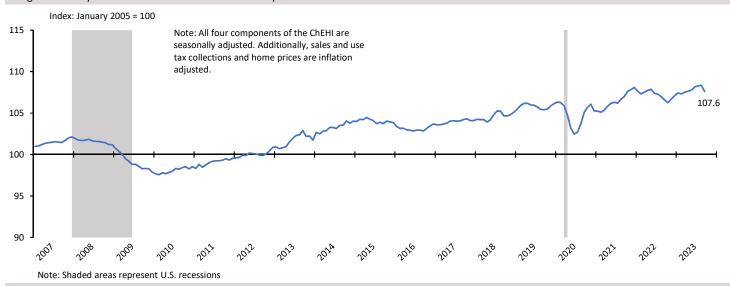
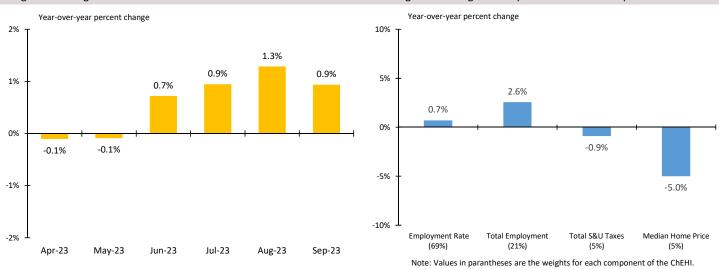
# **ECONOMIC ANALYSIS DIVISION** • NOVEMBER 2023

### ▶ Figure 1: Cheyenne Economic Health Index as of September 2023

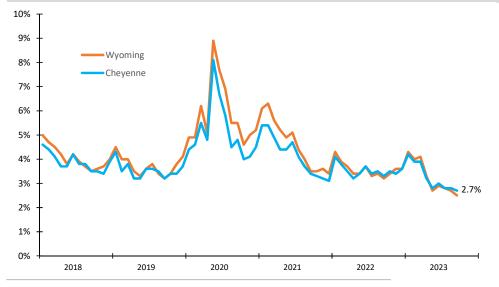


### ▶ Figure 2: Change in ChEHI - Last 6 Months

### ▶ Figure 3: Change in Components of ChEHI - September 2023



# ▶ Figure 4: Laramie County and Wyoming Unemployment Rate (Not Seasonally Adjusted)

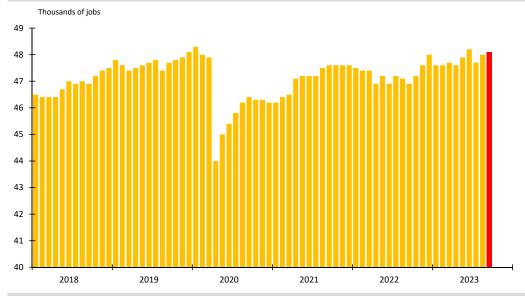


- >> SUMMARY: The Cheyenne Economic Health Index (ChEHI) reported a value of 107.6 in September 2023 (see Figure 1). This value is higher than the September 2022 value of 106.6.
- **▶** As seen in Figure 2, in four of the past six months (April 2023 - September 2023), the ChEHI reported year-over-year increases, with the largest increase occurring in August (+1.3%).
- >> Two of the four ChEHI components increased in September 2023 compared to September 2022, with total employment increasing the most, up 2.6% (see Figure 3). Median home prices saw the largest decline, down 5.0%.
- >> The unemployment rate for Laramie County in September 2023 was 2.7%, lower than the September 2022 rate of 3.3%, but slightly higher than the state-wide September 2023 rate of 2.5% (see Figure 4).

Note: Both unemployment rates in Figure 4 are not seasonally adjusted.

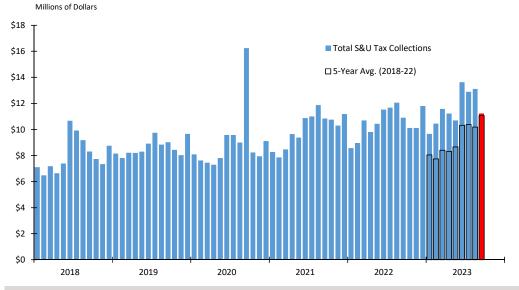


## ▶ Figure 5. Laramie County Total Nonfarm Employment (Seasonally Adjusted)



- → The total number of nonfarm payroll jobs in September 2023 was 48,100, higher than the September 2022 number by 1,200 (+2.6%) (see Figure 5). Total employment appears to have stabilized, roughly returning to pre-covid levels for the past ten months
- ➤ NOTE: MSA stands for Metropolitan Statistical Area. The Cheyenne MSA covers all of Laramie County.

