the county, five are in the health care industry: Western Colorado Intermountain Health (second-largest county employer), Community Hospital, VA Medical Center, Family Health West, and Hilltop Community Resources. In 2021, health care and social assistance produced $1.1 billion in GDP for Mesa County and accounted for 15.5% of the total GDP in the county, according to the Health Care and Social Assistance Industry Spotlight from the Mesa County Workforce Center. This was a 4.8% increase when looking at the average annual change of the last 10 years compared to the national increase of only 3.9%.

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Education—Mesa County has strong higher education and technical training institutions. Mesa County Valley School District 51 is the largest school district on the Western Slope of Colorado and the 14th-largest school district in the state. The district is also the largest employer in Mesa County. Each day, over 2,500 employees serve more than 22,000 students across 43 schools. According to the Colorado Department of Education, District 51 had an 80.3% graduation rate and an 81.6% completion rate for the class of 2022.

Colorado Mesa University (CMU) is the 3rd-largest employer in Mesa County. Accredited by the Higher Learning Commission, CMU is not only the 5th-fastest-growing university in the country, but is also the home of more than 10,000 students pursuing more than 225 academic programs. Located in downtown Grand Junction on 141 acres, CMU is a comprehensive regional public higher education institution offering liberal arts, professional, and technical programs at the master's, bachelor's, associate, and certificate levels. Of the 10,000 students, 15.4% come from outside Colorado and 29% are from traditionally underrepresented groups.

CMU Tech is the two-year division of CMU and serves the technical education needs of college and area high school students. The college offers over 29 certificate and associate degree programs, plus 330 noncredit personal and professional development courses.

Tourism—Travel is one of the top three industries in the state of Colorado and is a driving force of economic growth in Grand Junction and the surrounding communities. Lodging tax collections for 2022 were 7.8% higher than 2021. Hotel occupancy in 2022 in Grand Junction was 0.9% below 2021's occupancy, but 2021 occupancy was an all-time high. The months of January, February, and March in 2022 reached the highest occupancy ever recorded for those months in Grand Junction's history. The hotel average daily rate in Grand Junction for the year 2022 was 7.8% above 2021's average daily rate and 20.6% above 2019's average daily rate (prepandemic).

Over 15,000 visitors use the Grand Junction Visitor Center annually, and more than 500,000 people gain valuable travel inspiration by going to visitgrandjunction.com annually. Top domestic visitors come to Grand Junction from around Colorado (52%), Texas, Arizona, and California. Top international visitors come to Grand Junction from the United Kingdom, Canada, Germany, China, Australia, and the Netherlands. The top reasons people visit Grand Junction include vacation/pleasure, winery tours, and outdoor activities.

Agriculture, Forestry, Fishing, and Hunting—In Q1 2023, agriculture, forestry, fishing, and hunting industries made up 2% of Mesa County's total employment compared to 1.2% in 2022, according to the Mesa County Workforce Center Q1 2023 report. According to data from the USDA's most current Census of Agriculture (2017), the total market value of products sold in Mesa County is $94.2 million, making it the 2nd-most profitable county next to Saguache County.

Advanced Manufacturing—The manufacturing industry, with 3,304 employees, represented 4.7% of Mesa County's total employment as of Q1 2023. The number of manufacturing employees in Mesa County is expected to decrease 0.3% in 2024 year-over-year according to the Mesa County Workforce Center Q1 2023 report.

Outdoor Industry—The outdoor industry continues to thrive in Mesa County as it does in the rest of the state. The U.S. Bureau of Economic Analysis is now providing economic updates for the outdoor recreation industry through a satellite account, further legitimizing the impact of this industry on the U.S. GDP and total employment.

In 2022, the Grand Valley Outdoor Recreation Coalition commissioned an economic impact report for the outdoor industry in Mesa County, completed by economics professors from Colorado Mesa University. This study estimated the economic impact of outdoor recreation in Mesa County by measuring the impact of outdoor recreation businesses and the impact of outdoor recreation tourism.

The combined results of outdoor recreation business and tourism impacts produce a total employment contribution of 9,897 jobs and over $875 million, including direct, indirect, and induced effects. The total impact of outdoor recreation in Mesa County is 7.5% of GDP and 11% of jobs. Accounting for more than 1 out of 10 jobs in Mesa County (considering direct, indirect, and included effects), outdoor recreation is a significant part of the county's economic profile.

Energy—The energy industry, with 1,725 employees, represented 2.4% of total employment and 2.9% of total GDP in Mesa County as of Q1 2023. The number of energy employees in Mesa County decreased 6.3% in the past 10 years, and the GDP from this industry decreased 11.4% in the past 10 years according to the Mesa County Workforce Center Q1 2023 report.

Aviation, Aerospace, and Parts Manufacturing—The aviation, aerospace, and parts manufacturing industries make up 0.9% of Mesa County's total employment. Employment in these industries is expected to increase 3.5% in 2023. West Star Aviation is the largest private employer in Mesa County, with 531 total employees in Grand Junction. In early 2023, West Star announced a major expansion at its Grand Junction location. Eighty-two new jobs are projected, along with 40,000 square feet of hangar space and 32,000 square feet of expanded shop capacity.

Technology/Software—While the tech industry in Mesa County may not be as prominent as in larger metropolitan areas, it is steadily growing and gaining recognition. The city has a vibrant entrepreneurial spirit and a budding tech scene that is attracting startups and tech-savvy individuals. One of the driving forces behind the growth of the tech industry in Grand Junction is Colorado Mesa University, which offers specialized programs in computer science and engineering. Additionally, the city is home to coworking spaces and innovation hubs that provide resources and support for tech startups. As the tech industry continues to flourish, Grand Junction is positioning itself as an emerging tech destination in the region.

Real Estate— According to the Q1 2023 Mesa County Economic Update from the Colorado Mesa University Davis School of Business, Mesa County single-family real estate shows a decline in prices. Since summer 2022, the general trend has been downward, with a fair amount of volatility. The Freddie Mac house price index also shows a slight increase in prices in Grand Junction, rising 1.4%. Ultimately, interest rates have put the brakes on price increases despite the quarterly price volatility. Thirty-year mortgage rates averaged 6.43% in Q1 2023, and continued a generally upward trajectory over the latter half of 2023, reaching an average of 7.61% in early November.

Single-family home inventory is much higher than it was a year ago, rising from 214 in Q1 2022 to 446 in Q1 2023. The extremely low inventory of Q1 2022 seems to be the bottom of inventory shortages as rising interest rates and new construction have helped to increase inventory. Foreclosures rose sharply in 2022 but are back down to the 2019 level. Total building permits are up 27%, but single-family home permits are down 18.7%. Part of this reflects the demand and economics of building multifamily homes compared to single-family homes in this environment.

Development Opportunities—Mesa County is seeing tremendous business growth and new investments in commercial real estate. Throughout the first half of 2023, over 16 large transactions accounted for $30 million in sales. Opportunities for additional commercial investment exist, including the Fruita Business Park, the Riverfront at Las Colonias, Dos Rios, Clifton, and throughout Mesa County.

Grand Junction has seen several key developments in recent years. One significant development is the ongoing revitalization of the downtown area. Efforts to enhance and transform the downtown district have included infrastructure improvements and the creation of public spaces like the Riverfront at Las Colonias and the Riverside Cultural and Business Development Project of Dos Rios that aims to attract new businesses and mixed-use development.

