



*The Source You Trust*

# Residual Market Forum



**RMF**  
2026

# Adverse Weather and Workers Compensation Frequency

**Patrick Coate, PhD**

Senior Economist  
NCCI



# Adverse Weather and Work Injuries: Roadmap

Impacts of adverse weather are of interest to WC/insurance

---

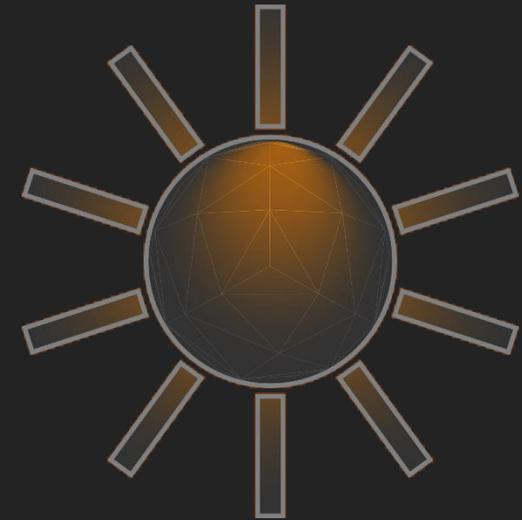
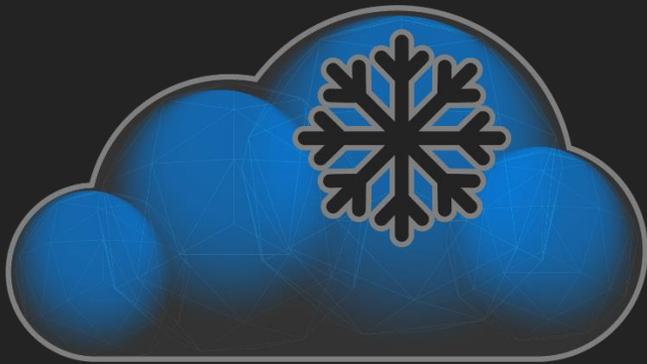
Show relationship between weather conditions and work injuries

20+ years of data, 35 states

---

What are the overall impacts of adverse weather?

