

# COLORADO WINE INDUSTRY ECONOMIC IMPACT STUDY



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## EXECUTIVE SUMMARY

The production and sale of Colorado wine contributes to statewide and local economic growth through multiple mechanisms. Wine production involves the hiring of workers and wage outlays for winemakers, sales staff, and other direct employment, and the generation of revenues from on- and off-site sales. Wineries also support tourism through tasting rooms and placemaking. Lastly, wine produced in Colorado is then sold downstream through various channels, including wholesalers, restaurants, bars, and grocers, each of which generates revenues through added mark-ups.

The Colorado Wine Industry Development Board has commissioned this study to provide a detailed, data-rich assessment of the economic contributions of the wine industry—excluding hard cider—to the Colorado state economy. Findings will support the Colorado Wine Industry Development Board’s work to further support the growth of the industry and communicate its importance to legislators and other industry and community stakeholders.

### *Grape Production*

**Colorado's terroir.** Colorado's grapes are sourced primarily from two American Viticultural Areas (AVAs)—the Grand Valley AVA (75,990 acres, established in 1991), and the West Elks AVA (48,405 acres, established in 2001)—as well as other areas across the state for grape production that have not yet received AVA designation.

In 2019, Colorado vineyards totaled an estimated 750 acres of vineyard land and estimated production of 2,100 tons of grapes, the fifth consecutive year of 2,000 or more tons. An estimated 87.5% of known vineyard acreage was in Mesa County, followed by Delta County (6.9%), with the remainder distributed across the state. The most common variety of *Vitis vinifera* harvested by tonnage in 2019 was Riesling (12.3%), followed by Merlot (8.4%), Cabernet Sauvignon (8.4%) and Cabernet Franc (7.7%).

Non-*vinifera* French-American hybrids, such as Chambourcin, have gained increasing prominence in Colorado's viticulture industry in recent years, due to the heartier constitution of these grapes. These grapes have proven more resilient than *Vitis vinifera* grapes in years of October freezes (e.g., in 2019 and 2020) and other climatic inconsistencies that can damage the harvest.

**Vineyards remain mostly small, family operations, but vary by region.** Vineyards in Colorado averaged less than 10 acres per operation, and with a survey-based median holding size of 2.9 acres. The overall tonnage per acre was 3.8, but this varies widely based on location and climatic conditions. For example, between 2008 and 2019, annual yield per acre in Mesa County (Grand Valley AVA) has averaged nearly three times that of Delta County (West Elks AVA).

## *Wine Production and Distribution & Sales*

**Wine production is growing.** Between fiscal years 2014 and 2020, bottled wine production, excluding ciders, more than doubled, reaching more than 259,000 cases. Colorado is now home to 154 wineries spread across 29 counties, ranging in size from small, sole proprietorships producing less than 500 cases a year to large scale operations with multistate distribution.

**The wine industry is a growing source of wealth and economic activity in Colorado.** In 2019, the industry—comprised of wine production, distribution & sales, and wine tourism—directly employed 890 workers and generated revenues of \$79.3 million. Wineries alone directly employed an estimated 540 workers in 2019.

As of early 2021, there were 154 wineries (excluding cideries) operating across 29 counties in Colorado. Winery revenues have increased (inflation-adjusted) at a 9% compound annual growth rate between 2012 and 2019. In 2019, winery revenues alone totaled \$50.7 million, with an additional \$8.4 million in revenues generated in the form of mark-ups among wholesalers, retailers, and restaurants.

## *Wine Tourism is a Key Part of the Wine Industry and Growing*

**In 2019, there were an estimated 365,900 winery visits, of which 111,100 were by wine tourists.** These visitors, split between same-day and overnight trips, spent an estimated \$27.9 million in various expenses (in addition to wine purchases), such as hotel accommodations, restaurants, gasoline and transportation, and retail purchases over the course of their single- or multi-day trip. The Colorado Mountain Winefest, the state's largest festival promoting Colorado wine with 6,600 visitors, sells out each year.

## *Wine Supports Broad-based Economic Activity*

Together, wine production, distribution & sales, and wine tourism in 2019 supported—through direct, indirect, and induced activities—a **total economic impact of \$162.3 million in business revenues, 1,360 jobs, and \$59.5 million in labor income** (including supplemental benefits). These activities supported estimated total state and local fiscal revenues of \$8.5 million.

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# INTRODUCTION

## *Background and Purpose*

The wine industry generates business sales and supports jobs and income among wineries, farmers, equipment suppliers, and various tourism services in state and local economies across the U.S. The industry continues to grow, buoyed by both experienced wine drinkers and new entrants drawn to the sophistication, nuance, and experience of wine. In 2019, according to the Wine Institute (2020), shipments of domestic and foreign wine in the U.S. reached 406 million cases, a 26% increase over 2009. The retail value of shipments totaled \$75.1 billion, representing an inflation-adjusted 39% growth over 2009.