Additionally, there has been a focus on expanding the housing options in Grand Junction. New construction projects, such as the $17 million, 78-unit apartment complex, the Lofts on Grand, planned for the downtown area, and the upcoming 257-unit downtown development of The Junction apartments, are expected to contribute to the city's housing growth. These developments demonstrate the commitment to revitalizing the downtown area and expanding housing options in Grand Junction, making it an attractive place to live and visit.

Community Recreation Center—A new community recreation center that was approved by Grand Junction voters is slated to open in late 2025. The Grand Junction City Council approved a plan in 2022 for an 83,000-square-foot recreation center that will include a lap pool, warm-water leisure pool, lazy river, warm-water therapy pool, water playground, gymnasium, indoor track, fitness, and weightlifting area, meeting rooms, and other gathering and recreation spaces. Voters approved a 0.14% sales tax increase in the April 4, 2023, municipal election to fund the recreation center.

Airport—The Grand Junction Regional Airport (GJT) is the premier Class I airport serving western Colorado and eastern Utah, with eight nonstop destinations and an average of 16 flights per day. GJT logged its busiest year of commercial traffic in 2021, with more than half a million passengers. However, 2022 and 2023 had their fair share of challenges with the loss of Delta's SkyWest connection between Grand Junction and Salt Lake City due to pilot shortages. GJT has begun a major runway project with crews moving 2 million cubic yards of dirt onto the site of the future runway. The runway will open by 2030.

Summary—As Mesa County continues a controlled growth trajectory, the industry base continues to diversify, which is essential for ensuring economic resilience and sustainability. Unemployment is now 3.3% as of September 2023, and Mesa County's new business filings are up 13.4% comparing year-to-date May 2022 to year-to-date May 2023.

The Leeds Business Confidence Index for state economy increased to 45.5 in Q4 2023, up from 44.9 in Q3 2023. These strong economic indicators position Mesa County well for continued growth in 2024.

Contributors:
Steve Jozefczyk, Grand Junction Economic Partnership
Nathan Perry, Colorado Mesa University
Mesa County Workforce Center
Grand Junction Regional Airport
Visit Grand Junction
Bray Commercial Real Estate

Northern Colorado

Summary—Talent, innovation, and opportunity continue to define Northern Colorado, a region that lies directly north of the Denver Metro area and south of Wyoming, between the western Rocky Mountains and eastern Great Plains, and encompasses Weld and Larimer counties. In Northern Colorado, prominent universities and community colleges attract companies searching for the next generation of talent. Northern Colorado's growing industry clusters include bioscience and medical devices, food processing and manufacturing, information technology and computer services, manufacturing (production tech and heavy machinery), and plastics. These clusters have strong ties to the region's agricultural production and energy extraction, as well as strength in animal science and translational medicine, boosting Northern Colorado's status as a regional distribution hub for agricultural and industrial products.

Northern Colorado continues to nurture technological innovation and entrepreneurship supported by its increasingly diverse and highly educated population. A historically high level of patent assignment and the strong presence of research institutions illustrate the regional passion for investment in ideas and innovation.

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Photo courtesy of Tim Atkinson.

In 2022, Innosphere Ventures (aka Rocky Mountain Innosphere) added to their entrepreneurial opportunities with the opening of their new wet lab facility. The new bioscience building will accommodate life science activities that include tissue culture, cell and molecular biology, and experiments that involve liquid substances. Northern Colorado features rich cultural and recreational opportunities. The region has three state-designated creative districts—Fort Collins, Greeley, and Loveland—where the arts and creative industries are celebrated.

Population—Northern Colorado's population continues to grow, with a 2022 population of over 716,954 (2% year-over-year growth) for Weld and Larimer combined, according to the U.S. Census Bureau (ACS 1-Year Estimates). Larimer County grew by 1.2% between 2021 and 2022, while Weld grew by 3%. Fort Collins and Greeley are the area's two largest cities, with a 2022 estimated combined population of 278,451. The median age in Northern Colorado is approximately 36.2, younger than Colorado's median age of 37.7 (2022, ACS 1-Year Estimates). The continued in-migration of talented college students and younger professionals seeking work opportunities in the region drives this metric.

Industry and Employment—From 2017 to 2022, job growth in two Northern Colorado metropolitan statistical areas (MSAs) (Greeley and Fort Collins) posted gains of 6.6%, significantly outpacing the national growth rate of 4.1% during the same period. Employment in the Greeley MSA increased 1.3% in September 2023 year-to-date and is flat to 2019 levels. Employment in the Fort Collins MSA grew 1.7% in September 2023 year-to-date and is 4.6% above 2019 levels. Industries where employment is higher in 2022 compared to 2020 include Accommodation and Food Services; Professional, Scientific, and Technical Services; and Retail Trade.

Northern Colorado's top industries by employment are Retail, Health Care, Manufacturing, Accommodation and Food Services, and Construction. While the private sector is an economic driver, there is significant public investment through public health care providers, public universities, and local school districts.

Northern Colorado's real GDP decreased by 0.5% between 2020 and 2021 (most current available data). The U.S. GDP increased by 5.8% over the same time period. Key manufacturers include Advanced Energy, Anheuser-Busch, Boulder Scientific, Burris Optics, In-Situ, JBS, J.M. Smucker Company, Leprino Foods, Noosa, Otter Products, Tolmar, URSA Major, Vestas, Walker Manufacturing, Water Pik, and Woodward.

As of September 2023, the combined unemployment rate in Larimer and Weld counties was 3.1% (not seasonally adjusted). The labor force increased in September 2023 year-over-year by approximately 2.4% (not seasonally adjusted). The region's diverse industry mix has been helpful in weathering the impacts of the COVID-19 pandemic.

Over the last several years, Northern Colorado observed a tight labor market, which led to strong regional collaborative public-private partnerships to address local workforce issues. These existing collaborations have helped the region mobilize a strong economic development and workforce response to the pandemic. The region's educational institutions have focused on industry-relevant training and experience-based learning programs to ensure that the workforce is skilled and prepared.

Growing from the success of the Talent 2.0 initiative, NoCo Works is a Regional Workforce Collaboration composed of collaborators from across Weld and Larimer counties working collectively to address regional workforce challenges and opportunities. In September 2023, NoCo Works and its six subcommittees were launched. These six subcommittees comprise over 200 participants representing various community partners, propelling this regional workforce initiative forward, and initiating the work related to regional talent and workforce development within the Northern Colorado ecosystem.

Partnership, collaboration, and alignment are embedded in the cultural DNA of Northern Colorado. The region has five sector partnerships: the NoCo Manufacturing Partnership, the Northern Colorado Health Sector Partnership, the Northern Colorado Construction Sector Partnership, the Non-Profit Sector Partnership, and the Hospitality Sector Partnership. These organizations bring together industry stakeholders to create local alignment and collaborate on issues facing industry.

Education—Northern Colorado is home to Colorado State University in Fort Collins and the University of Northern Colorado in Greeley, as well as two community colleges, Aims Community College and Front Range Community College. Over 62,000 students are enrolled in Northern Colorado's colleges and universities. These public community colleges and universities produce over 17,600 postsecondary credentials per year. A variety of traditional and certificate programs help prepare the region's labor force for current and future employment.

