



Impact of Economic Changes on California Workers' Compensation

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Executive Summary



Rebound

Employment and wages for most industries have rebounded from the initial pandemic related changes in 2020, but employment in Retail and Hospitality remained below 2019 levels through 2022



Projected Lows

Projected changes to frequency and severity due to industry mix of employment are low through 2025

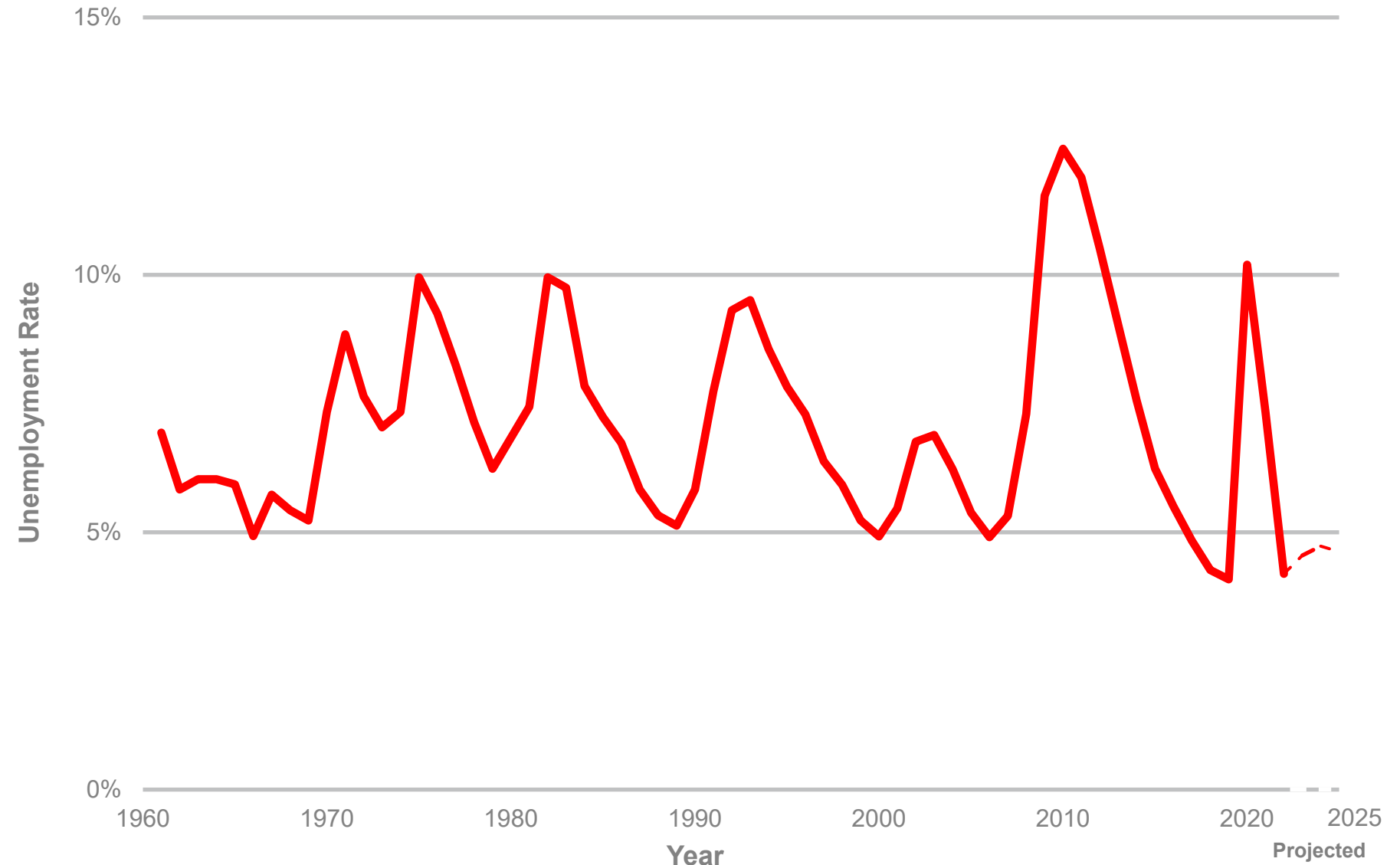
Overall Economic Impact

Annual California Unemployment Rate

While unemployment is forecast to increase in 2023 and 2024, it is projected to remain at historically low levels with small annual changes.

WCIRB research has found that increases in unemployment are correlated with decreases in indemnity claim frequency.

Given the current forecast of changes in the unemployment rate are small, they would also have a small impact on changes in indemnity claim frequency.

[More Info](#)

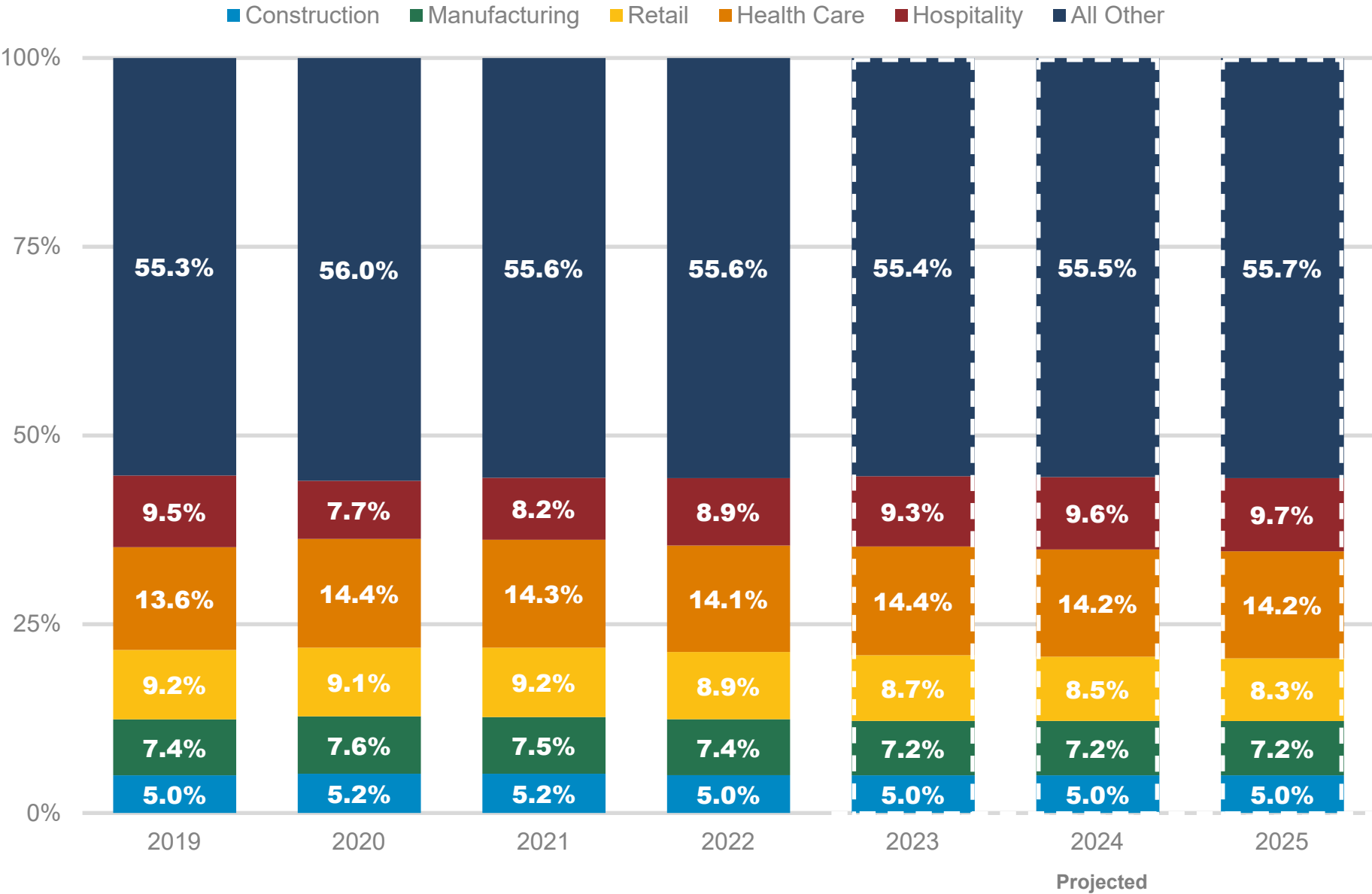
Distribution of Employment by Industry

In 2020, the number of workers employed in the Hospitality industry decreased dramatically, from 9.5% to 7.7% of the statewide workforce. Hospitality employment is forecast to rebound and exceed the 2019 share by 2024.

The share of employment in Retail has decreased from 9.2% in 2019 to 8.9% in 2022 and is forecast to decrease to 8.3% in 2025.