## **Colorado's Wine Industry**

Colorado is among the nation's newer and burgeoning locations for premium wine. Between fiscal years 2014 and 2020, bottled wine production, excluding ciders, more than doubled, reaching more than 259,000 cases. Colorado is now home to 154 wineries spread across 29 counties, ranging in size from small, sole proprietorships producing less than 500 cases a year to large scale operations with multistate distribution. Colorado's grapes are sourced primarily from two American Viticultural Areas (AVAs)—the Grand Valley AVA (75,990 acres, established in 1991), and the West Elks AVA (48,405 acres, established in 2001)—as well as other areas across the state for grape production that have not yet received AVA designation. Colorado's cold winter climate and high altitudes offer a unique *terroir* from many other wine grape-producing regions of the U.S.

Many tourists in Colorado—both state residents and out-of-state visitors—are increasingly visiting wineries as a standalone itinerary or as part of a broader Colorado tourism experience. Festivals such as the Colorado Mountain Winefest have sold out in recent years, reflecting the growing enthusiasm and excitement about Colorado wine and Colorado wine tourism experiences.

The production and sale of Colorado wine contributes to statewide and local economic growth through multiple mechanisms. Wine production involves the hiring of workers and wage outlays for winemakers, sales staff, and other direct employment, and the generation of revenues from on- and off-site sales. Wineries also support tourism through tasting rooms and placemaking. Lastly, wine produced in Colorado is then sold downstream through various channels, including wholesalers, restaurants, bars, and grocers, each of which generates revenues through added mark-ups.

All these impacts support additional jobs, income, business sales, and tax revenues through supply chain transactions and worker household expenditures. For example, sales and employment among grape producers who sell their output to wineries, as well as the contracting of various services and other key inputs and supplies.

The Colorado Wine Industry Development Board has commissioned this study to provide a detailed, data-rich assessment of the economic contributions of the wine production—excluding hard cider—to Colorado’s economy. Findings will support the Colorado Wine Industry Development Board’s work to further support the growth of the industry and communicate its importance to legislators and other industry and community stakeholders.

## *Data and Methods*

This analysis leverages multiple sources, including state and federal data, existing reports, news articles, and interviews with wine industry stakeholders. Economic impacts were computed through use of IMPLAN, a widely used input-output model. The IMPLAN model employed in this study is specific to Colorado and designed to reflect the unique attributes of the Colorado economy.

## *Definitions*

The following terms are used frequently in this report:

- **Winery supply chain.** The network of wineries, vineyards, estate wineries, supporting services and suppliers (e.g., cooperage, bottling services), and downstream distribution and sales channels (e.g., mark-up revenues earned at wholesalers, retailers, and restaurants from the sale of Colorado wine).
- **Mark-ups.** Earnings from the sale of Colorado wine within the distribution and sales network. Mark-ups represent only the additional, marginal revenue earned by the seller, and thereby excludes the underlying value of the wine. These revenues are generated among wholesalers, retailers, bars, and restaurants.
- **Direct impacts.** Revenues, jobs, and income directly tied to wine production, distribution, and sales. Also referred to as final demand.
- **Indirect impacts.** Additional revenues, jobs, and income supported through upstream supply chain transactions. This includes jobs at vineyards for grapes used to produce Colorado wine.
- **Induced impacts.** Additional revenues, jobs, and income supported through the spending of income earned among direct and indirect workers on goods and services as part of household consumption. For example, jobs at restaurants and grocery stores supported through the purchasing of goods and services by workers employed at wineries.
- **Total economic impacts.** The sum of direct, indirect, and induced impacts.

## *Organization of Report*

The remainder of this report is organized as follows:

- **Overview of Colorado's wine industry.** Background and indicators on vineyard, winery, and distribution & sales activities across the state.
- **Wine tourism.** Scale and impact of wine-related tourism in Colorado.
- **Economic and fiscal impacts of wine production.** The additional statewide impacts of wine production from supply chain business-to-business transactions (indirect) and household spending (induced).
- **Summary and conclusion.** Review of key findings.

# OVERVIEW OF COLORADO'S WINE INDUSTRY

## *History of the Industry*

Colorado's first wine grape vines were planted in the late 19<sup>th</sup> century. Today, Colorado's wines primarily use grapes sourced from the state's two American Viticultural Areas (AVA), the Grand Valley AVA and the West Elks AVA. Colorado's terroir features both high elevations and dry, low humidity climates with very alkaline soil. For these reasons, Colorado's AVAs present notable similarities with some of Argentina's most well-known and productive wine grape producing regions. Winemaking is more dispersed across the state, with large concentrations along the Front Range within a daytrip of Denver and surrounding suburban cities as well as within each AVA and adjacent counties.

### **Grand Valley AVA**

The Grand Valley AVA was established in 1991 and covers an area of nearly 76,000 acres in Western Colorado and at elevations between 4,000 and 4,500 feet above sea level. The summer climate is typically hot during the daytime but with cool nights, ideal for fruit-growing conditions. The AVA is also a featured location for vacations and outdoor activities, including the Colorado National Monument. In 2018, Wine Enthusiast Magazine named the Grand Valley AVA as "one of the ten wine travel destinations in the world," and in 2017 USA Today's "10 Best" nominated the Palisade-based Colorado Mountain Winefest the best wine festival in the country (USA Today, 2017). The most common wine varieties grown in the AVA include Syrah, Merlot, Viognier, and Cabernet Franc.

