

The logo for PCA (Portland Cement Association) features the letters 'PCA' in a bold, white, sans-serif font. A white swoosh underline is positioned beneath the 'A', extending to the right and ending in a registered trademark symbol (®).

PCA®

Since 1916

America's Cement Manufacturers™

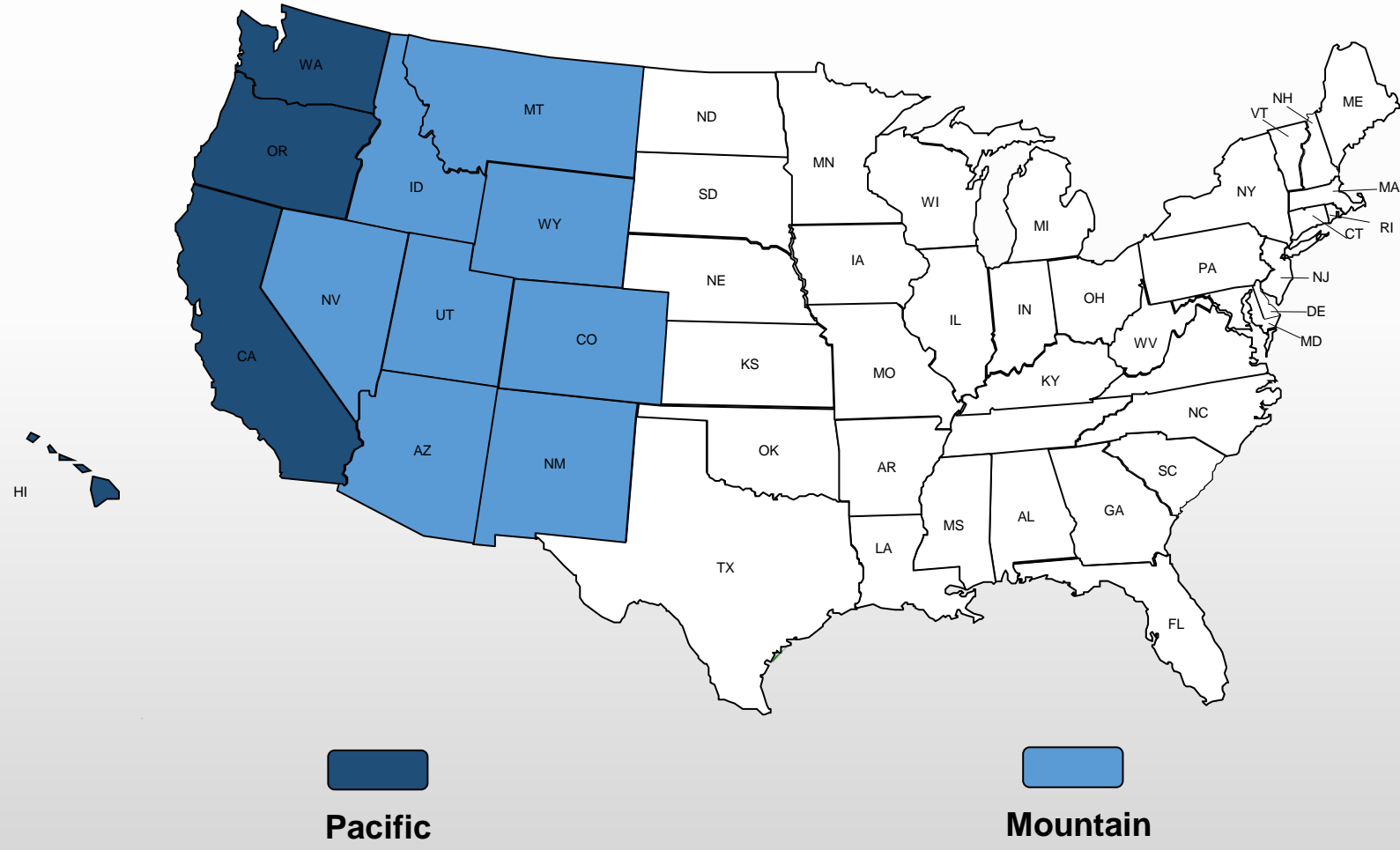
West Region Update

Brian Schmidt, Sr. Regional Economist

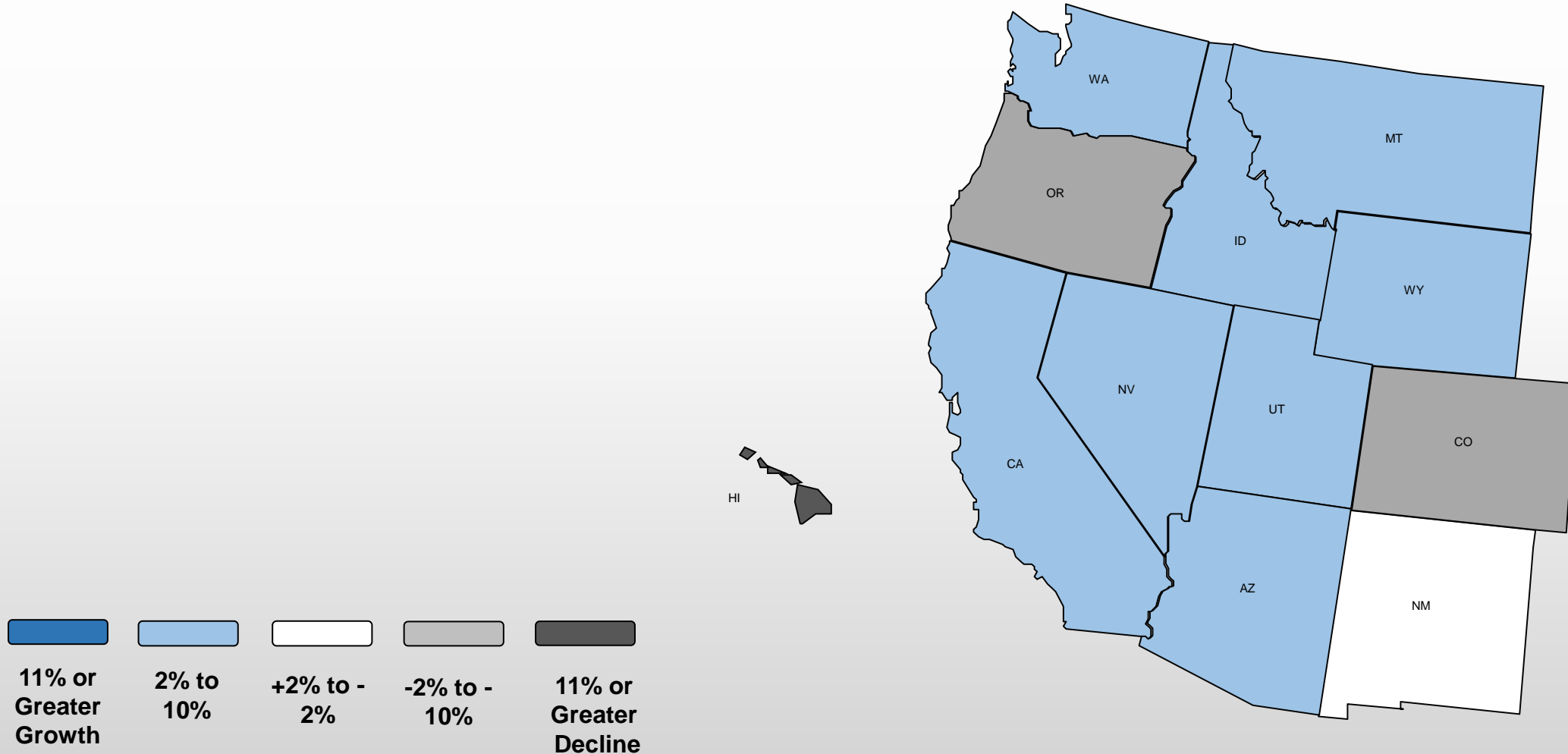
May 2022



Regional Focus

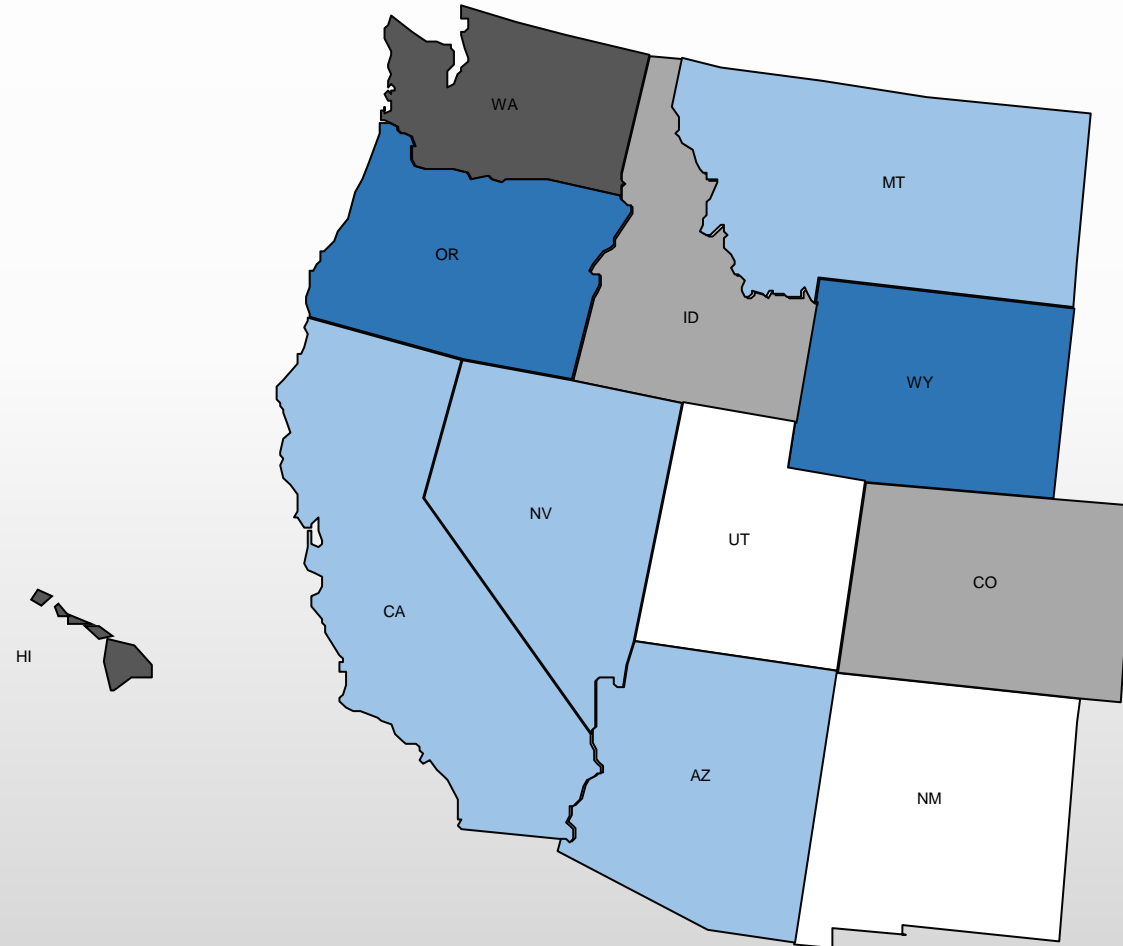
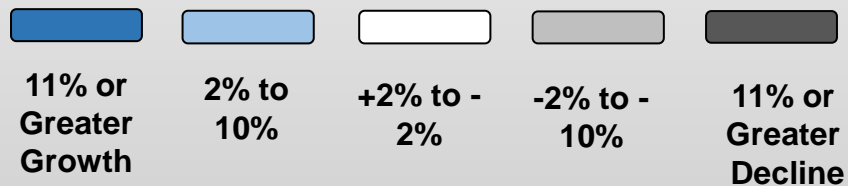


2021 Cement Consumption Performance



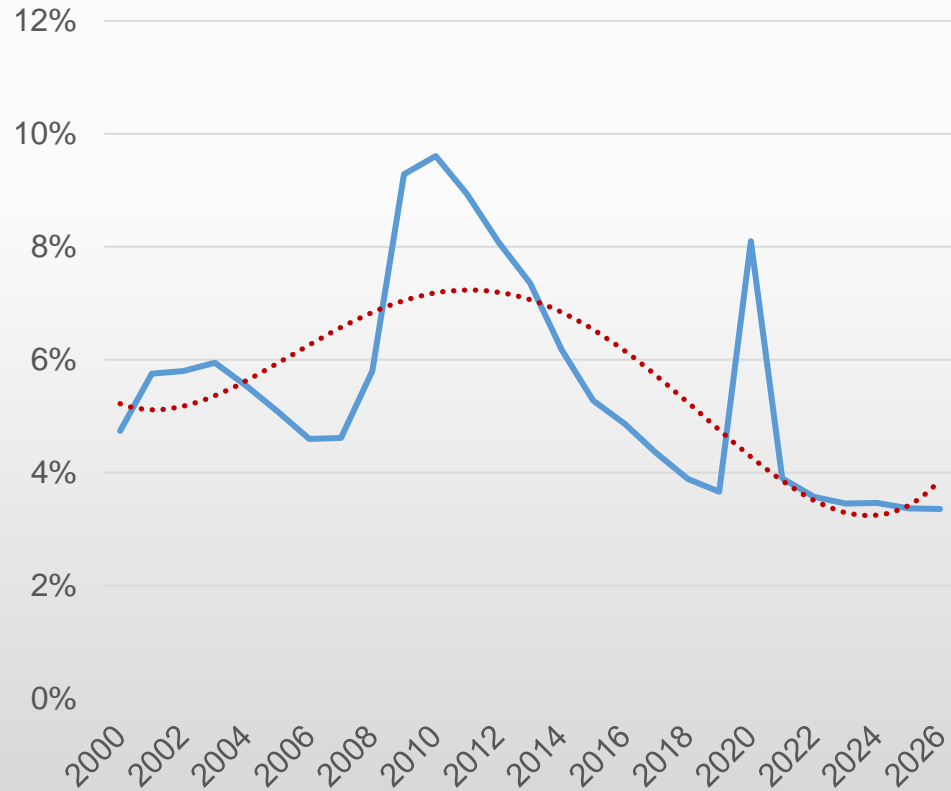
2022 Year-to-Date Cement Consumption Performance