Over 10,000 students from 40 public high schools across Larimer and Weld counties participated in dual enrollment programs in partnership with 11 universities and community colleges. Northern Colorado's K–12 and higher education institutions help develop the region's talent into a highly productive and innovative workforce. Weld County is further supporting education and the employment pipeline by providing workforce stipends to every graduating high school senior through the Bright Futures program. ✤

Contributors:
Adam Crowe, Larimer County Economic and Workforce Development
Katie Geiger, City of Fort Collins
Stephanie Pitts-Noggle, Town of Erie
Rich Werner and Cassidy Stubblefield, Upstate Colorado Economic Development

Pueblo County

Pueblo's economy is anchored by its strong manufacturing base and is the hub of Southern Colorado. Pueblo offers a strong transportation infrastructure, relatively low cost of land/real estate, abundant water capacity, ideal climate, successful and innovative workforce training programs, and the largest voter-funded cash incentives in the state.

In 2023, Pueblo saw the successful completion of the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP), which destroyed 2,613 tons of chemical agents that had been stored at the Pueblo Chemical Depot. This project was a unique opportunity for Pueblo as over 1,000 highly skilled workers are now available for new opportunities in the community. This has attracted strong interest from companies in a variety of industries. In September 2023, the countywide unemployment rate was 4.3%, up from 3.7% in September 2022. In comparison, Pueblo's unemployment rate is higher (4.7% in September 2023), up from 4.2% in September 2022.

In Q1 2023, the three largest sources of jobs in the local economy were Health Care and Social Assistance (19.3%), Government (federal, state, and local) (18.7%), and Retail Trade (13.1%). In addition, Pueblo's heritage of manufacturing and metal fabrication provides many of the primary jobs that support other employment in the community.

New and Existing Industry Clusters—Pueblo is actively recruiting companies in aerospace and defense, chemicals manufacturing, construction-related manufacturing, food and beverage manufacturing, outdoor recreation, and professional and scientific sectors. Additionally, Pueblo has and continues to position itself as a leader in the renewable energy sector. Utility companies are making progress in moving toward their aggressive carbon-emission reduction goals by transforming generation infrastructure. The city and county of Pueblo have each passed resolutions to become 100% renewable by 2035. This makes the county attractive to companies that have their own environmental, social, and governance (ESG) goals.

EVRAZ Steel Mill is finishing the construction of a more than $500 million expansion of its long-rail mill. In April 2023, CS Wind announced an expansion of its Wind Turbine Production facility. It plans to add 850 new full-time jobs, making it the world's largest manufacturing plant for wind turbine towers. Construction has been completed on Lightsource BP's new 300-mw solar facility that will supply power to the EVRAZ Steel Mill, the only solar-powered steel mill in the United States. This will provide electric price certainty for the mining and steel-making company through 2041.

Pueblo continues to attract a variety of companies. Examples of companies that have located in Pueblo and continue to enjoy tremendous success are United Launch Alliance, Collins Aerospace, CAE Doss Aviation, EVRAZ, CS Wind, Trane Technologies, Professional Bull Riders, GulfCo Manufacturing, Target Distribution, Fuji Film, and many others.

Pueblo enjoys a tremendous transportation advantage with highways and rail. Pueblo County sits on I-25, a north-south interstate, and Highway 50 running east-west. A large portion of Pueblo is served by rail, ranging from a mix of heavy, light, and short-line rail depending on the area of town. The two rail lines servicing the region are Union Pacific and BNSF. This transportation allows easy access to numerous cities

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within 500 miles, such as Denver, Wichita, Cheyenne, and Albuquerque. Pueblo continuously improves development on its rail served industrial parks.

Pueblo is focused on talent and workforce development, with special efforts centered on talent retention, development, recruitment initiatives, and by aligning programs and partners. Pueblo enjoys a reputation as having the best customized training programs in the region. Pueblo continues to support skilled workforce education programs such as Pueblo County High School's Manufacturing, Agriculture, and Construction (MAC) Academy, which has over 300 students enrolled. Pueblo Community College and Colorado State University – Pueblo also offer incredible education opportunities.

HARP Project—A driving force for much of the development in the downtown area is the expansion of the Historic Arkansas Riverwalk Project, also known as HARP. The city recently completed many ambitious improvements in recent years. Future phases will result in expansion of the Riverwalk, an amateur athletic swimming complex, and potential indoor/outdoor water park. In addition to the tourist and convention visitors, the HARP project is expected to attract professional offices to locate in the city center area. ✥

Contributor: *Jeffrey C. Shaw and Shannon Baker, Pueblo Economic Development Corporation*

Southern Colorado

Employment—The unemployment rate in El Paso County was 3.4% on a nonseasonally adjusted basis at the end of September 2023 compared with 2.8% in September 2022 and 5% in September 2021. The labor force increased from 361,311 to 368,052 from September 2022 to September 2023, a 1.9% increase. Over the same period, employment increased 1.2% from 351,265 to 355,496 for a gain of 4,231 employed. El Paso County unemployment during the COVID-19 pandemic peaked in April and May 2020, with both counties reporting an 11.1% unemployment rate and 36,640 (April) and 37,617 (May) people unemployed. As of September 2023, the number of people unemployed (12,556) is about one-third of what it was during the pandemic peak. From 2021 to 2022, there were 10,480 net new jobs in El Paso County, which is almost double the number of new jobs needed to match population growth (5,600) as calculated by Data-Driven Economic Strategies and the State Demographer's Office. The continued growth of various sectors, including government contracting, health care, and hospitality-related sectors, has ensured a healthy diversification of industries and job growth across the region.

Specific Sectors—Seventeen of the 21 industry sectors in El Paso County saw job gains in 2022. The most significant gains were in Accommodations and Food Services; Transportation and Warehousing; Professional, Scientific, and Technical Services; and Health Care and Social Assistance. These four industries represented 87% of the 10,480 new jobs in the county. The four industry sectors that experienced a combined loss of 1,943 jobs in 2022 were led by Administrative and Waste Services as well as Finance and Insurance.

Average annual pay increased in all but four industry sectors in El Paso County, with an increase in the average annual wage from $59,313 in 2021 to $61,990 in 2022. This 4.5% wage increase was higher than the national average (3.5%) but lower than the Colorado average (5.5%). In 2022, the average wage in El Paso County was 16.7% below the 2022 state average of $74,432 and 11.4% below the U.S. average of $69,986. Colorado's average wage is largely driven by the Denver/Boulder area. There have been some marginal improvements in the wage gap, but there is still a long way to go.

In 2013, El Paso County began to meet or exceed the number of new jobs needed to match population growth. It is fair to say the region took off around this time due to a confluence of industry diversification and more professional and technical jobs. The region was also quite affordable compared to the Denver/Boulder metropolitan areas. Primarily because of the region's affordability and high military presence, the wage gap was often explained away. Although it takes a long time for wages to adjust, now in 2023, 10 years later, wages should be more in line with both the U.S. and Colorado. This is particularly true as the cost-of-living index for Colorado Springs is now 109% of that of the U.S. This higher cost of living is primarily due to drastically higher housing costs. Like many other growing parts of the nation, there is much concern about the region's high cost of living and the ability to continue to attract and retain working-age people.

Per Capita Personal Income—Per capita personal income for El Paso County was $58,627 in 2021 (most current data available), 83% of the state average ($70,706). El Paso County's per capita personal income fell from a rank of 25th in the state in 2020 to 27th in the state in 2021.

Although there are legitimate concerns about the lower average wages in the region, it is also important to remember that the per capita personal income will be skewed somewhat by the lower median age in El Paso County. El Paso County had a median age of 35.2 in 2022, which is younger than both the state (37.7) and nation (39). All individuals, including children, are in the denominator of the calculations for per capita personal income, which is why this metric needs to be used with caution.