The share of employment in other key industries has remained relatively stable since 2019.

[More Info](#)

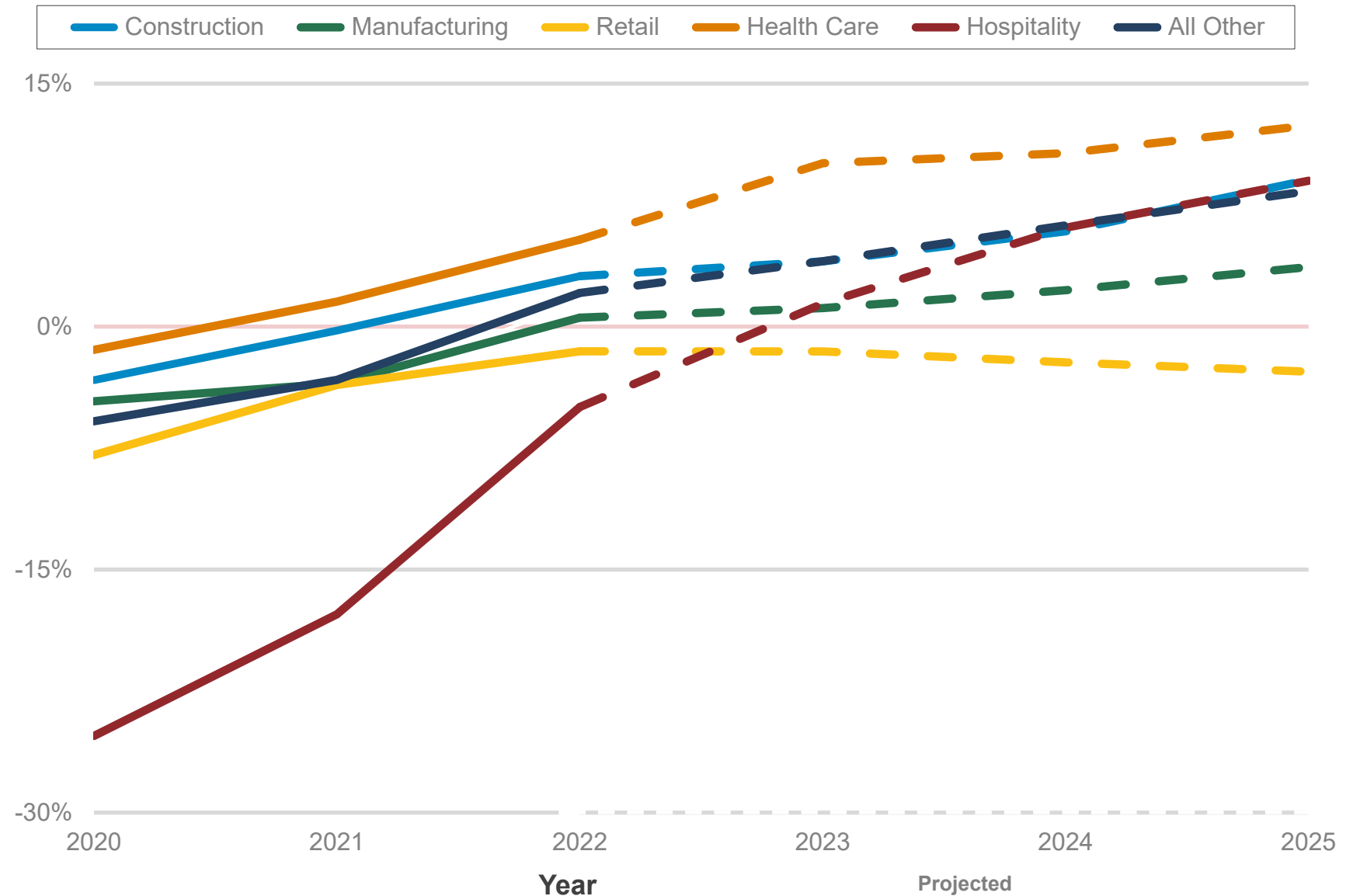


Cumulative Change in Employment Since 2019 for Key Industries

In 2023, employment forecasts vary significantly by industry, with projected growth of over 6% for Hospitality and flat employment for Retail.

Employment in Hospitality is projected to grow strongly through 2025.

Retail employment is forecast to decrease slightly in 2024 and 2025.

[More Info](#)

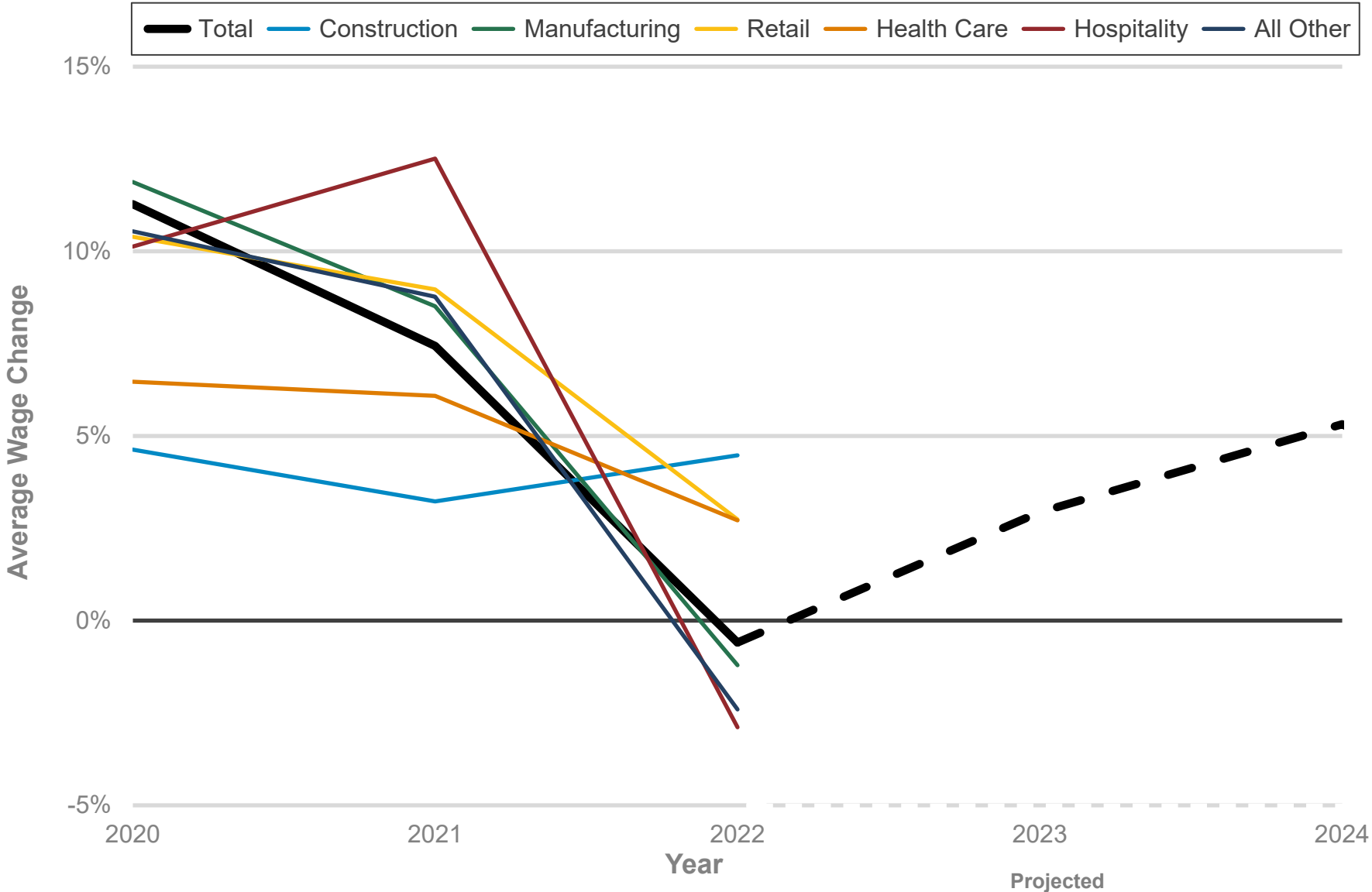
Annual Change in Average Wage by Industry

In recent years, wages have increased at relatively consistent levels for Construction and Health Care while increasing significantly more in other industries. This is partially because lower wage employees were more likely to be laid off during 2020.

In 2022, wages in these industries increased at a lower level and decreased in hospitality and manufacturing.

Wages overall are forecast to increase at higher levels in 2023 and 2024 than in 2022.