- Through March

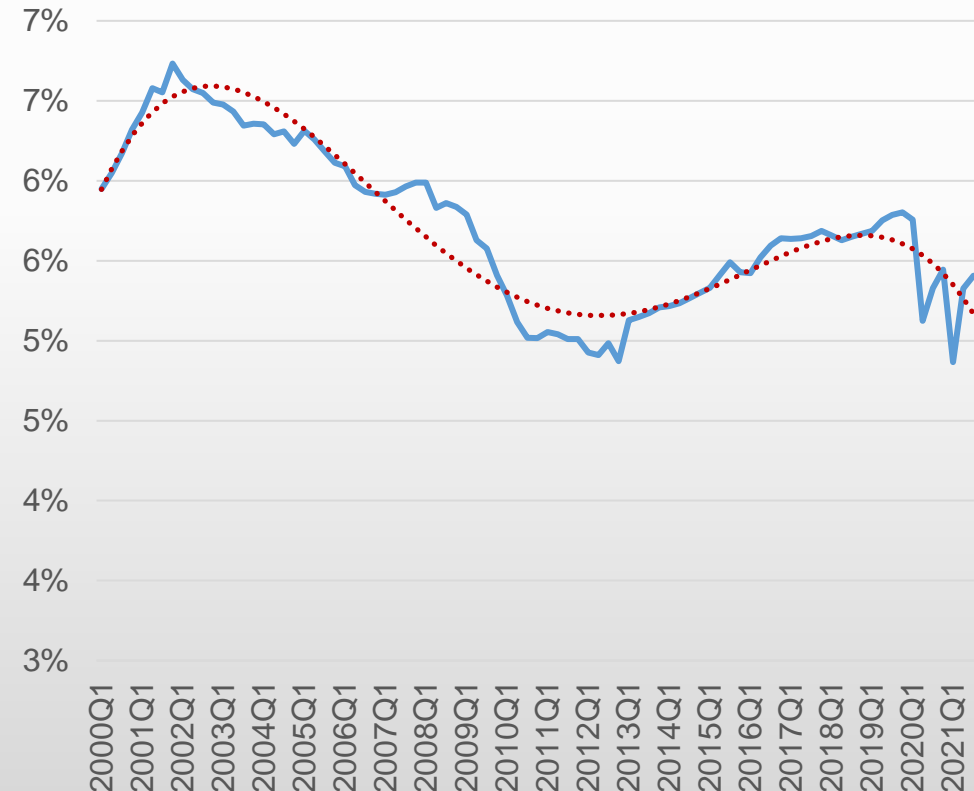


Strength in Labor Markets Low Household Debt

Labor Markets Are Strong
% Unemployed

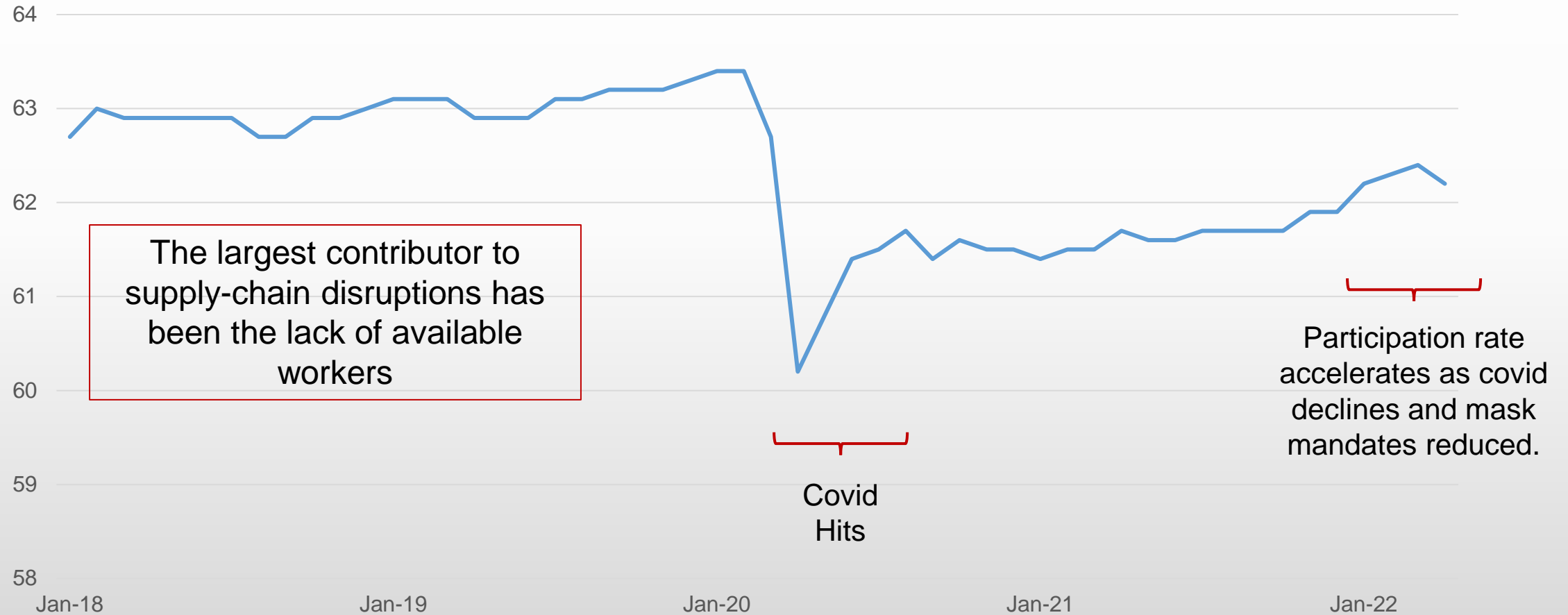


Household Debt Service Ratio
Deby as % of Disposable Income



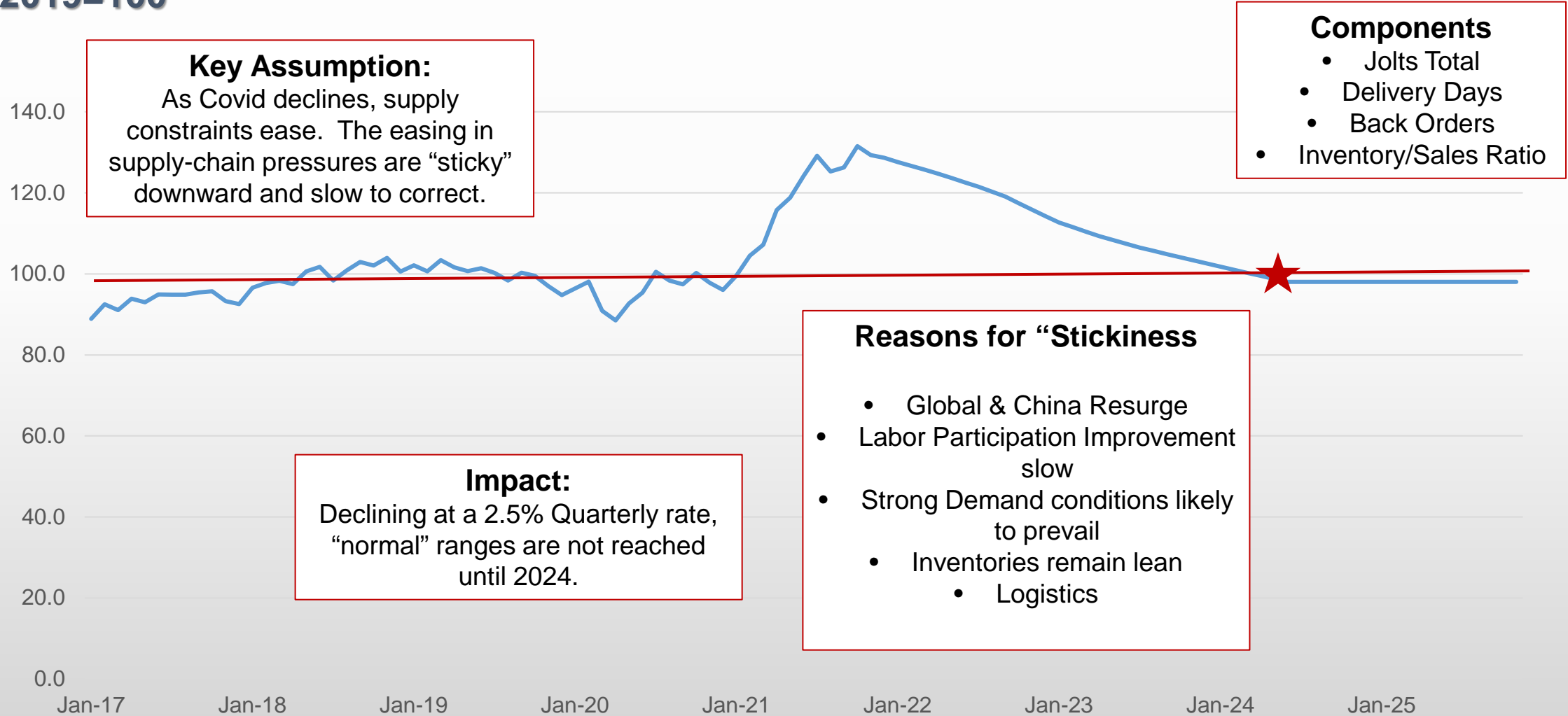
Labor Force Growth Restraints

Labor Participation Rate



PCA Supply Chain Index

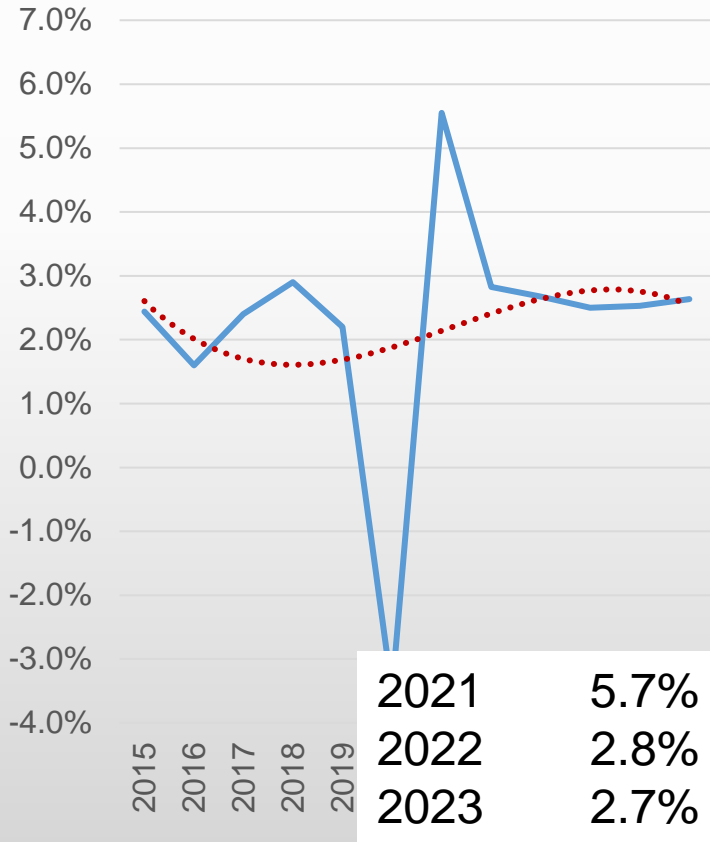
2019=100



Macroeconomic Summary: Baseline

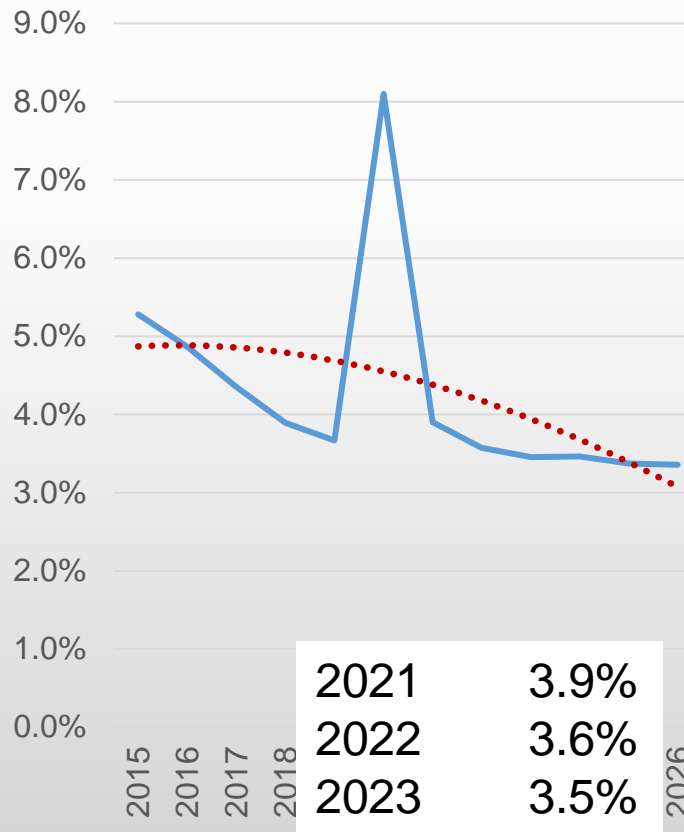
GDP Growth

Real GDP Annual Growth



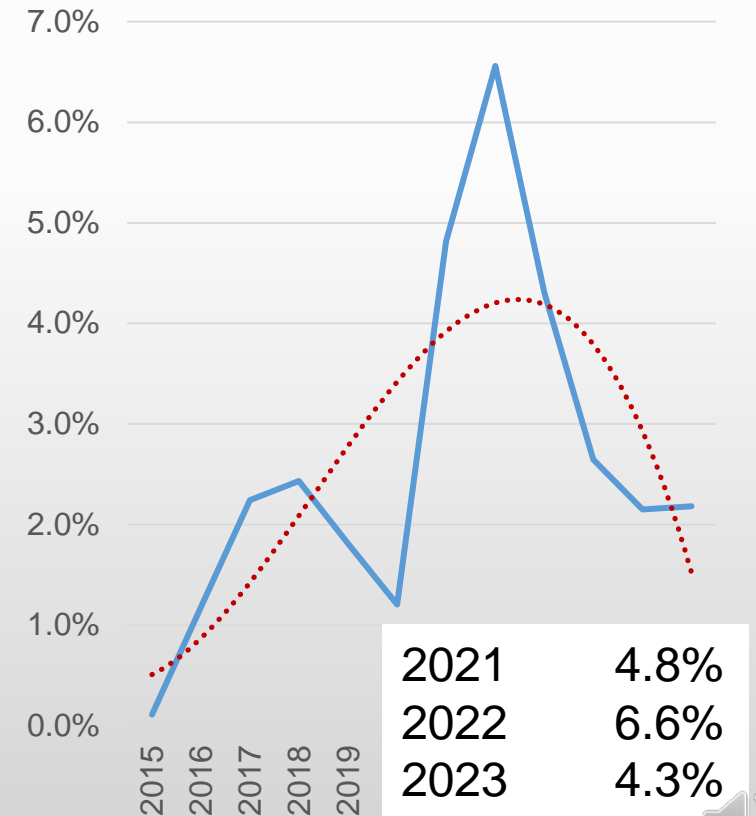
Unemployment Rate

Percent Unemployed



