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**PCA**®

*Since 1916*

America's Cement Manufacturers™

## Coronavirus Briefing #5

July 9<sup>th</sup> 2020

# US Cement Industry Outlook

Ed Sullivan, SVP & Chief Economist

# Introduction

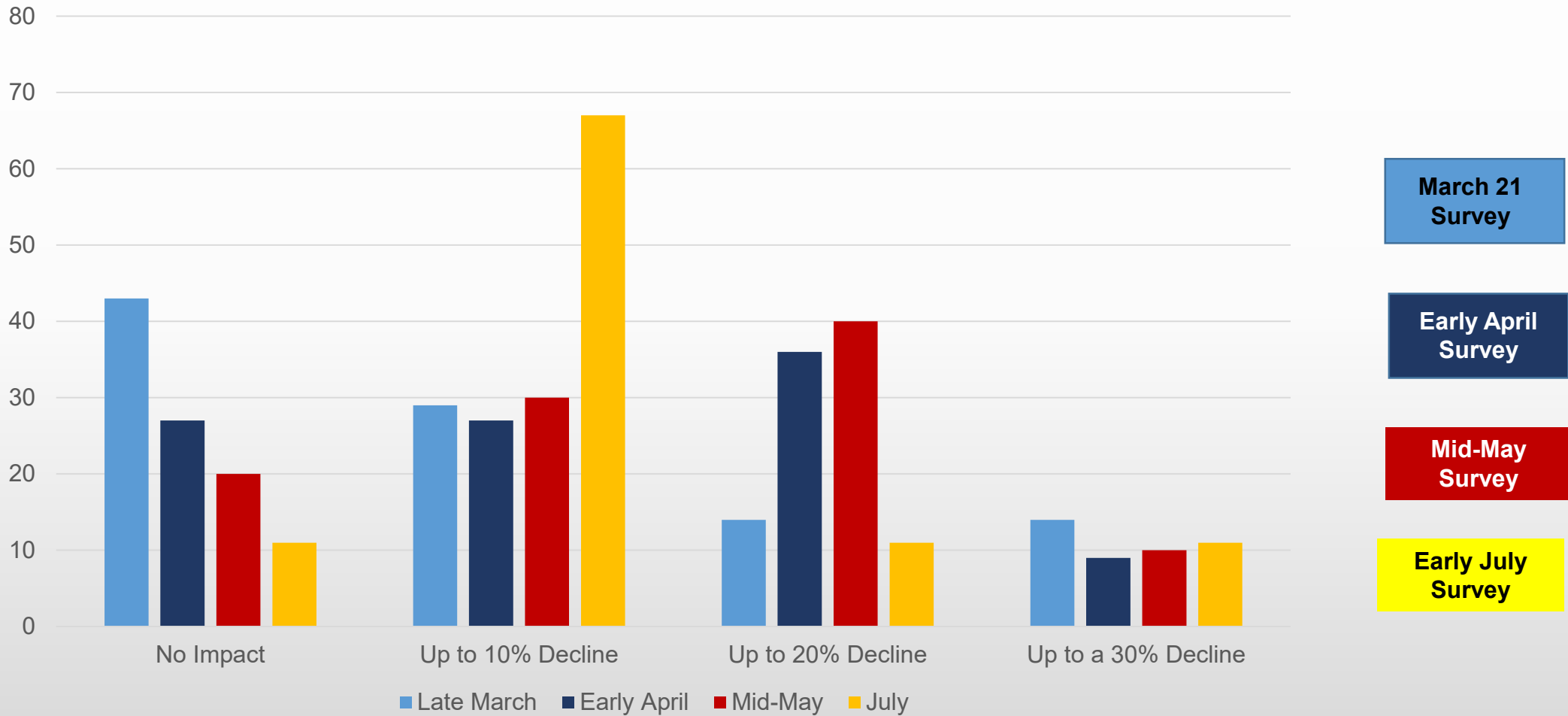
# Market Intelligence's Research Focus

1. CEO Survey & Industry Pulse.
2. Review Recent Macroeconomic & Covid Information.
3. Key Macroeconomic Outlook Assumptions.
4. Likely Economic & Cement Consumption Scenarios.
5. Longer Term Considerations

# Industry Pulse

# Survey of Cement CEOs

“To what extent have you experienced shipment declines as a result of the coronavirus disruption”



# CEO Survey

- Minor disruption of fly ash and petcoke supplies have been reported. Some difficulties in securing disruptions that have occurred relate to equipment deliveries, face masks, and sanitizers.
- Two reported plant shut downs. 22% reported layoffs. 45% reported a reduction in shifts and some have reduced overtime.
- 78% indicated that Capex had been cut particularly as it relates to climate change investments.
- CEO's are concerned about: 1) state & local DOT funding in the context of dire state fiscal conditions, 2) the ripple effects of economic adversities on demand decay in construction activity and cement consumption, 3) the potential of labor shortages resulting from Covid, and 4) concern that in the context of financial stress, a new round of more rigid emission regulations might arise in the next few years.

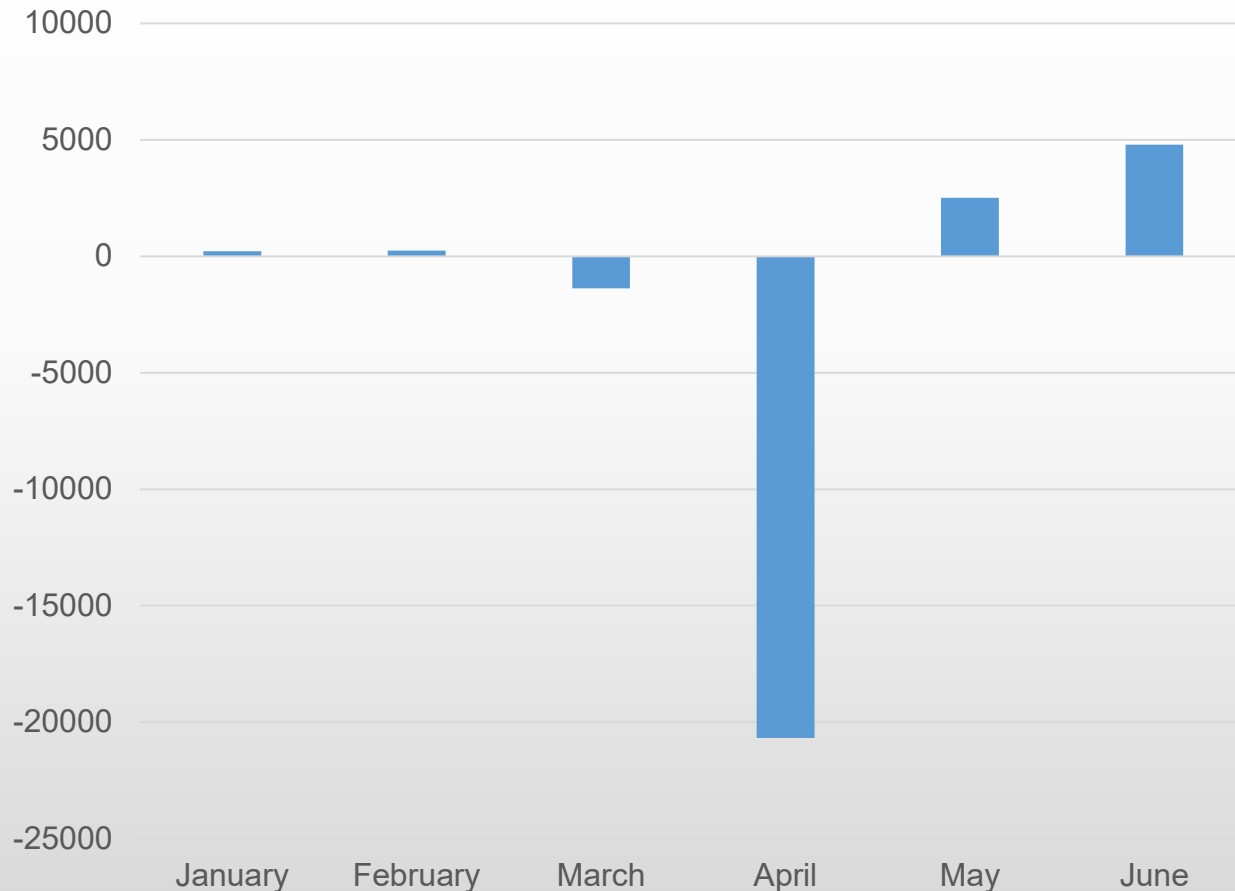
# Re-Openings, Macroeconomic Data & Covid