Residential Real Estate—From October 2022 through September 2023, a total of 2,439 single-family permits were issued in El Paso County. This is a decrease of 1,638 permits issued (down 40%) compared to the same period the year before. Through September 2023, permits for 143 multifamily projects and 2,176 units were pulled in 2023. Q2 2023, average monthly rents for apartments were $1,480 in the Colorado Springs Metro area. For Q2 2023, Denver Metro area's average monthly rent for apartments was $1,878. Thus, Colorado Springs has an average monthly rent roughly $400 per month less than the Metro Denver region. It is worth noting that the average monthly rent in the U.S. is roughly $1,800 per month according to Moody's Analytics.

There were permits for 8,683 dwelling units (both single-family homes and multifamily units) pulled in 2022 in the Pikes Peak region. The Pikes Peak region needs 8,500 dwelling units, either single-family or multifamily, per year between 2023 and 2028 when incorporating both population growth and the existing shortage of housing. These calculations by Data-Driven Economic Strategies incorporate research by Common Sense Institute and input from the Colorado State Demography Office. Through September 2023, the region issued 4,165 single- and multifamily permits combined. Due to high interest rates and significantly higher home prices, this lower level of building ensures that the "ideal" 8,500 permits will not be met this year. While interest rates are still high and housing supply is still low, there will be both insufficient building and upward pressure on prices in the medium and long term.

In Q2 2023, the median price for an existing single-family home in Colorado Springs was $467,100, a 2.9% decrease from Q2 2022, although overall prices have remained steady over the last 18 months. By way of comparison, the U.S. median home price was $402,600, with a 2.4% decrease over the same period. Colorado Springs' median home prices are 16% higher than the U.S.

The housing opportunity index for Colorado Springs, compiled by Wells Fargo and the National Association of Home Builders, decreased from 71.4% in 2019 Q3 to 21.5% in 2023 Q3 (most recent data available). This metric measures the percentage of homes sold in the region that are affordable to the median household income.

Foreclosures increased 435% in 2022, to 771, after 12 consecutive years of foreclosure declines in El Paso County. It is important to remember, however, that foreclosures across the country were at record lows during 2020 and 2021 due to the pandemic foreclosure moratorium. For context, the average number of foreclosures in El Paso County in 2022 were 64 per month. For comparison, from 2005 to 2007, the average number of foreclosures per month was about four times higher, at 233.

Commercial Real Estate—Average commercial office vacancy rates in Colorado Springs dropped slightly to 9.5% in 2022 from 9.8% in 2021. Through September 2023, the vacancy rate rose to 11.5%. This stands in sharp contrast to national office vacancy rates, which rose to 19.2% in 2023 Q3 according to Moody's Analytics. At the same time, average office rents in Colorado Springs increased slightly from $24.43 per square foot in 2021 to $24.89 per square foot in 2022. They continued to rise to $26.07 per square foot in Q3 2023. Data-Driven Economic Strategies uses the CoStar Group and Olive Real Estate Group to compile local commercial real estate information.

The average industrial vacancy rate in Colorado Springs rose to 4.7% in 2022 from 3.7% in 2021. Through September 2023, the rate stood at 4.5%. Average rents rose from $9.40 per square foot in 2021 to $10.25 per square foot in 2022. They continued to rise to $10.53 per square foot in Q3 2023. Although industrial space was one of the "super stars" of the pandemic primarily due to increases in e-commerce, the national and regional trend is for some normalization in this commercial real estate subsector.

Average retail vacancy rates in Colorado Springs declined from 5.6% in 2021 to 4.7% in 2022. Rates stood at 4.6% through September 2023. Average rents increased from $14.83 per square foot in 2021 to $16.77 in 2022. They continued to increase to $18.02 per square foot in Q3 2023. Although the expectation nationwide was for retail space to suffer during and after the pandemic, the reality

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is that this subsector was already in transition prior to the increase in e-commerce during the pandemic. Nationwide, neighborhood-type retail is performing better than larger malls.

Average medical office vacancy rates in Colorado Springs increased from 8.5% in 2021 to 8.7% in 2022. Through September 2023, vacancies stood at 8.5%. Average rents increased in this property type, from $25.98 per square foot in 2021 to $26.41 in 2022. In Q3 2023, they declined to $23.79 per square foot. As of Q3 2023, the cost of retail space was 24.9% lower in Colorado Springs than in Denver, office space was 24.1% lower, and medical office space was 12.5% lower. Industrial spaces are more expensive in Colorado Springs.

Sales and Use Tax—Colorado Springs sales and use tax collections increased 7.2% to $247.8 million in 2022. Sales and use tax collections are up 0.6% in September 2023 compared to September 2022. Most regions experienced windfall gains in sales and use tax revenues due to pandemic-related stimulus, although now revenues are more in line with historical trends.

Education—In 2022, eight of the 17 school districts in the Colorado Springs MSA exceeded the state of Colorado's average high school graduation rate of 82.3%.

In 2022, 33.2% of the Colorado Springs MSA's population age 25 and older had some college or an associate degree, which is higher than the state overall (27%) and the United States (27.9%). In addition, 42.3% of this population had attained a bachelor's degree or higher, which is slightly lower than the state (45.9%) but significantly higher than the nation (35.7%) according to U.S. Census Bureau 1-year data on educational attainment. ✤

Contributors:
Tatiana Bailey and Rebecca Wilder, Data-Driven Economic Strategies (DDES)

Photo courtesy of Tectonic Components.

Southwest Colorado

The southwest corner of Colorado includes Archuleta, Dolores, La Plata, Montezuma, and San Juan Counties, as well as the Southern Ute and Ute Mountain Ute Tribes. The region encompasses 6,584 square miles, or 6.3% of the total land area in Colorado. Publicly managed lands make up 45% of the district; 38% is in private ownership, and 17% are tribal lands. The area is rural, with small communities that depend upon each other to provide goods and services within the larger regional economy.

Net migration in the region remained positive through 2020. Some of the inbound migration was due to the pandemic, and workers who could work remotely sought refuge in communities with abundant natural assets, access to open space, and small-town hospitality—like southwest Colorado. The regional population of the five counties was estimated at 100,018 in 2022, averaging 0.8% annual growth since 2010.

The region's employment rebounded strongly from the pandemic. In 2020, the regional unemployment rate stood at 6.6%. In September 2023, it was 2.9%, lower than the state rate of 3.2%. In 2022, collective employment across the five counties averaged 50,230, an increase of 3.3% from the prior year, according to the Bureau of Labor Statistics LAUS data. With such a strong labor force participation rate, there are fewer people available to fill the job openings in some industries. Additionally, southwest Colorado is trending to have fewer young people and more retirees.

Regionally, the tourism industry provides the largest share of employment (22%). Economic drivers include cultural attractions such as Mesa Verde National Park, national monuments (Canyon of the Ancients, Chimney Rock, Yucca House), the Durango & Silverton Narrow Gauge Railroad, as well as recreational opportunities on public lands. Top employment sectors vary by county. In Archuleta and San Juan it is accommodation and food services; in Dolores and Montezuma it is local government; and in La Plata, retail trade is the largest employment sector.

Top industry growth projections from 2023 through 2028 include Management of Companies and Enterprises (24%); Educational Services (17%); Manufacturing (13%); Transportation and Warehousing (13%); and Professional, Scientific, and Technical Services (12%), according to data from Lightcast.

