Wyoming Economic Indicators

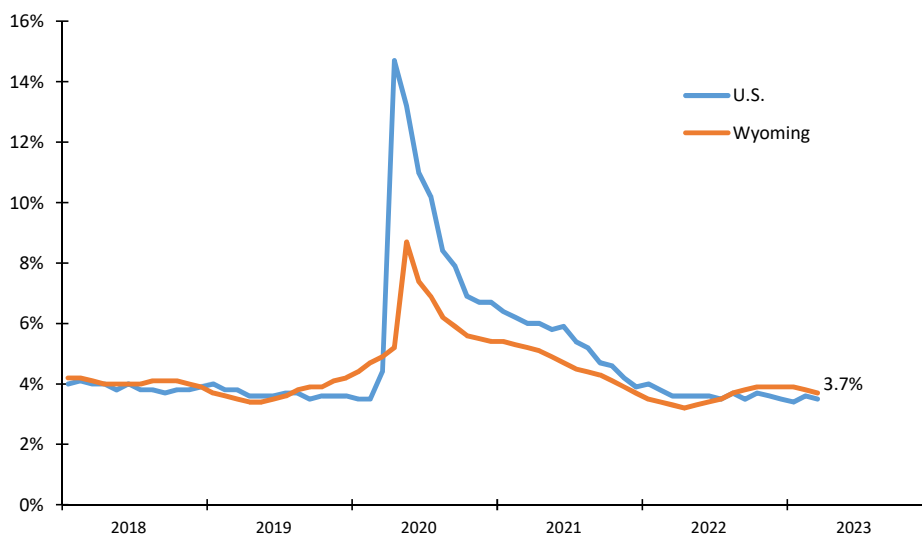## ▶ Figure 1: Wyoming Economic Health Index as of March 2023

Index: January 2005 = 100

Note: All four components of the WEHI are seasonally adjusted. Additionally, both tax collection components are inflation adjusted.

106.1

Note: Shaded areas represent U.S. recessions
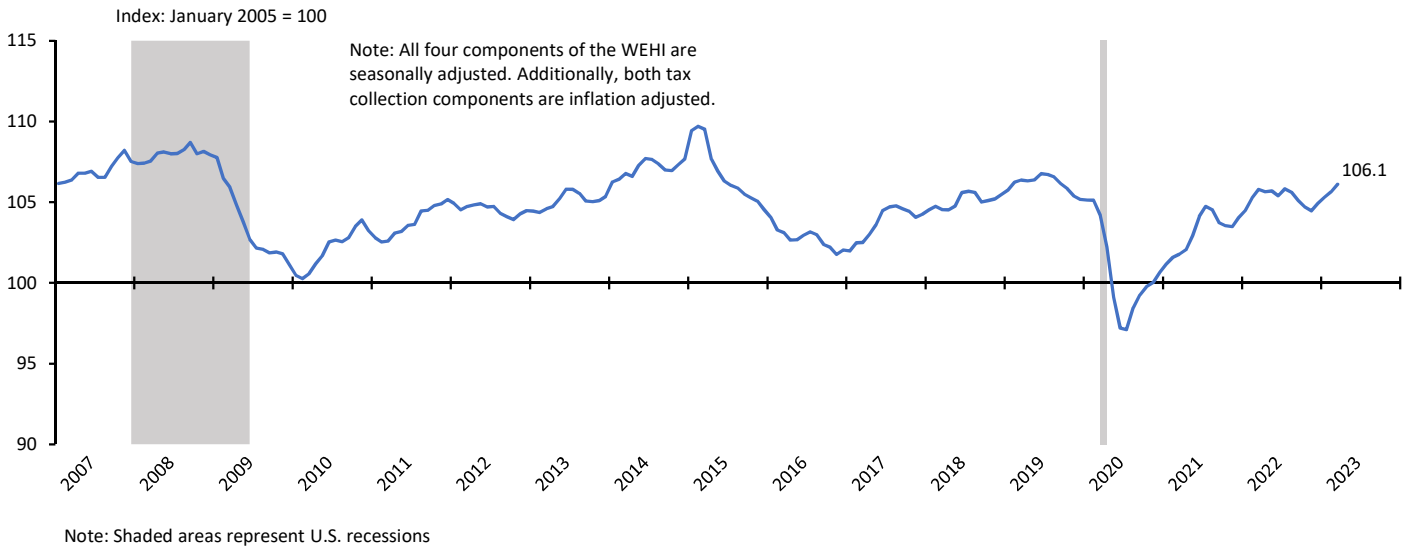
▶ Figure 2: Change in WEHI - Last 6 Months