[More Info](#)



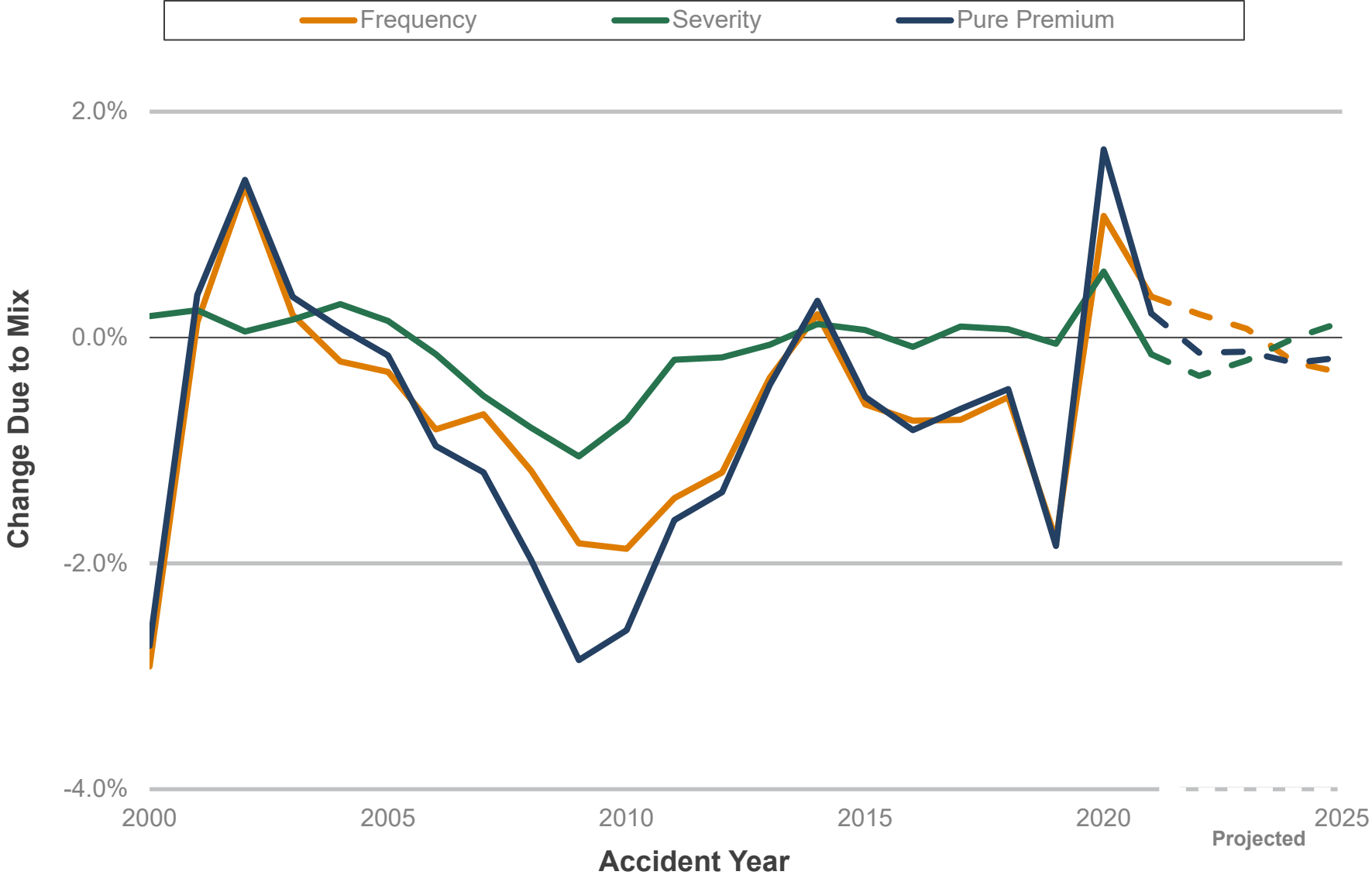
Change in Frequency, Severity and Pure Premium Due to Industrial Mix

In 2020, claim frequency and severity both increased due to the mix of employment by industry.

The increase in severity was driven by the decrease in hospitality employment as claims filed by workers in this industry have lower average severity.

Forecast changes in frequency and severity due to industry mix are low and offset each other for a flat impact on pure premium through 2025.

[More Info](#)

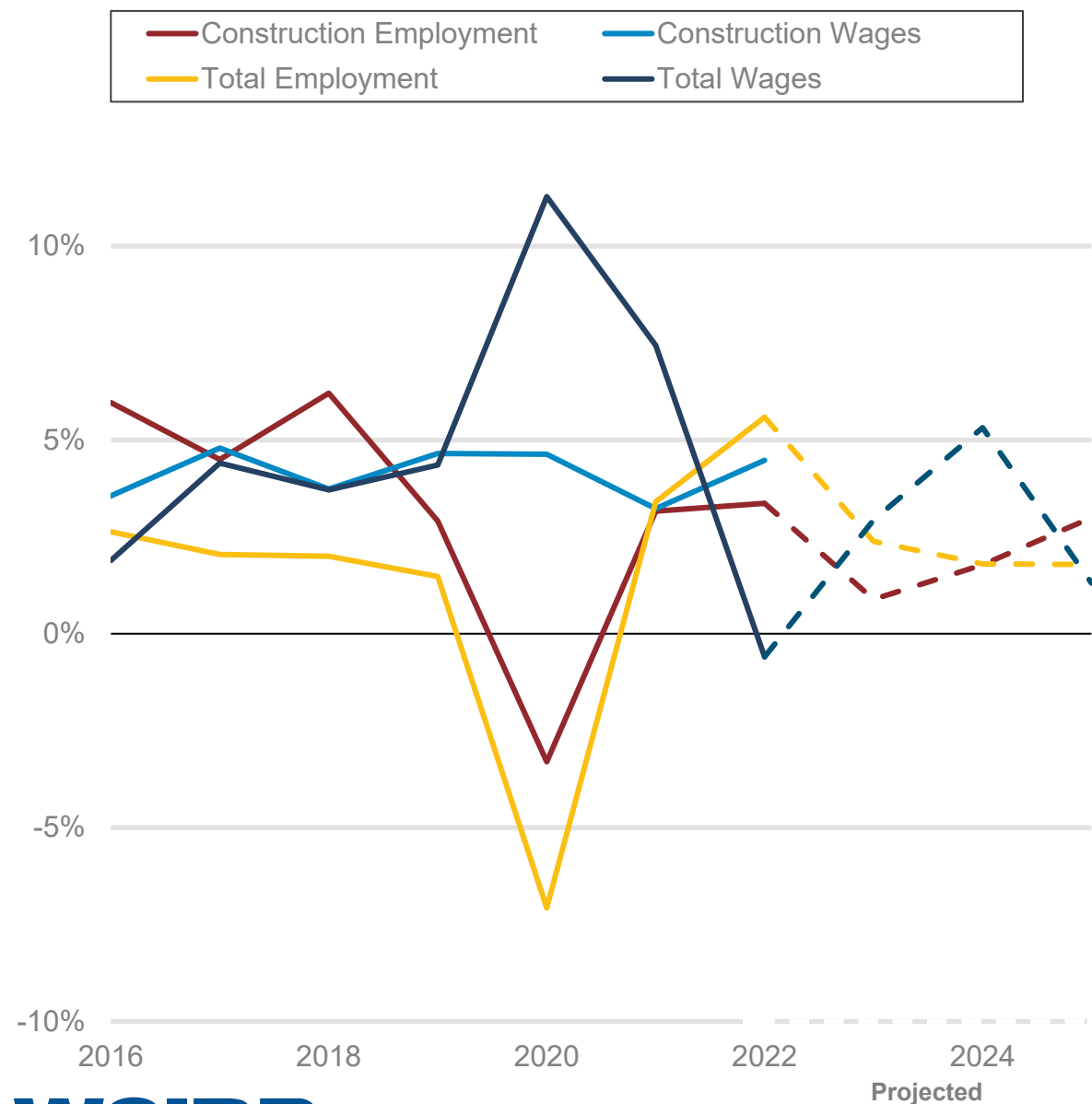




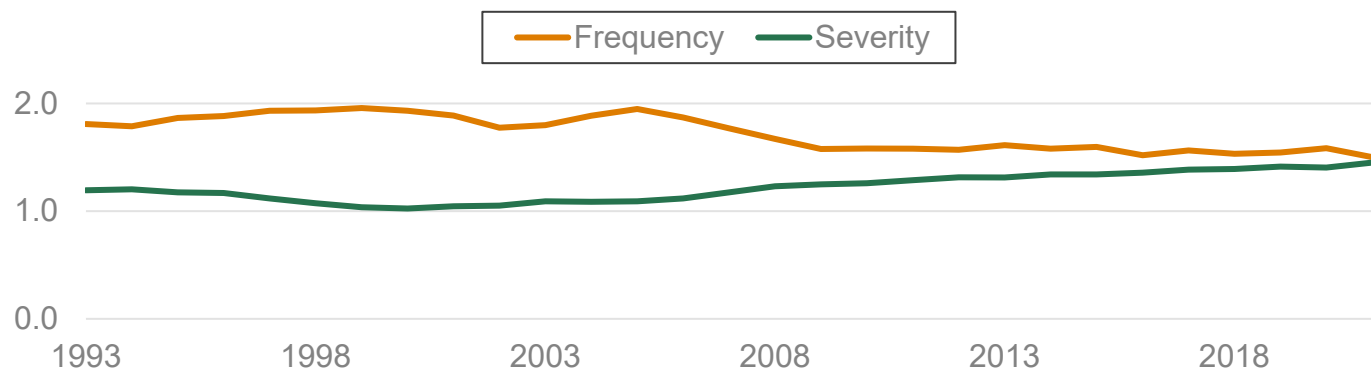
Industry Highlights

Construction Highlights

Change in Employment and Wages



Indemnity Claim Frequency and Severity Relative to Statewide



Construction employment is forecast to grow moderately in 2024 and 2025.