Inflation Rate

CPIU, Annual Percent Change



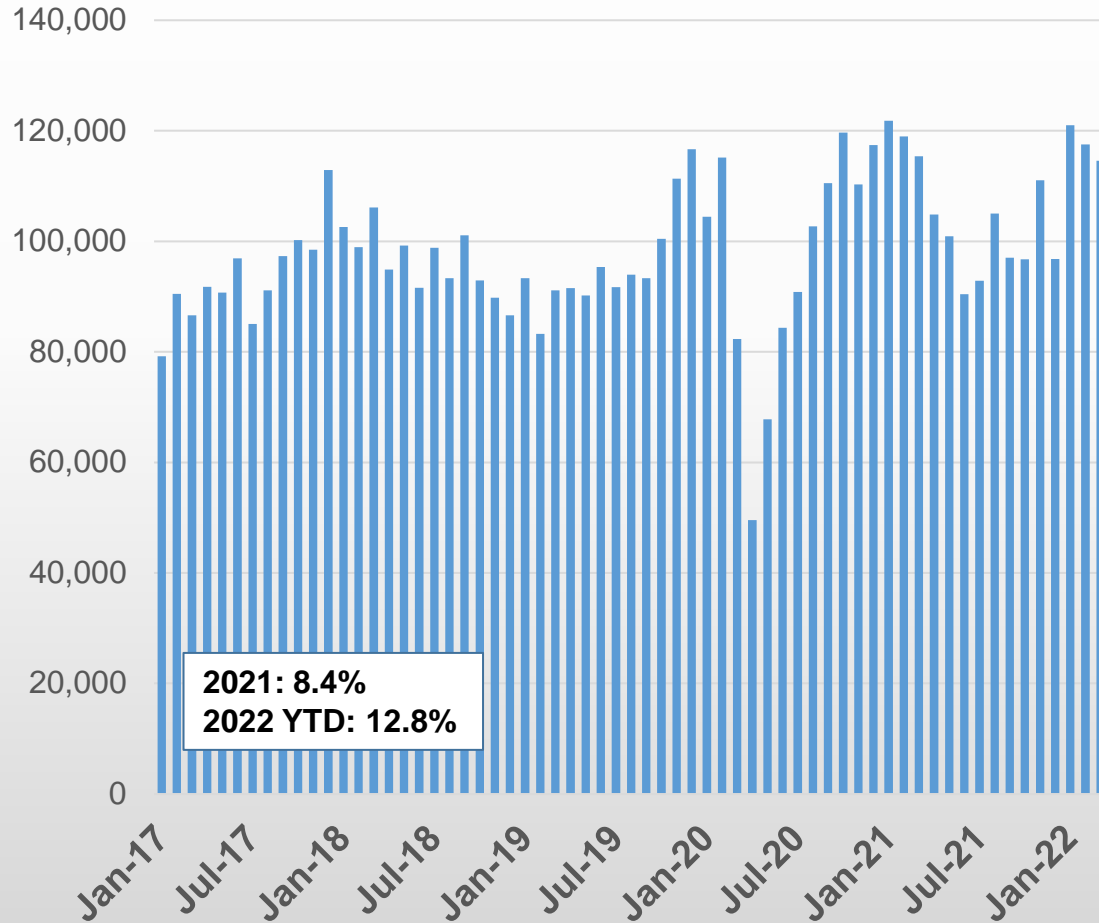
Residential Update



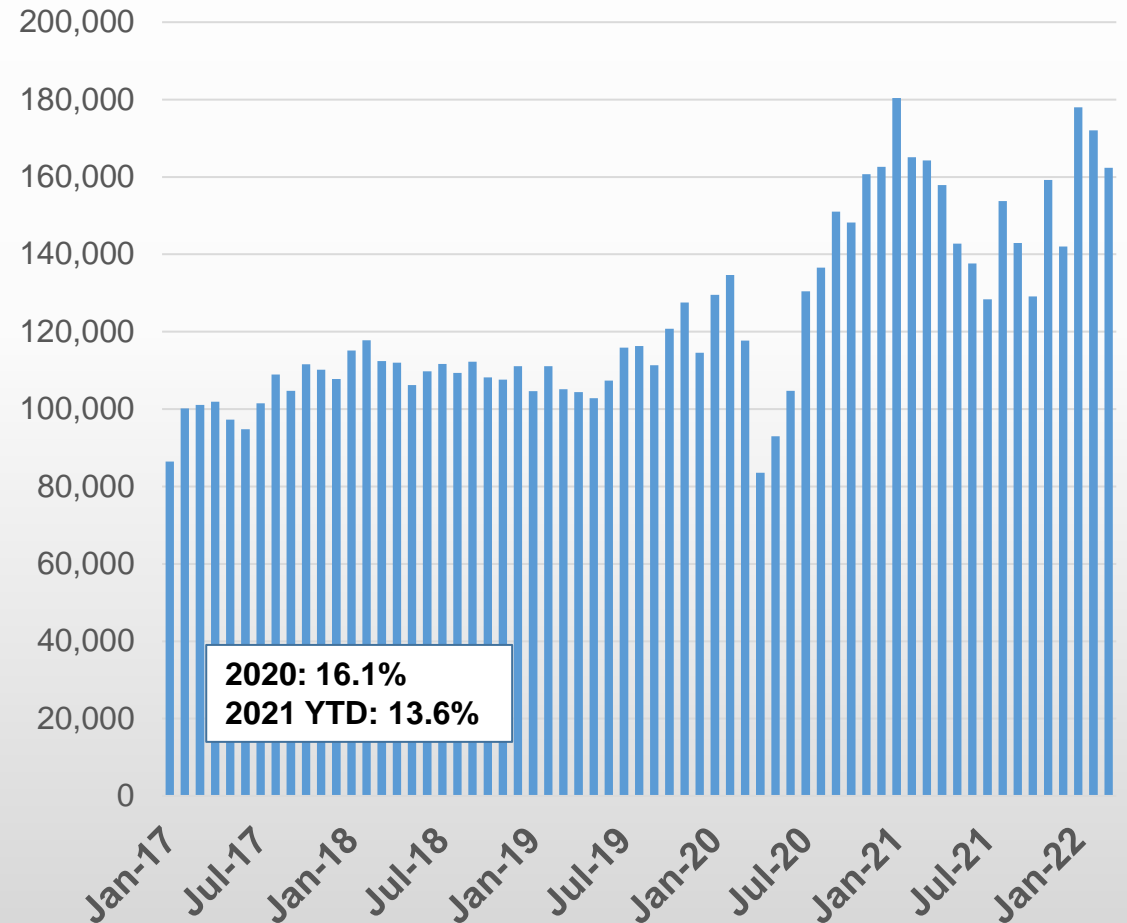
Single Family Housing Permits: West

SAAR

Pacific



Mountain



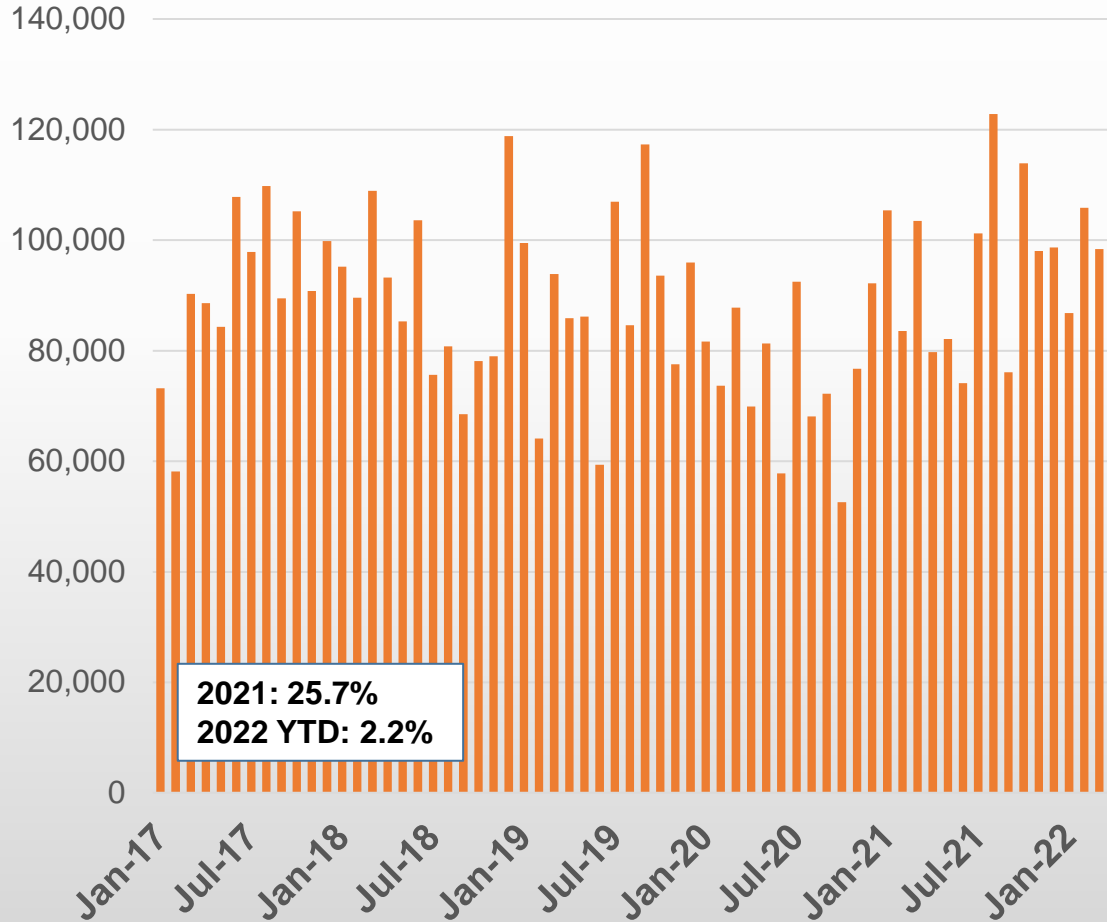
Source: Census



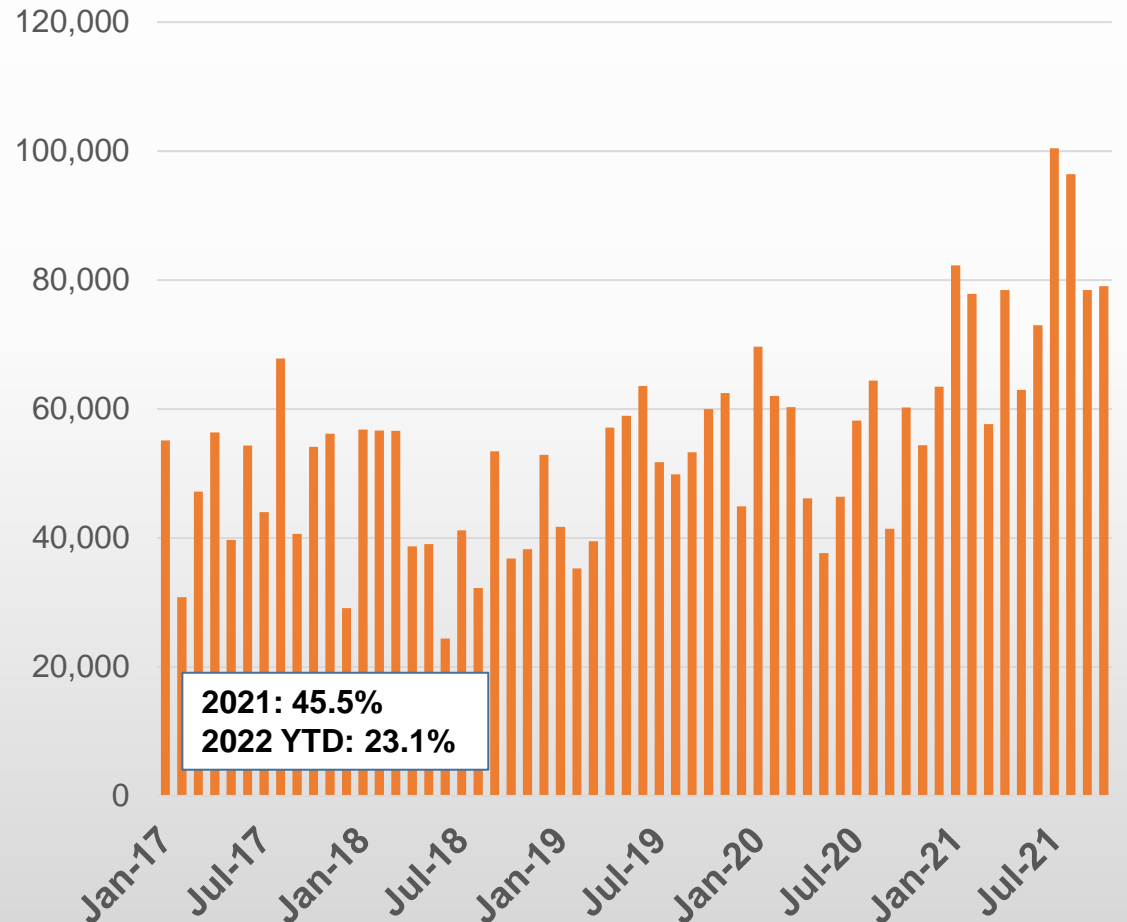
Multifamily Housing Permits: West

SAAR

Pacific



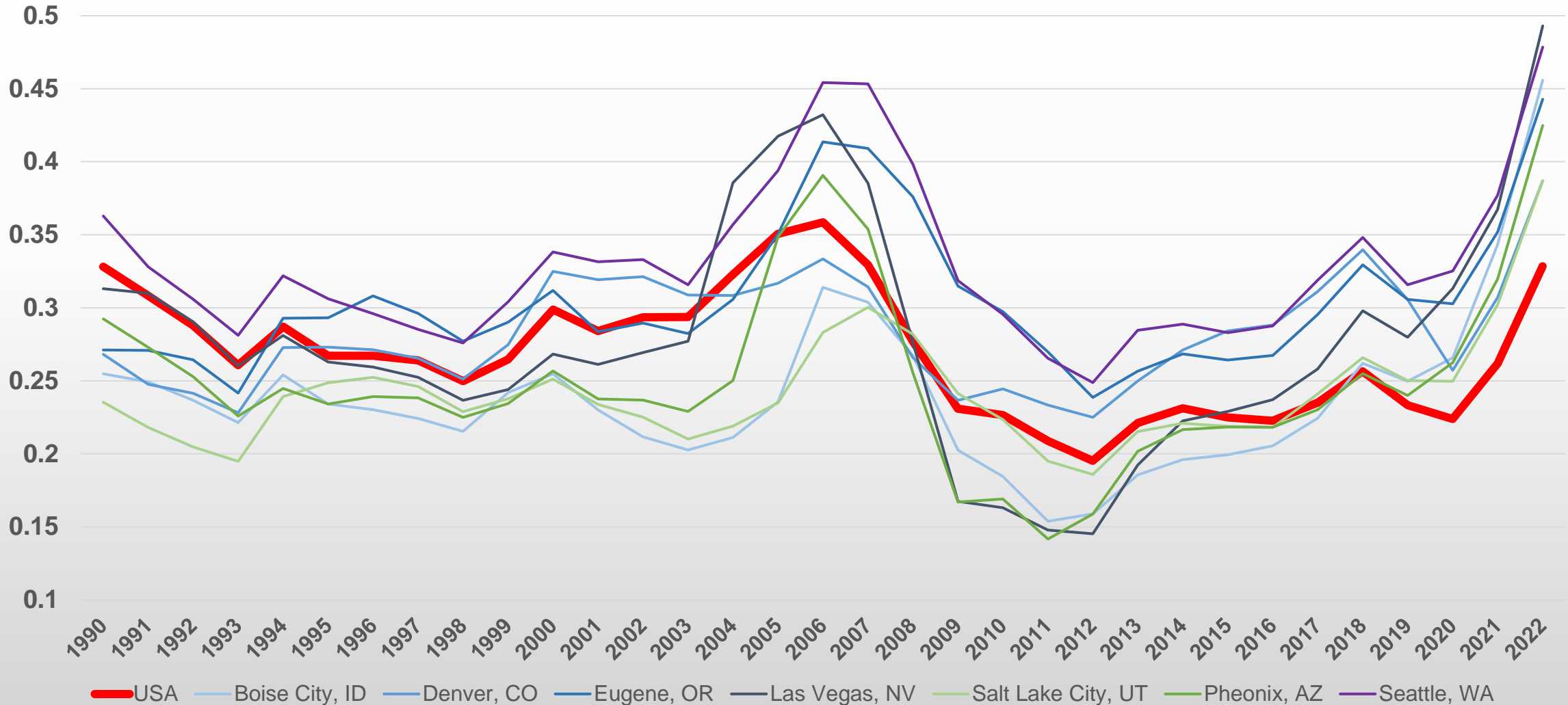
Mountain



Source: Census



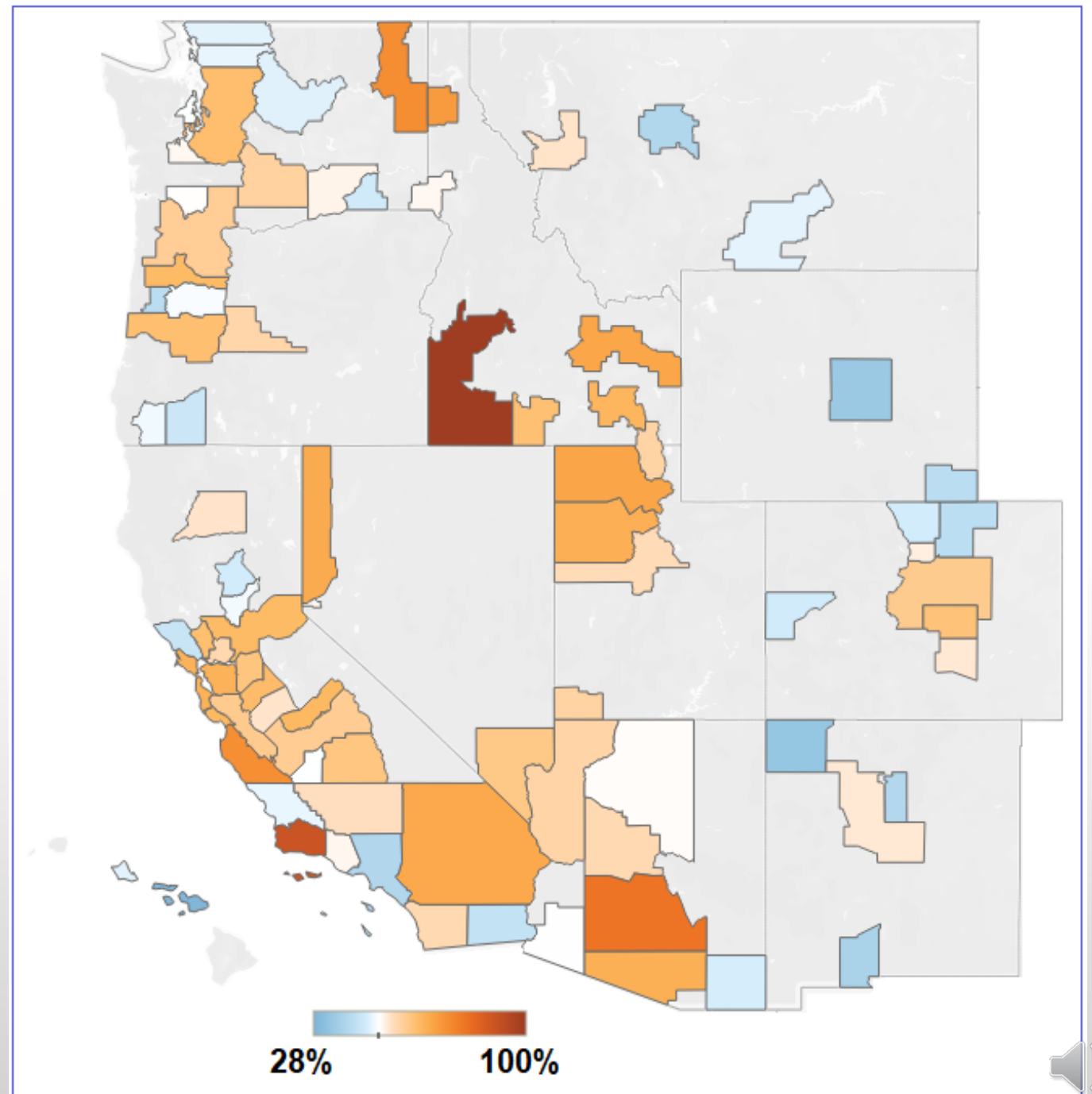
Monthly Payment to Household Income Ratio



Percent Change in Monthly Mortgage Payment From Pre-Pandemic Levels

Estimated Monthly Payment in 2022/2019