### **West Elks AVA**

Established in 2001, the West Elks AVA covers an area of 48,405 acres bounded by the "dobies," a "moonscape of adobe looking geological irregularities that separate Delta, Colorado" and the Uncompahgre Range from the fertile basin to the east, nestled at the foot of the West Elk Mountains (Colorado Wine Industry Development Board, 2021). Due to its higher elevations—between 5,400 and 7,000 feet above sea level—the West Elks AVA has a mild growing season that starts about two weeks later than the Grand Valley AVA and has 30% fewer days between the last spring frost and the first fall frost than does the Grand Valley. *Vitis vinifera* that thrive under these conditions include Riesling, Pinot Gris, and Pinot Noir.

## *Vineyards and Grape Production*

In 2019, there were an estimated 99 vineyards across the state, though primarily concentrated in Western Colorado. Colorado's vineyards include wineries (or estate wineries, 32%) and contract vineyards (68%), representing vineyard acreage that has been leased out by the owner to a third party for use and harvesting.

In 2019, Colorado vineyards totaled an estimated 750 acres of vineyard land and estimated production of 2,100 tons of grapes, the fifth consecutive year of 2,000 or more tons.<sup>1</sup> An estimated 87.5% of known vineyard acreage was in Mesa County, followed by Delta County (6.9%), with the remainder (5.6%) spread across the state. The most common varieties in 2019 were Syrah and Cabernet Sauvignon (Caspari, 2019).

Colorado's wine grape production remains low compared to the two largest states, California and Washington. In 2019, California produced 4 million tons of wine grapes, followed by Washington with 201,000 (U.S. Department of Agriculture, 2021). The most common variety of *Vitis vinifera* harvested by tonnage in 2019 was Riesling (12.3%), followed by Merlot (8.4%), Cabernet Sauvignon (8.4%) and Cabernet Franc (7.7%) (**Exhibit 1**).

**Exhibit 1. Total Wine Grape Harvested in Colorado, Share of Total and Yield per Acre, 2019 Survey**

Variety	Utilized Grapes	Production	Yield per Acre (Tons)
Riesling	12.3%	11.9%	4.0
Merlot	8.4%	8.7%	3.0
Cabernet Sauvignon	8.4%	8.7%	3.1
Cabernet Franc	7.7%	8.3%	3.5
Syrah	5.8%	5.3%	3.7
Chardonnay	5.5%	5.2%	2.7
Viognier	4.6%	4.5%	6.3
Chambourcin	2.1%	2.9%	3.7
Gewürztraminer	1.8%	2.4%	2.4
Pinot Noir	0.8%	0.9%	1.0
Other/Unknown	42.5%	41.2%	4.2

Source: Caspari (2019).

Non-*vinifera* French-American hybrids, such as Chambourcin, have gained increasing prominence in Colorado's viticulture industry in recent years, due to the heartier constitution of these grapes. These grapes have proven more resilient than *Vitis vinifera* grapes in years of October freezes (e.g., in 2019 and 2020) and other climatic inconsistencies that can damage the harvest. These hybrids also bring some resistance to phylloxera.

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<sup>1</sup> Estimates are based on reported survey results, plus the prior year's reported data among vineyards that participated in 2018 but not 2019, and estimated additional vineyards not captured in the current or prior years' surveys (e.g., hobbyist growers in the Front Range region). Based on interview with Horst Caspari (2021).

According to analysis by Colorado State University (Caspari, 2019), vineyards in Colorado averaged less than 10 acres per operation, and with a survey-based median holding size of 2.9 acres (**Exhibit 2**). The overall tonnage per acre was 3.8 (**Exhibit 3**), but this varies widely based on location and climatic conditions. For example, based on survey findings, between 2008 and 2019, annual yield per acre in Mesa County (Grand Valley AVA) has averaged nearly three times that of Delta County (West Elks AVA).

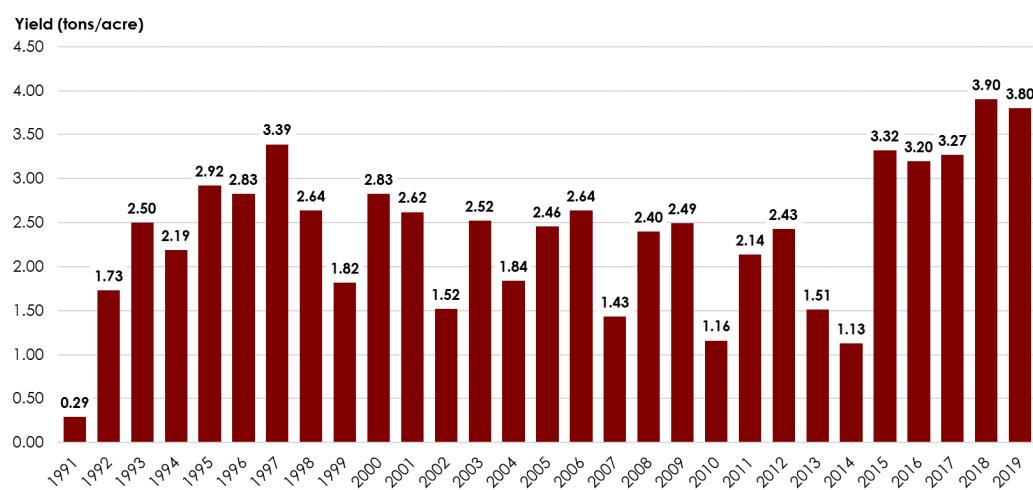
### **Exhibit 2. Vineyard Production and Yield Indicators, 2019**