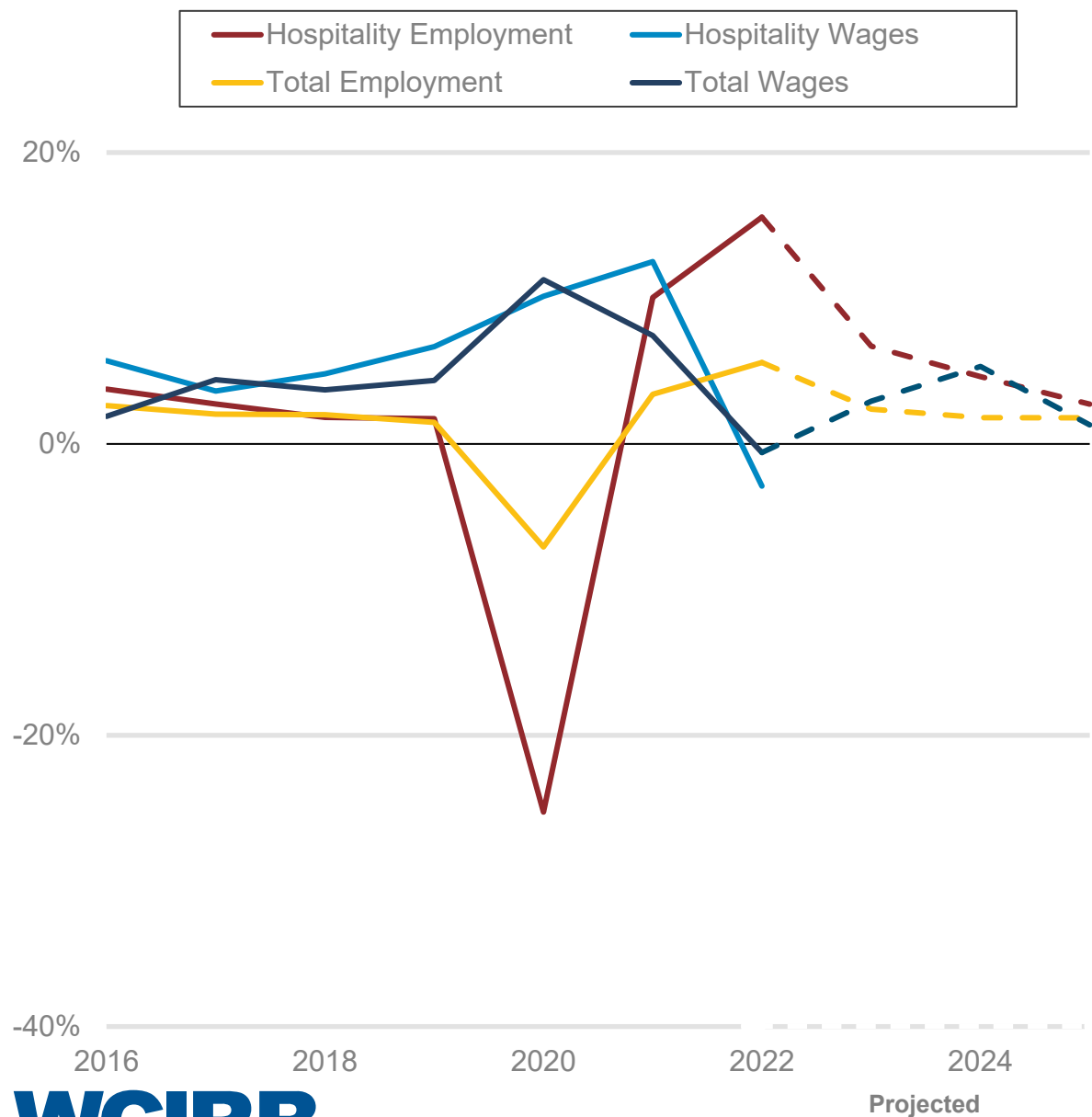
Since 2019, average wages have increased less in Construction than statewide and are projected to increase more in 2023.

Both frequency and severity of Construction claims have been approximately 50% higher than the statewide average in recent years.

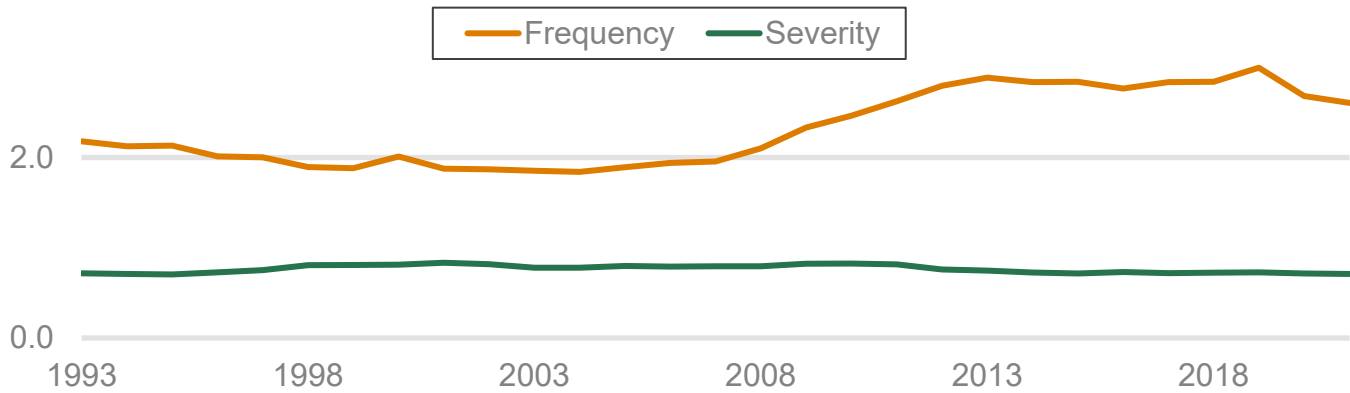
[More Info](#)

Hospitality Highlights

Change in Employment and Wages



Indemnity Claim Frequency and Severity Relative to Statewide



After a large decrease in Hospitality employment in 2020, employment is projected to return to 2019 levels during 2023.