# Macroeconomic Data



# Change In Employment

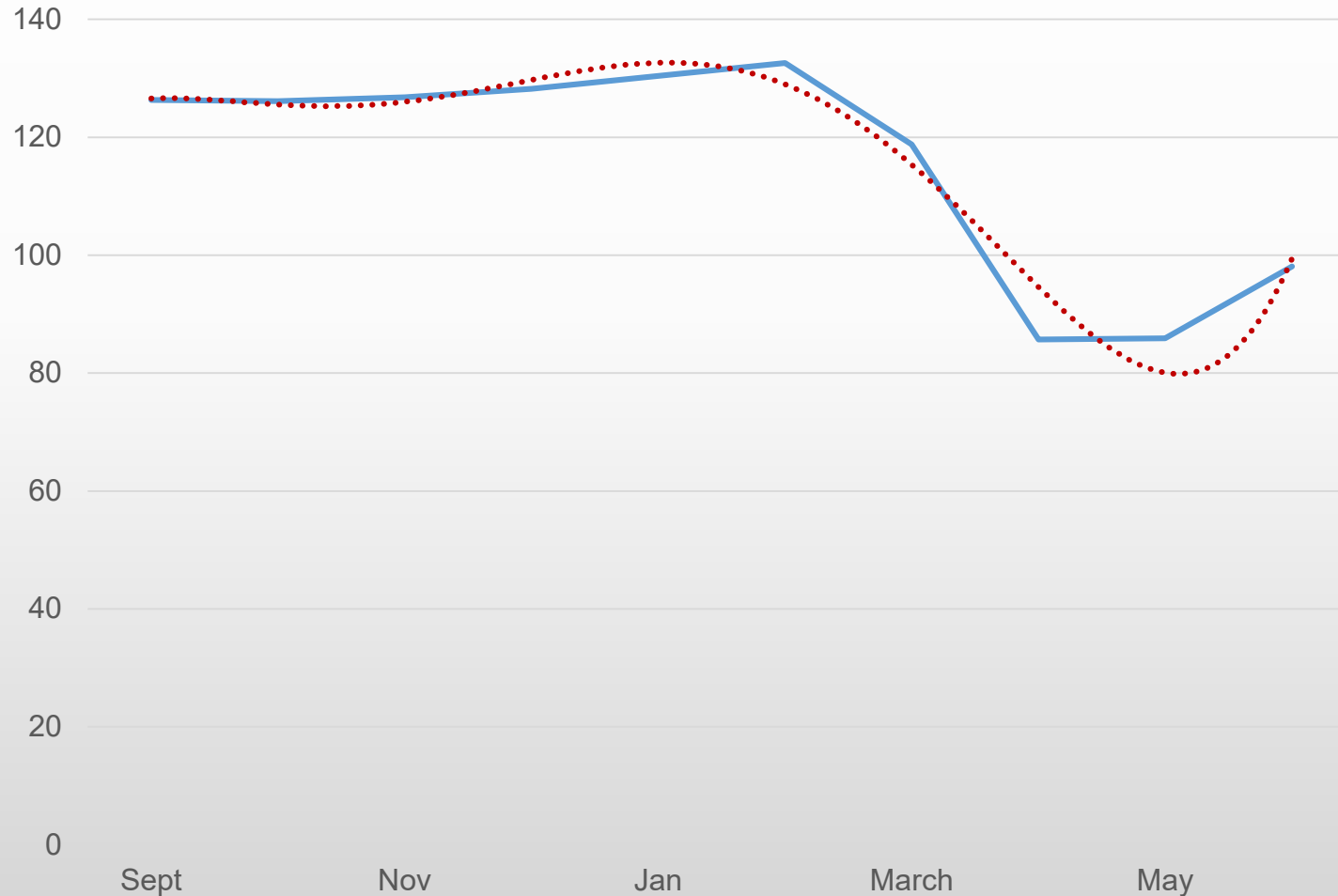
- Millions



- The top-line June jobs numbers were good, with employment increasing by 4.8 million jobs in the month.
- This, combined with the 2.7 million increase in May, means the economy has recovered about one-third of the jobs lost during the height of the business shutdowns in March and April.
- Unemployment fell to near 12% in June, after adjusting for the ongoing misclassification of furloughed workers acknowledged by the Bureau of Labor Statistics.
- This compares to an adjusted peak unemployment rate of nearly 20% in April.
- The economy remains down 14.5 million jobs since February.

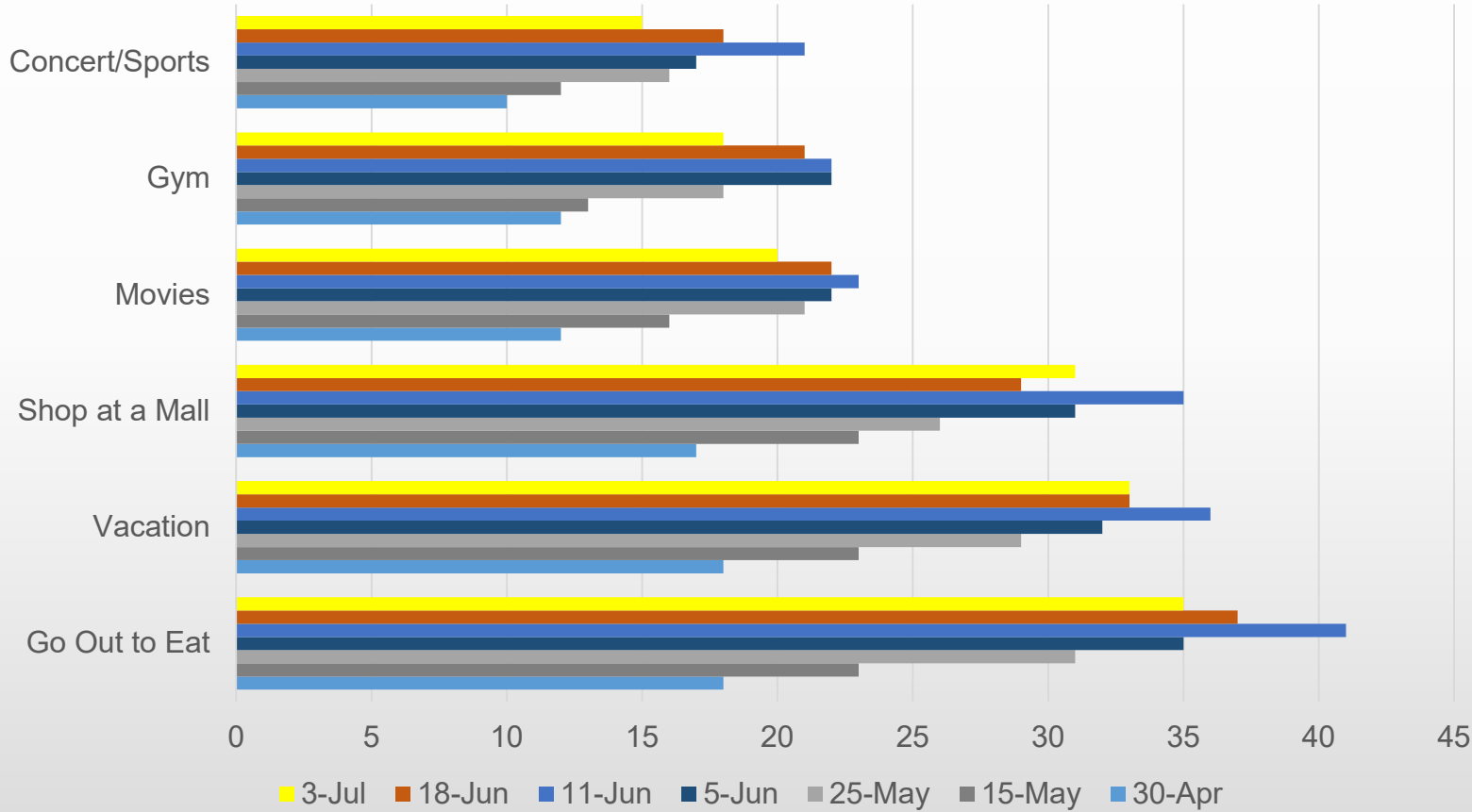
# Consumer Confidence

## Composite Conference Board



- Consumer Confidence is a critical ingredient in determining sales and total Consumer spending activity.
- Prior to Covid, the Conference Board's Consumer Confidence Index was riding a strong high. This partially supported strong consumer spending and enabled US GDP to sustain its strength.
- Back-to-back large declines occurred in March and April. The trough has likely been reached. Tepid improvement is expected going forward
- The May results showed a modest improvement. June followed with stronger gains.
- Consumer confidence is still low and remains troublesome. It is not continuing to decline.
- The impact of higher Covid infections is only partially captured in the data. *A full capture may suggest smaller gains going forward.*