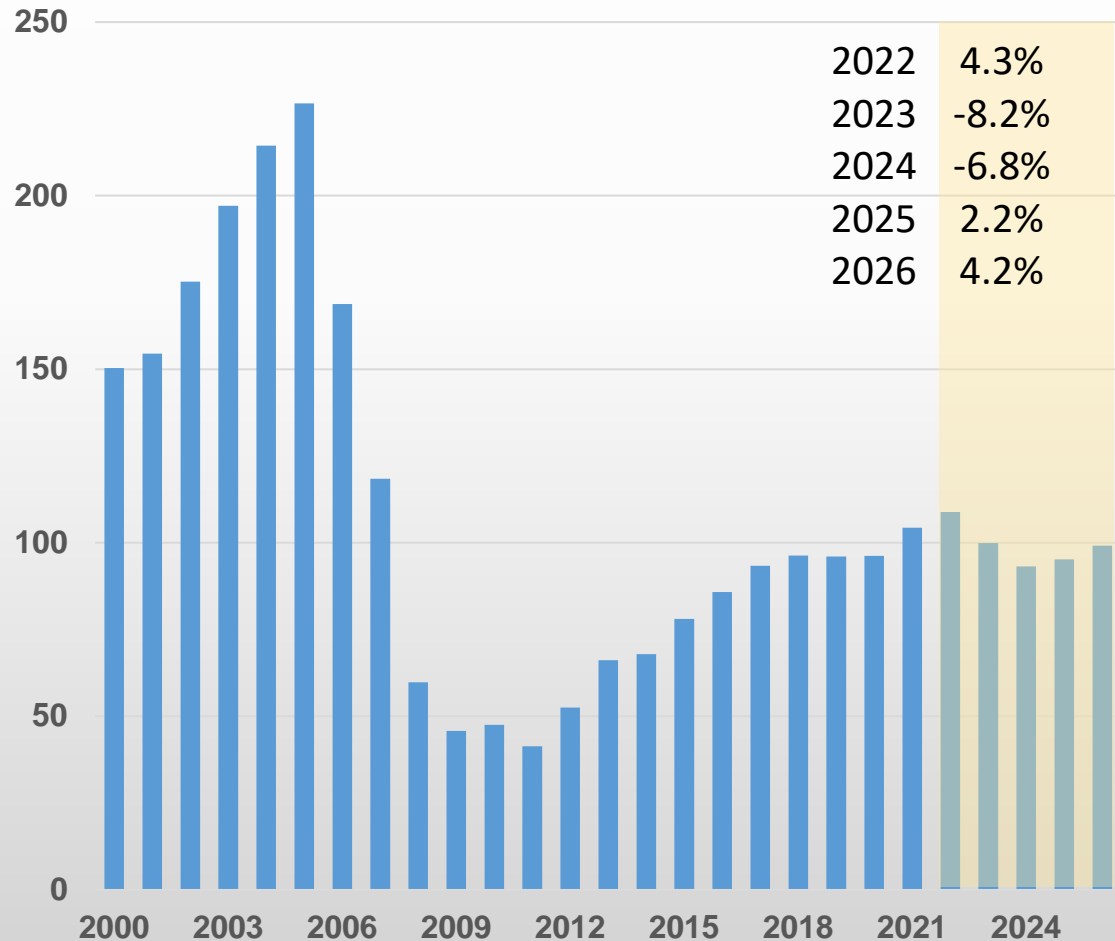
- MSA's in blue below average of all MSA's in US; MSA's in orange above.
- Widespread increase in monthly mortgage payment in region.
- Boise City, ID has doubled its monthly mortgage payment in three years.



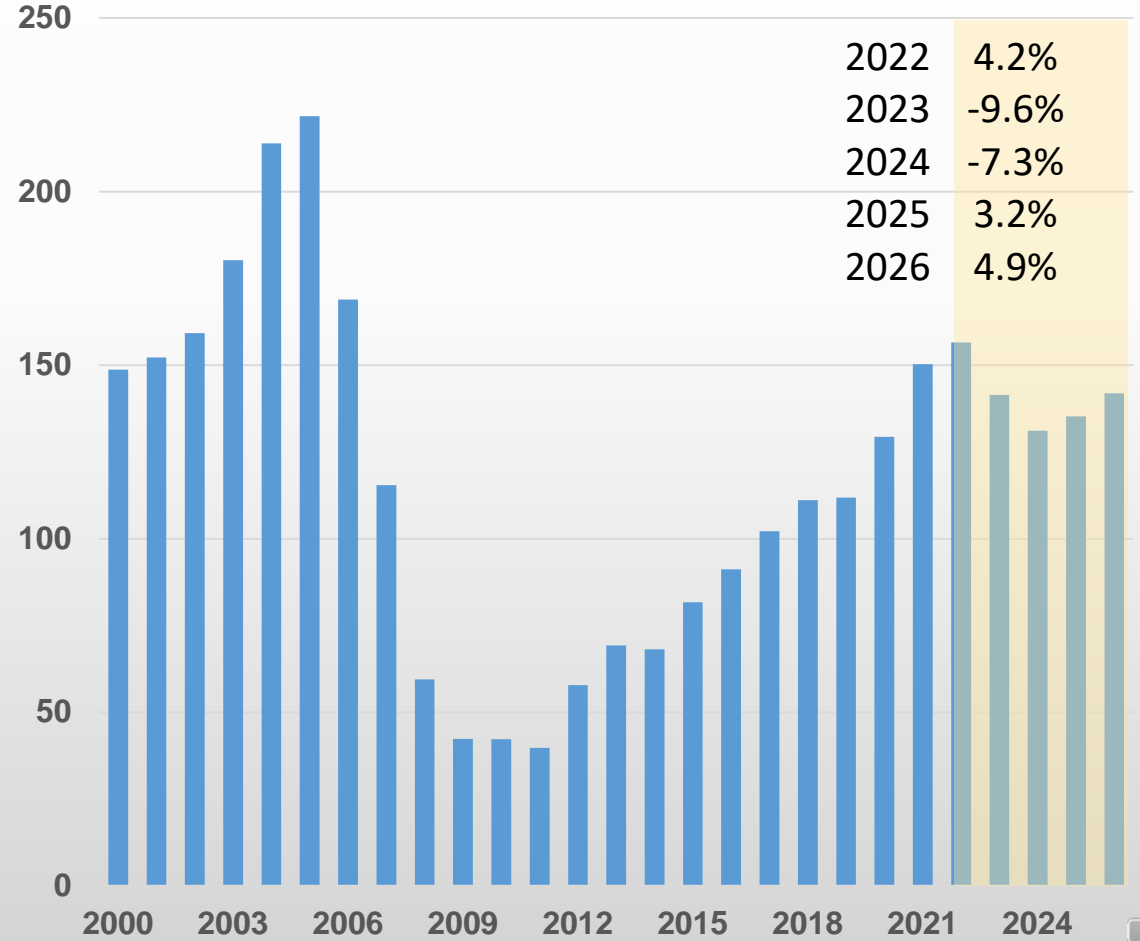
Single Family Housing Permits

Thousands

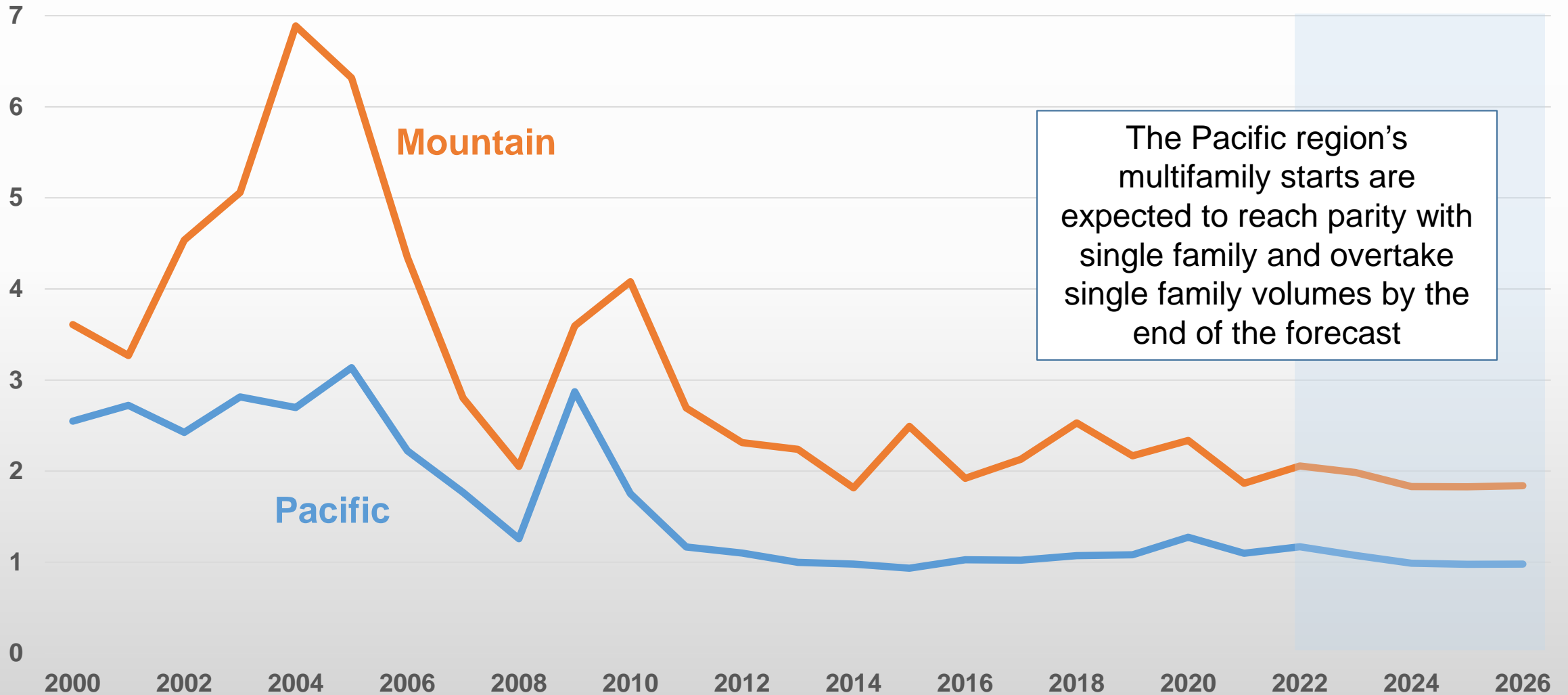
Pacific



Mountain



Single Family to Multifamily Ratio



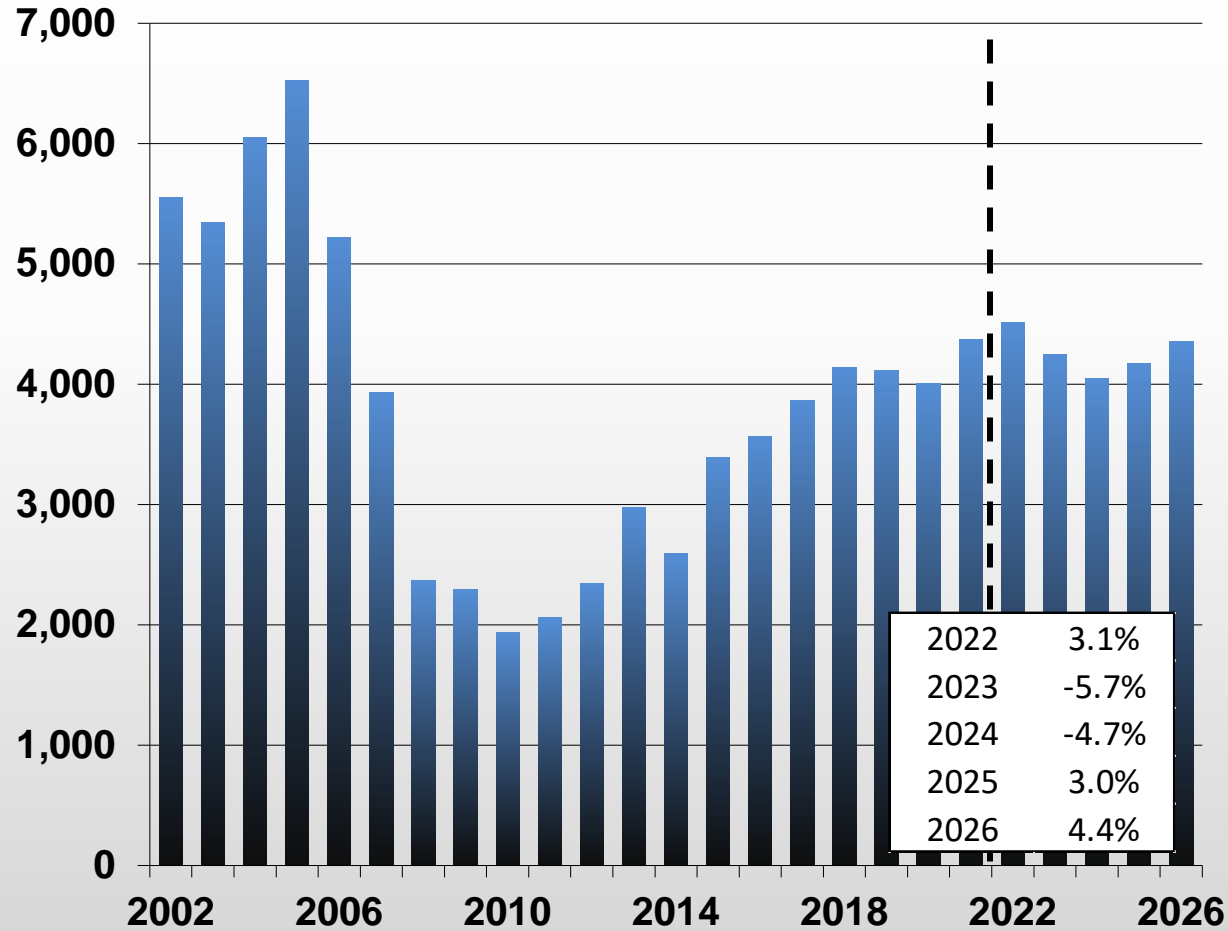
The Pacific region's multifamily starts are expected to reach parity with single family and overtake single family volumes by the end of the forecast