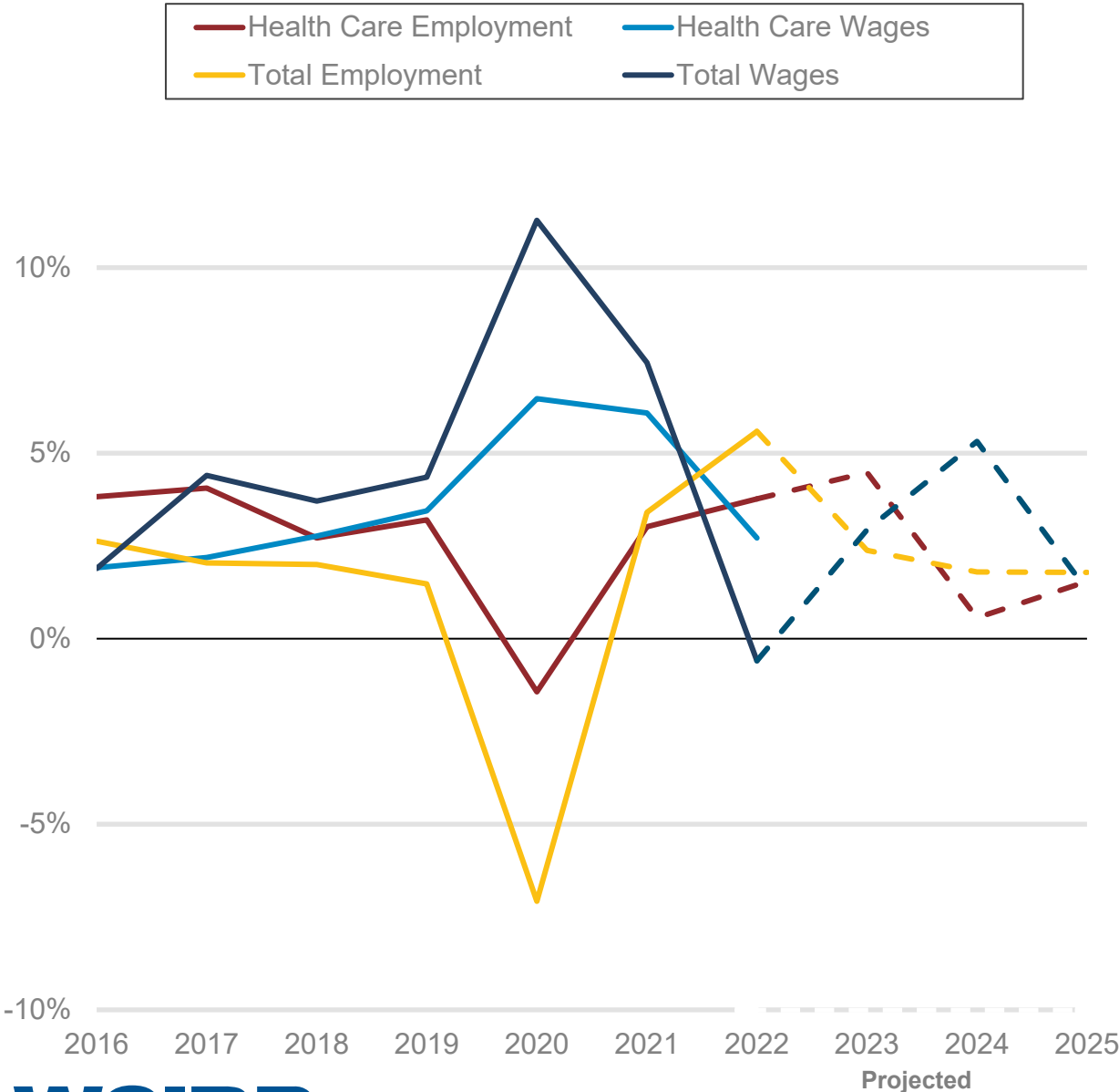
In 2020 and 2021, average wages increased more in Hospitality than statewide and then decreased in 2022.

While the frequency of claims for Hospitality is nearly three times the statewide average, the average severity is around one quarter lower.

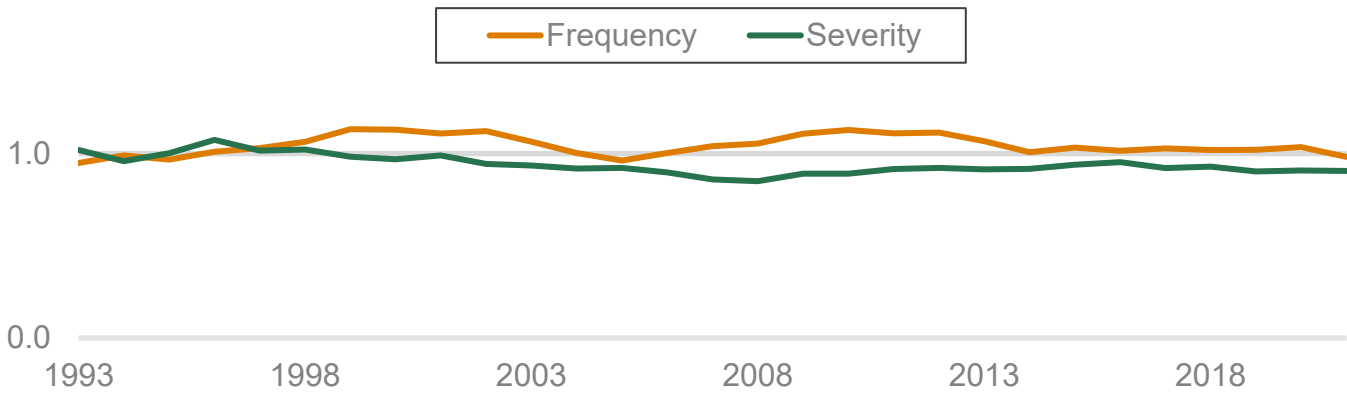
[More Info](#)

Health Care Highlights

Change in Employment and Wages



Indemnity Claim Frequency and Severity Relative to Statewide



After a small decrease in Health Care employment in 2020, employment rebounded in 2021 and is projected to grow moderately through 2025.

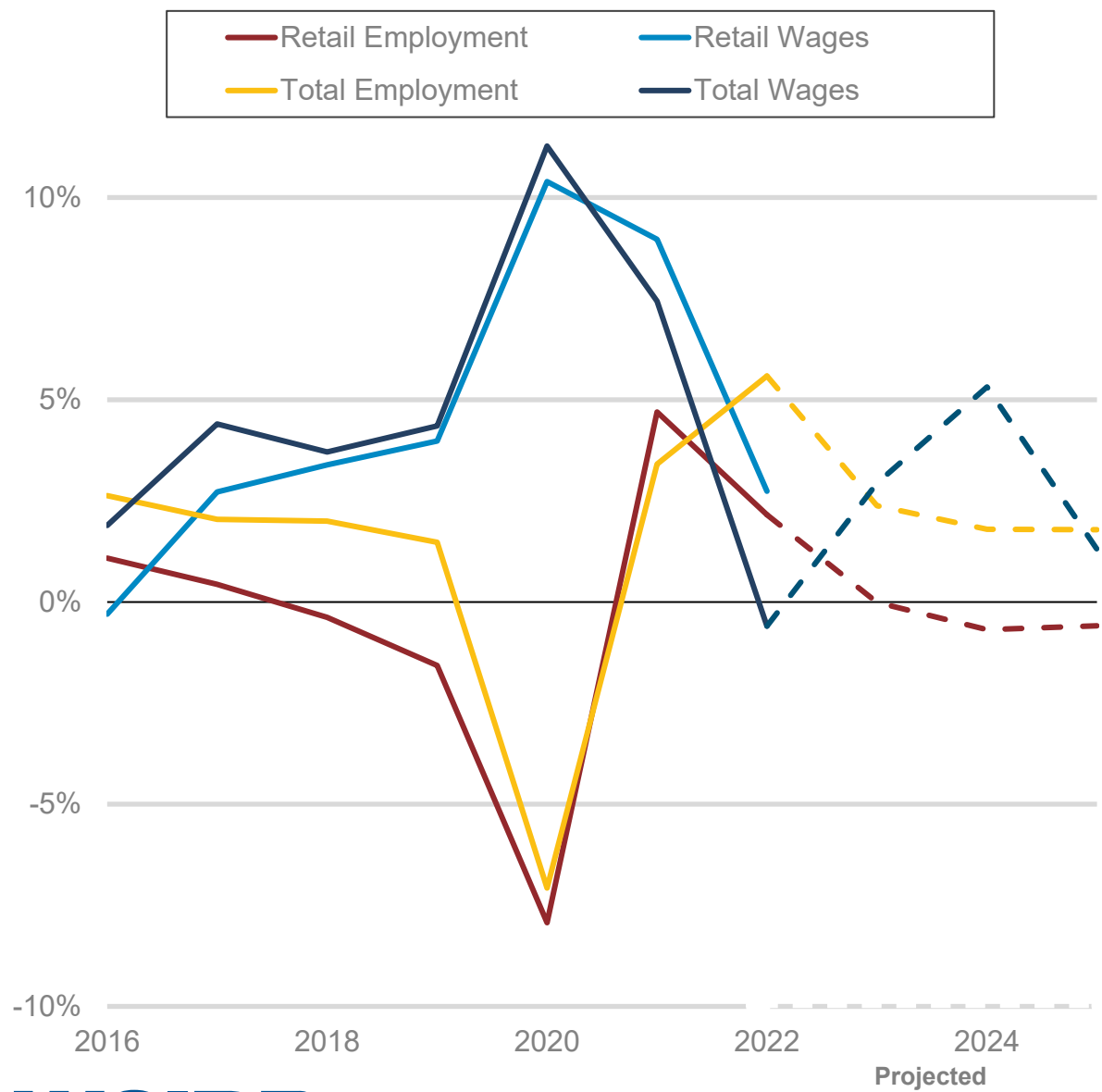
In 2020 and 2021, average wages increased less in Health Care than statewide and increased more than statewide in 2022.

The frequency of claims in Health Care is slightly higher than the statewide average and the severity is slightly lower. Both have decreased relative to statewide in recent years.