# Are you Comfortable Going to.....

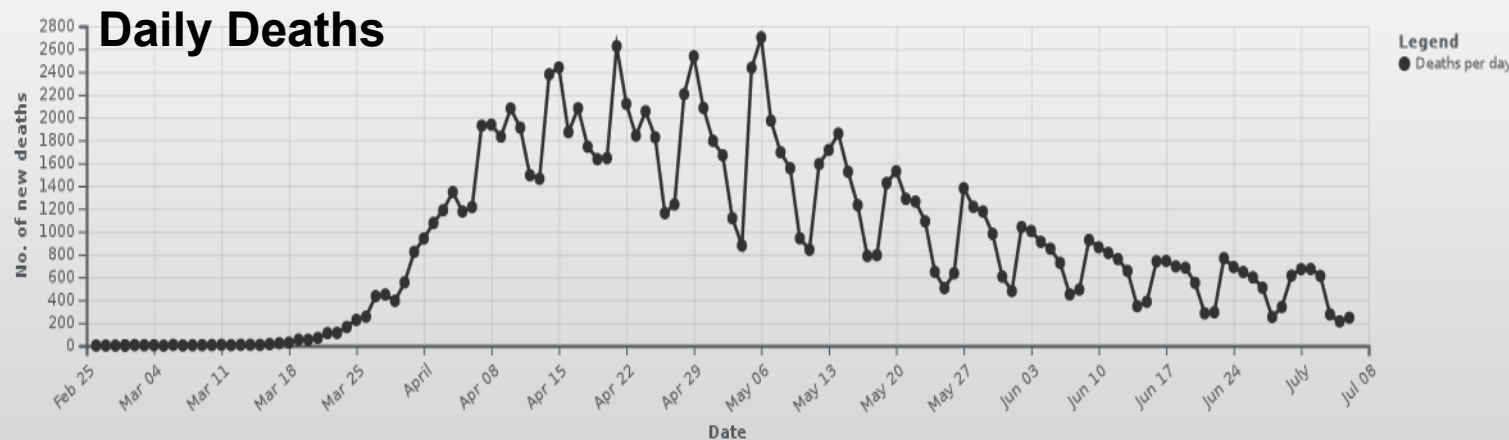


- As Covid infections declined, consumers grew more confident to return to “normal” spending activities.
- Consumer comfort levels improved five straight weeks.
- As Covid infections increased, consumer confidence in returning to their “normal” spending activity paused and in some cases reversed.
- Consumers return to “normal” spending activity will play a key role in the speed at which the economy recovers.
- The rise in infections suggests a slower than previously expected return to “normal” spending.
- Consumer spending accounts for 70% of overall economic activity. The slower return to “normal” suggests slower than expected interim growth.

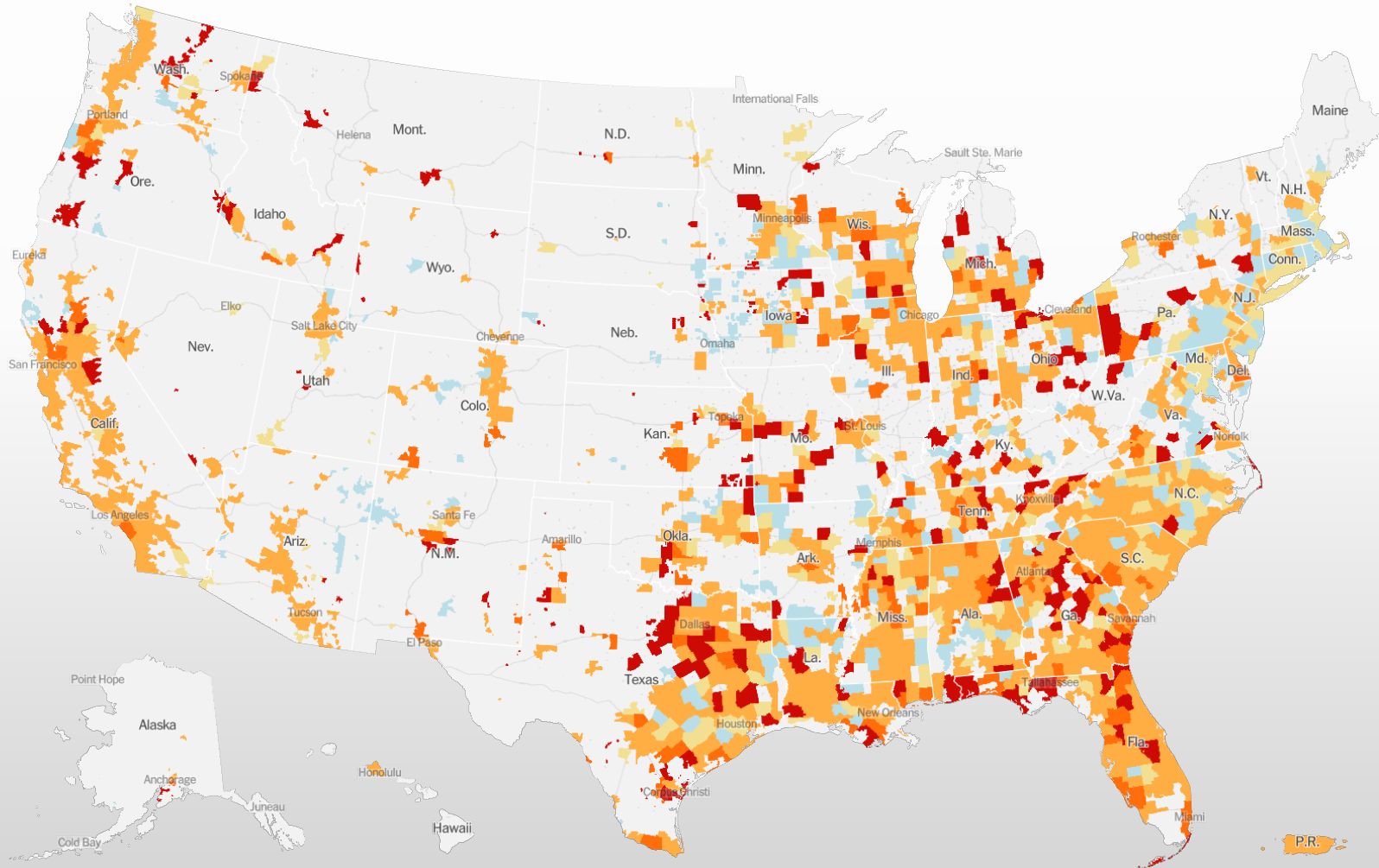
# Covid Data

# Covid: Infections & Deaths

- Until recently, daily Covid infections were hovering near 20K to 25K new cases daily. This level represented as much as a 40% decline in infections.
- This decline, coupled with the stability of new cases prompted some states that were not hit hard to ease policies designed to restrict the spread of the virus.
- Covid infections increased two to three fold since early June.
- This increase correlates closely with the easing of restrictions. Allowing for a two week lag, re-opening of bars seems to be a critical explanatory policy factor.
- Despite the increase in infections, the daily death rates continue to fall. This seeming contradiction may reflect new/better treatments & higher testing.
- Some states have reversed their re-opening strategies. Others have paused planned re-opening schedules.