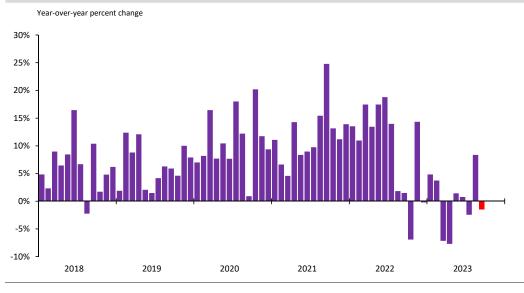
## ▶ Figure 6. Laramie County 4% Sales and Use Tax Collections (1-Month Lag)



➤ Laramie County's collection of the 4% sales and use tax was \$11.2 million in September 2023, \$0.3 million more than September 2022 (see Figure 6). This value is also \$0.1 million more (+1.3%) than the September 5-year (2018-2022) average.

Note: The value for September 2023 in Figure 6 is actually collections from October 2023 because there is approximately a 1-month lag between collections and sales activity.

### ▶ Figure 7. Change in Laramie County Median Home Sales Price



→ Laramie County's median home sales price was \$340,000 in September 2023, 1.4% lower than September 2022 (see Figure 7). Median home prices have declined year-over-year in four months of 2023, potentially signalling a slowdown in the Laramie County housing market.



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# Cheyenne Economic Health Index Addendum

The Cheyenne Economic Health Index (ChEHI) is a coincident economic indicator designed to provide a current assessment of Laramie County's economy. There are four components of the ChEHI. The first two components, unemployment rate and total nonfarm employment, are included to capture overall labor market activity for Laramie County. The third component, sales and use tax collections, captures economic activity related to taxable sales in Laramie County. The fourth component, median home sales price, serves as a proxy for the housing market.

Unemployment Rate: The first component of the ChEHI is the unemployment rate. This statistic measures the percentage of people in Laramie County actively looking for work but do not have jobs. In the ChEHI model, the employment rate (100% minus the unemployment rate) is indexed rather than the unemployment rate because an increase in the employment rate, similar to an increase in total employment, sales and use tax collections, and home prices, is considered to be a positive for the county's economy. The unemployment rate is available monthly, not seasonally adjusted, from the U.S. Bureau of Labor Statistics. The data is then seasonally adjusted.

Total Nonfarm Employment: The second component of the ChEHI is total nonfarm employment. This statistic measures the number of people who have wage or salary jobs in Laramie County. The total nonfarm employment is available monthly, seasonally adjusted, from the U.S. Bureau of Labor Statistics.

Sales & Use Tax: The third component of the ChEHI is the sales and use tax collected from the state's 4 percent tax rate. Because sales and use tax collections the county receives for a given month represent transactions that took place 4 to 6 weeks prior, the data is lagged one month in the ChEHI model. This statistic is available monthly from the State of Wyoming's Department of Revenue. The data is adjusted for inflation using the Consumer Price Index for All Urban Consumers from the U.S. Bureau of Labor Statistics. The data is also seasonally adjusted.

Median Home Sales Price: The fourth component of the ChEHI is the median home sales price. This statistic is available monthly from the Cheyenne Board of REALTORS. This variable is defined as the median sales price for a single family, non-rural residential home. The data is adjusted for inflation using the Consumer Price Index for All Urban Consumers from the U.S. Bureau of Labor Statistics. The data is also seasonally adjusted.

Methodology: Each series for the components discussed above are standardized starting in January 2005, resulting in a value of 100 for each component and the ChEHI. As each component changes from month to month, the ChEHI value changes. Next, the standard deviation of each component's standardized series values is calculated, followed by the calculation of the inverse of each component's standard deviation. Lastly, the individual inverse standard deviations are standardized, resulting in weights that sum to 1. The rationale for this weighting approach is that the components that are more stable over time will have a smaller standard deviation and thus, a larger inverse standard deviation and weight. A large shift in a typically stable data series would provide a better signal of a change in the economy than a large shift in a data series that typically has large fluctuations. Therefore, this weighting approach allows the ChEHI to put a larger weight on the more stable components so that if they do experience a large shift, the ChEHI's value will be affected more to represent the change in the county's economic conditions. Lastly, a 3-month moving average is used in order to smooth out the index. This helps eliminate large "spikes" that may occur due to a certain component recording an unusually high or low value in a given month.