Year-over-year percent change

Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
1.1%	0.9%	0.8%	0.8%	0.4%	0.3%
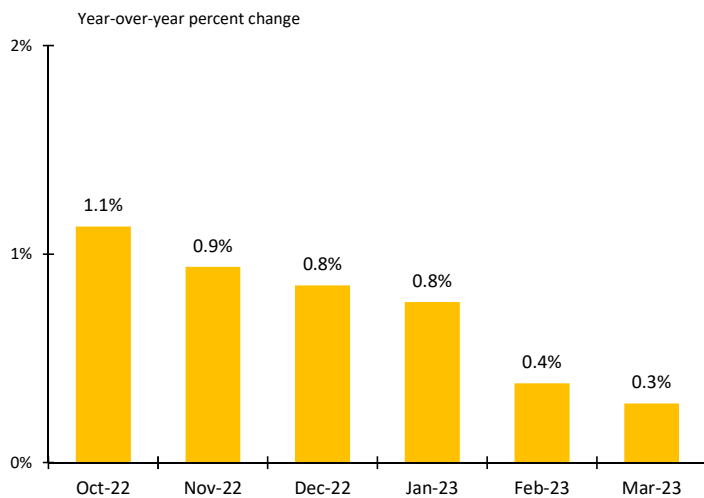
▶ Figure 3: Change in Components of WEHI - March 2023

Year-over-year percent change

Employment Rate (70%): -0.4%
Total Employment (26%): 2.0%
Mining S&U Taxes (1%): 22.7%
Lodging S&U Taxes (3%): -5.1%

Note: Values in parantheses are the weights for each component of the WEHI.
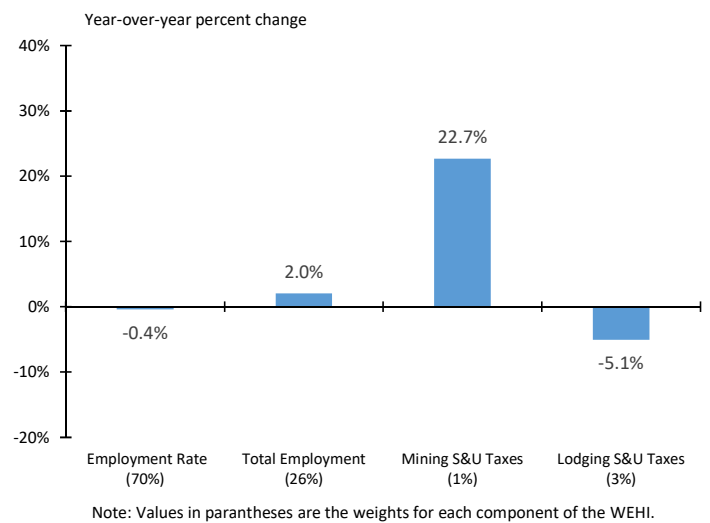
▶ Figure 4: Wyoming and United States Unemployment Rate (Seasonally Adjusted)


— U.S.
— Wyoming

3.7%

▶▶ SUMMARY: The Wyoming Economic Health Index (WEHI) reported a value of 106.1 in March 2023 (see Figure 1). This value is higher than the March 2022 value of 105.8.

▶▶ As seen in Figure 2, in each of the past six months (October 2022 - March 2023), the WEHI reported year-over-year increases, with the largest increase occurring in October (+1.1%).

▶▶ Two of the four WEHI components improved in March 2023 compared to March 2022 (see Figure 3). Mining sales & use taxes saw the largest year-over-year increase, up 22.7%, while lodging sales & use taxes experienced the largest decline, down 5.1%.

▶▶ The unemployment rate for Wyoming in March was 3.7%, lower than the February 2023 rate of 3.8%, but higher than the March 2022 rate of 3.3% (see Figure 4).