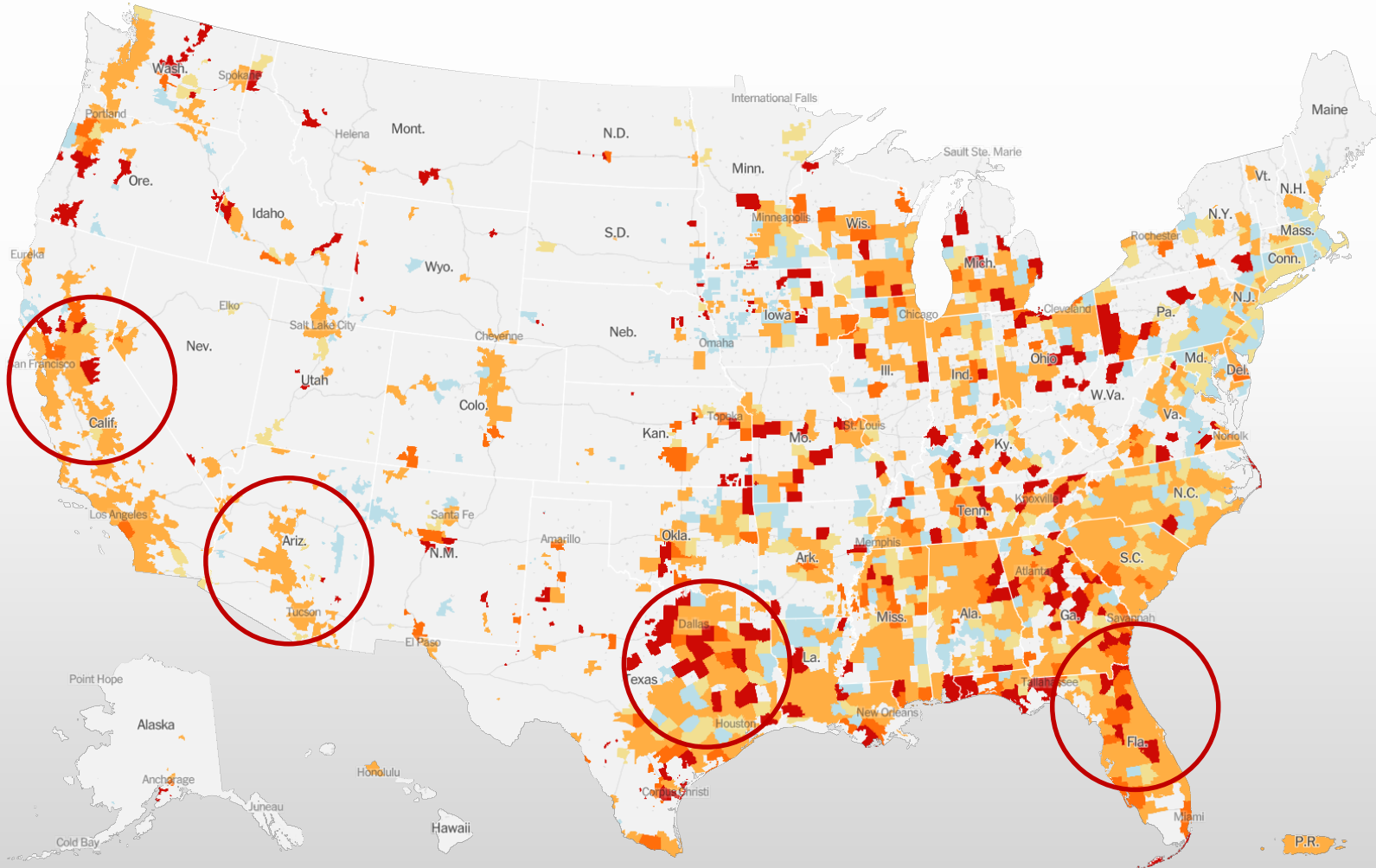


# Covid: Current Daily Infections



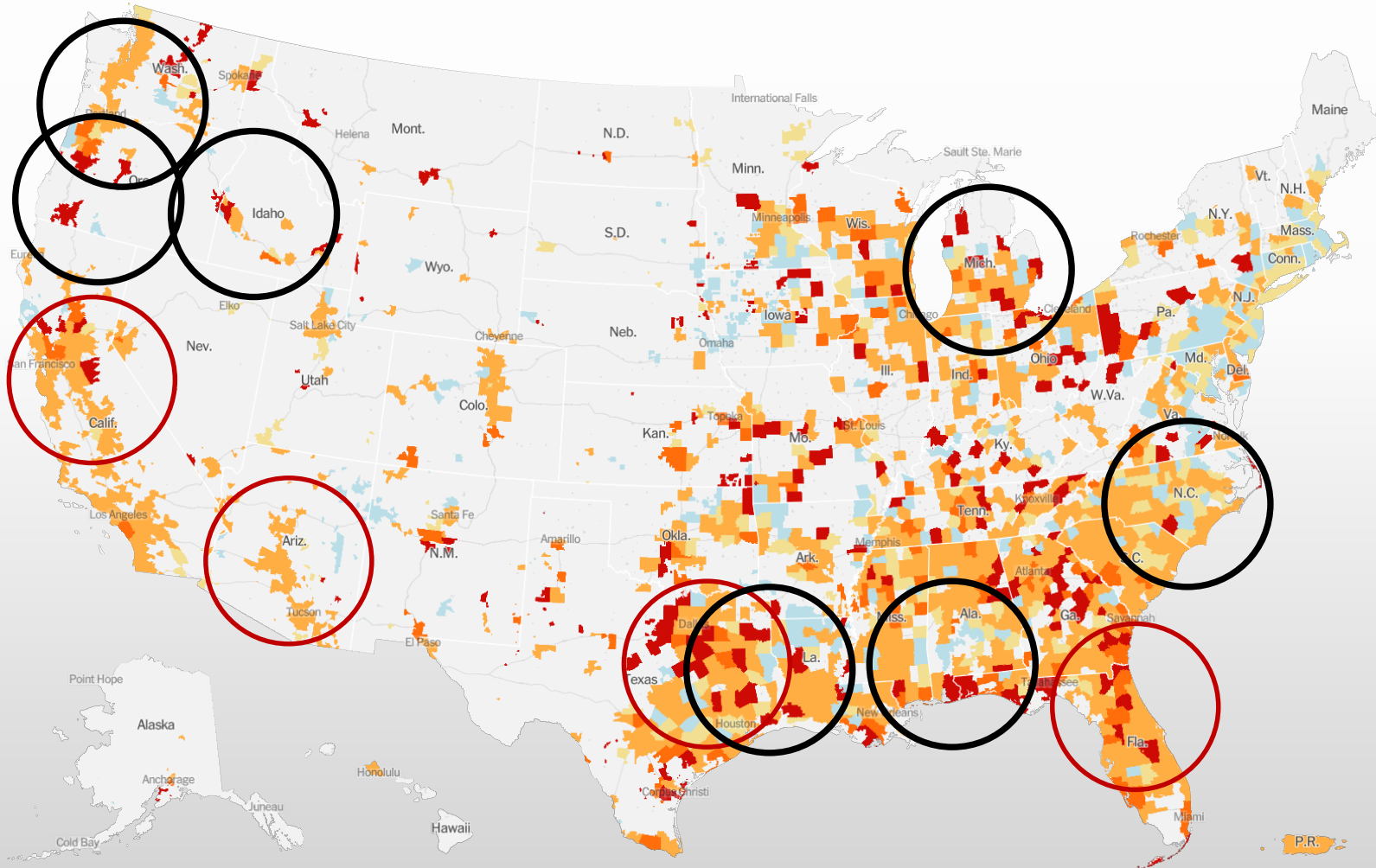
- Regions that were hard hit in the spring (Northeast) prompted harsh state-led policy restrictions.
- Given time, these restrictions significantly reduced new infections. In many of these regions low infection rates have been maintained – even in light of re-opening.
- Some areas not hit hard during the Spring, and encouraged by the diminishment of the virus in the Northeast, engaged in re-opening policies.
- The virus' intensity is now spreading to these areas. From the Northeast to the south and the west.

# Covid: Policy Retrenchment



- Covid increases correlate closely with the easing of restrictions. Allowing for a two week lag, re-opening of bars seems to be a critical explanatory policy factor.
- The alarming increases in **Florida, Texas, Arizona and California** have prompted state governments to reverse policies aimed at easing restrictions.