Scenario analyses



# Modeling Strategy



Compare claims to mild-weather baseline, all else equal

---



Consider precipitation as well as temperature

---



Investigate differing effects by sector and cause

---

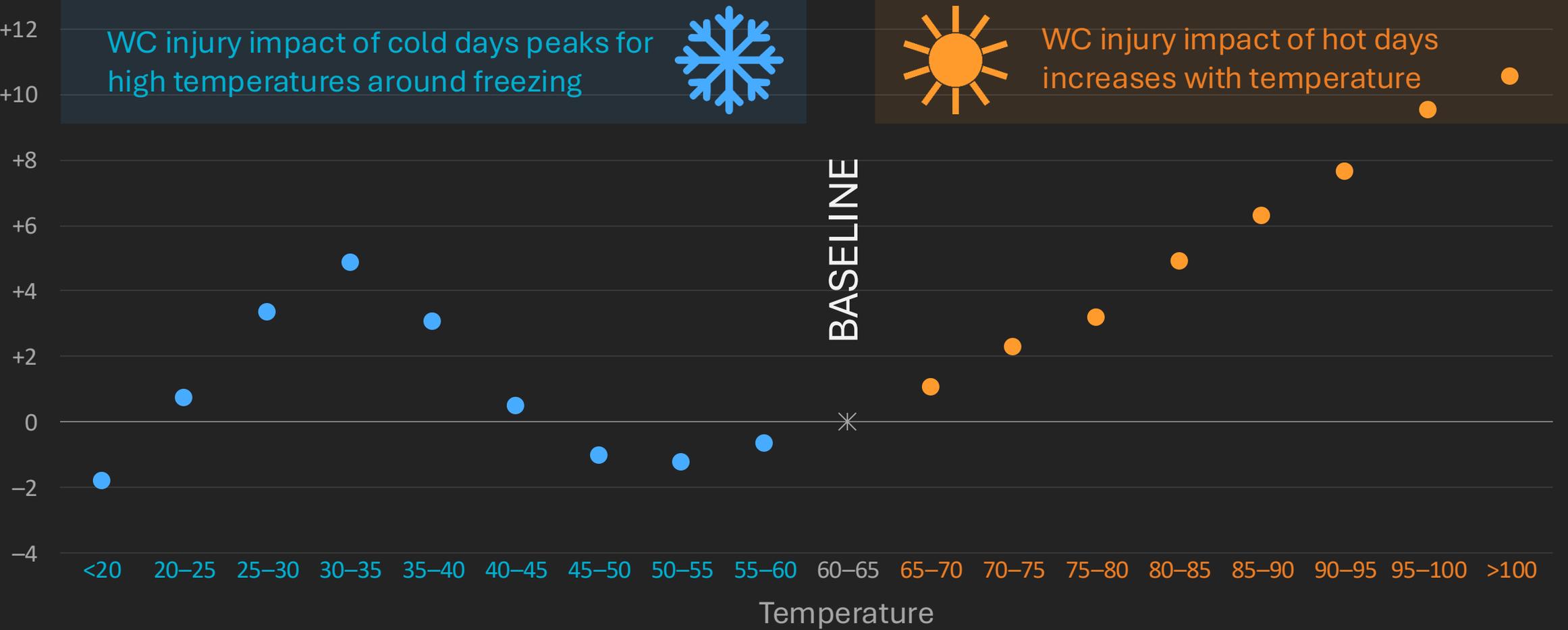


Focus on all claims, not just directly weather related

# Impact on Claims: Temperature

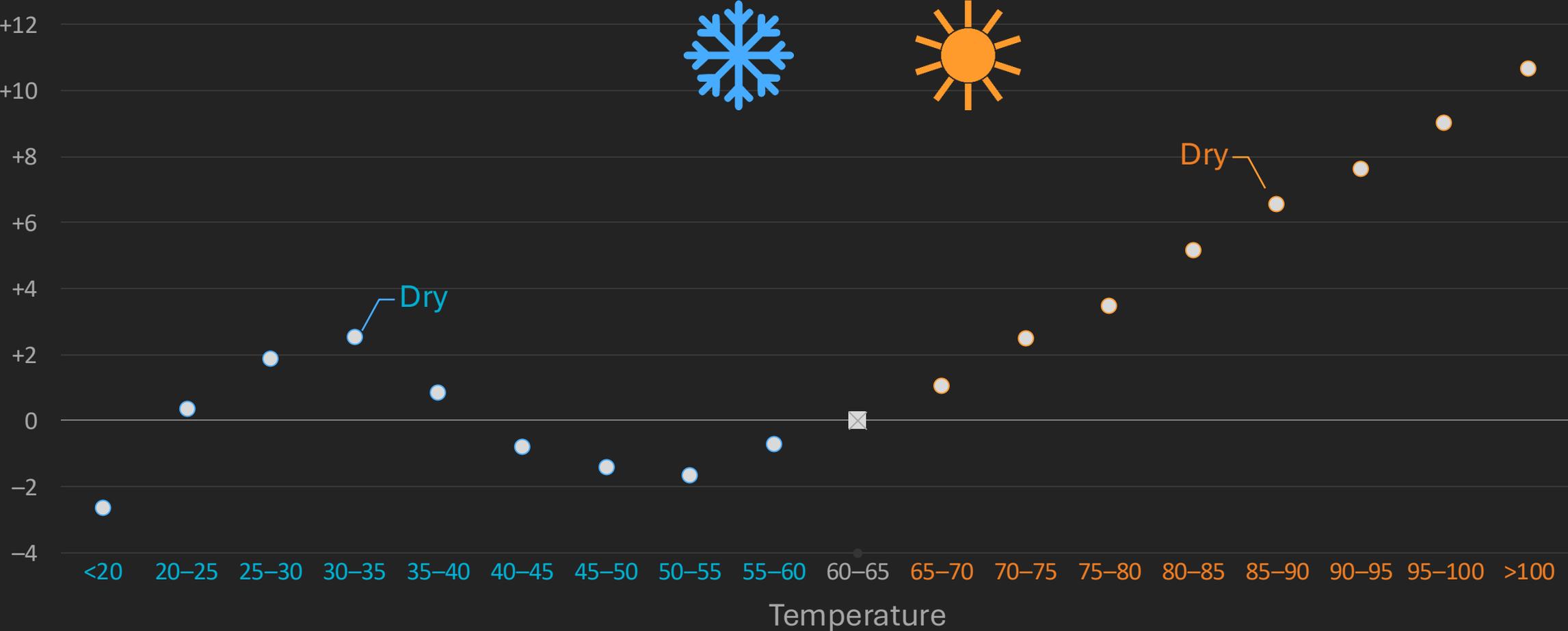
Impact on Claims

Percent



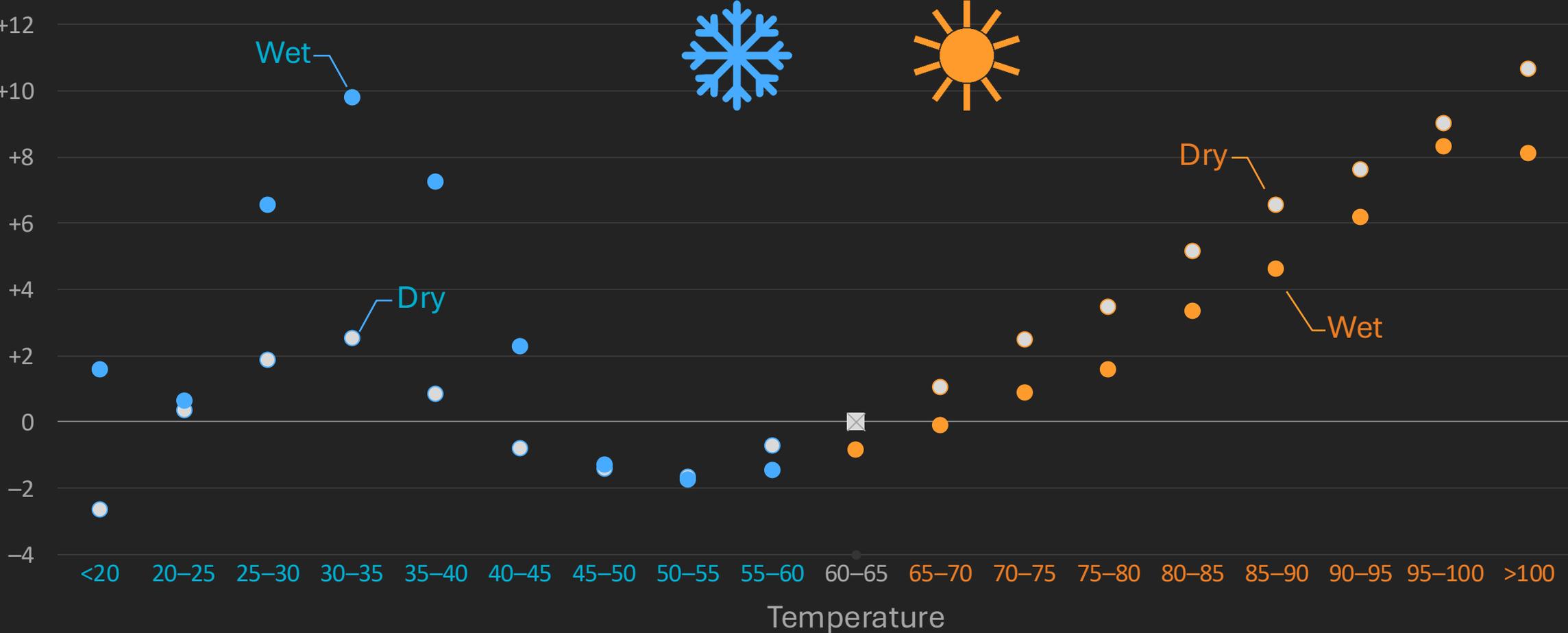
# Impact on Claims: Temperature and Precipitation