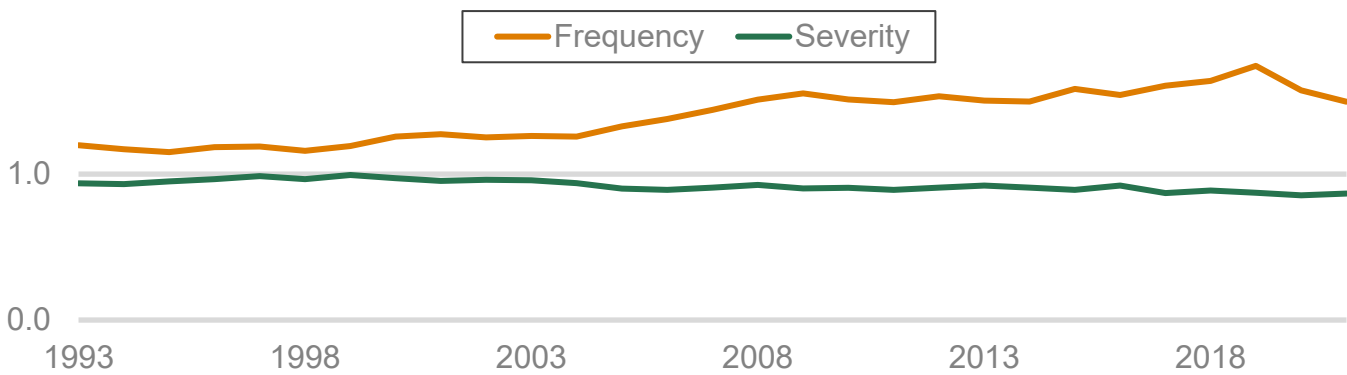
[More Info](#)

Retail Highlights

Change in Employment and Wages



Indemnity Claim Frequency and Severity Relative to Statewide



Retail employment decreased more than the statewide average in 2020 and is projected to remain below 2019 levels through 2025.

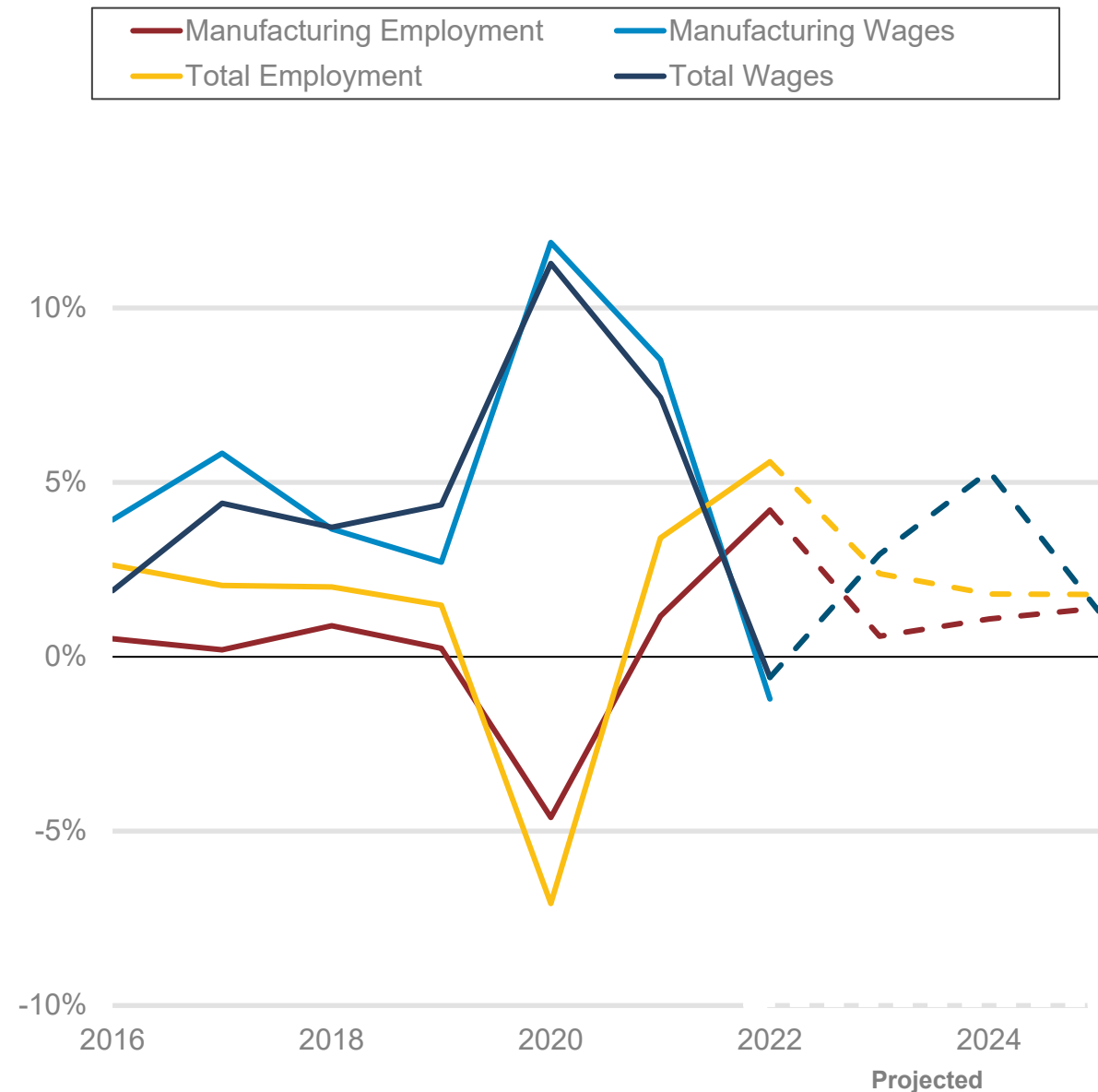
As lower wage workers were more likely to be laid off in 2020, wage increases in 2020 and 2021 were higher than the statewide average and increased modestly in 2022.

Severity for Retail is slightly lower than the statewide average and frequency is significantly higher, around 50% higher than the statewide average.

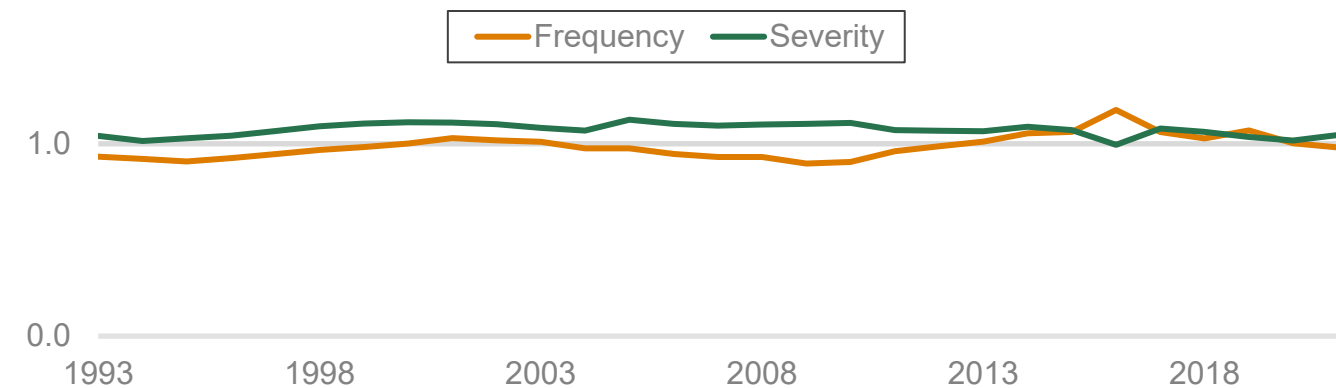
[More Info](#)

Manufacturing Highlights

Change in Employment and Wages



Indemnity Claim Frequency and Severity Relative to Statewide



Manufacturing employment decreased modestly in 2020, recovered to 2019 levels in 2022 and is projected to grow modestly through 2025.