# Covid: Policy Retrenchment



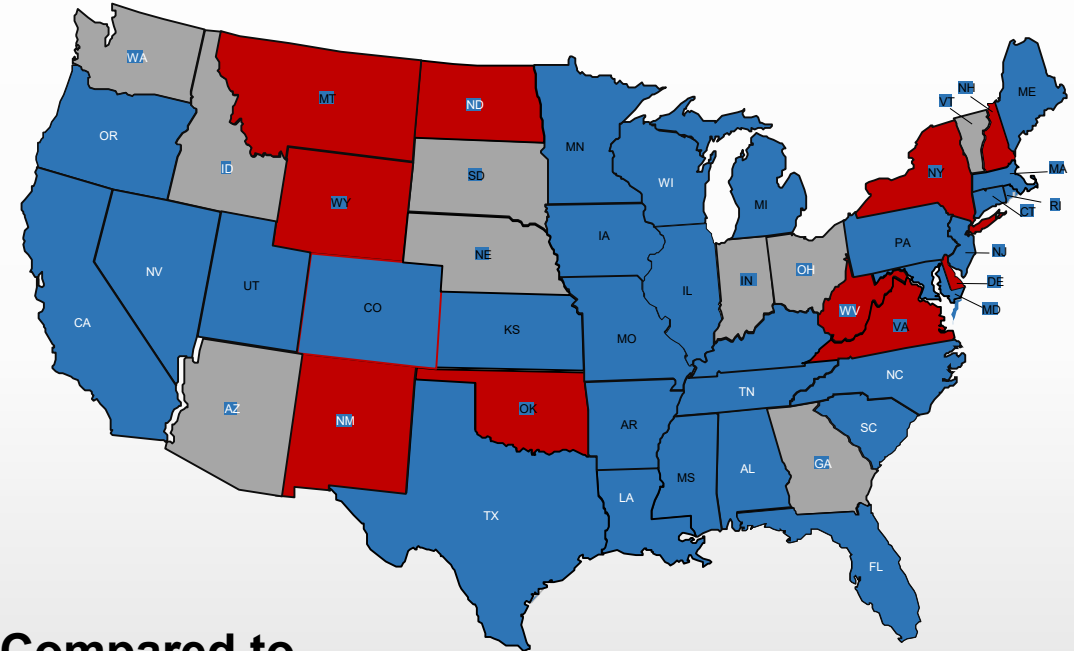
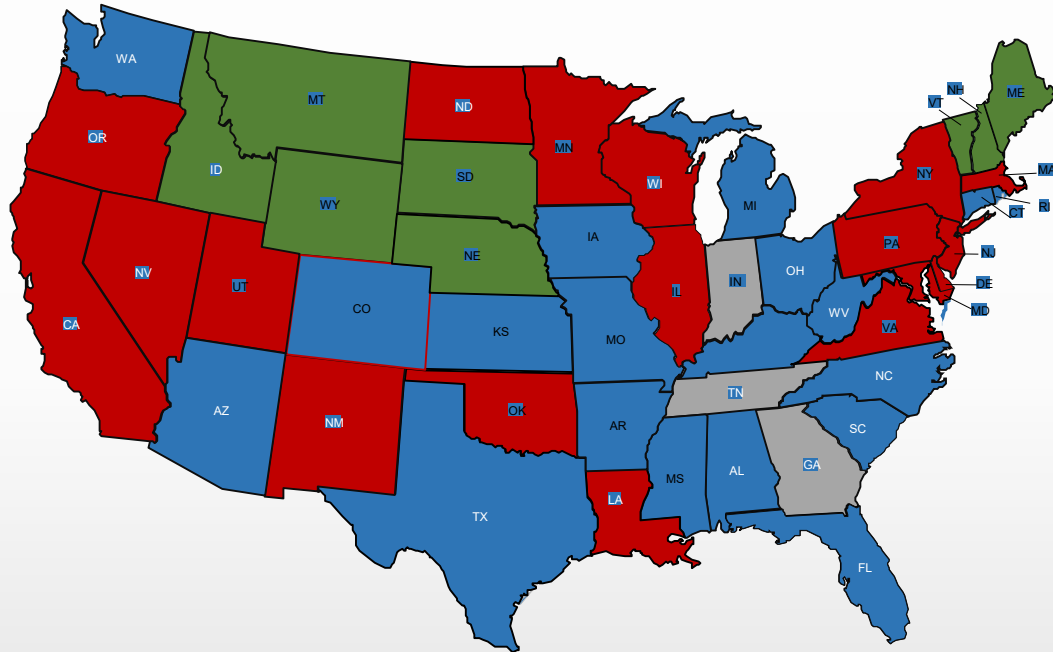
- Covid increases correlate closely with the easing of restrictions. Allowing for a two week lag, re-opening of bars seems to be a critical explanatory policy factor.
- The alarming increases in **Florida, Texas, Arizona and California** have prompted state governments to reverse policies aimed at easing restrictions.
- In addition to states reversing their reopening policies, another seven states have put their re-opening plans on pause.



# Macroeconomic Risks & Assumptions

# State Revenues: 2020

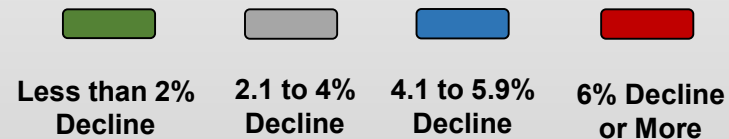
# State Revenues: 2021



## Revenue Decline Compared to 2019 Levels

### Given our Macroeconomic Projection

- Estimate Income by State
- Consumer Spending by State
- VMT By State
- Real Estate Values

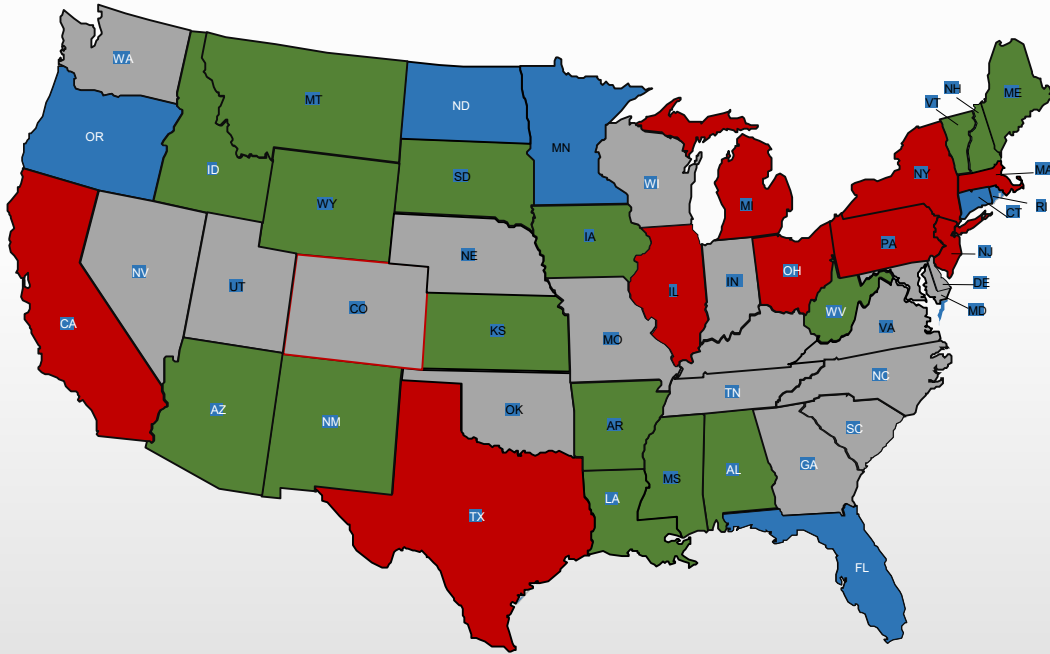


### We Calculate State Revenues

- Individual & Corporate Income Taxes
- Sales Taxes
- Fuel Taxes
- Property & All Other
- Add CARES
- Assume drawdown of rainy day fund

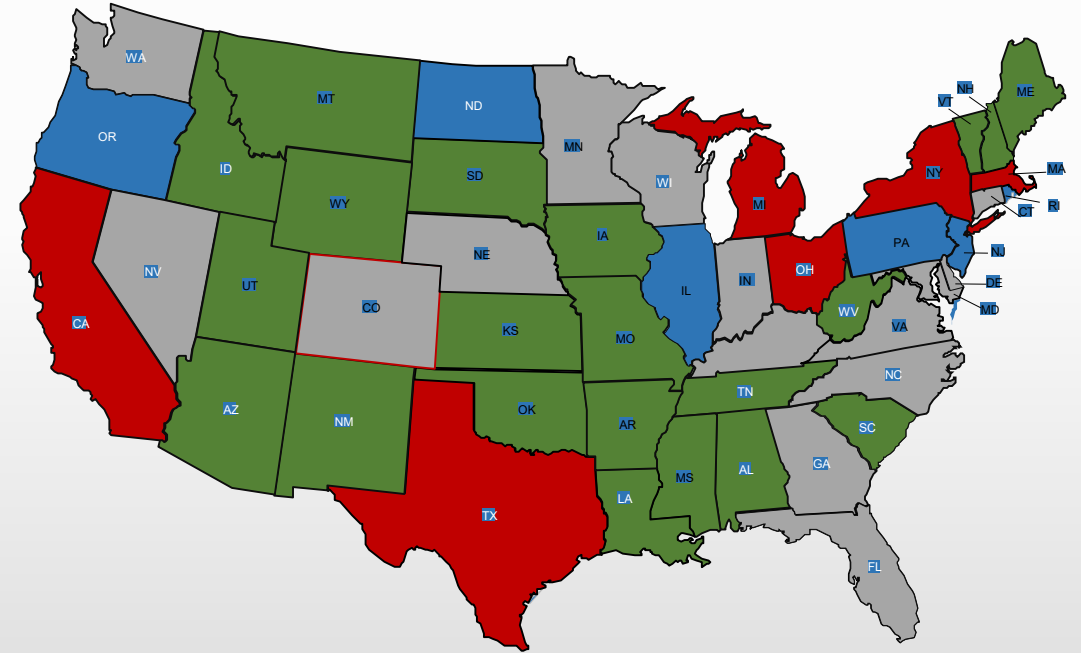
### Unemployment Payments: 2020

\$450 Billion

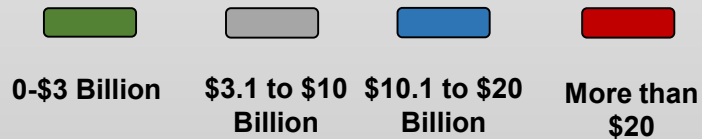


### Unemployment Payments: 2021

\$330 Billion



### Unemployment Payments



# State Fiscal Drag & Heroes Act Compromise

- State revenues will decline fiscal 2020 and 2021. Compared to 2019 levels aggregated state revenues are expected to decline 6.1% in 2020 and 4.9% below 2019 levels in 2021. State expenditures will increase in fiscal 2020 and 2021. Large state deficits will emerge. Based on our analysis, cumulative US state deficits exceed \$450 billion each year. This may represent a large drag on the economic recovery as well as a large moderating factor for public sector cement consumption.
- The house has passed a \$3 trillion spending bill aimed at a myriad of projects. Among the items included in spending is roughly \$1 trillion in fiscal support to state, local & tribal governments.
- The Senate returns the week of July 21<sup>st</sup>. Senator McConnell has stated his concern over the growth in federal debt, and will counter with his own proposal – presumably at lower funding levels.
- PCA has assumed state/local/tribal spending support at 25% of the Heroes act (Based on PCA-DC guidance). That implies \$250 billion in funding relief. It also implies that tight fiscal conditions will prevail even in light of additional federal support.
- State rainy day funds were much stronger than they were entering the Great Recession. As a share of general fund expenditures, rainy day funds represented 7.6% going into the recession, compared to 4.5% going into the Great Recession.