Southwest Colorado Accelerator Program for Entrepreneurs (SCAPE)

One regional economic development strategy is to foster entrepreneurship in diverse industries. The Southwest Colorado Accelerator Program for Entrepreneurs (SCAPE) celebrated its 10th year of operations in 2023. Their mission is to help create more high growth, job-creating companies in southwest Colorado by providing education, as well as mentoring and access to funding for startups and early-stage companies. It has launched 52 companies that have raised $54 million in capital, contributing to the creation of 230 local jobs. SCAPE's participating companies represent a variety of industries from tech, aerospace, craft food and beverage, and outdoor recreation.

A few notable recent graduates of the SCAPE process include *Timber Age Systems,* headquartered in Durango, which produces factory-built modular housing with a focus on helping to solve the housing crisis in southwest Colorado. Ponderosa pine is a sustainable and logical raw material for their innovate process of using cross-laminated timber to design and build their products.

EsoTerra Cider, founded in the Town of Dolores, crafts premium artisanal hard ciders, capitalizing on southwest Colorado's spectacular apple varieties and unique terroir.

Cold Case Gear, headquartered in Pagosa Springs, manufactures phone cases built from space-age materials to protect technology during the most extreme expeditions.

Tectonic Components, headquartered in Durango, builds a superior mountain bike pedal, using innovative materials and design.

Eclipse DOT, headquartered in Hesperus, takes the complexity out of compliance through an online platform, training programs, and business consultations for the commercial trucking industry.

Farm to Summit, headquartered in La Plata County, utilizes local and imperfect produce to create dehydrated meals that are nutrient-dense, flavor-packed, and sustainably packaged.

When start-up companies grow into second-stage companies, they can be recognized for their impact on regional and state economies. *Colorado Companies to Watch* is a unique statewide awards program that was launched in 2009 and led by the state Office of Economic Development and International Trade (OEDIT), in partnership with corporate donors and economic development groups. By 2013, southwest Colorado boasted 12 companies that had been honored as Colorado Companies to Watch, the most of any region in the state outside the Front Range. Currently, the region is home to more than 20 winners.

MODSTREET was a winner in 2023. Headquartered in Durango, they provide unique, high quality, flexible, outdoor parklets (sidewalk extension for public use) and other modular products for retailers and communities alike.

Regional investments are also important for economic health. One indicator of investment comes from the Opportunity Zone (OZ) Program. At its best, the program provides opportunities for equitable distribution of capital in rural areas. While the OZ Program is sunsetting in 2026, OEDIT's efforts helped the region increase knowledge, provide technical assistance, and create partnerships for ongoing, innovative community development.

In southwest Colorado, OZ investments in Durango support workforce/affordable housing, hospitality projects, and business operations. These include the *Gauge Apartments,* a development of 89 units located adjacent to trailheads and the Animas River south of downtown Durango.

Photo courtesy of Region 9 EDD.

The purchase and renovation of the *Super 8 Motel* just south of downtown Durango is the first traditional OZ hospitality investment and has 85 rooms with great access to the Animas River and trailheads.

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Agile Space Industries, designs, manufactures and tests integrated aerospace propulsion systems and has the only independent propulsion test facility in the country.

Factors affecting cost of living in the region are similar to those in the state and nation. Inflation, transportation and energy, and housing have impacted the purchasing power of peoples' paychecks. Health care and insurance are another factor affecting cost of living. Higher premiums and fewer providers places additional pressure on individuals and families to resort to more costly plans or to choose subpar or no coverage.

Broadband

Access to broadband technology continues to be an issue across the region. High-speed internet service is an essential utility, and the region recognizes that improved access to reliable broadband benefits education, health care, and businesses. Most communities, except for Durango and Cortez, are defined as unserved (lack access to 25 Mbps) and underserved (lack access to 100 Mbps). Below are the regional statistics according to BroadbandNow.

- La Plata County: 37% underserved, and 16% unserved
- Montezuma County: 42% underserved, and 11% unserved
- Dolores County: 76% underserved, and 15% unserved
- Archuleta County: 57% underserved, and 13% unserved
- San Juan County: 81% underserved, and 6% unserved

In addition to low speeds, customers pay high costs for poor connectivity. The lack of affordable and abundant connectivity curtails economic development, educational attainment, investment in businesses, entrepreneurship, and public safety responses. Compounding the situation is the lack of middle-mile infrastructure within the region. The current strategy is to collaborate with neighboring communities to build a redundant loop around southwest Colorado:

Photo courtesy of Timber Age.

- Along I-25 from Denver to Walsenburg
- Along Highway 160 from Walsenburg to Cortez
- From Cortez to Grand Junction
- From Grand Junction along I-70 back to Denver

It is also important to build or lease existing fiber:

- Extend the fiber coming across Wolf Creek Pass along Highway 160 all the way to the connection with the Ute Mountain Ute Tribe South of Towaoc
- Along 550 from Durango to a regenerations station six miles north of Silverton
- Along Highway 140 south from Hesperus to the NM border
- Along Highways 184 and 145 from Mancos to Dolores and Rico
- Along Highway 491 from Cortez to Dove Creek

The lack of affordable homes is also impacting employers' ability to attract or retain workers across the region in the top sectors of Tourism, Health Care, and Accommodation and Food Services. These sectors tend to pay lower wages. This creates a situation where employees leave an employer for a slightly higher wage in a similar industry or they leave the area in search of higher wages and more affordable housing.

To help address this issue, local jurisdictions are getting ready for the implementation of Proposition 123, which

AVERAGE ANNUAL WAGE BY SECTOR
REGION 9 COUNTIES AND COLORADO 2022

Sector	Archuleta	Dolores	La Plata	Montezuma	San Juan	Colorado
Agriculture	$44,022	$39,622	$36,263	$41,129	ND	$46,054
Mining	50,280	95,179	103,756	59,169	95,179	159,447
Utilities	91,263	ND	99,568	77,466	ND	123,865
Construction	48,340	55,310	58,803	46,147	55,310	75,581
Manufacturing	35,999	48,972	54,808	41,276	48,972	82,609
Wholesale Trade	121,043	46,957	77,918	60,451	74,806	106,796
Retail Trade	33,211	31,173	37,128	36,382	36,323	42,360
Transportation & Warehousing	70,137	40,884	69,382	78,326	70,137	66,876
Information	54,222	95,962	104,165	53,388	95,962	136,887
Finance and Insurance	62,401	103,458	116,606	64,296	103,458	121,618
Real Estate & Rental and Leasing	44,700	55,495	56,289	69,029	56,634	79,655
Professional & Technical Services	64,838	67,594	89,132	70,080	84,907	121,635
Mgmt of Companies & Enterprises	109,511	ND	89,106	110,118	ND	161,364
Administrative & Waste Services	34,710	77,248	45,367	34,705	43,112	58,799
Educational Services	29,331	59,137	68,059	41,854	59,137	52,889
Health Care and Social Assistance	38,455	54,356	60,495	44,892	54,356	62,938
Arts, Entertainment, & Recreation	26,684	29,703	28,841	53,942	35,765	46,988
Accommodation & Food Services	28,464	26,716	27,123	23,663	29,479	31,097
Other Services	37,886	36,543	39,685	30,027	18,860	52,444
Federal Government	70,787	54,844	86,401	72,570	62,729	95,223
State Government	60,622	57,765	57,989	56,861	46,854	76,866
Local Government	58,694	28,572	60,052	40,187	45,053	58,827
Average Annual Wage	43,075	38,717	56,322	43,459	34,377	74,407
Annual Livable Wage	92,796	74,210	86,196	71,292	81,276	ND

Sources: Bureau of Labor Statistics, Quarterly Census of Employment and Wages and Region 9 Economic Development District.

will make several hundred million dollars available for affordable housing. Affordable housing, as defined by Proposition 123, includes rental housing at or below 60% of the area median income (AMI) and for-sale housing at 100% of AMI, ensuring that households spend less than 30% of their monthly income on housing costs. To be eligible for this funding, local jurisdictions must commit to increasing their affordable housing stock above a baseline amount. These jurisdictions need to determine their baseline of affordable housing units and commit to increasing it by 3% each year for three years. Archuleta County, Pagosa Springs, Dolores County, Dove Creek, Rico, La Plata County, and several others have already taken steps or are planning to file their commitments by the November 1, 2023, deadline.