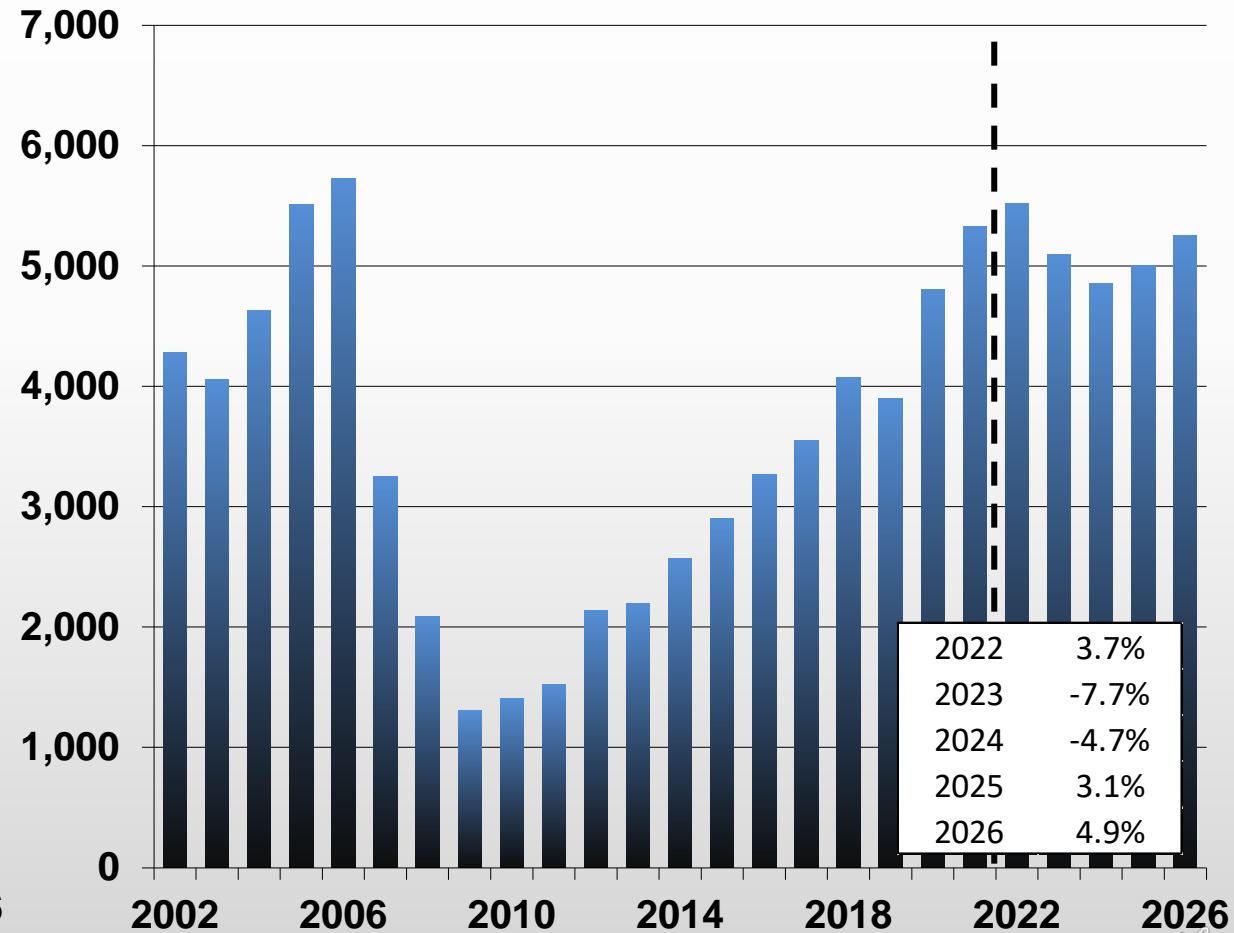
Residential Cement Consumption: West

(000) Metric Tons

Pacific



Mountain

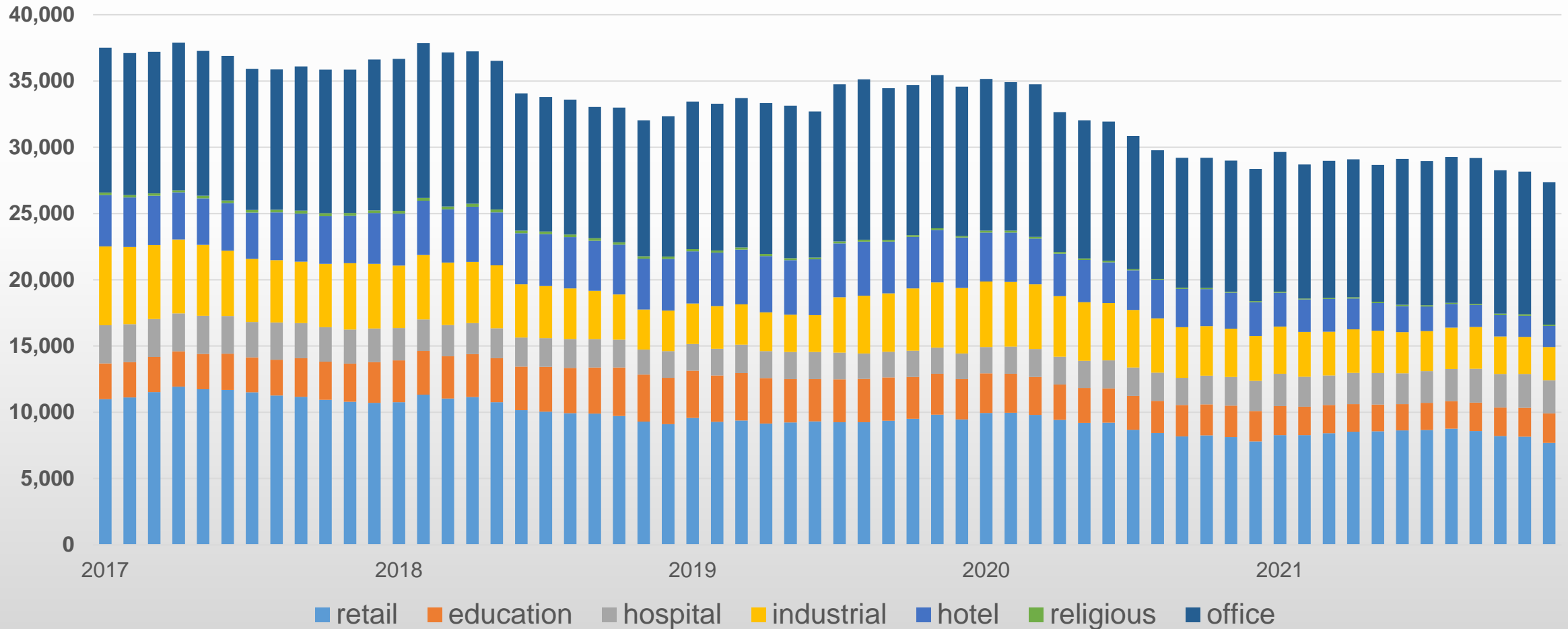


Nonresidential Update



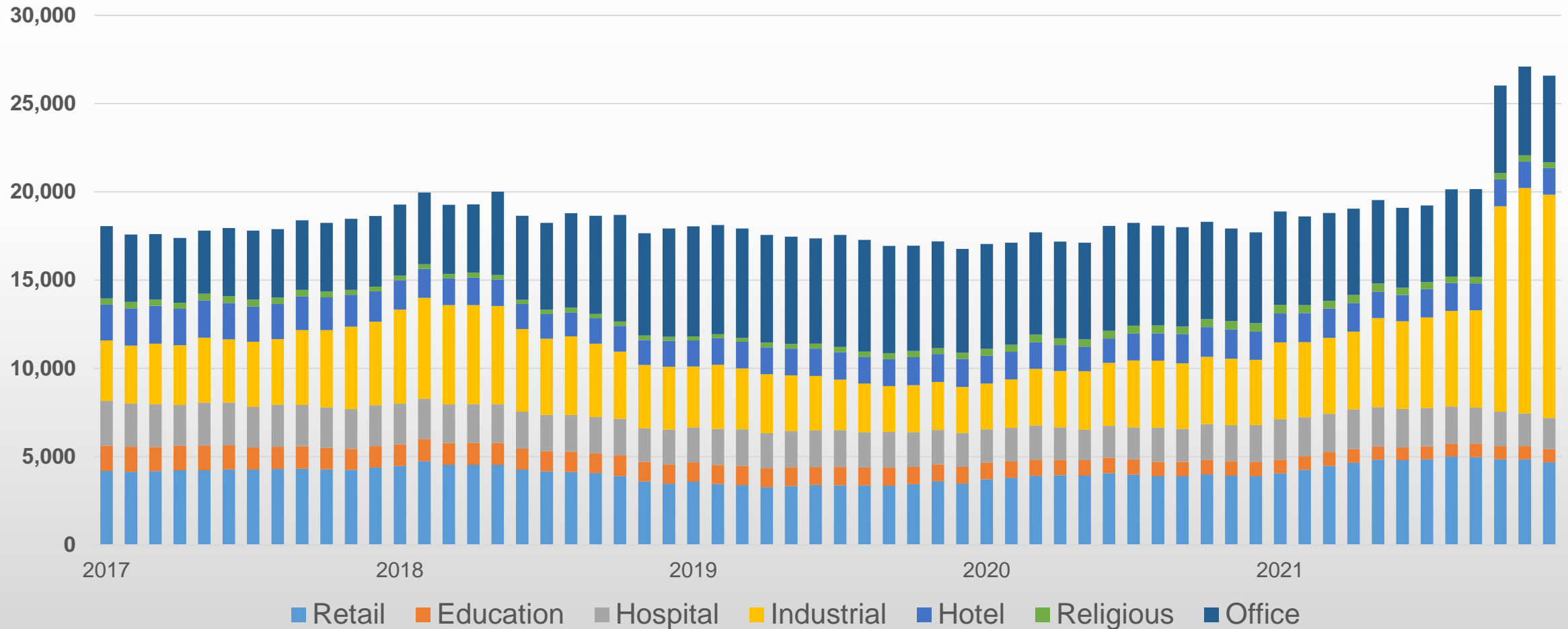
Commercial Construction Spending: Pacific