▸ Figure 5. Wyoming Total Nonfarm Employment (Seasonally Adjusted)

Thousands of jobs
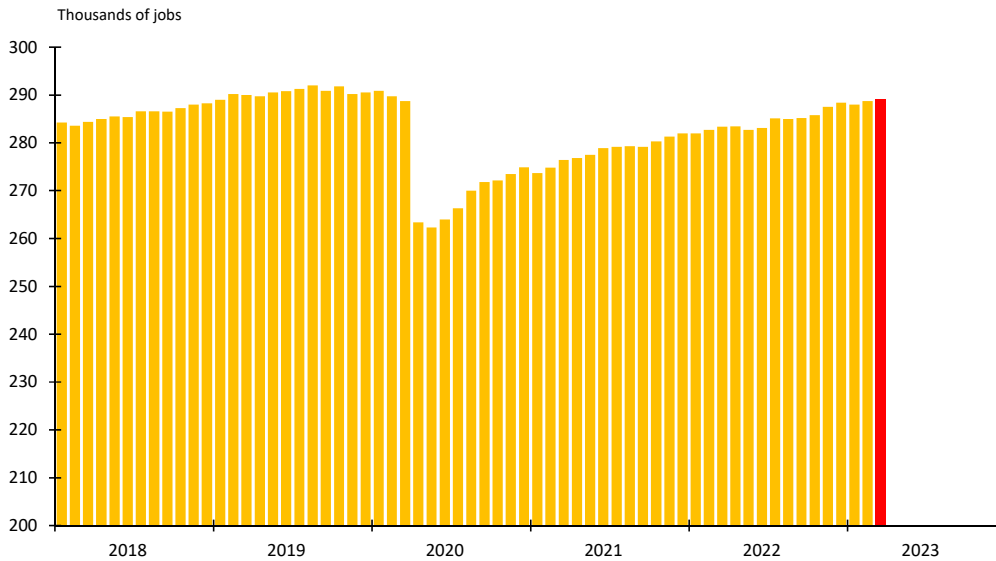
▸▸ The total number of nonfarm payroll jobs in March 2023 was 289,200, higher than the February 2023 number by 500 and the March 2022 number by 5,800 (see Figure 5).

By March 2023, Wyoming recovered almost all of the 26,000 jobs lost during the worst parts of the pandemic (March 2020-April 2020). The mining industry is the main reason total employment has not fully recovered, still down around 3,300 jobs relative to pre-covid levels.
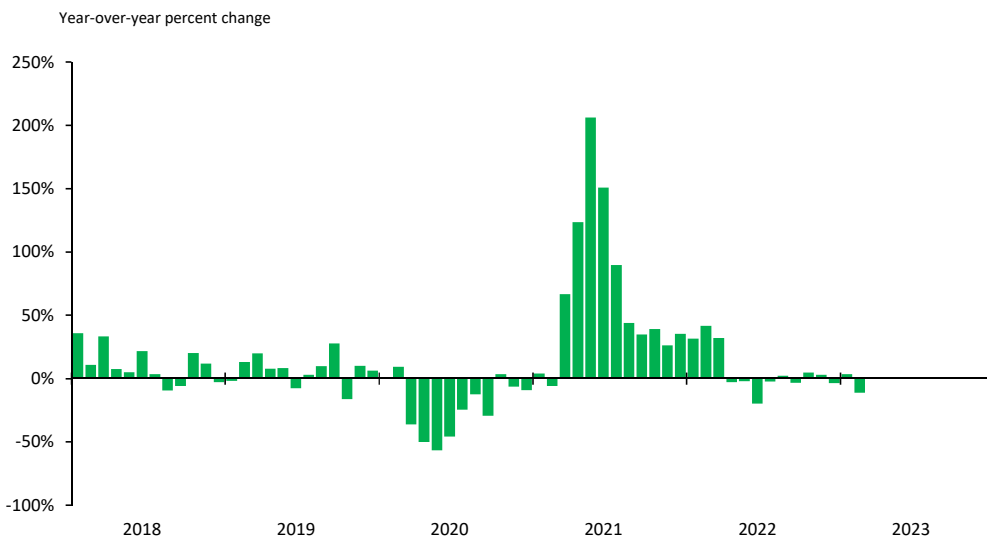
▸ Figure 6. Wyoming 4% Sales and Use Tax Collections - Mining Sector (1-Month Lag)