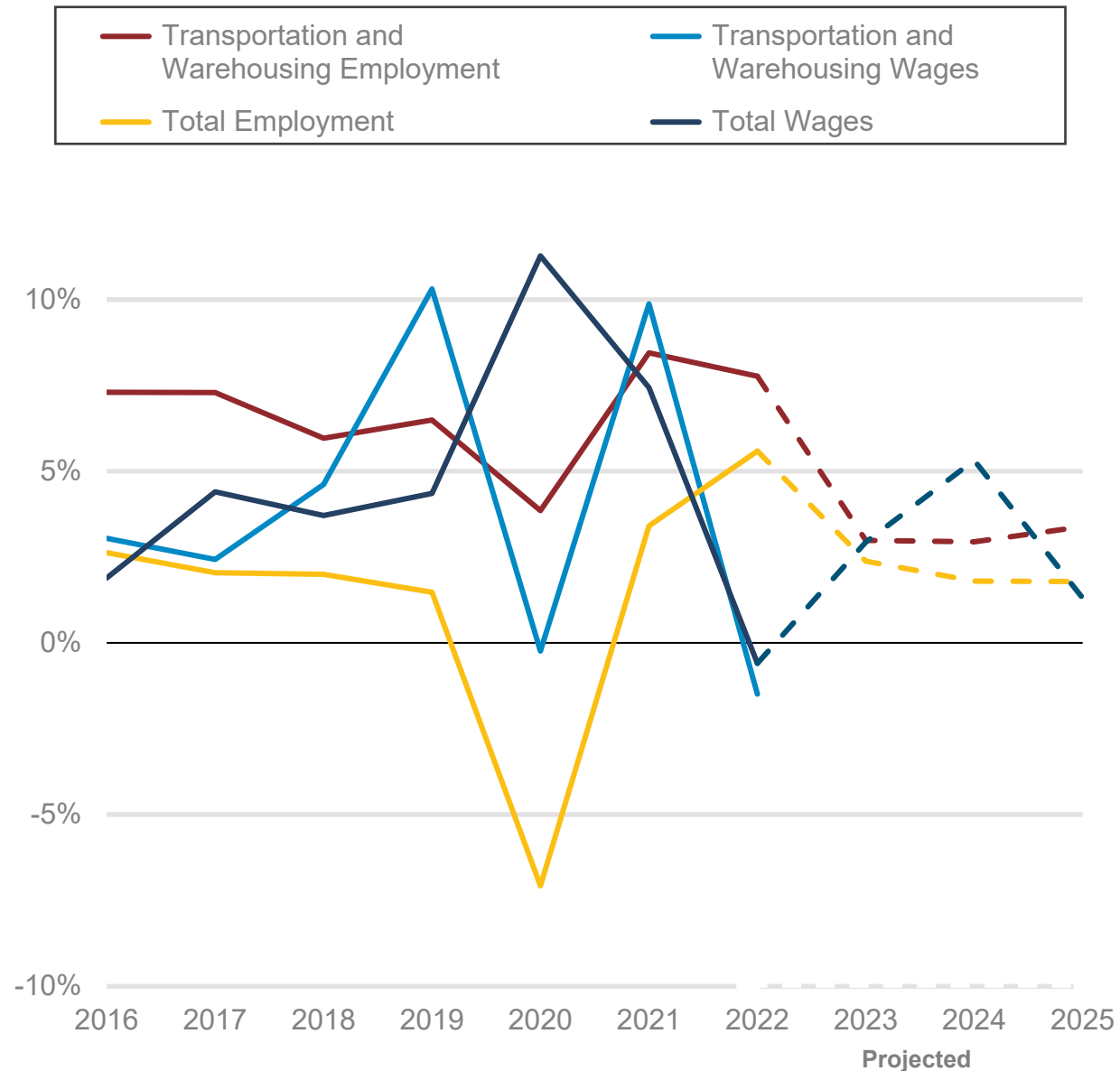
In 2020 and 2021, wages in Manufacturing increased more than the statewide average and then decreased in 2022.

In recent years, both average frequency and severity of Manufacturing claims has been somewhat higher than the statewide average.

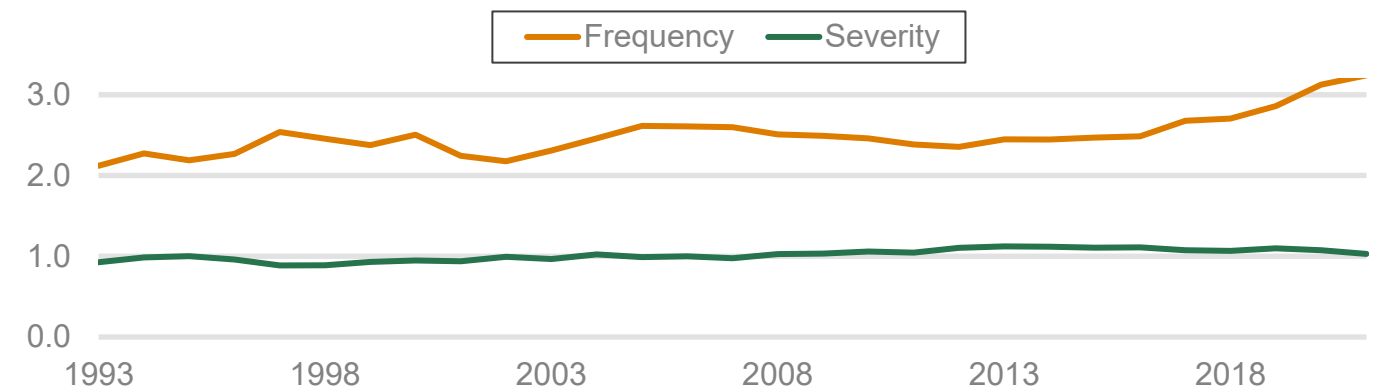
[More Info](#)

Transportation and Warehousing Highlights

Change in Employment and Wages



Indemnity Claim Frequency and Severity Relative to Statewide



Employment in Transportation and Warehousing has grown faster than statewide since 2019 and is forecast to continue growing strongly.

Wages in Transportation and Warehousing were flat in 2020, grew strongly in 2021 and decreased in 2022.

The average severity of Transportation and Warehousing claims has been slightly above the statewide average while the average frequency has been significantly higher and increasing relative to the statewide average.

[More Info](#)



Detail for Technical Appendix

Changes in economic conditions have significant impacts on workers' compensation costs and exposures. The WCIRB relies on economic data from the Bureau of Labor Statistics (BLS) and the UCLA Anderson Forecast to help understand the underlying economic dynamics in California. These external data sources are combined with Unit Statistical Report (USR) data to help model the impact of economic changes on the California workers' compensation system.

The WCIRB Indemnity Claim Frequency model¹ has been used for many years to project indemnity claim frequency for purposes of pure

premium ratemaking and was most recently reviewed at the December 9, 2021 meeting of the Actuarial Committee.² This model projects changes in indemnity claim frequency based on changes in economic variables and filing of cumulative injury claims. Increases in aggregate employment and decreases in the unemployment rate are correlated with increases in indemnity claim frequency.

Let us know what you think about this study by emailing us at **ActuarialResearch@wcirb.com**.

¹ https://www.casact.org/sites/default/files/database/proceed_proceed99_99046.pdf

² Item AC21-12-07 in https://www.wcirb.com/sites/default/files/documents/20211209_ac_agenda.pdf

More Info

Slide 5: Annual California Unemployment Rate

This exhibit shows the annualized California unemployment rate. Historic values are from the BLS and forecasts are from the UCLA Anderson Forecast.

Slide 6: Distribution of Employment by Industry

This exhibit shows the shares of statewide employment by industrial sector. Historic values are from the BLS and forecasts are from the UCLA Anderson Forecast.

Slide 7: Cumulative Change in Employment Since 2019 for Key Industries

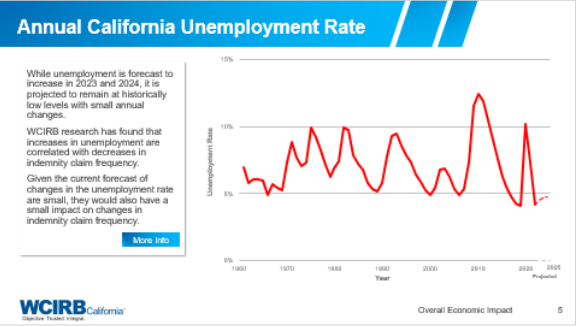
This exhibit shows the cumulative change in annualized employment since 2019 for select industries. Historic values are from the BLS and forecasts are from the UCLA Anderson Forecast.

Slide 8: Annual Change in Average Wage by Industry

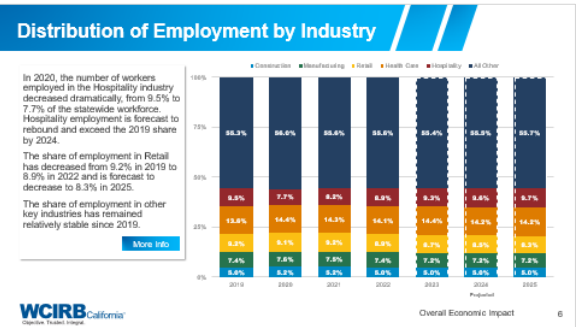
This exhibit shows annual changes in average wage for select industries and overall. Historic wages are from the BLS Quarterly Census of Employment and Wages (QCEW) data series. Forecasts of overall wage changes are from the UCLA Anderson Forecast.