Impact on Claims  
Percent



# Impact on Claims: Temperature and Precipitation

Impact on Claims  
Percent



# Workers Compensation Is Not the Economy

Sector Distribution—NCCI States, Percent

	Employment	Voluntary		Residual	
		Payroll	Premium	Payroll	Premium
Construction	6	8	20	26	49
Combined Office	29	36	17	28	18
Transportation and Warehousing	5	4	11	6	8
Leisure and Hospitality	13	5	6	8	6
Manufacturing	9	17	18	6	5
Health Care	17	10	7	10	5
Retail Trade	11	8	10	3	2
Wholesale Trade	5	5	6	2	2
All Other	5	8	6	11	6

Combined Office is an aggregation of several sectors: Information, Financial Services, Professional and Business Services, and Private Education  
 Market values are calculated by industry, excluding Public Administration and where sector is unknown; values may not sum to 100% due to rounding  
 Sources: NCCI's Statistical Plan data (CY 2023p); US Bureau of Labor Statistics (US total, CY 2024)

**RMF**  
2026

# ...And The Residual Market Is Not Workers Compensation

Sector Distribution—NCCI States, Percent

	Employment	Voluntary		Residual	
		Payroll	Premium	Payroll	Premium
<b><i>Construction</i></b>	<b>6</b>	<b>8</b>	<b>20</b>	<b>26</b>	<b>49</b>
<b><i>Combined Office</i></b>	<b>29</b>	<b>36</b>	<b>17</b>	<b>28</b>	<b>18</b>
<b><i>Transportation and Warehousing</i></b>	<b>5</b>	<b>4</b>	<b>11</b>	<b>6</b>	<b>8</b>
Leisure and Hospitality	13	5	6	8	6
Manufacturing	9	17	18	6	5
Health Care	17	10	7	10	5
Retail Trade	11	8	10	3	2
Wholesale Trade	5	5	6	2	2
All Other	5	8	6	11	6

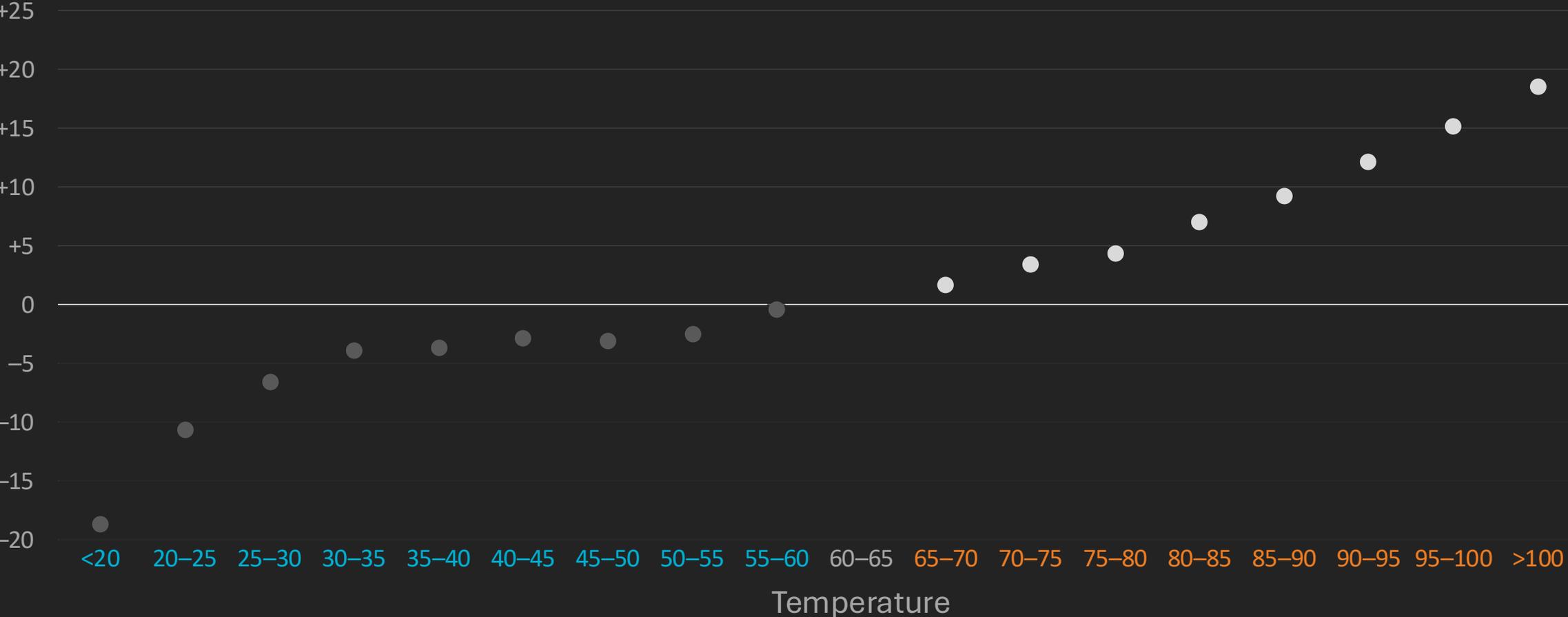
Combined Office is an aggregation of several sectors: Information, Financial Services, Professional and Business Services, and Private Education  
 Market values are calculated by industry, excluding Public Administration and where sector is unknown; values may not sum to 100% due to rounding  
 Sources: NCCI's Statistical Plan data (CY 2023p); US Bureau of Labor Statistics (US total, CY 2024)