Livable wages are essential to the social and economic health of any community. According to the Region 9 Economic Development District's 2022 Livable Wage Update, when livable wages are linked to average annual wages by sector in each county in the region, most employment sectors do not provide enough income to meet the basic needs of a family of four, especially if there is only one wage earner in the household.

In 2022, the average earnings per job were $59,100. This is $21,700 below the national average earnings of $80,800.

To date, southwest Colorado continues to maximize its human and economic assets to realize a shared vision –

We strive to encourage economic development that preserves our small town and traditional heritage, takes care of our natural resources, and provides opportunities for our children to stay in southwest Colorado. ✤

Contributors:

Donna Graves, Information Services, Inc.

Heather Otter and Laura Lewis Marchino, Region 9 Economic Development District

Steering Committee

Chris Eisinger
Senior Research Scientist
Colorado Energy and Carbon Management Commission
303-894-2100 x 5111
chris.eisinger@state.co.us

Elizabeth Garner
State Demographer
Colorado Department of Local Affairs
303-864-7720
elizabeth.garner@state.co.us

Tony Gurzick
Grizzly Peak Consulting
970-799-0052
tony.gurzick@hotmail.com

David Hansen
Economist
Colorado Legislative Council
303-991-0072
david.hansen@coleg.gov

Adam Illig
Data Scientist
Business Research Division
University of Colorado Boulder
303-492-3182
adam.illig@colorado.edu

Katharine Jones
Economist
Denver Regional Office
U.S. Dept. of Housing and Urban Development
303-672-5060
Katharine.Jones@hud.gov

Kristina Kolaczkowski
Associate Director of Healthcare Economics
Optum
763-361-1565
kristina.kolaczkowski@optum.com

Brian Lewandowski
Executive Director
Business Research Division
University of Colorado Boulder
303-492-3307
brian.lewandowski@colorado.edu

Glenda Mostek
Executive Director
Colorado Nursery and Greenhouse Association
303-758-6672
gmostek@yahoo.com

Ron New
Director of Operations
WhippleWood Advisors
303-551-8030
rnew@whipplewoodadvisors.com

Jennifer Pinsonneault
Sr. Program Manager, Economic Vitality
Community Vitality Department
City of Boulder
303-441-3017
pinsonneaultj@bouldercolorado.gov

Penn Pfiffner
Consulting Economist
Construction Economics, LLC
303-233-7731
penn@constecon.com

Brian Pool
Partner
Government Performance Solutions, Inc.
303-884-8646
brian@governmentperformance.us

Rachel Rose
Manager - Strategy and Analytics
Colorado Office of Economic Development and International Trade
303-892-3830
rachel.rose@state.co.us

Tim Sheesley
Chief Economist
Xcel Energy
303-294-2662
tim.sheesley@xcelenergy.com

Richard Thompson
Professor
School of Business and Economics
National University
720-839-3890
richardthompson@ncu.edu

Kate Watkins
Economist
Bright Fox Analytics
kate.m.watkins@gmail.com

Joseph Winter
Program Manager CES
Colorado Department of Labor and Employment
303-318-8857
joseph.winter@state.co.us

Richard Wobbekind
Faculty Director
Leeds School of Business
Business Research Division
303-492-1147
richard.wobbekind@colorado.edu

Estimating Groups

Agriculture

Glenda Mostek (Chair)
Executive Director
Colorado Nursery and Greenhouse Association
gmostek@yahoo.com

Elena Brookover
Risk Advisor
AgRisk Advisors
303-539-9349
Elena.Brookover@cropins.net

Nicholas Colglazier
Executive Director
Colorado Corn Administrative Committee
ncolglazier@coloradocorn.com

Tyler Cozzens
Agricultural Economist
Livestock Marketing Information Center
303-716-9934
tyler.cozzens@lmic.info

Heath Dewey
Agriculture Market Reporter
Livestock, Poultry, and Grain Market News Division, USDA - Agricultural Marketing Service
970-353-9750
Heath.dewey@usda.gov

Chris Dias
Agriculture Market Reporter
Livestock, Poultry, and Grain Market News Division, USDA - Agricultural Marketing Service
970-353-9750
chris.dias@usda.gov

Brad Erker
Executive Director
Colorado Wheat Administrative Committee
970-449-6994
brad.erker@coloradowheat.org

Stephen Koontz
Professor
Department of Agricultural & Resource Economics
Colorado State University
970-491-7032
stephen.koontz@colostate.edu

Tom Lipetzky
Director, Marketing & Strategic Initiatives
Colorado Department of Agriculture (Retired)
303-869-9172
tom.lipetzky@state.co.us

Katelyn McCullock
Director
Livestock Marketing Information Center
303-716-9936
katelyn.mccullock@lmic.info

Tony Miller
President
First FarmBank
970-346-7900
TMiller@firstfarmbank.com

Rodger Ott
Regional Director
USDA NASS Mountain Regional Field Office – Colorado
720-787-3150
rodger.ott@usda.gov

Julie Schmidt
Agricultural Statistican
National Agricultural Statistics Service
USDA NASS Mountain Regional Field Office – Colorado
720-787-3150
julie.schmidt@usda.gov

Tyler Wilson
Deputy Director
USDA NASS Mountain Regional Field Office – Colorado
720-787-3150
tyler.wilson@usda.gov

Around the State

Tatiana Bailey
Director
Data-Driven Economic Strategies
tbailey@ddestrategies.org

Shannon Baker
Mission Coordinator
Pueblo Economic Development Corp
719-544-2000
sbaker@pedco.org

Austin Brown
Economic Vitality Specialist
City of Louisville
303-335-4529
abrown@louisvilleco.gov

Adam Crowe
Economic Development Manager
Larimer County Economic and Workforce Development
970-498-6641
acrowe@larimer.org

Erin Fosdick
President and CEO
Longmont Economic Development Partnership
303-651-0128
erin@longmont.org

Katie Geiger
Senior Economic Specialist
City of Fort Collins
kgeiger@fcgov.com

Donna Graves
Information Services, Inc.
970-385-4897
dkgraves1956@gmail.com

Steve Jozefczyk
Deputy Director
Grand Junction Economic Partnership
970-245-4332
steve@gjep.org

Laura Lewis Marchino
Executive Director
Region 9 Economic Development District of SW Colorado
970-247-9621
laura@scan.org

Jill Mendoza
Economic Development Manager
Town of Superior
303-499-3675
jillm@superiorcolorado.gov