Millions of Dollars

■ Mining S&U Tax Collections
☐ 5-Year Avg. (2018-22)
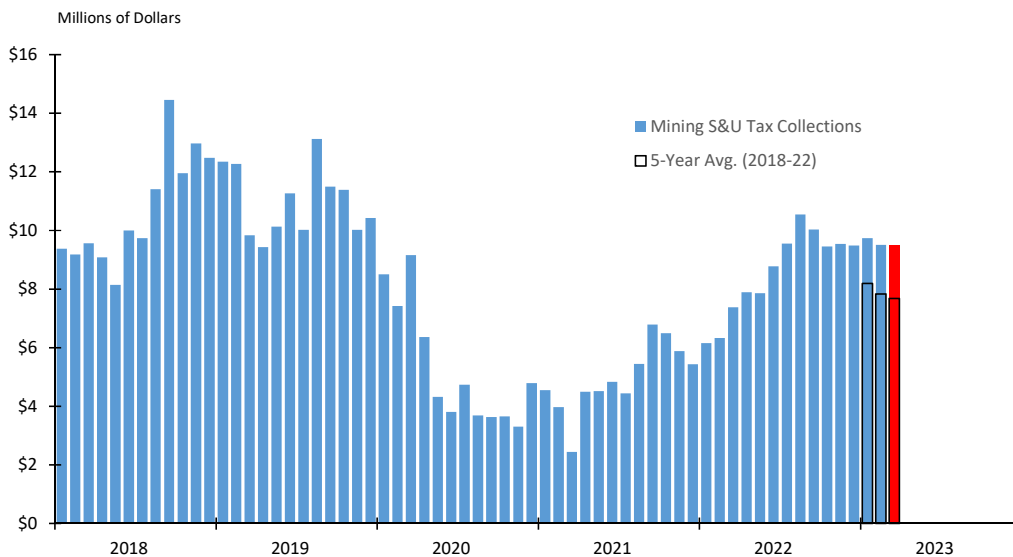
▸▸ Wyoming's collection of the 4% sales and use tax from the mining sector was $9.5 million in March 2023, $2.1 million more than March 2022 (see Figure 6). This value is also $1.8 million more (+23.8%) than the March 5-year average.

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

▸ Figure 7. Change in Wyoming 4% Sales and Use Tax Collections - Lodging (1-Month Lag)

Year-over-year percent change

▸▸ Wyoming's collection of the 4% sales and use tax from lodging was $2.6 million in March 2023, 0.4% less than March 2022 (see Figure 7). Lodging activity has finally started to stabilize after the first year of the pandemic and the reopening of the economy both had large impacts in 2020 and 2021.

Note: The value for March 2023 in Figure 7 is actually based on collections from April 2023 because there is approximately a 1-month lag between collections and sales activity.

Wyoming Economic Health Index Addendum

The Wyoming Economic Health Index (WEHI) is a coincident economic indicator designed to provide a current assessment of the state's economy. There are four components of the WEHI. The first two components, unemployment rate and total nonfarm employment, are included to capture overall labor market activity for Wyoming. The third component, sales and use tax collections related to the mining sector, captures economic activity related to mineral production in the state. The fourth component, sales and use tax collections related to lodging, serves as a proxy for tourism activity in the state.

Unemployment Rate: The first component of the WEHI is the unemployment rate. This statistic measures the percentage of people in Wyoming actively looking for work but do not have jobs. In the WEHI 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, mining activity, and tourism activity, is considered to be a positive for the state's economy. The unemployment rate is available monthly, seasonally adjusted, from the U.S. Bureau of Labor Statistics.

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

Mining Sales & Use Tax: The third component of the WEHI is the sales and use tax collected from the mining sector (including oil and gas extraction). Because sales and use tax collections the state receives for a given month represent transactions that took place 4 to 6 weeks prior, the data is lagged one month in the WEHI 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.

Lodging Sales & Use Tax: The fourth component of the WEHI is sales and use tax collections from lodging. Again, because sales and use tax collections received by the state for a given month of transactions represent transactions that took place 4 to 6 weeks prior, the data is lagged one month in the WEHI 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.

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 WEHI. As each component changes from month to month, the WEHI 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. Next, 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 WEHI to put a larger weight on the more stable components so that if they do experience a large shift, the WEHI's value will be affected more to represent the change in the state'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.