**RMF**  
2026

# Impact on Claims: Sector

Impact on Claims  
Percent

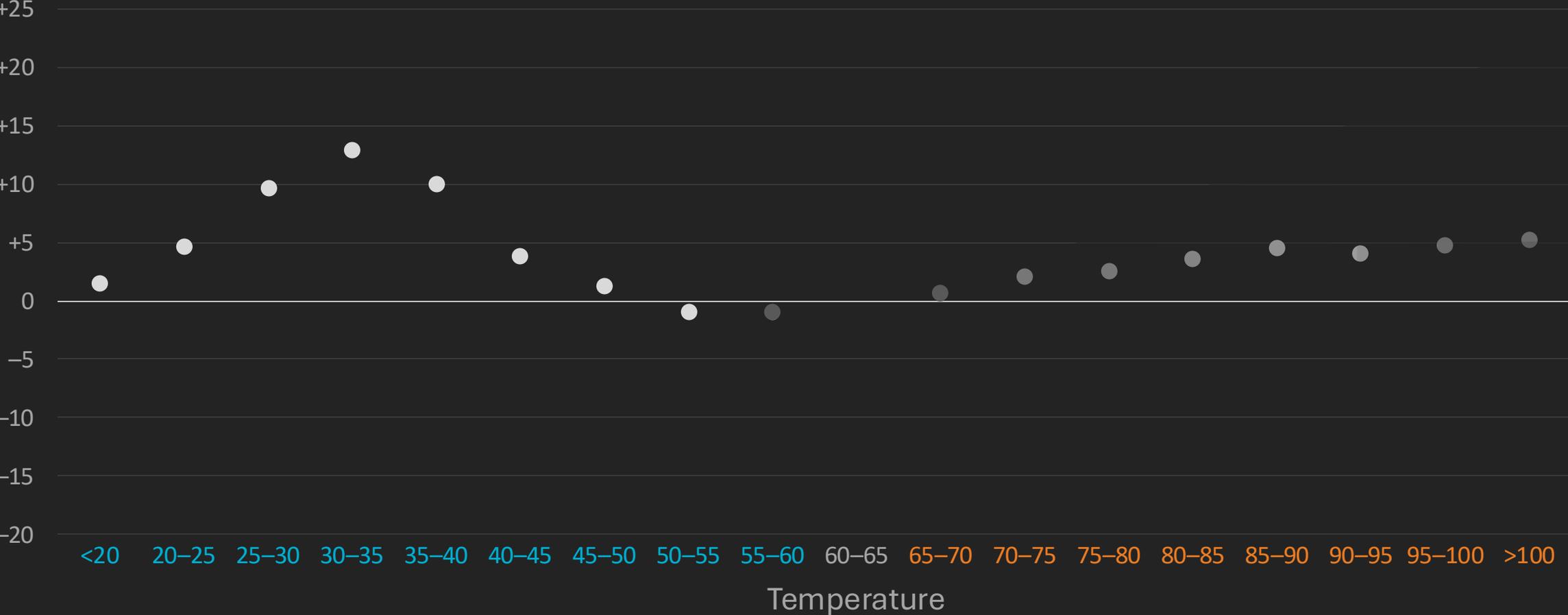
Construction



# Impact on Claims: Sector

Impact on Claims  
Percent

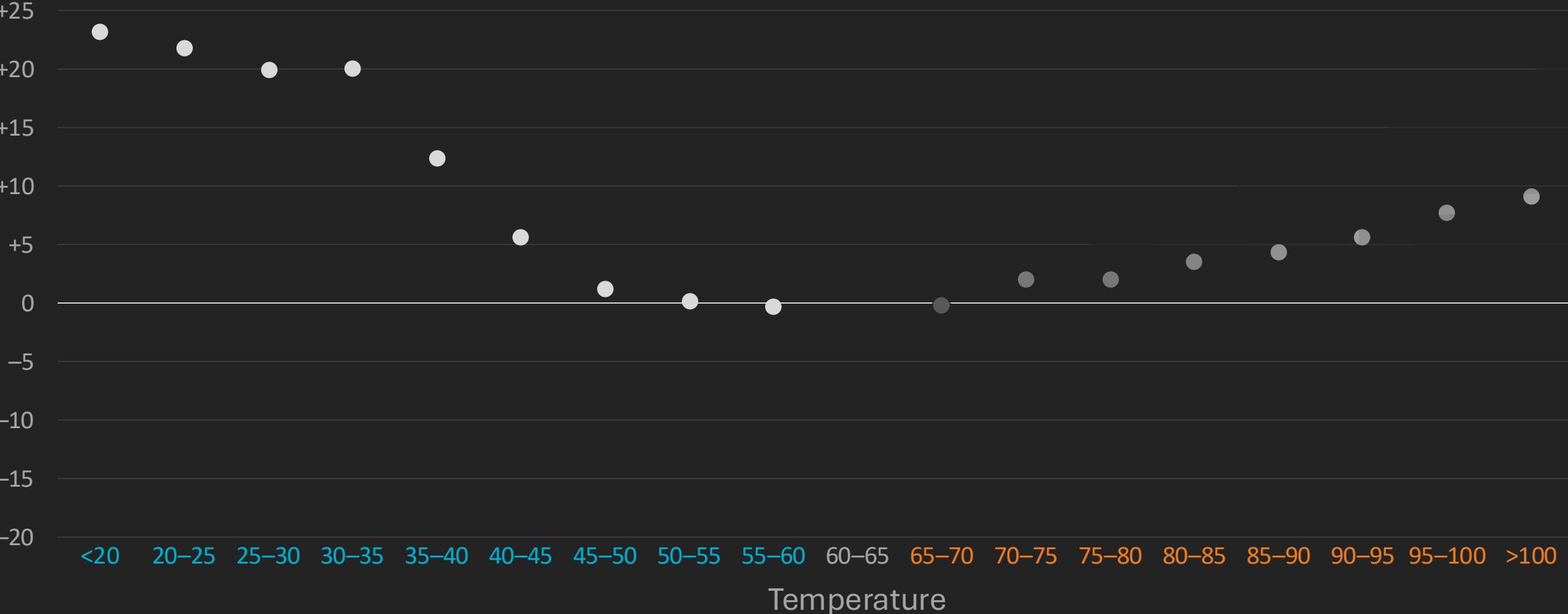
Office 



# Impact on Claims: Sector

Impact on Claims  
Percent

Transportation 



# Impact on Claims: Sector



Construction: **warm weather** impact nearly 2x

---