Heather Otter
Economic Development Project Manager
Region 9 Economic Development District of SW Colorado
heather@scan.org

Candace Payne
Executive Director
East Central Council of Local Governments
719-348-5562
cpayne@prairiedevelopment.com

Nathan Perry
Associate Professor of Economics
Colorado Mesa University
970-248-1888
naperry@coloradomesa.edu

Jennifer Pinsonneault
Sr. Program Manager, Economic Vitality
Community Vitality Department
City of Boulder
303-441-3017
pinsonneaultj@bouldercolorado.gov

Stephanie Pitts-Noggle
Economic Development Manager
Town of Erie
303-926-2767
spn@erieco.gov

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Estimating Groups

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Jeff Shaw
President and CEO
Pueblo Economic Development Corp
719-544-2000
jshaw@pedco.org

Cassidy Stubblefield
Community Support Coordinator and Operations Manager
Upstate Colorado Economic Development
CStubblefield@upstatecolorado.org

Richard Werner
President and CEO
Upstate Colorado Economic Development
970-356-4565
rwerner@upstatecolorado.org

Matt Wiggins
Senior Director of Economic Vitality and Special Projects
Boulder Economic Council
303-442-1044
matt.wiggins@boulderchamber.com

Rebecca Wilder
Associate Director of Data Analytics
Data-Driven Economic Strategies
704-756-3305
rwilder@ddestrategies.org

Construction

Katharine Jones (Co-Chair)
Economist
Denver Regional Office
U.S. Dept. of Housing and Urban Development
303-672-5060
Katharine.Jones@hud.gov

Penn Pfiffner (Co-Chair)
Consulting Economist
Construction Economics, LLC
303-233-7731
penn@constecon.com

Michael Gifford
President
Associated General Contractors of Colorado
303-388-2422
mgifford@agccolorado.org

Tony Milo
Executive Director
Colorado Contractors Association
303-290-6611
tmilo@ccainfo.org

Chelsea Scott
Senior Real Estate Consultant
John Burns Real Estate Consulting
cscott@jbrec.com

Education and Health Services

Kristina Kolaczkowski (Co-Chair)
Associate Director of Healthcare Economics
Optum
763-361-1565
kristina.kolaczkowski@optum.com

Richard Thompson (Co-Chair)
Professor
School of Business and Economics
National University
720-839-3890
richardthompson@ncu.edu

Emily Johnson
Director of Policy Analysis
Colorado Health Institute
johnsone@coloradohealthinstitute.org

Emily Orr
Physical and Behavioral Health Unit Manager
Health Care Policy and Financing
Department of Health Care Policy and Financing
330-206-9204
emily.orr@state.co.us

Emily Santich
Colorado Health Institute
santiche@coloradohealthinstitute.org

Financial Activities

Ron New (Chair)
Director of Operations
WhippleWood Advisors
303-551-8030
rnew@whipplewoodadvisors.com

Sean Breeze
Broker Associate
Your Castle Realty
303-916-7503
sean.breeze@yourcastle.org

Steve Levine
Senior Director Risk Management and Associate General Counsel
CircusTrix Holdings, LLC
720-201-4685
steve.levine@circustrix.com

Richard Morgan
SVP/Head of Lending - Denver
Kirkpatrick Bank
richardmorgan644@gmail.com

Jessica Ostermick
Director
CBRE
303-264-1927
jessica.ostermick@cbre.com

Frances Padilla
District Director
SBA Colorado District Office
U.S. Small Business Administration
303-844-4293
frances.padilla@sba.gov

Troy Sibelius
Executive Vice President
The Buckner Company
303.756.9909
tsibelius@buckner.com

John Trull
VP, Regulatory Affairs
GoWest Credit Union Association
971-263-0681
jtrull@gowest.org

Jenifer Waller
President
Colorado Bankers Association
303-825-1575
jenifer@coloradobankers.org

Patricia Wells
Director of Communications
Colorado Bankers Association
303-825-1575
patricia@coloradobankers.org

Government

Jennifer Pinsonneault (Chair)
Sr. Program Manager, Economic Vitality
Community Vitality Department
City of Boulder
303-441-3017
pinsonneaultj@bouldercolorado.gov

Brittney Becerra
Advocacy and Special Projects Associate
Colorado Counties Inc.
720-202-5296
bbecerra@ccionline.org

Dianne Criswell
Attorney
General Counsel, Colorado Special District Property & Liability Risk Pool
Special Districts Association of Colorado
303-863-1733
dianne@sdaco.org

Justin Fazzari
Senior Broadband Strategist
Sanborn+AppGeo
justinfazz@gmail.com
Ben Mendenhall
Consultant
ben5280@gmail.com

Meredith Moon
Chief Economist and Director of Economic Competitiveness
Metro Denver EDC
meredith.moon@metrodenver.org

Heather Stauffer
Legislative Advocacy Manager
Colorado Municipal League
303-831-6411
hstauffer@cml.org

Bill Sutter
Chief Financial Officer
Boulder Valley School District
303-641-9658
bill.sutter@bvsd.org

Joel Wagner
Deputy Finance Director
Finance
City of Boulder
303-441-3871
wagnerj@bouldercolorado.gov

Information

Kate Watkins (Chair)
Economist
Bright Fox Analytics
kate.m.watkins@gmail.com

Arielle Brachfeld
Deputy Film Commissioner
Colorado Office of Film Television & Media
303-892-8769
arielle.brachfeld@state.co.us

Adam Illig
Data Scientist
Business Research Division
University of Colorado Boulder
adam.illig@colorado.edu

Brian Lewandowski
Executive Director
Business Research Division
University of Colorado Boulder
303-492-3307
brian.lewandowski@colorado.edu

Makayla O'Malley
Program Manager
Colorado Office of Film Television & Media
makayla.omalley@state.co.us

Donald Zuckerman
Film Commissioner
Colorado Office of Film Television & Media
303-892-3896
donald.zuckerman@state.co.us

International Trade

Rachel Rose (Chair)
Manager - Strategy and Analytics
Colorado Office of Economic Development and International Trade
303-892-3830
rachel.rose@state.co.us

John Addison
Marketing Specialist
Markets Division
Colo Dept of Agriculture
303-869-9189
john.addison@state.co.us

Bryce Cooke
Senior Economist
Office of State Planning and Budgeting
703-447-0347
bryce.cooke@state.co.us

Denise Froning
Trade Policy Committee Chair
World Trade Center Denver
denise.froning@gmail.com

Karen Gerwitz
President
World Trade Center Denver
303-592-5760
karen@wtcdenver.org

Inta Morris
Principal
Confluence Strategies, LLC
inta@confluencestrategies.biz

Macie Murcray
Strategy & Analytics Coordinator
Colorado Office of Economic Development and International Trade
303-892-3830
macie.murcray@state.co.us

Anthony Russo
President
TradeHub International
arusso@tradehubinternational.com

Leisure and Hospitality

Tony Gurzick (Chair)
Grizzly Peak Consulting
970-799-0052
tony.gurzick@hotmail.com

David Becher
Director of Research
RRC Associates
303-396-1611
david@rrcassociates.com

Katy Black
Managing Director
HVS
970-305-2229
kblack@hvs.com

Jill Corbin
Deputy Director of Destination Stewardship
Colorado Tourism Office
Office of Economic Development and International Trade
303-534-5225
jill.corbin@state.co.us

Elizabeth Fogarty
Director
Visit Grand Junction
970-256-4060
ElizabethF@GJcity.org