Average vineyard holding (acre)	9.7
Median vineyard holding (acre)	2.9
Estimated total acreage	750
Estimated total grape tonnage	2,100
Average yield (t/acre)	3.8
Average grape price (\$/t)	\$1,600
Average grape revenue (\$/acre)	\$5,900

*Source: Caspari (2019).*

*t = ton (grapes).*

### **Exhibit 3. Wine Grape Yield (Tons) per Acre, Colorado Vineyards, 1991-2019**



*Source: Caspari (2019).*

These variations, along with changes in market prices for grapes, affect overall revenues generated among vineyards. For example, within Mesa County (including the Grand Valley AVA), planted acres on the eastern part (or zone) of the county averaged gross revenues per acre of nearly \$5,000 between 2000 and 2015. This compares with more than \$500 in the north, and roughly \$3,500 and \$4,000 in central and eastern Orchard Mesa. Over

this same period, the eastern zone was home to approximately 125 acres, compared with 110 acres in eastern Orchard Mesa and more than 250 acres across the remaining areas. Based on research by Colorado State University, the estimated average annual cost in 2015 was \$4,000/acre, implying that the majority acreage in the county was not, on average, profitable (2016).

The last two harvests (2019 and 2020) have been hampered by severe October freezes, damaging much of the existing crop of *Vitis vinifera*. Temperatures during these freezes—14 degrees on October 26 and as low as 9 degrees the following day—plummeted at so fast a rate that vines were not able adapt to the changing conditions, resulting in significant damage to grapevines that will be reflected in the following growing season. The October 2020 freeze was devastating for many growers, with an estimated 80% crop-loss average (Lofholm, 2020). Many growers are considering switching either to another crop altogether or shifting more of their vines to resilient French-American hybrids, which fared much better during freeze events.

## *Wineries, Wine Production, and Revenues*

The scale and impact of wine making in Colorado spans business size, business type, and geography. According to the Colorado Department of Revenue, as of January 2021 there were 177 winery and winery-related licenses in the state. After removing cideries, of this total there were 154 business locations licensed as either “limited wineries,” “manufacturers (wine),” or as vinters restaurants (Colorado Department of Revenue, 2021).

There are 29 counties with at least one winery (as of January 2021). The largest concentrations of wineries are in Mesa County, Delta County, and Denver County. Six counties across the state are home to at least 10 wineries (**Exhibit 4**).

### **Exhibit 4. Wineries by County in Colorado, as of January 2021**

<b>County</b>	<b>Number of Wineries</b>
Mesa County	29
Delta County	19
Denver County	16
Boulder County	14
Arapahoe County	10
Larimer County	8
All other counties (23)	58
Total (29 counties)	154

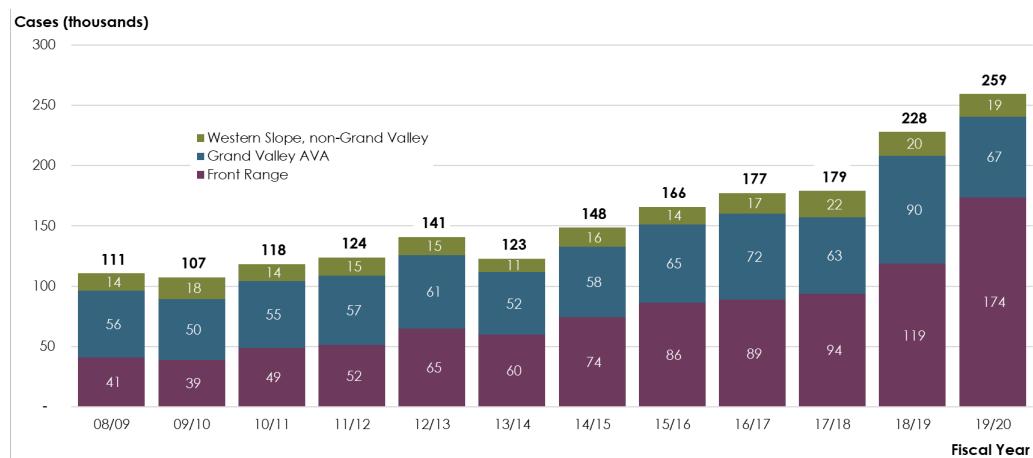
*Source: Colorado Department of Revenue (2021).*

In 2019, data from the U.S. Treasury’s Alcohol and Tobacco Trade and Tax Bureau (TTB) shows that Colorado wineries moved 199,500 cases of bottled wine (not including hard ciders) from bonded to non-bonded locations for

sale (U.S. Treasury Department, 2021). During the same year, according to the U.S. Bureau of Labor Statistics, there were 55 employers in Colorado whose primary industry classification was “winery”—the remaining licensed wineries were either classified as an industry other than “winery” (e.g., wholesaler, restaurant) or were sole proprietors with no employees (U.S. Bureau of Labor Statistics, 2021).<sup>2</sup>

Colorado wineries in fiscal year (FY) 2019-2020 (ending in June 2020) produced an estimated 259,200 cases of wine, more than doubling production in FY 13-14 (**Exhibit 5**).