Office: largest impacts around **freezing** temperatures

---



Transportation: significant impacts for both **hot** and **cold**

# Impact on Claims: Cause of Injury



Contact: over 10% more injuries on the **hottest** days

---



Strains: smaller weather impacts than other major causes

---



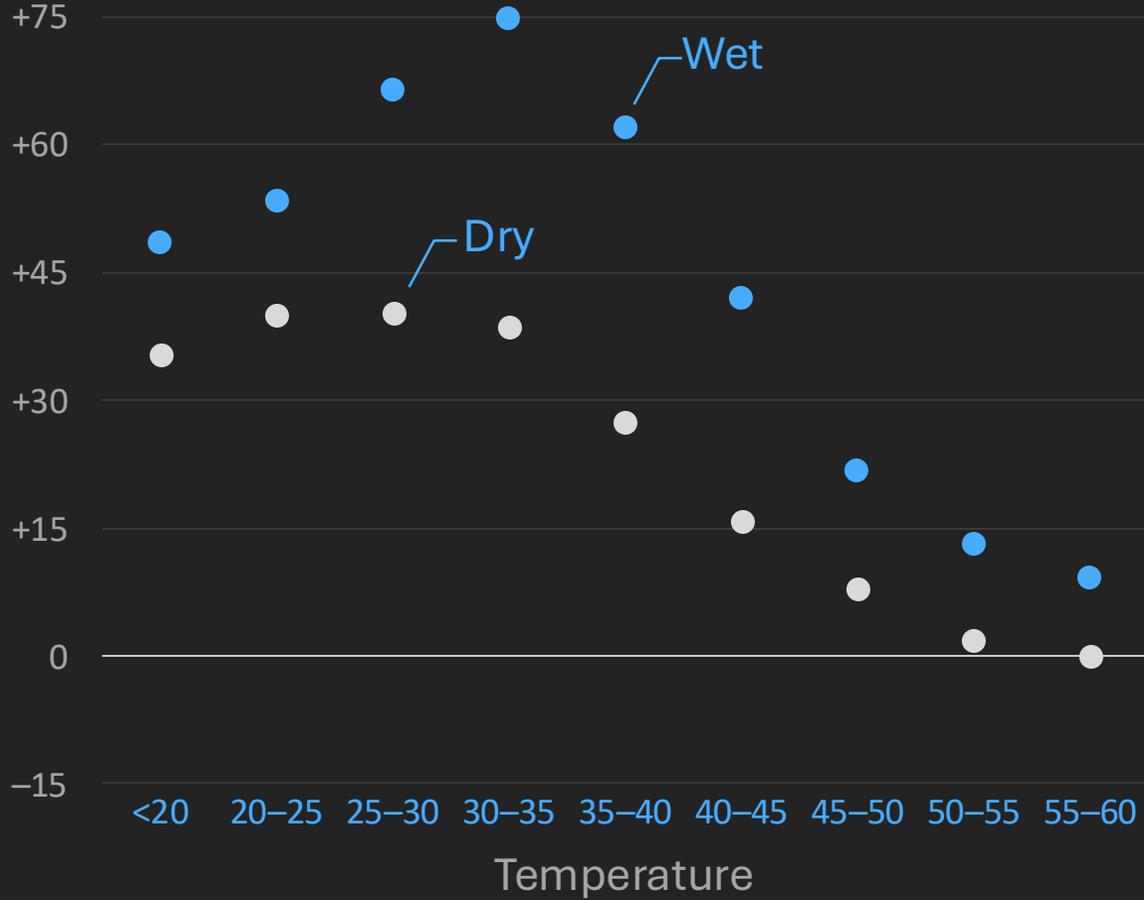
Slip/Fall: many more injuries on days at or below **freezing**