Tom Foley
Senior Vice President Business Operations and Analytics
Inntopia
tfoley@inntopia.com

Allison Kohn
Director, Government and Community Affairs
VISIT DENVER
303-571-9466
akohn@visitdenver.com

Denise Mickelsen
Communication Director
Colorado Restaurant Association
dmickelsen@corestaurant.org

Melanie Mills
President/CEO
Colorado Ski Country USA
303-837-0793
mmills@coloradoski.com

Hayes Norris
Communications Manager
Colorado Tourism Office
hayes.norris@state.co.us

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Estimating Groups

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Peggi O'Keefe
Executive Director
Colorado Gaming Association
peggi@clearstrategies.biz

Doug Price
President and CEO
Visit Colorado Springs
719-685-7633
doug@VisitCOS.com

Richard W. Scharf
President and CEO
VISIT DENVER
303-571-9415
rscharf@visitdenver.com

Hanna Scovill
Research Economist
Metro Denver EDC
hanna.scovill@metrodenver.org

Alexea Veneracion
Director of Communications
Visit Colorado Springs
719-685-7639
Alexea@visitcos.com

Tim Wolfe
Director
Colorado Tourism Office
Office of Economic Development & International Trade
tim.wolfe@state.co.us

Manufacturing

David Hansen (Chair)
Economist
Colorado Legislative Council
303-991-0072
david.hansen@coleg.gov

Jennifer Hagan-Dier
Vice President and COO
Manufacturer's Edge
303-709-9054
jhagan-dier@manufacturersedge.com

Adam Illig
Data Scientist
Business Research Division
University of Colorado Boulder
303-492-3182
adam.illig@colorado.edu

Elizabeth A. Ramey
Principal Economist
Colorado Legislative Council Staff
303-866-3522
elizabeth.ramey@state.co.us

Daniel Salvetti
Semiconductor Industry Manager
Colorado Office of Economic Development and International Trade
720-601-5055
daniel.salvetti@state.co.us

Rebecca Wilder
Associate Director of Data Analytics
Data-Driven Economic Strategies
704-756-3305
rwilder@ddestrategies.org

Natural Resources and Mining

Chris Eisinger (Chair)
Senior Research Scientist
Colorado Energy and Carbon Management Commission
303-894-2100 x 5111
chris.eisinger@state.co.us

Alexandra Evans
Policy Analysat
Center for the New Energy Economy
Colorado State University
Alexandra.I.Evans@colostate.edu

Todd Ohlheiser
Executive Director
Colorado Stone, Sand and Gravel Association, and Colorado Ready Mixed Concrete Association
303-882-6879
todd@coloradocaa.org

Mike O'Keeffe
Geologist
Colorado Geological Survey
303-384-2637
okeeffe@mines.edu

Alexander Papp
Consultant
Coalgeo, LLC
apapp5@comcast.net

Suzanne Tegen
Assistant Director
Center for the New Energy Economy
720-231-6182
Suzanne.Tegen@colostate.edu

John Tobin
President
Natural Reources Education Program
303-674-7083
jtobin3es@gmail.com

Other Services

Adam Illig (Chair)
Data Scientist
Business Research Division
University of Colorado Boulder
303-492-3182
adam.illig@colorado.edu

Population, Economy, and Employment

Elizabeth Garner (Co-Chair)
State Demographer
Colorado Department of Local Affairs
303-864-7720
elizabeth.garner@state.co.us

Joseph Winter (Co-Chair)
Program Manager CES
Colorado Department of Labor and Employment
303-318-8857
joseph.winter@state.co.us

Monicque Aragon
Managing Senior Economist
Colorado Department of Labor and Employment
monicque.aragon@state.co.us

Roberto Berkowitz
Student Research Assistant
Business Research Division
Leeds School of Business
Roberto.Berkowitz@colorado.edu

Jayson Brubaker
Student Research Assistant
Business Research Division
Leeds School of Business
Jayson.Brubaker@Colorado.EDU

William Craighead
University of Colorado Colorado Springs
wcraigh2@uccs.edu

Cindy DeGroen
Projections Demographer
Colorado Department of Local Affairs
303-864-7752
cindy.degroen@state.co.us

Lucas Ericson
Student Research Assistant
Business Research Division
Leeds School of Business
Lucas.Ericson@colorado.edu

Ryan Gedney
Senior Economist
Colorado Department of Labor and Employment
303-318-8858
ryan.gedney@state.co.us

Adam Illig
Data Scientist
Business Research Division
University of Colorado Boulder
303-492-3182
adam.illig@colorado.edu

Michelle Kim
Student Research Assistant
Business Research Division
Leeds School of Business
michelle.kim-2@colorado.edu

Brian Lewandowski
Executive Director
Business Research Division
University of Colorado Boulder
303-492-3307
brian.lewandowski@colorado.edu

Robert McNown
Economist
JTC Econometrics
mcnownr@gmail.com

Marcus Popoff
Student Research Assistant
Business Research Division
Leeds School of Business
marcus.popoff@colorado.edu

Shivam Vats
Student Research Assistant
Business Research Division
Leeds School of Business
Shivam.Vats@colorado.edu

Richard Wobbekind
Faculty Director
Leeds School of Business
Business Research Division
303-492-1147
richard.wobbekind@colorado.edu

Professional and Business Services

Brian Pool (Chair)
Partner
Government Performance Solutions, Inc.
303-884-8646
brian@governmentperformance.us

Ashley Cawthorn
Marketing Director
Berg Hill Greenleaf Ruscitti LLP
303-402-1600
adc@bhgrlaw.com

Mark Hamouz
Engineering Consultant
jmhmah@aol.com

Adam Illig
Data Scientist
Business Research Division
University of Colorado Boulder
adam.illig@colorado.edu

Michael Yeadon
Business Intelligence Consultant
Keysight Technologies
303-662-2681
michael.yeadon@keysight.com

Special Section Contributors

Jayson Brubaker
Student Research Assistant
Business Research Division
Leeds School of Business
Jayson.Brubaker@Colorado.EDU

John Carlson
Fiscal Compliance Analyst
University of Colorado Boulder
jcarlsonjr@gmail.com

Daniel Ryley
Vice President of Corporate Attraction
Metro Denver Economic Development Corporation
720-898-7018
daniel.ryley@metrodenver.org

Antonio Soto
Director
Minority Business Office
Office of Economic Development and International Trade
Antonio.Soto@state.co.us

Trade, Transportation, and Utilities

Tim Sheesley (Chair)
Chief Economist
Xcel Energy
303-294-2662
tim.sheesley@xcelenergy.com

Gregory Fulton
President
Colorado Motor Carriers Association
303-433-3375
greg@cmca.com

Matthew Groves
Vice President of Legal, Regulatory & Compliance
Colorado Automobile Dealers Association
303-282-1449
Matthew.groves@colorado.auto

Laura Jackson
Senior Director, Research and Market Intelligence
Denver International Airport
303-342-2282
laura.jackson@flydenver.com

Brian Lewandowski
Executive Director
Leeds School of Business
University of Colorado Boulder
303-492-3307
brian.lewandowski@colorado.edu

William Mixon
Senior Economist
Office of State Planning and Budgeting
william.mixon@state.co.us

Pam Reichert
Senior Manager, Air Service Development
Denver International Airport
pam.reichert@flydenver.com

Tim Wonhof
Program Manager
Office of Labor Market Information
Colorado Department of Labor and Employment
tim.wonhof@state.co.us

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