### **Exhibit 5. Wine Production in Colorado by Fiscal Year, 2008-2009 to 2019-2020**



Source: Colorado Wine Industry Development Board (2020).<sup>3</sup>

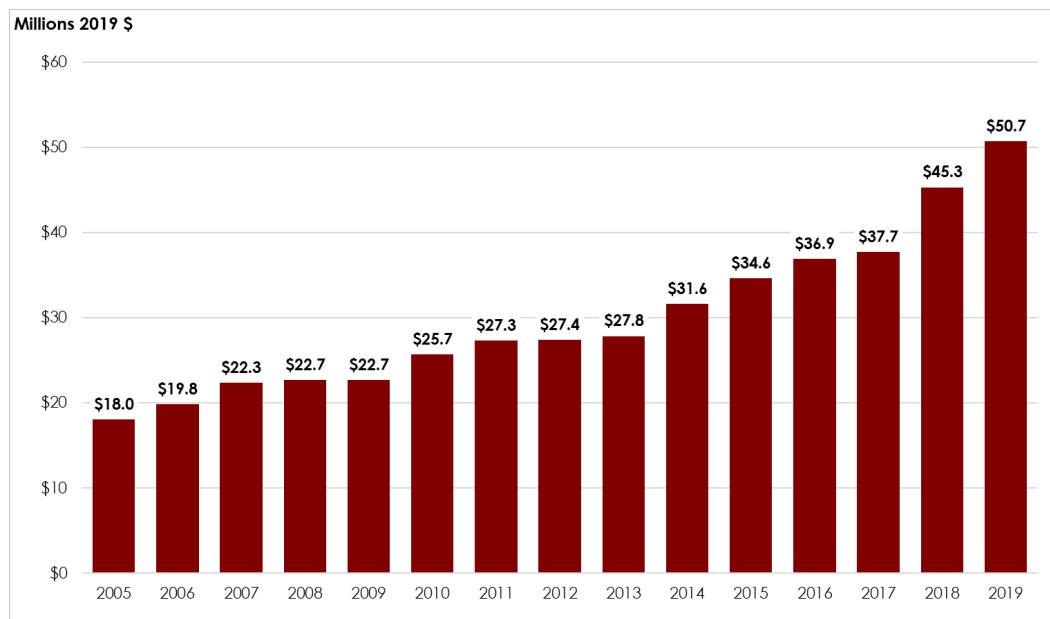
In the 2019 calendar year, Colorado wineries generated an estimated \$50.7 million in revenues off the production and sale of wine (**Exhibit 6**). This winery revenue estimate represents direct-to-consumer sales, based on a retail average sale price of \$21.79, and discounted winery sales to wholesalers (which typically entail a per bottle estimated sales discount of 45%) and through self-distribution direct to retailers and restaurants. In inflation-adjusted terms, winery revenue increased at a 9% compound annual growth rate between 2012 and 2019.

<sup>2</sup> Data represents covered workers, i.e., those included in the Unemployment Insurance System, and thus excludes the self-employed and many business owners.

<sup>3</sup> Note (a): data presented above are estimates of overall production. According to the Colorado Wine Industry Development Board (2020), “[e]ach winery reports the CO wine liters when it moves product out of bonded storage, as defined by the federal government. For some wineries, that indicates sales to consumer, retailer or wholesaler. For others that means moving wine from the production area into case storage. It is not, unfortunately, a completely accurate reflection of either sales or production. It is, however, a consistent figure for comparison of one year to the next and a good indicator of sales and production.”

Note (b): Fiscal year runs from July 1 to June 30 of following year.

## **Exhibit 6. Estimated Colorado Wine Industry Wine Revenues, 2005-2019, millions 2019 \$**



Sources: Colorado Wine Industry Development Board (2020); Wine Institute (2020); Federal Reserve Bank of St. Louis (2021); Colorado State University (2013); High Peak Strategy LLC (2021).

### **Revenues Across the Distribution & Sales System**

The production and sale of Colorado wine generates revenues among wineries, distribution & sales networks, and consumer sales at restaurants and liquor stores. In this analysis, we estimate that wineries discount the sale of their wine to wholesalers by on average 45%. Wholesalers then typically include a 30% mark-up in sales—on top of the discounted per bottle or bottle-equivalent (in the case of cans) purchase price from wineries—to liquor stores and restaurants. Liquor stores then add an additional 40% to their purchase price from wholesalers in the final retail price of Colorado wine sold to consumers. Restaurants include an estimated 100% mark-up on average on the retail price per bottle of Colorado wine, or nearly 130% on top of the price per unit paid to wholesalers. Mark-up estimates are based on additional three-tier sales mark-ups among Colorado businesses; mark-up revenues for Colorado wine sold in retail outlets outside the state are not included.