\$2009, Thousands, SAAR



Commercial Construction Spending: Mountain

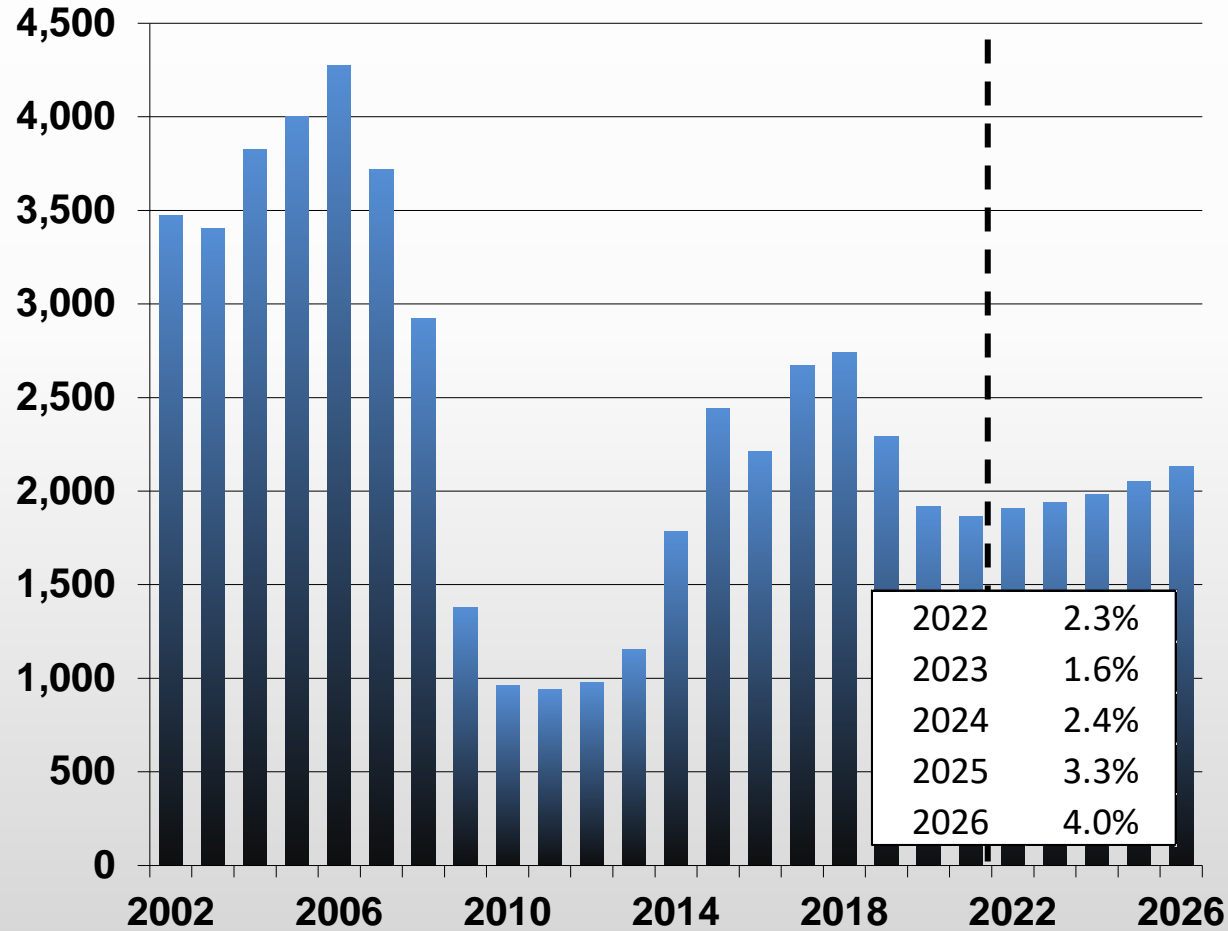
\$2009, Thousands, SAAR



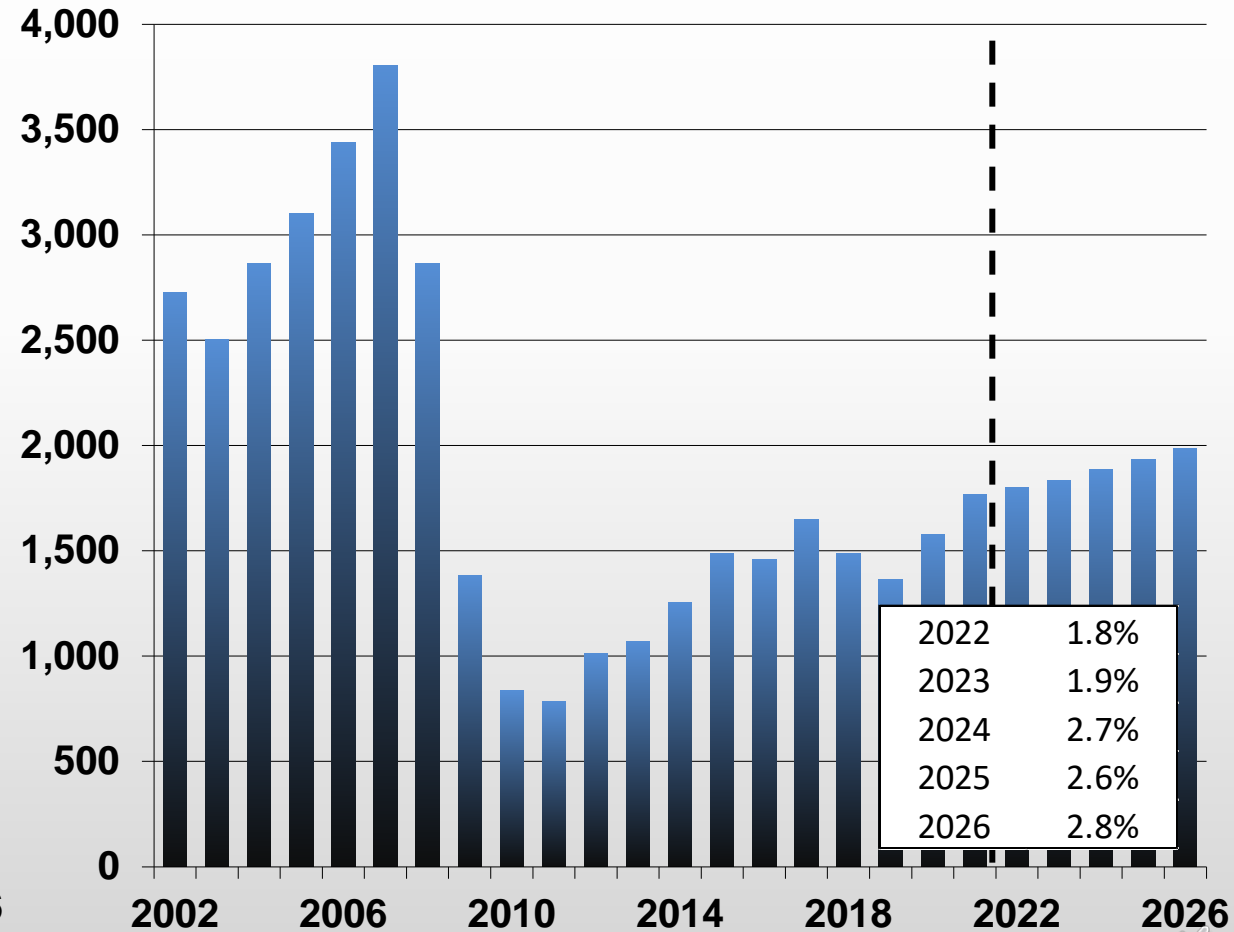
Commercial Cement Consumption: West

(000) Metric Tons

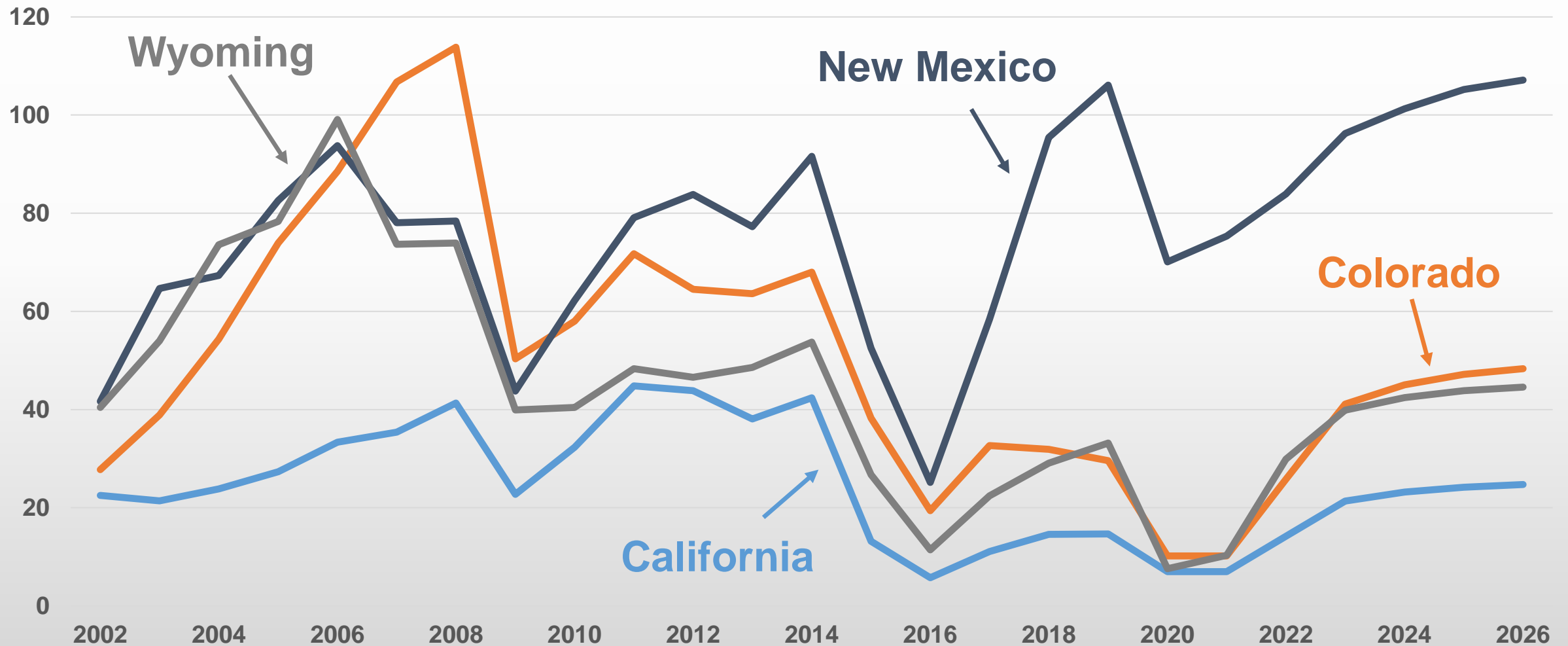
Pacific



Mountain

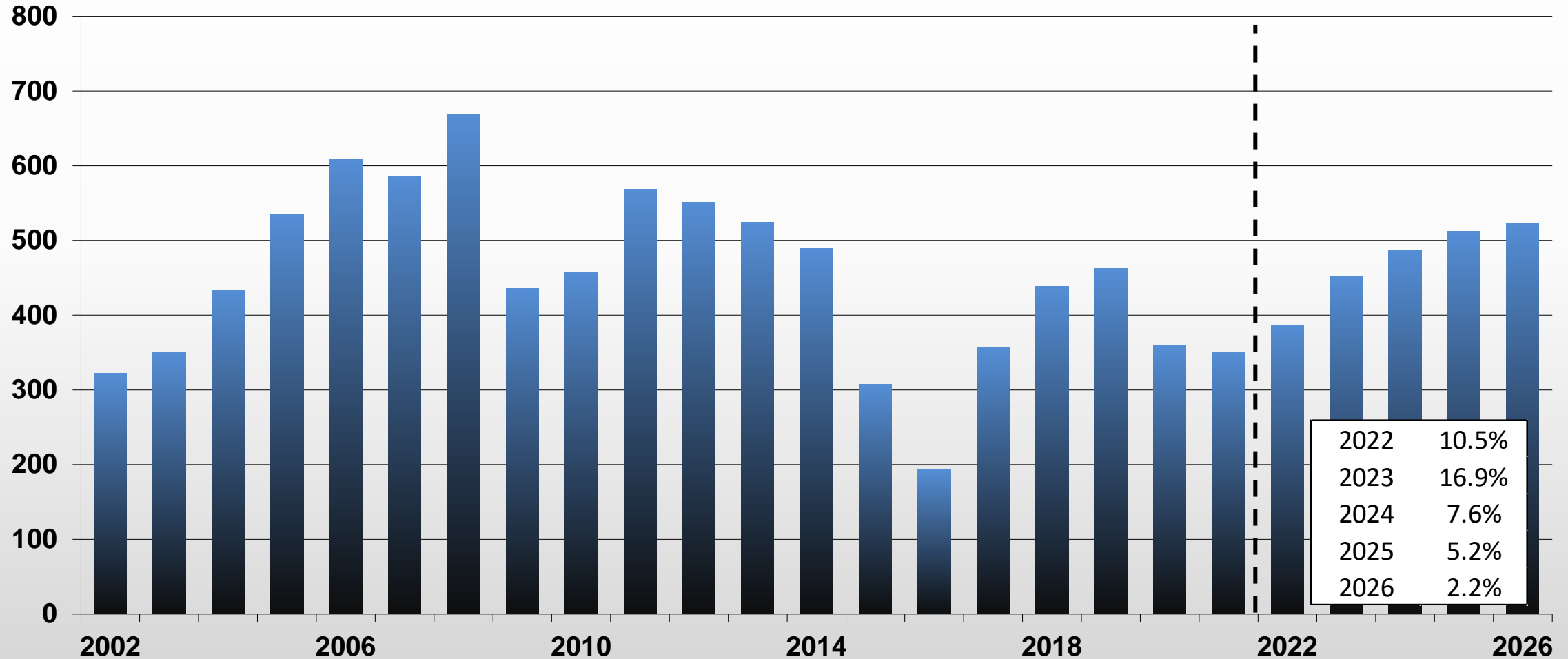


Active Rotary Rigs



Oil Well Cement Consumption

000 Metric Tons

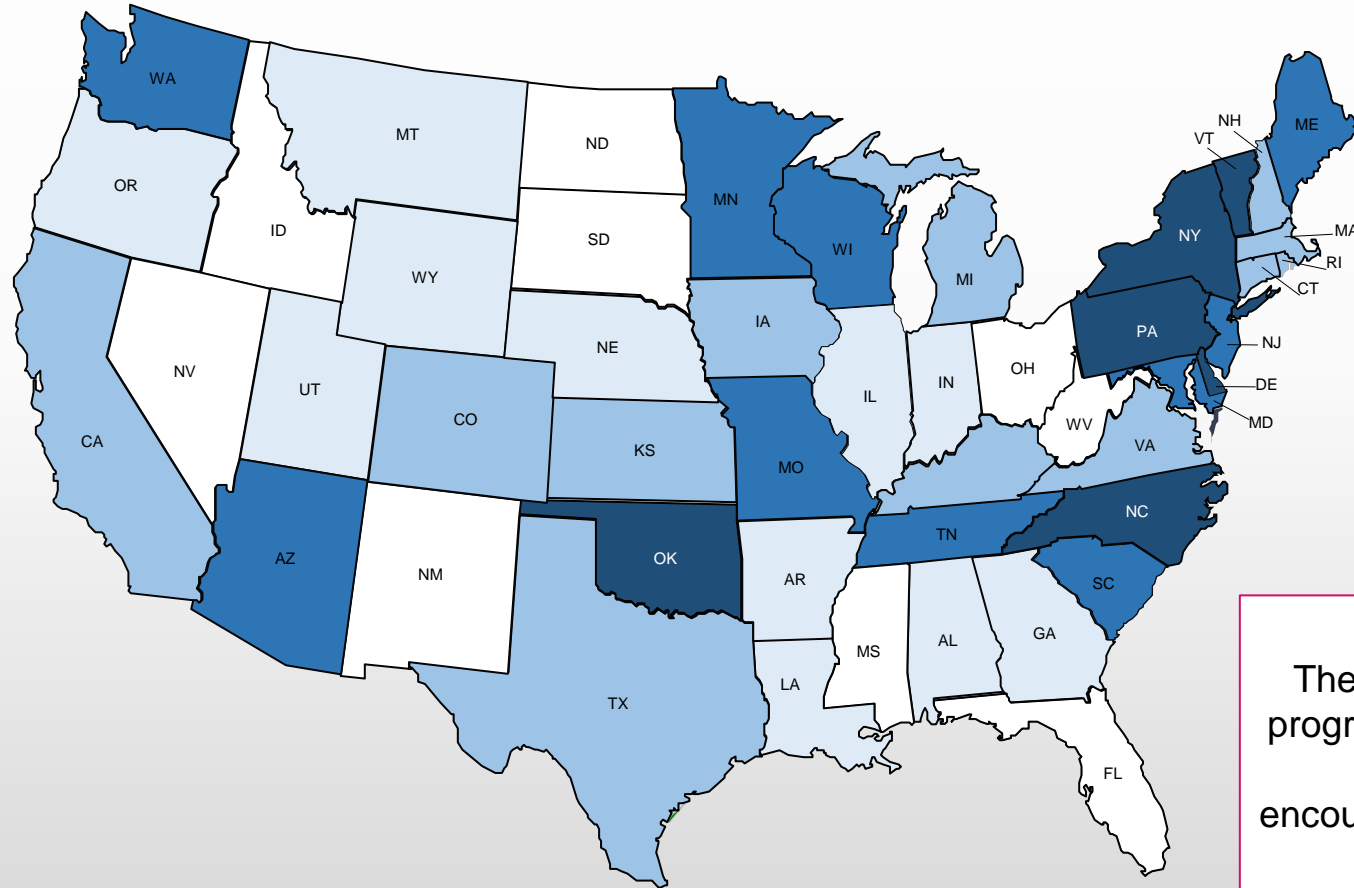


Public Update

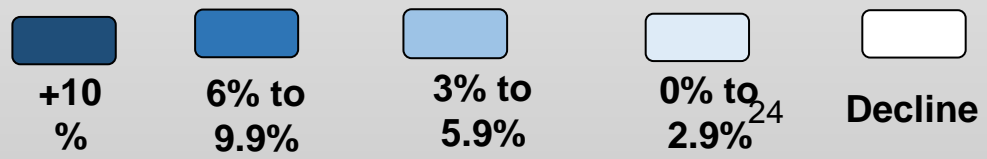


Evolving State Fiscal Conditions

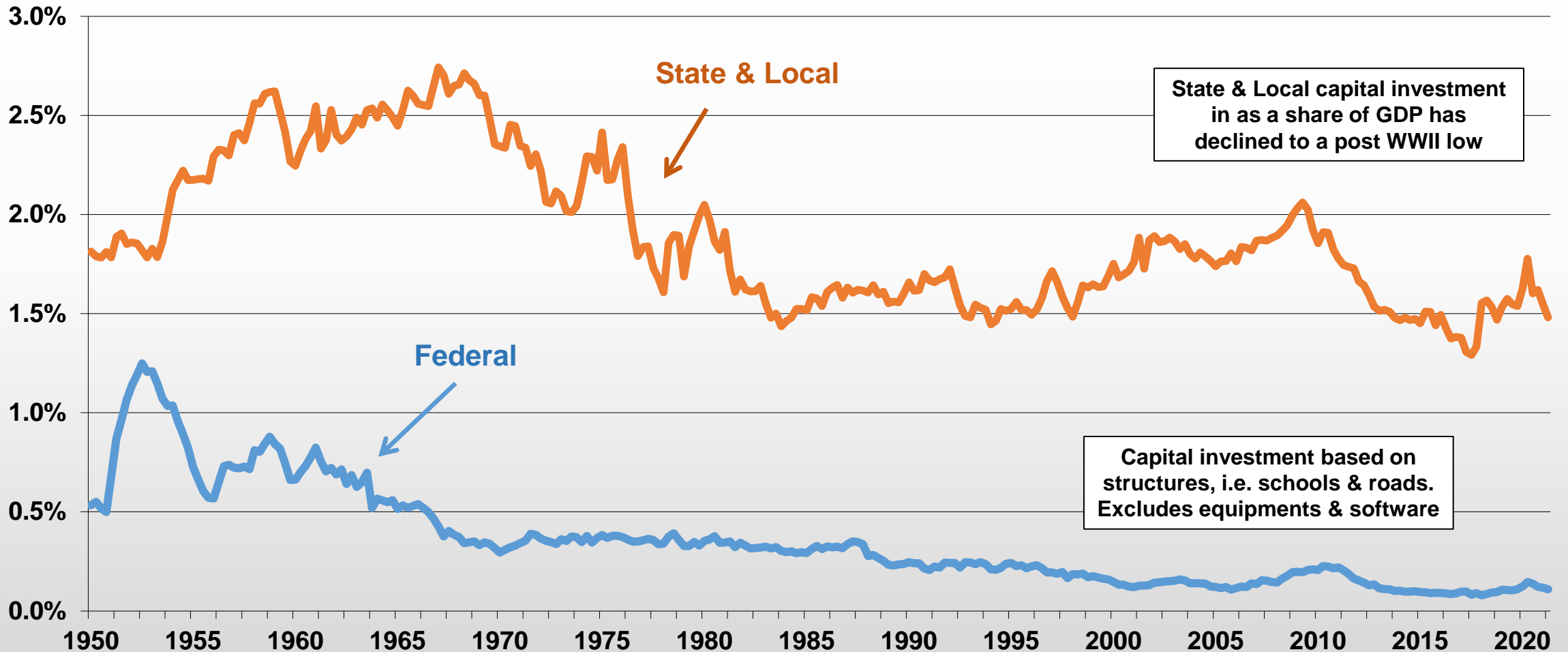
Percent **Increases** in General Fund Tax Revenues
from Pre-COVID Levels