# Macroeconomic Outlook

# The Alphabets of Recovery

## U

A Sharp deep decline, followed by a period of slow recovery.

- Some Scarring.
- Many business foreclosures. Consumer spending is hurt by debt, and lacks confidence .
- Jobs come back slowly.
- Economic growth is enhanced by relaxation of state policies aimed at restraining the spread of the virus.
- Consumer confidence slowly improves as Covid deaths ebb.
- A slow shallow process of recovery.
- Federal Support continues (33% Funding of Heros Act)
- Virus does not accelerate significantly.

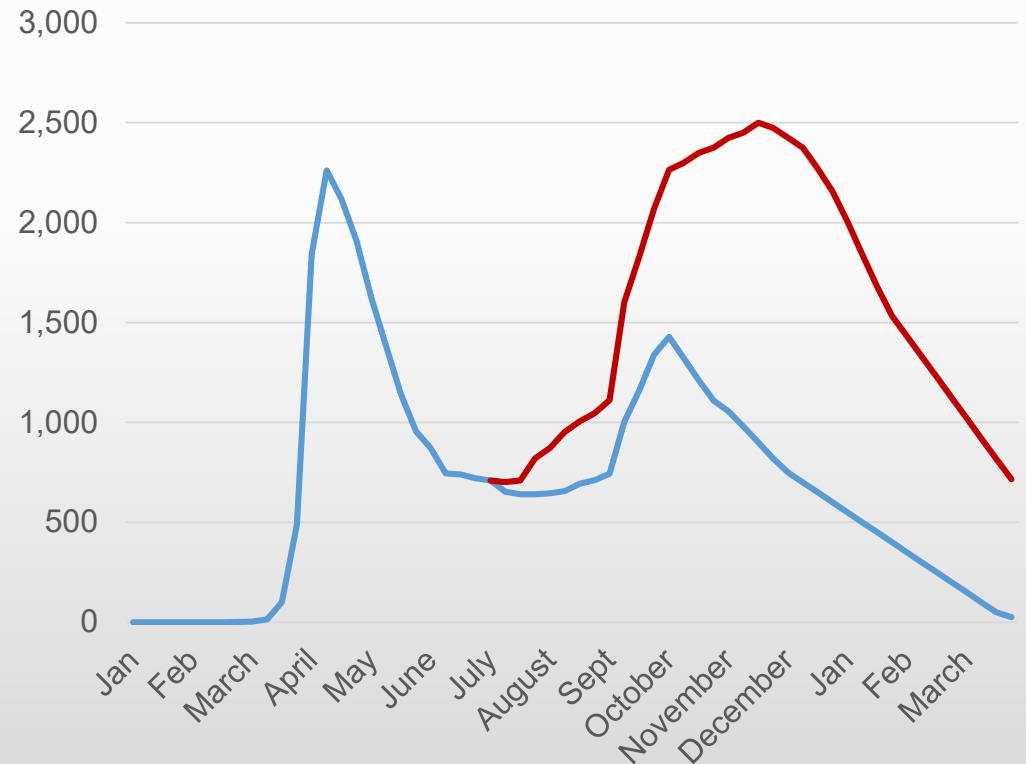
## W

A Sharp deep decline, followed by a slow recovery and a slide back into recession due to a significant rise in infections.

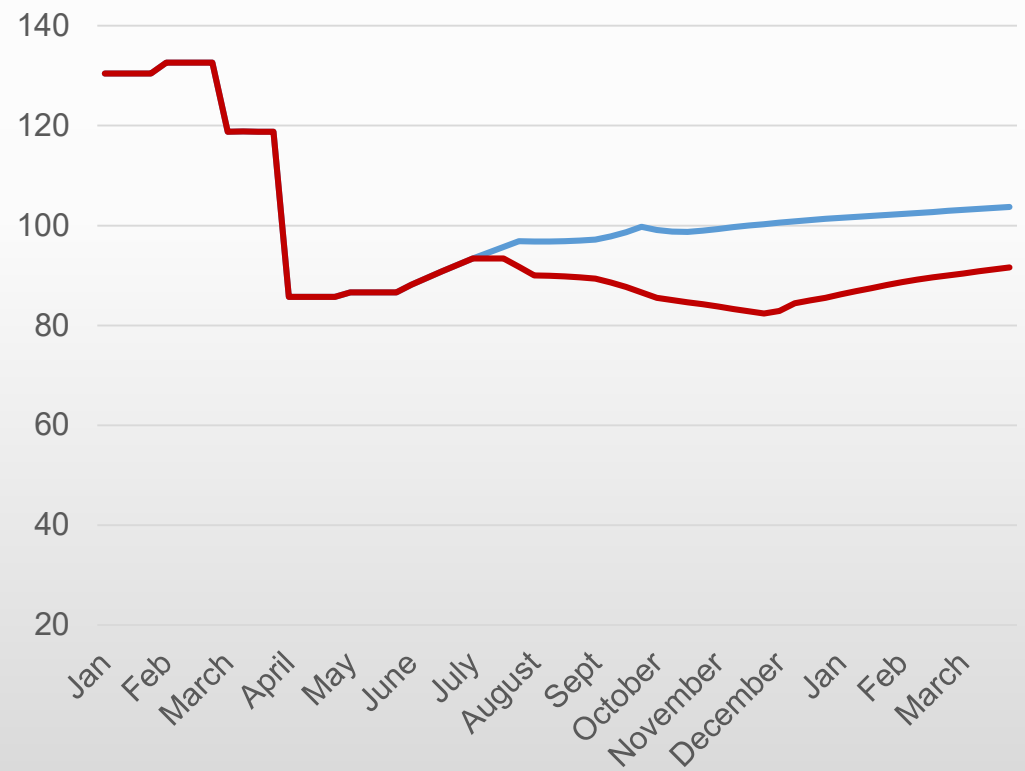
- Some Scarring.
- Many business foreclosures. Consumer spending is hurt by debt, and lacks confidence .
- Jobs come back slowly.
- Economic growth is enhanced by relaxation of state policies aimed at restraining the spread of the virus.
- Consumer fear and uncertainty re-appear.
- Some state re-opening retrenchment. Some state pausing of re-opening schedule.
- Virus accelerate significantly.
- The slow shallow process of recovery is interrupted, followed by another retrenchment in GDP growth.
- Federal Support continues (33% Funding of Heros Act) and is supplemented with further support in early 2021.