Based on this analysis, the wine industry in Colorado supported a total direct revenue impact of \$59.1 million. Of this total, \$50.7 million accrued to wineries, \$2.6 million to wholesalers, \$2.8 million to retailers, and \$3.0 million among restaurants serving Colorado wine (**Exhibit 7**).

### **Exhibit 7. Estimated Colorado Wine Industry Wine Revenues by Segment, Including Mark-ups, 2019 (mils \$)**

<b>Segment of Wine Industry</b>	<b>Revenues (mils \$)</b>
Wineries	\$50.7
Direct-to-consumer and discounted sales	
Wholesaler	\$2.6
Mark-up revenues	
Retailers	\$2.8
Mark-up revenues	
Restaurants	\$3.0
Mark-up revenues	
<b>Total</b>	<b>\$59.1</b>

Sources: Colorado Wine Industry Development Board (2020); Wine Institute (2020); High Peak Strategy LLC (2021).

### **Winery Employment and Wages**

In 2019, wineries employed an estimated **540 workers** across the state, including employees and business owners, based on an annual average.<sup>4</sup> These jobs include not just winemakers, but also administrative staff, sales personnel, tasting room staff, and, in the case of vintners restaurant operations, kitchen staff, wait staff, and customer service personnel. This estimate also includes the annualized average number of workers employed at vineyards owned by wineries (i.e., estate wineries), which include both seasonal workers and full-year annual employment.

Many estate wineries and vineyards also rely on the availability of H-2A workers, or migrant guest workers legally allowed to work in the agriculture sector under federally regulated income levels and employment conditions. Many of these workers, in addition to pruning vines and harvesting grapes—work primarily in the spring and fall—also work in orchards and other agricultural products, which help sustain their work for the entire season. According to interviewees, the demand for seasonal labor for other agricultural commodities, such as peaches and apples, is essential to the operations of vineyards; in many cases, there would otherwise not be enough year-round employment to support these workers essential for the wine industry.

Workers and owners of wineries in 2019 earned an estimated **\$20.8 million** in labor income, including wages, proprietor income, and fringe benefits,

<sup>4</sup> Estimates based on winery value of shipments and workers in 2017 in Colorado reported in the 2017 U.S. Economic Census (U.S. Census Bureau, 2017), adjusted to 2019 dollars, estimated winery revenues, and interviews.

such as healthcare and employer's cost of defined contribution retirement plans. Income among winery workers varies widely based on occupation. For example, many tasting room staff may earn \$12-15/hour, but can double their hourly earnings with tips. Many wineries, especially smaller businesses, employ part-time staff for sales and operations work.

The total wine production and distribution & sales system in Colorado, including wineries and wholesalers, retailers, and restaurants, in 2019 directly generated a total of **\$59.1 million in business revenues** (including winery sales and mark-ups). These revenues were associated with **630 direct jobs** and **\$24.4 million in labor income (Exhibit 8)**.

#### **Exhibit 8. Estimated Colorado Wine Industry Wine Direct Employment, Labor Income, and Revenues by Segment, 2019**

<b>Segment</b>	<b>Employment</b>	<b>Labor Income</b>	<b>Revenues</b>
		mils \$	mils \$
Wineries	540	\$20.8	\$50.7
Wholesalers	10	\$1.0	\$2.6
Retailers	40	\$1.3	\$2.8
Restaurants	40	\$1.2	\$3.0
<b>Total</b>	<b>630</b>	<b>\$24.4</b>	<b>\$59.1</b>

Sources: U.S. Census Bureau (2017); IMPLAN (2021); High Peak Strategy LLC (2021).

## **WINE TOURISM**

Wineries often thrive on the flow of visitors to wine regions. Many visitors to Colorado may not identify wine tasting and wine tourism as the primary purpose for their visit, but nonetheless sometimes include wine as part of their overall Colorado itinerary. Many others discover Colorado wine during their visit, such as on a ski trip, visiting the Western Slope, or introduced by friends and family from Colorado during their stay.

A large share of Colorado wineries is located on the Front Range, far from the sources of most Colorado grapes in the Grand Valley and West Elks AVA regions. However, this proximity to the state's main population center in Denver and surrounding suburbs opens opportunities for visitors to explore and try Colorado wine within easy reach of their tourist destination. On the Western Slope, a major driver of sales has been from tasting rooms, of which, according to interviews, a large majority of visitors come from either the Denver region or, to a lesser extent, from out of state. Especially during COVID-19, Denver residents eager to get away have opted to drive to the Grand Valley or West Elks AVA regions for an overnight or weekend getaway.

The various Colorado wine festivals held throughout the state each year have historically been major drivers of Colorado wine tourism. The largest of these festivals, the Colorado Mountain Winefest held each year in Palisade, in 2019 attracted an estimated 6,600 visitors from over 40 states and nine countries.

Many of these visitors come from the Denver region and spend one or more nights in the Grand Valley, spending disposable income on hotel accommodations, restaurants, transportation, and various other tourism-related expenses. According to the Colorado Association for Viticulture & Enology (CAVE), these visitors were associated with an estimated \$1.2 million in direct spending in the region in 2019 (Colorado Association for Viticulture & Enology, 2019). Colorado also hosts numerous smaller wine festivals throughout the year. Many of these are within, on average, 1.5 hours or less from Denver (**Exhibit 9**).