Covid Relief:
The last Federal Covid Relief program included \$350 Billion to support fiscal duress encountered by states, countries, cities and tribes

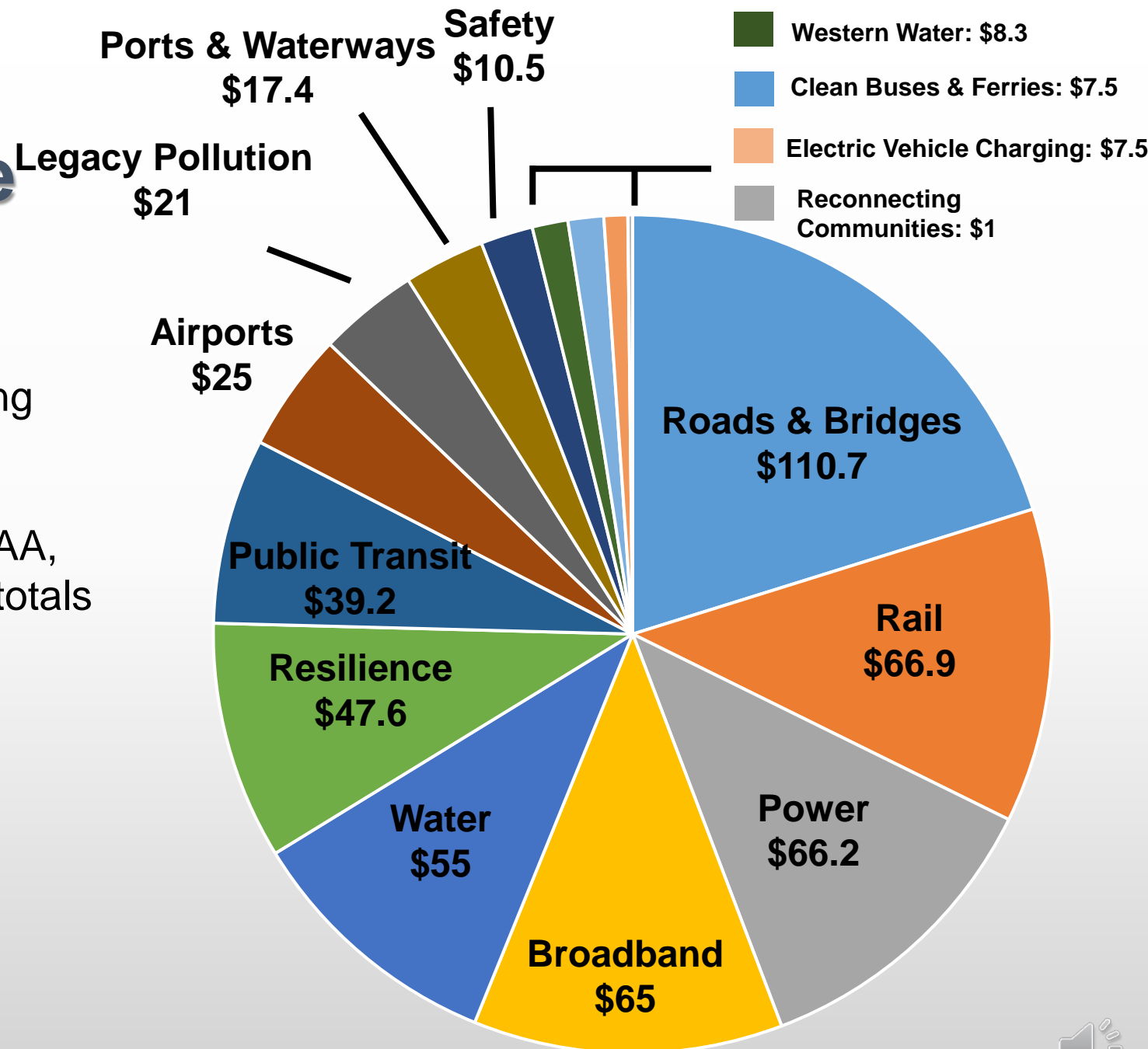


Public Capital Investment Share of GDP



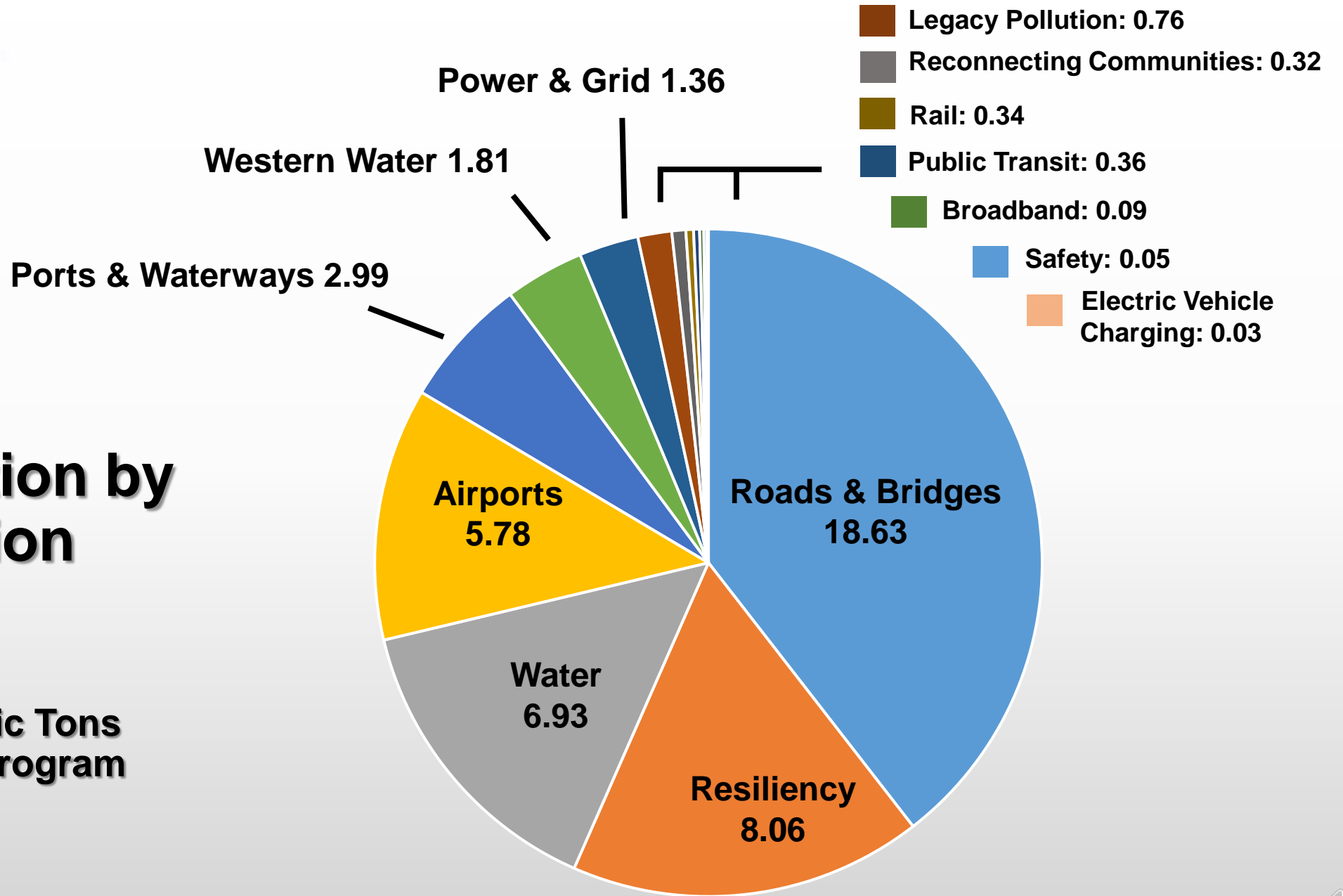
Infrastructure Package

- Represents \$550 billion in new spending
- Bill reauthorizes current surface transportation bills (FAST Act, WRDA, FAA, etc.) at current levels for 5 years, which totals \$1.2 trillion
- Much less in dollar size than previous proposals but heavier emphasis on traditional infrastructure

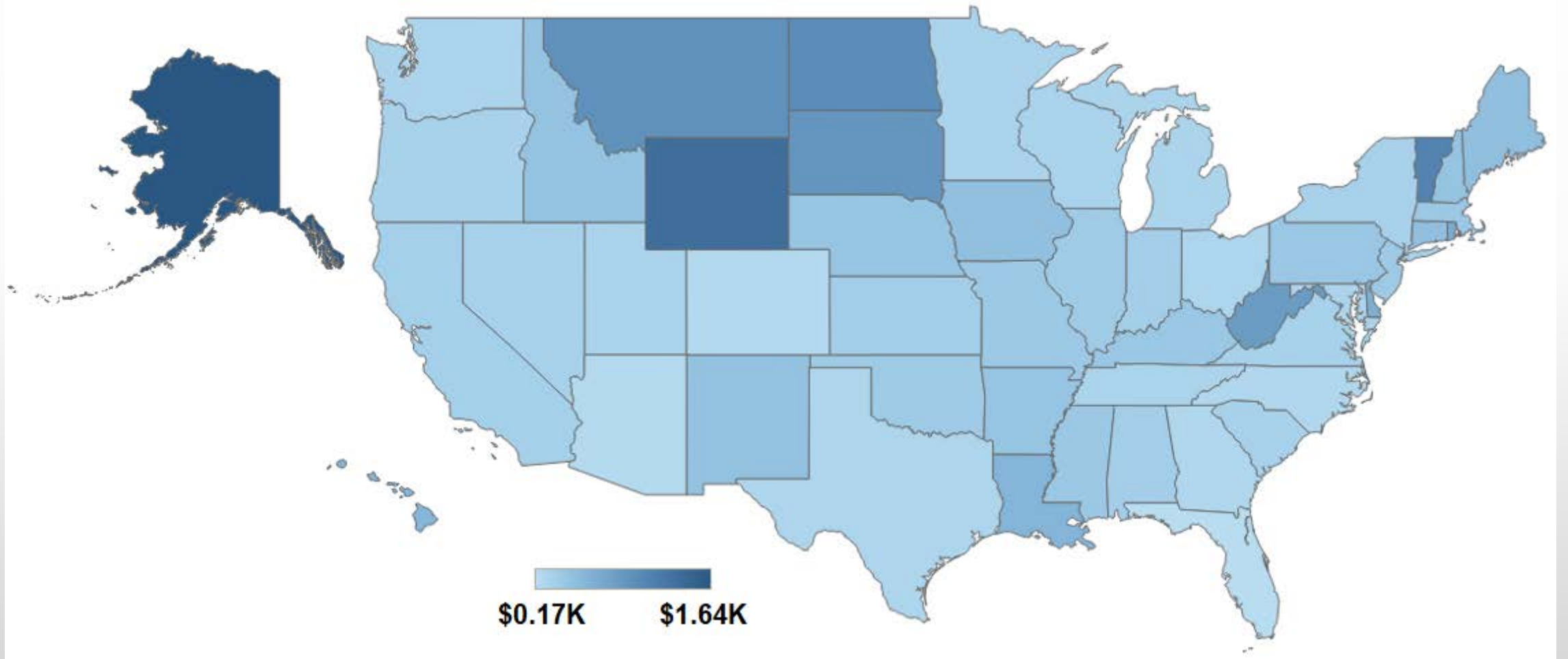


Cement Consumption by Construction Sector

47.6 Million Metric Tons Over Five Year Program



Net New Spending on Roads & Bridges Per Capita



Region Specific Spending: Western Water Infrastructure

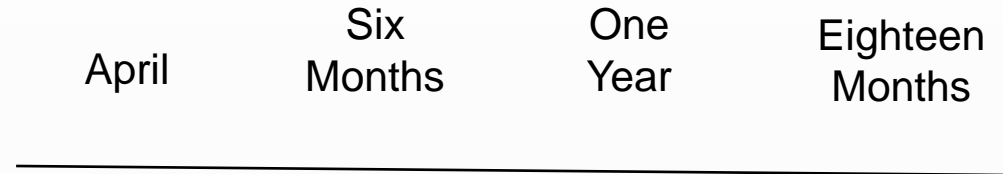
- **\$8.3 billion dedicated to funding just for water infrastructure in the western U.S.**
- **Nearly all spending categories carry significant cement intensity.**

O	Western Water Infrastructure	\$8.30
i	Aging Infrastructure	\$ 3.20
ii	Water storage, groundwater storage and conveyance projects	\$ 1.15
iii	Water recycling and reuse projects	\$ 1.00
iv	Desalination projects	\$ 0.25
v	Rural water projects	\$ 1.00
vi	Dam safety projects	\$ 0.50
vii	Drought Contingency Plan	\$ 0.30
viii	waterSMART Water and Energy Efficiency Grants	\$ 0.40
ix	Cooperative Watershed Management Program	\$ 0.10
x	Aquatic Ecosystem Restoration Program	\$ 0.25
xi	Multi-benefit watershed projects	\$ 0.10
xii	Colorado River fish species recovery programs	\$ 0.05



There Will Be a Wait for Pouring to Begin

Small Volumes of cement consumption associated with the program materialize in second half 2022.



4-9 Months

Federal & State Paperwork



Roughly 38% occurs through competitive grants.

Bid Letting & Review



Contract Award to Construction



Average Construction Start: **Early/Mid-2023**



Infrastructure Timing Distribution Highway & Bridges

Also the issue of inflation: Inflation will eat away at real spending power of nominal dollars awarded in 2021 each consecutive year.

This is an Representation of the process and not actual numbers.