# Impact on Claims: Cause and Precipitation

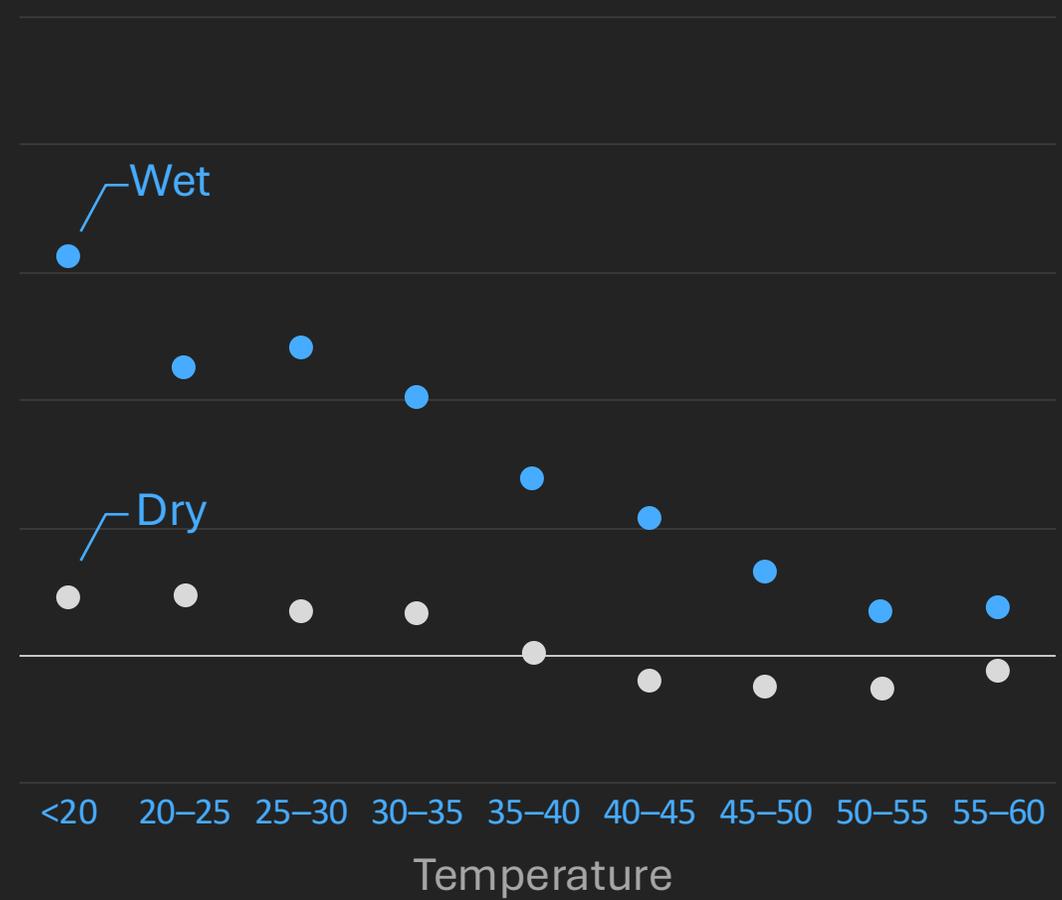
Impact on Claims

Percent

Slip/Fall



Motor Vehicle Accidents



# What Are the Overall Impacts of Weather on WC Claims?

How much does adverse weather impact claim rates *in general*?

Comparison: actual seasonal weather to mild baseline

How much *extra* impact is there from an increase in severe weather?

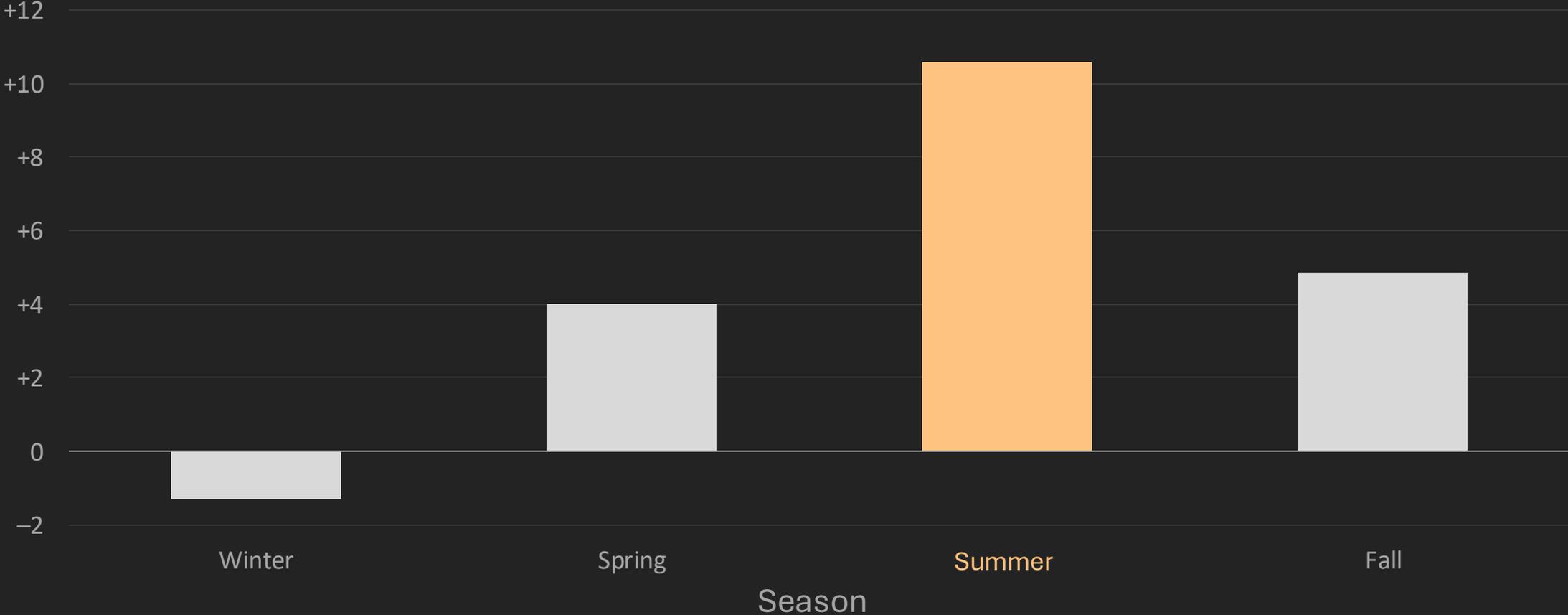
Comparison: average season to a more extreme season