### **Exhibit 9. Notable Colorado Wine Festivals**

<b>Event</b>	<b>Location</b>	<b>Drive Time Distance from Denver</b>		<b>Typical Trip</b>
		<b>Hours</b>	<b>Daytrip or Overnight</b>	
Colorado Mountain Winefest	Palisade	3.75		Overnight
Manitou Springs Wine Festival	Manitou Springs	1.5		Daytrip
Estes Park Wine Festival	Estes Park	1.5		Daytrip
Front Range Wine Festival	Windsor	1.5		Daytrip
Castle Rock Wine Festival	Castle Rock	0.75		Daytrip
Boulder Valley Wine Festival	Boulder	0.75		Daytrip
Wine & Chocolate Festival	Estes Park	1.5		Daytrip
Wine Festival at Island Lake	Fort Collins	1.5		Daytrip
Palmer Lake Wine Festival	Palmer Lake	1.25		Daytrip

Many of these visitors are from within Colorado. In recent years, a growing number of Colorado residents are actively seeking out wine tourism experiences, especially in the Western Slope. Some wineries are collaborating with local hotels to develop wine tourism package tours, including local transportation.

Tourist spending on Colorado wine and associated impacts thus represents spending of disposable income already in the state, of which a large share would have been spent on other goods and services. This spending thus represents a gross impact, whereas spending by out-of-state tourists and spending by Colorado residents on Colorado wine tourism in lieu of out-of-state travel is considered a net impact. Both forms of impact are important and support economic activity in wine producing regions of the state. In this analysis both are considered.

In addition to wine-specific tourists, wineries attract out-of-state visitors whose travel is primarily for other Colorado activities, such as snow sports, visiting friends and family, summer outdoor recreation, or business. These visitors may include a stop at one or more wineries as a compliment to their primary visitation purpose; for example, visitors to Boulder who discover and visit a local tasting room during their stay.

In 2019, there were an estimated 365,900 winery visits, of which 111,100 were by wine tourists. These visitors, split between same-day and overnight trips, spent an estimated \$27.9 million in various expenses (in addition to wine purchases), such as hotel accommodations, restaurants, gasoline and

transportation, and retail purchases over the course of their single- or multi-day trip.<sup>5</sup>

This spending directly supported an estimated 260 jobs across the economy, ranging from restaurants, retail outlets, hotels, transportation expenses.

These jobs were associated with \$8.1 million in income, including labor compensation and proprietor income (**Exhibit 10**).

**Exhibit 10. Estimated Direct Spending and Associated Jobs and Income from Wine Tourism, 2019**

Spending Category	Spending mils \$	Jobs	Income mils \$
Full-service restaurants	\$10.0	140	\$4.2
Retail	\$7.3	65	\$1.8
Accomodations	\$4.1	40	\$1.4
Transportation	\$6.4	15	\$0.7
Total	\$27.9	260	\$8.1

Sources: IMPLAN (2021); WineAmerica (2017); Dean Runyan Associates (2020); High Peak Strategy LLC (2021).

## ECONOMIC AND FISCAL IMPACTS OF WINE PRODUCTION IN COLORADO

Economic impacts include additional jobs, labor income, and business revenues supported through upstream supply chain transactions ("indirect") and the spending of worker earned income on household goods and services ("induced"). For example, indirect activities would include sellers of winemaking equipment such as glass bottles and other key production inputs. Induced impacts include jobs at local grocery stores, at entertainment venues, restaurants, and various other providers of household goods and services.

In 2019, the production and distribution & sale of Colorado wine was associated with a total of 990 jobs across the state economy, including 160 indirect jobs and 200 induced jobs. Total revenues traced to Colorado wine production and distribution & sale summed to \$123.2 million, along with \$45.2 million in labor income (**Exhibit 11**).

Wine tourism supported a total \$39.2 million in business revenues, inclusive of direct daytrip and overnight wine tourist spending and related indirect and direct sales across state economy. An estimated 370 jobs across the state economy can be traced to wine tourism spending and \$14.2 million in income (**Exhibit 12**).

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<sup>5</sup> Estimates based on multiple sources, including WineAmerica (2017) and spending patterns in Colorado and specific subs-state regions produced by Dean Runyan Associates (2020).

**Exhibit 11. Estimated Economic Impacts of Colorado Wine Production and Distribution & Sales, 2019**

<b>Impact</b>	<b>Employment</b>	<b>Labor Income</b>	<b>Revenues</b>
		mils \$	mils \$
Direct	630	\$24.4	\$59.1
Indirect	160	\$10.9	\$32.3
Induced	200	\$10.0	\$31.7
<b>Total</b>	<b>990</b>	<b>\$45.2</b>	<b>\$123.2</b>

Sources: IMPLAN (2021); High Peak Strategy LLC (2021).