# Covid Deaths & Consumer Sentiment– “U & W”

**Average Daily Deaths**  
IHME



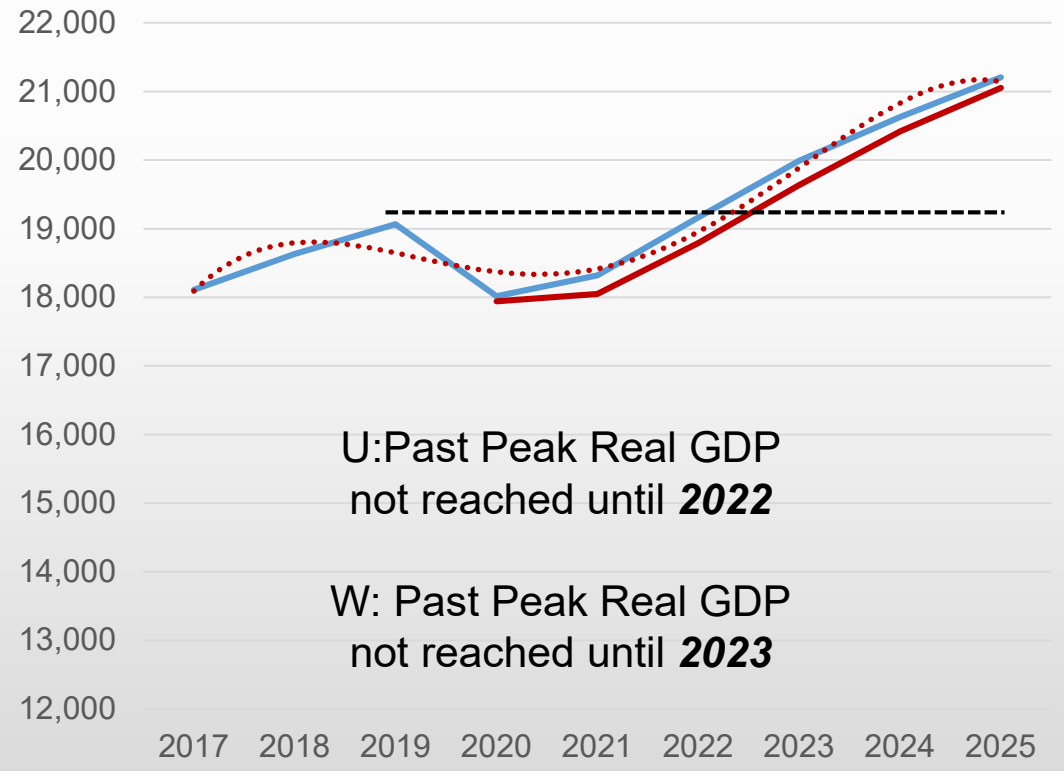
**Consumer Sentiment**  
Percent Change, Y-O-Y