Two example scenarios:



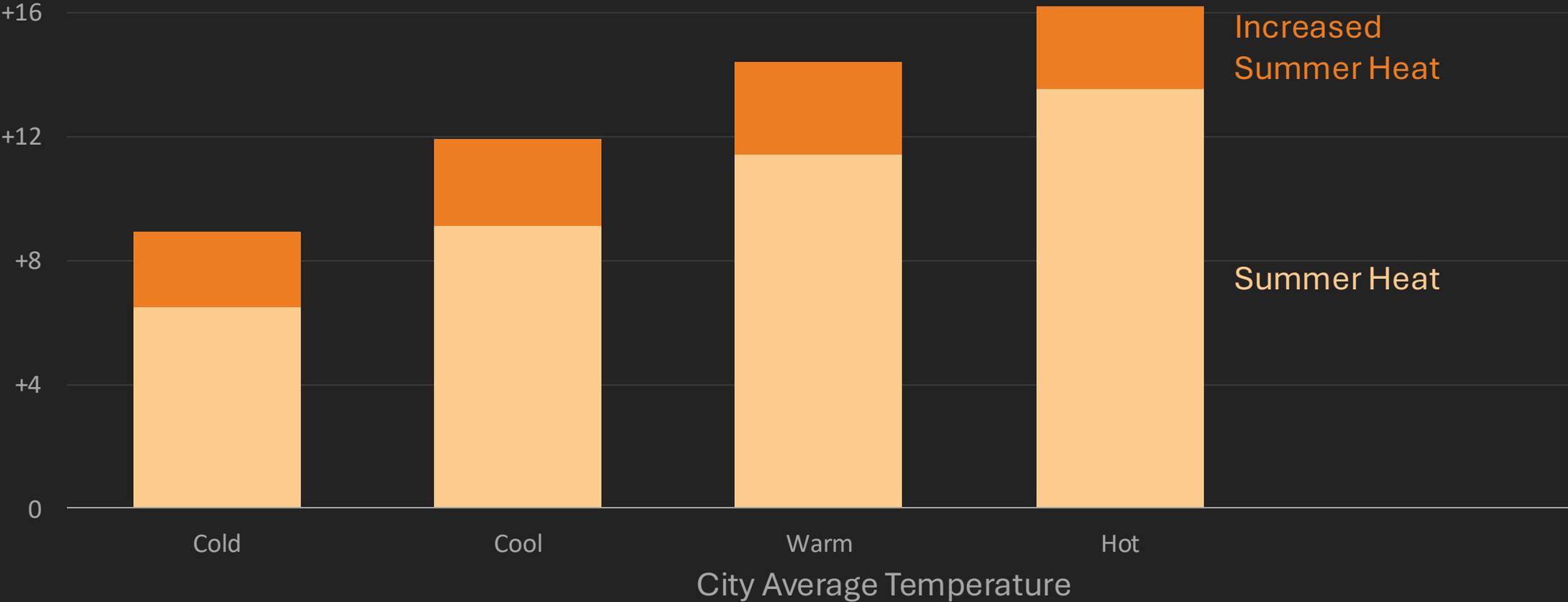
# Impact of Heat on Construction-Related Injuries by Season

Impact on Claims  
Percent



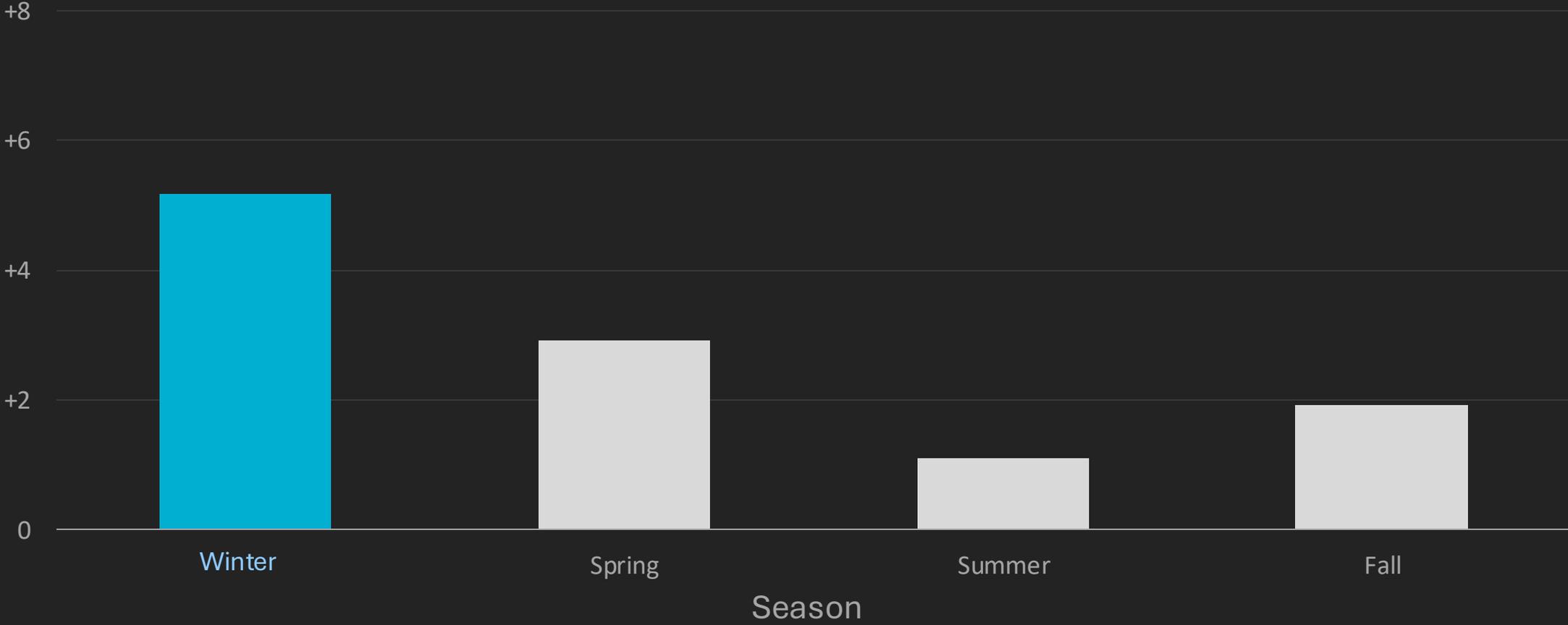
# Impact of Heat on Construction-Related Injuries by City Type