**Exhibit 12. Estimated Economic Impacts of Colorado Wine Tourism, 2019**

<b>Impact</b>	<b>Employment</b>	<b>Labor Income</b>	<b>Revenues</b>
		mils \$	mils \$
Direct	260	\$8.1	\$20.1
Indirect	50	\$2.9	\$9.1
Induced	60	\$3.1	\$10.0
<b>Total</b>	<b>370</b>	<b>\$14.2</b>	<b>\$39.2</b>

Sources: IMPLAN (2021); High Peak Strategy LLC (2021).

Note: revenues for wine tourism are less than tourist spending by nearly \$8 million. This is due to an adjustment, in input-output modeling, to reflect gross margins, and not the entire value of the products sold to consumers in the retail sector.

Factoring in direct, indirect, and induced impacts across wine production, distribution & sales, and wine tourism, a total of 1,360 jobs were supported by the Colorado wine industry in 2019. These jobs were associated with \$162.3 million in total revenues and \$59.2 million in labor income (**Exhibit 13**). Each direct job in the wine industry is associated with a total 1.5 jobs across the state economy (a “jobs multiplier” of 1.5). By comparison, the restaurant industry in Colorado has a jobs multiplier of 1.4, while the computer and electronic products manufacturing subsector (employing nearly 23,000 workers in Colorado in 2019) exhibited a jobs multiplier of more than 5.0 (IMPLAN Group LLC, 2021).

**Exhibit 13. Estimated Total Economic Impacts of Colorado Wine Tourism, 2019**

<b>Impact</b>	<b>Employment</b>	<b>Labor Income</b>	<b>Revenues</b>
		mils \$	mils \$
Direct	890	\$32.5	\$79.3
Indirect	210	\$13.8	\$41.4
Induced	260	\$13.2	\$41.7
<b>Total</b>	<b>1,360</b>	<b>\$59.5</b>	<b>\$162.3</b>

Sources: IMPLAN (2021); High Peak Strategy LLC (2021).

Economic impacts in turn support fiscal revenues at the local (state, county, and subcounty districts) and federal levels. For example, sales tax revenues generated by household spending at neighborhood restaurants and retail stores. In 2019, the total economic impacts of Colorado wine production, distribution and sale, and associated wine tourism supported an estimated \$8.5 million in state and local taxes and \$13.3 million in federal taxes, e.g., income tax (**Exhibit 14**).

**Exhibit 14. Estimated Total Fiscal Impacts of Colorado Wine Industry, 2019**

Tax Level	Taxes, 2019 mils \$
State and Local	\$8.5
Federal	\$13.3
Total	\$21.8

Sources: IMPLAN (2021); High Peak Strategy LLC (2021).

## SUMMARY AND CONCLUSIONS

The wine industry is a growing source of wealth and economic activity in Colorado. In 2019, the industry—comprised of wine production, distribution & sales, and wine tourism—directly employed 890 workers and generated revenues of \$79.3 million.

As of early 2021, there were 154 wineries (excluding cideries) operating across 29 counties in Colorado. Winery revenues have increased (inflation-adjusted) at a 9% compound annual growth rate between 2012 and 2019. In 2019, winery revenues alone totaled \$50.7 million, with an additional \$8.4 million in revenues generated in the form of mark-ups among wholesalers, retailers, and restaurants.

In 2019, there were an estimated 365,900 winery visits, of which 111,100 were by wine tourists. These visitors, split between same-day and overnight trips, spent an estimated \$27.9 million in various expenses (in addition to wine purchases), such as hotel accommodations, restaurants, gasoline and transportation, and retail purchases over the course of their single- or multi-day trip.

Together, wine production, distribution & sales, and wine tourism in 2019 supported a total economic impact of \$162.3 million in business revenues, 1,360 jobs, and \$59.5 million in labor income (including supplemental benefits).

Looking forward, the wine industry unfortunately suffered a highly damaging October freeze in 2020, destroying a large number of vines on the Western Slope. Given the industry's still relatively small size, the freeze will result in a significant dip in grape yield and overall production in 2021 and has prompted numerous growers to consider planting more robust French American hybrids. Despite this near-term event, the industry continues to

draw the interest and attention of wine enthusiasts and wine beginners alike, especially during the COVID-19 pandemic among individuals and households who opted for a closer-to-home getaway experience. These trends are expected to continue unabated in the coming years and will be an important source of economic growth and activity for many communities on both the Western Slope and Front Range regions of the state.

## APPENDIX

For this project, we spoke with the following individuals and organizations:

### **Exhibit 15. Wineries, Vineyards, and Associations Interviewed for this Study**

Type	Contact	Organization
Wineries	Ulla Garlich and John Garlich	Bookcliff Vineyards
	Kevin Webber	Carboy Winery (Vintners Restaurants)
	Garrett Portra	Carlson Vineyards and Winery
	Nicki McTague	Infinite Monkey Theorem
	Sue Phillips	Plum Creek Cellars
	David Myers	Redstone Meadery
	Kaibab Sauvage and Patric Matysiewski	Sauvage Winery/Colorado Vineyards Specialists
	Brent Helleckson	Stone Cottage Cellars
	Bruce Talbott	Talbott Farms
	Horst Caspri	Colorado State University
Others		Colorado Association for Viticulture & Enology
Cassidee Shull		

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