Slide 9: Change in Frequency, Severity and Pure Premium Due to Industrial Mix

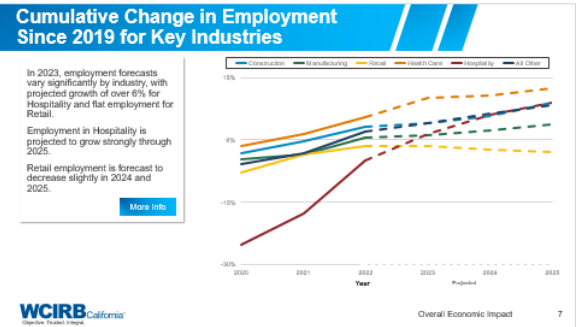
This exhibit shows the measured and expected annual changes in indemnity claim frequency, indemnity claim severity and pure premium due to the mix of employment in each calendar year. Projected changes for frequency and severity are calculated based on 3-year average relativities to statewide and UCLA Anderson Forecast changes in employment for each industry. Relativities are calculated based on USR data for policy years 2018-2020. Changes for pure premium are the combination of changes in frequency and severity. Historic changes in frequency and severity are measured using USR data at a classification level. Other impacts of changes in employment and wages, along with other factors can impact frequency, severity and pure premium changes. This exhibit measures only changes due to the mix of employment.



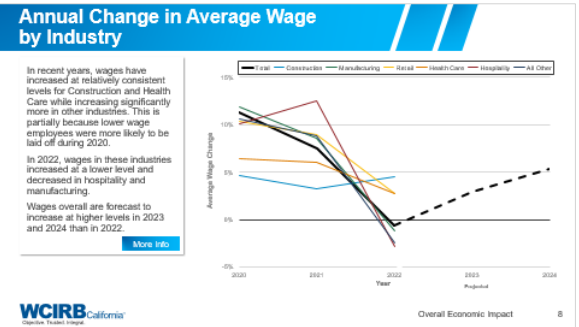
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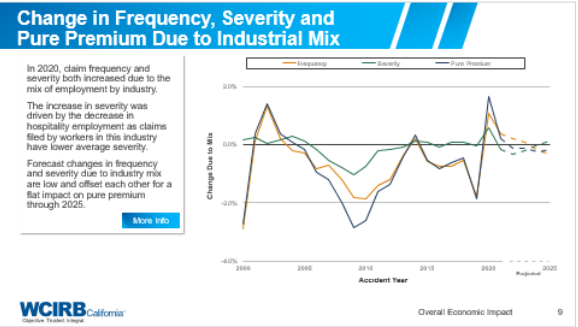
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Return to Slide 8



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More Info (continued)

Industry Highlights

These exhibits show indemnity claim frequency and severity relativities to statewide by industry. Severities are limited to \$500,000. Frequency and severity relativities to the statewide average are calculated based on USR data by policy year. Claim counts and losses are developed to fifth report level based on the average of the most recent two report level-to-report level development factors observed in USR data. Indemnity count and indemnity loss development factors are calculated by the WCIRB Indemnity Loss Development Group (ILDG). Medical loss development factors are calculated by the WCIRB Medical Loss Development Group (MLDG). COVID-19 claims are excluded. Data from standard exception classifications is allocated to industries based on WCIRB wage studies.

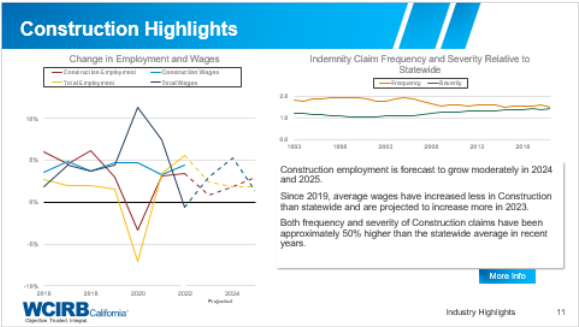
Historic wages are from the BLS Quarterly Census of Employment and Wages (QCEW) data series. Historic employment values are from the BLS and forecasts are from the UCLA Anderson Forecast.

Data Sources (Evaluation Dates)

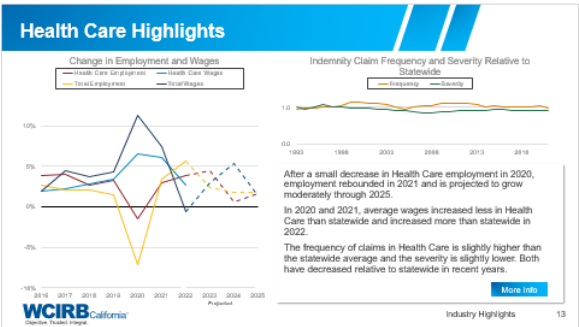
USR Summary Data (Policy Year 2021)

BLS (Year End 2022)

UCLA Anderson Forecast, a unit of UCLA Anderson School of Management (October 2023)



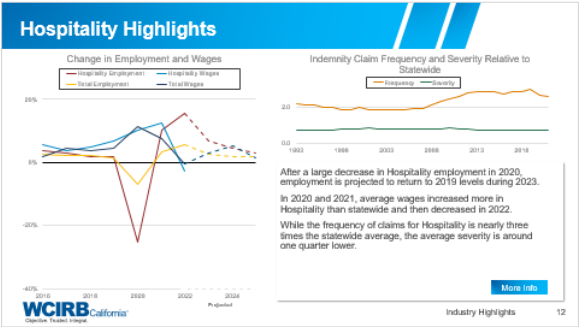
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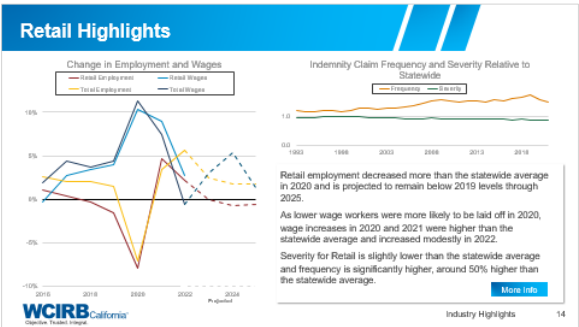
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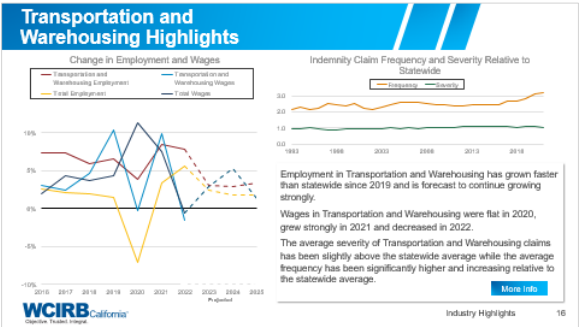
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Definition of Industries

NAICS	NAICS Sector	Report Label
11	Agriculture, Forestry, Fishing and Hunting	All Other
21	Mining, Quarrying, and Oil and Gas Extraction	All Other
22	Utilities	All Other
23	Construction	Construction
31	Manufacturing	Manufacturing
42	Wholesale Trade	All Other
44	Retail Trade	Retail
48	Transportation and Warehousing	All Other
51	Information	All Other
52	Finance and Insurance	All Other
53	Real Estate and Rental and Leasing	All Other
54	Professional, Scientific, and Technical Services	All Other
55	Management of Companies and Enterprises	All Other
56	Administrative and Support and Waste Management and Remediation Services	All Other
61	Educational Services	All Other
62	Health Care and Social Assistance	Health Care
71	Arts, Entertainment, and Recreation	All Other
72	Accommodation and Food Services	Hospitality
81	Other Services (except Public Administration)	All Other
92	Public Administration	All Other

Conditions and Limitations

Insured Employer Experience Only. Unless otherwise noted, the information in this report is based on the reported experience of insured employers only and may or may not be indicative of the experience of the state as a whole including self-insured employers.

Future Projections Can Differ from Estimates Based on Current Data. WCIRB estimates were based on information available at the time of this study. If subsequent information becomes available that changes the basis of our assumptions, these estimates would of course be affected.

Individual Insurer Results Can Differ. The amounts and ratios shown represent statewide totals based on the amounts reported by insurers writing workers' compensation insurance in California. The results for any individual insurer can differ significantly from the statewide average. An individual insurer's results are related to its underwriting book of business, claims and reserving practices, as well as the nature of its reinsurance arrangements.

Unaudited Data from Third Parties. The information presented herein may have relied upon publicly available sources of information. While in such circumstances, we deemed the sources credible for the purposes we used the information, we did not independently validate the underlying information.

Partial or Preliminary Data. Some of the information presented herein may be based on data from only a partial time period or at an initial preliminary evaluation. Once more complete and mature information becomes available, estimates could differ.

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1901 Harrison Street, 17th Floor
Oakland, CA 94612
888.CA.WCIRB (888.229.2472)



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