Impact on Claims  
Percent



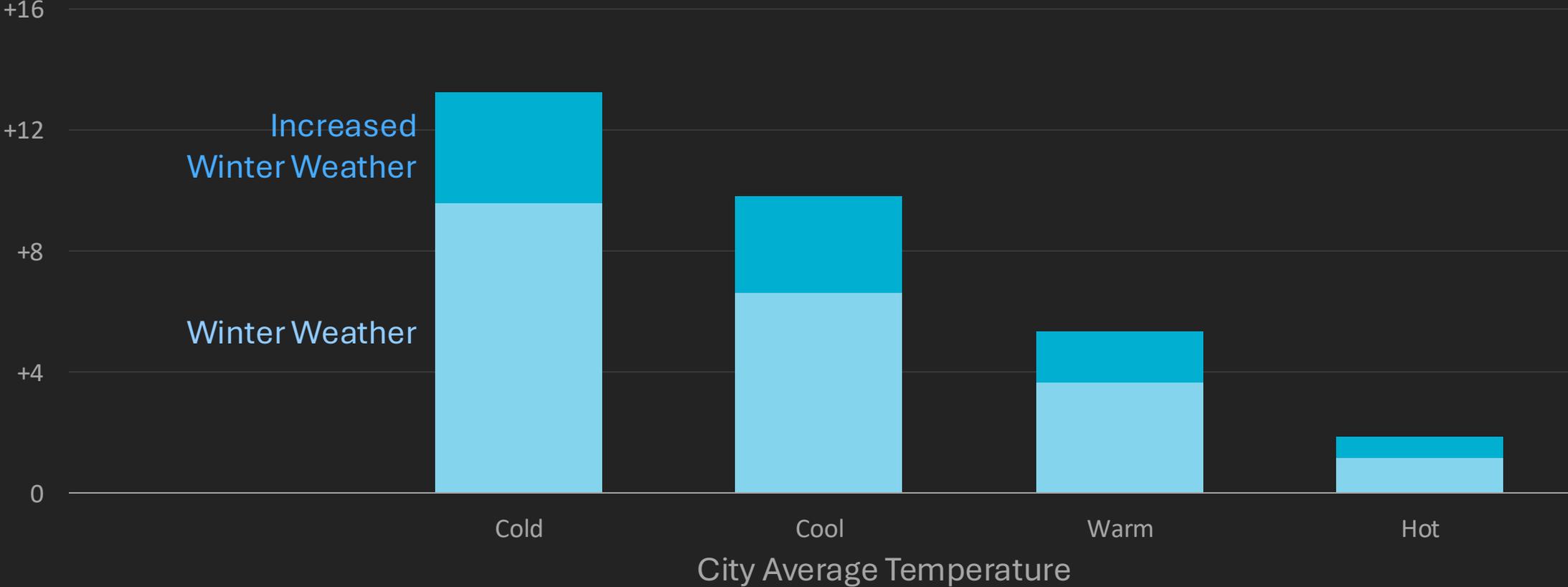
# Impact of Precipitation on Slip/Fall Injuries by Season

Impact on Claims  
Percent



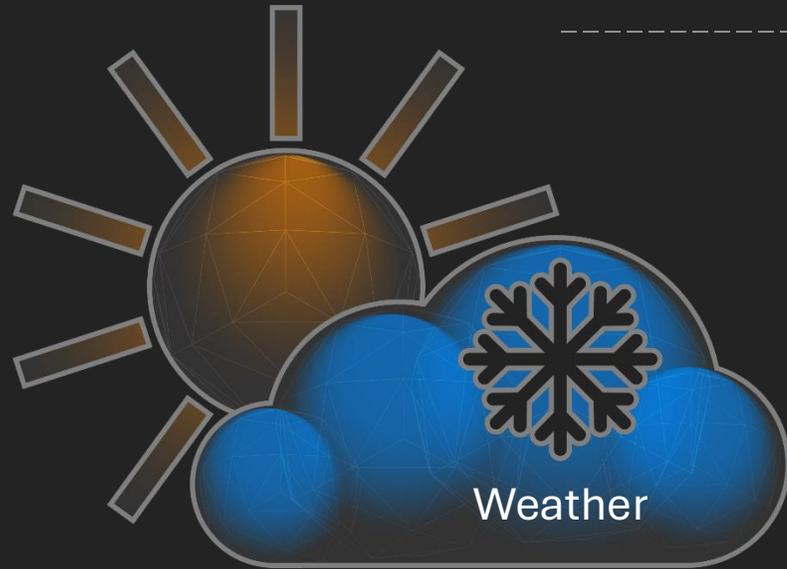
# Impact of Winter Precipitation on Slip/Fall Injuries by City Type

Impact on Claims  
Percent



# Insights

More WC injuries on both **hot** and **cold (and wet)** days



Meaningful **overall effects**,  
most impactful for specific  
types of injuries and jobs –  
including many critical to the  
residual market

**Precipitation impacts** concentrated in colder areas, but  
**increased heat** could affect all regions