Process repeated across all construction segments that are impacted by the Infrastructure Program

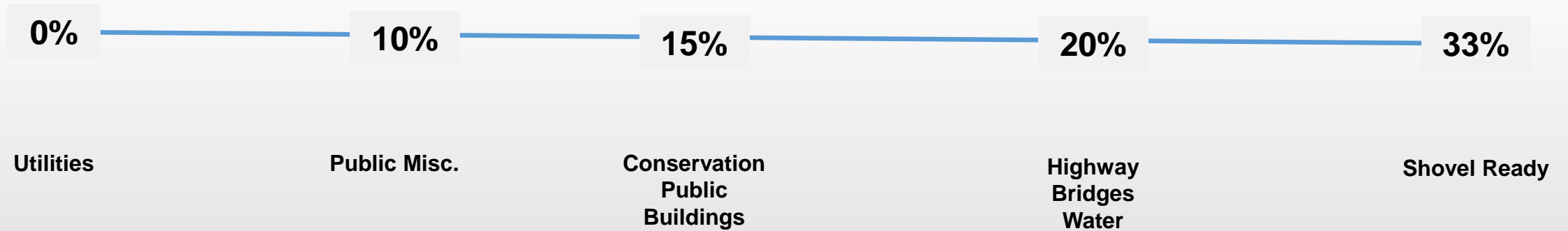
	Spending Allocation Billion \$	Fiscal Year Spending				Total Spent	Total Spent
		2023 Year 1	2024 Year 2	2025 Year 3	2026 Year 4		
		21%	43%	22%	14%		
2023	\$20	\$4	\$9	\$4	\$3	\$20	100%
2024	\$20		\$4	\$9	\$4	\$17	86%
2025	\$20			\$4	\$9	\$13	64%
2026	\$20				\$4	\$4	21%
2027	\$20				---		
Total Spending	\$100	\$4	\$13	\$17	\$20		



S&L Sterilization

Percentage Foregone

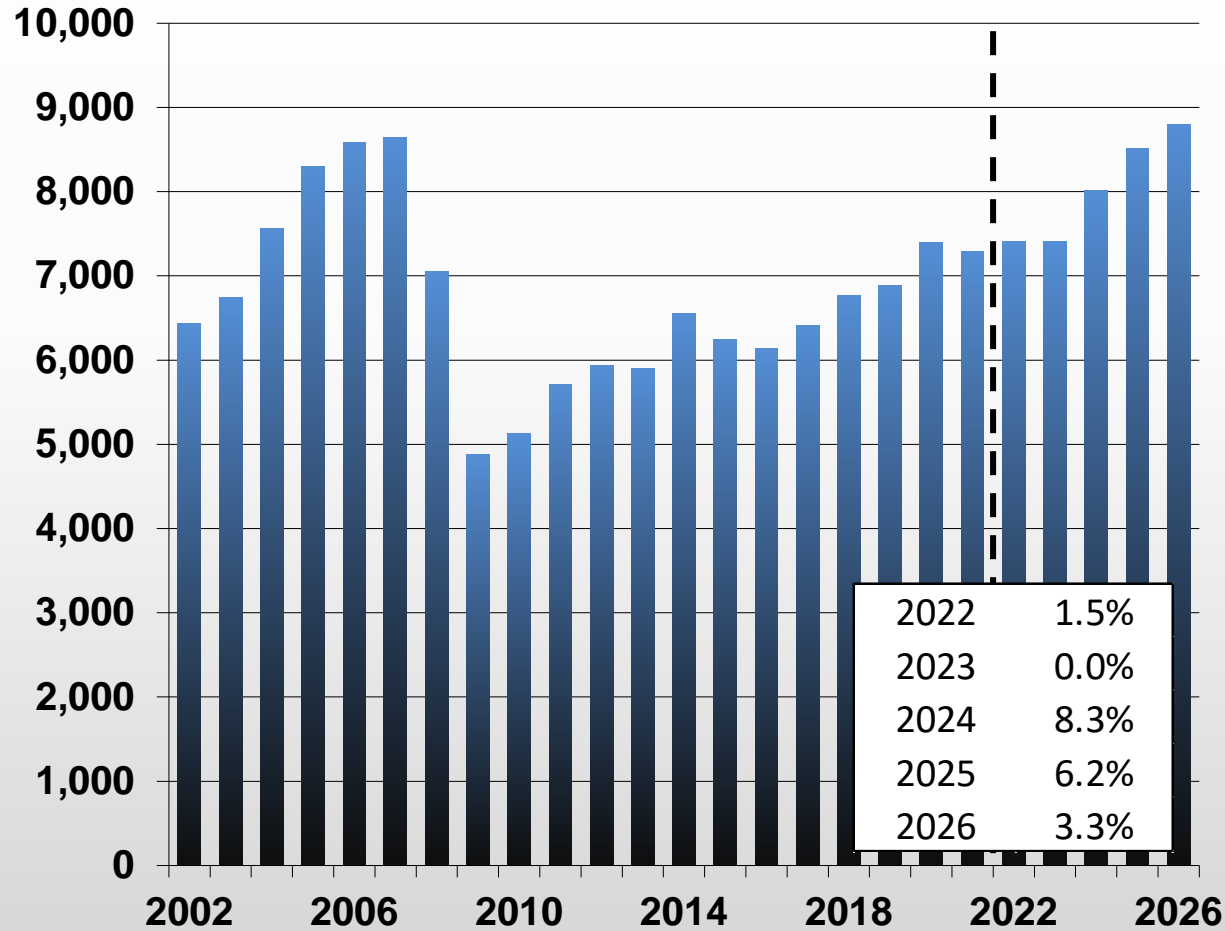
TEA/SAFETY-LU:	31%
ARRA:	81%



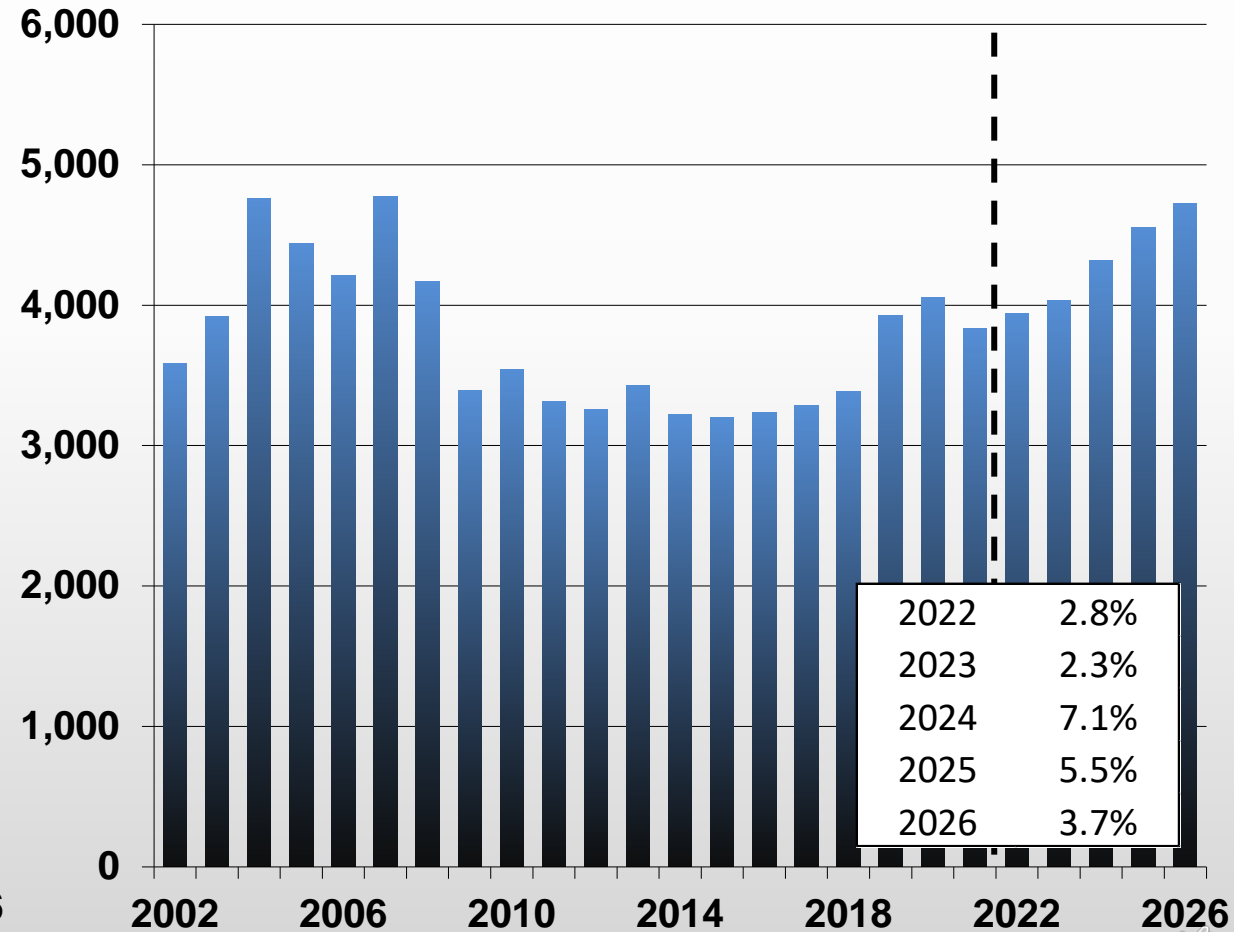
Public Cement Consumption: West

(000) Metric Tons

Pacific



Mountain



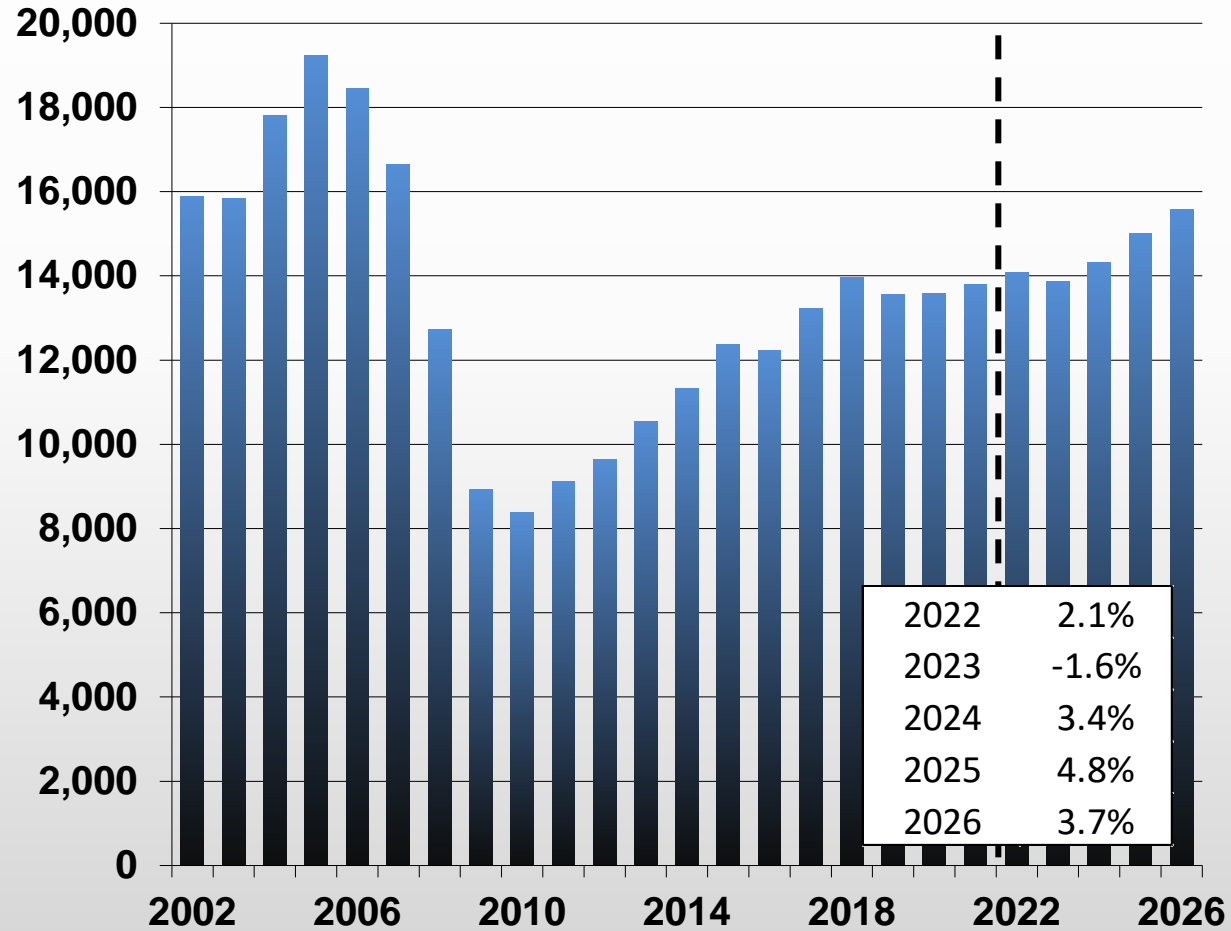
Cement Outlook Summary



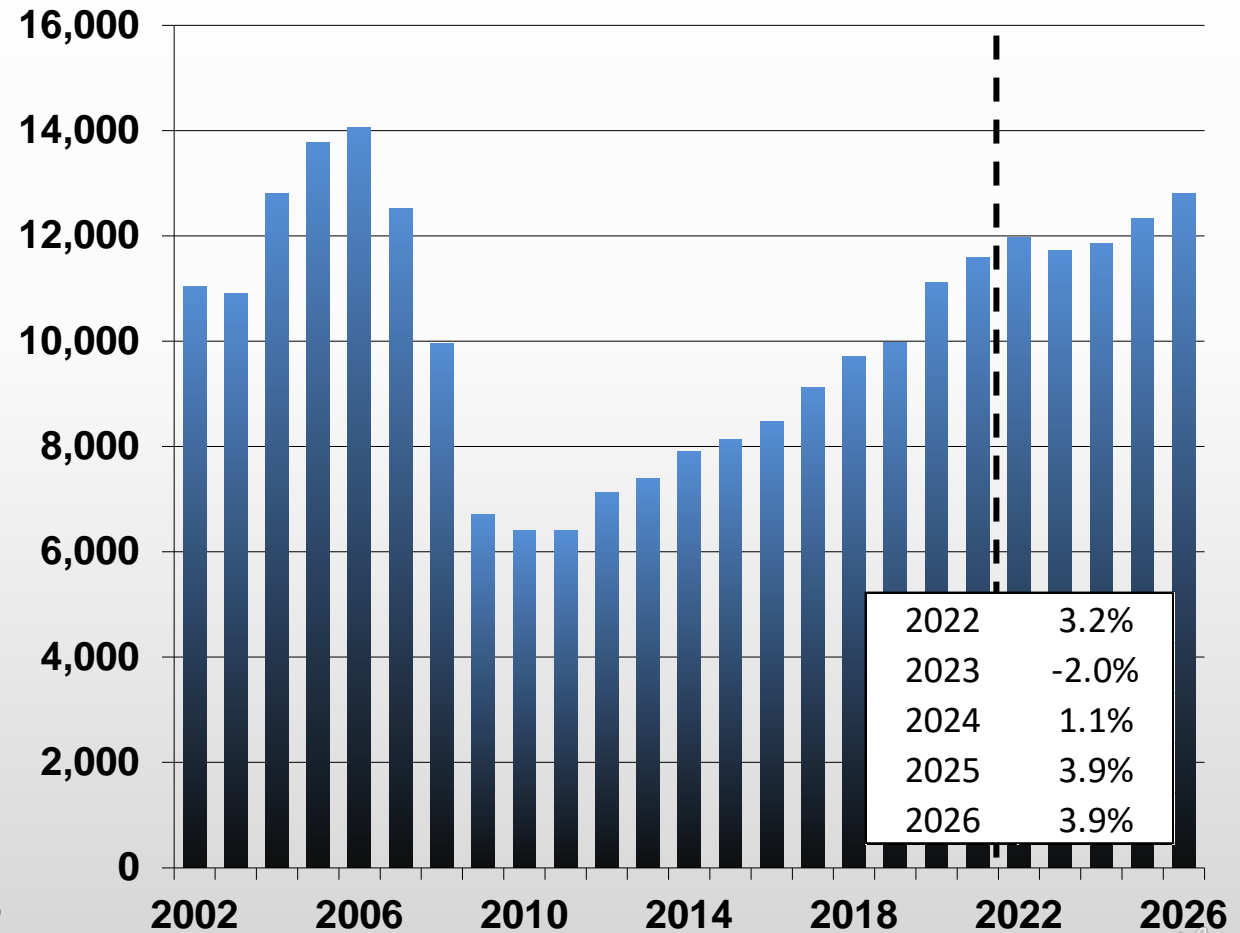
Total Portland Cement Consumption: West

(000) Metric Tons

Pacific



Mountain



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West Region Update

Brian Schmidt, Sr. Regional Economist

May 2022