# GDP – “U & W” Scenarios

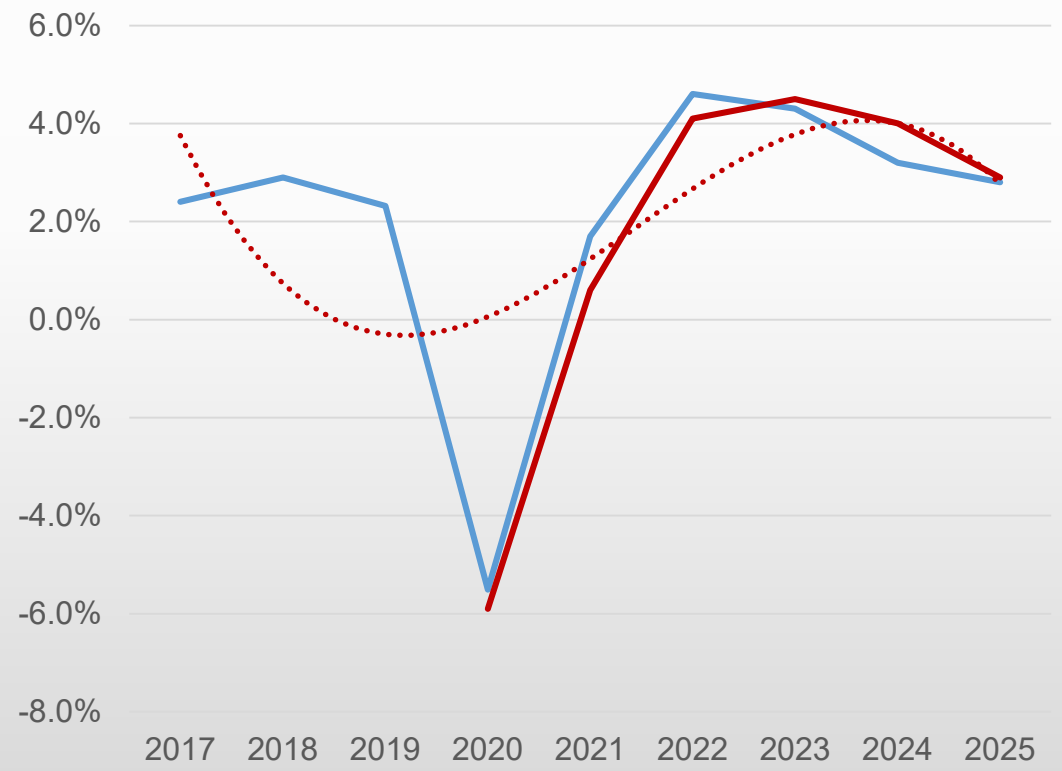
## Real GDP

1985=100



## Real GDP Growth

Percent Change, Y-O-Y

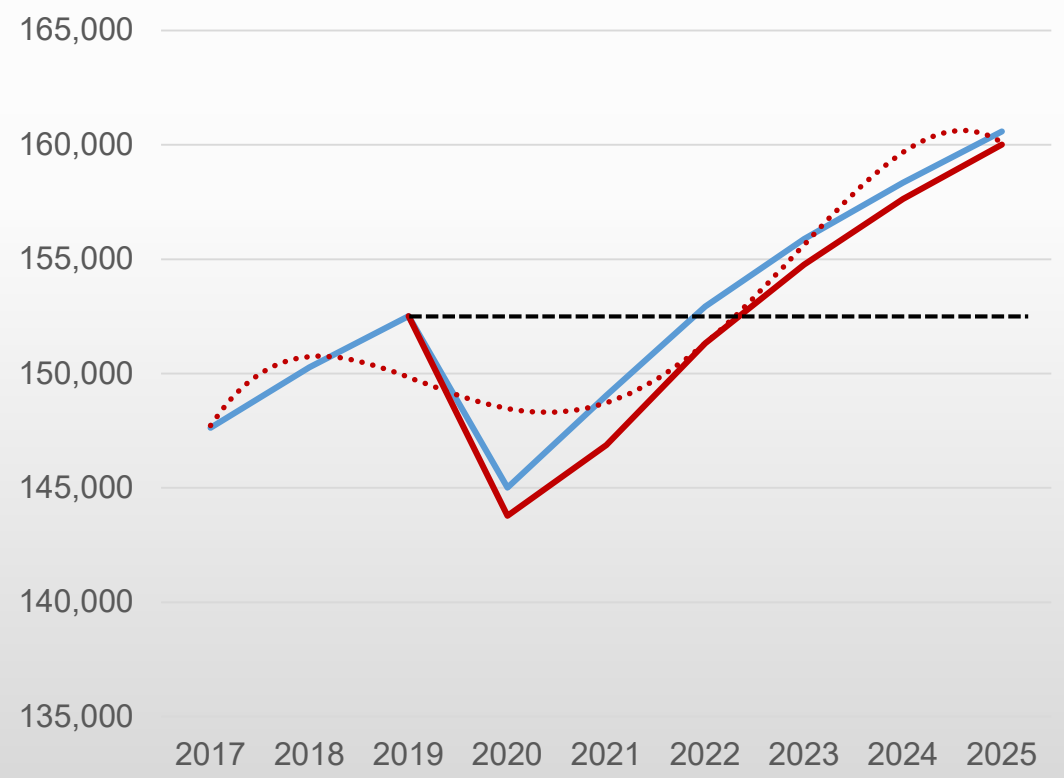




# Employment & Unemployment Rates– “U & W”

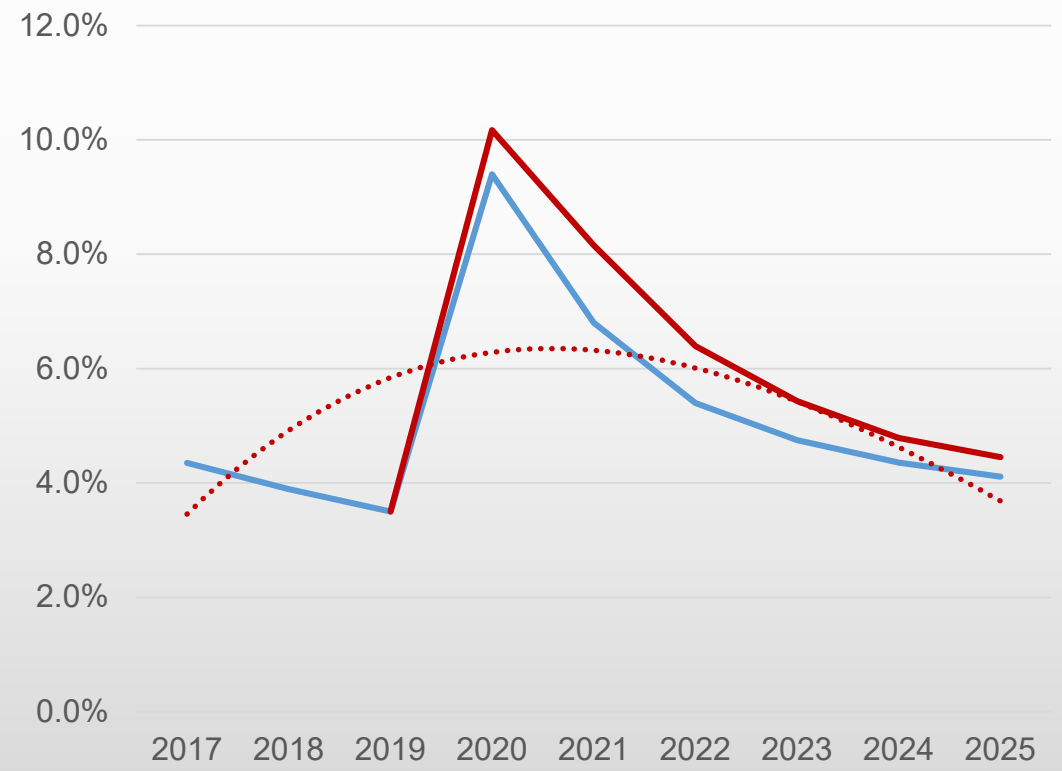
## Employment

Thousands



## Unemployment Rates

% Unemployed of Labor Force

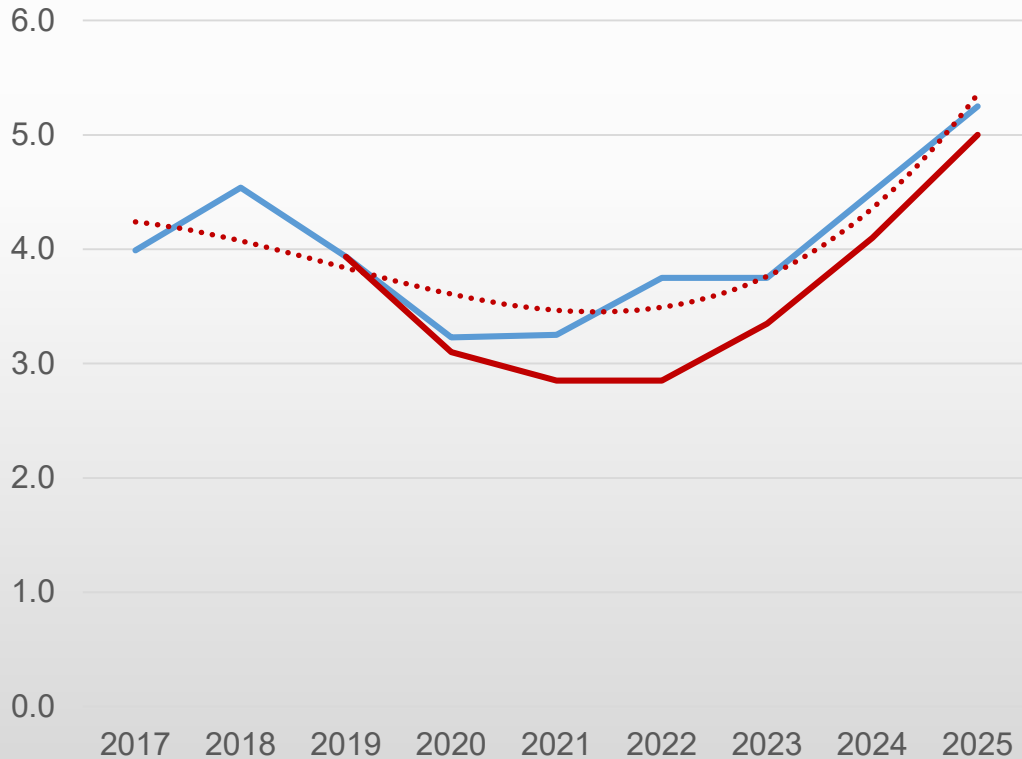


# Construction & Cement Outlook

# Housing Starts – “U & W”

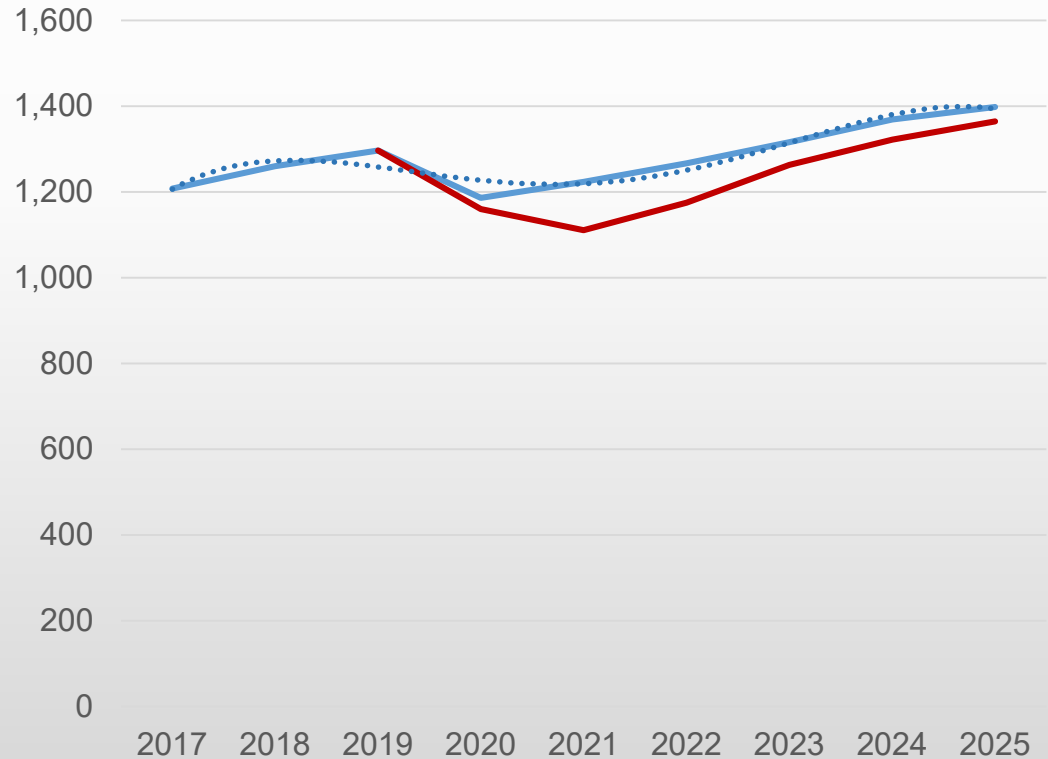
## Mortgage Rates

Conventional, 30 Year, Annual Interest Rate



## Housing Starts

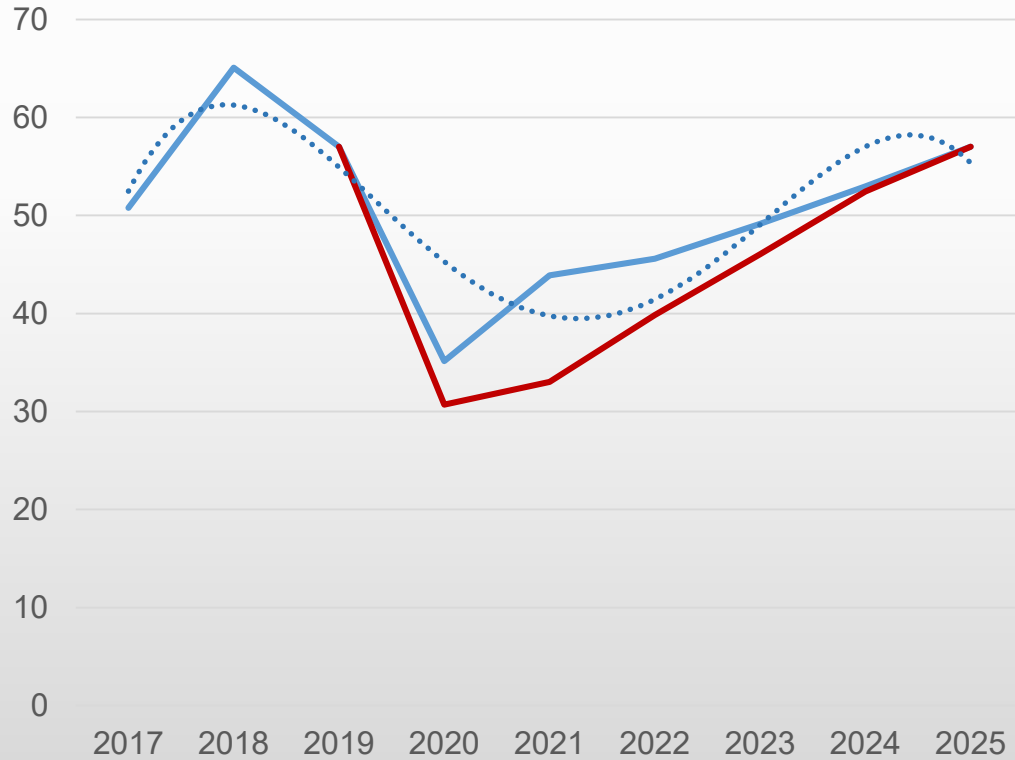
Thousands



# Oil Price Impacts – “U & W”

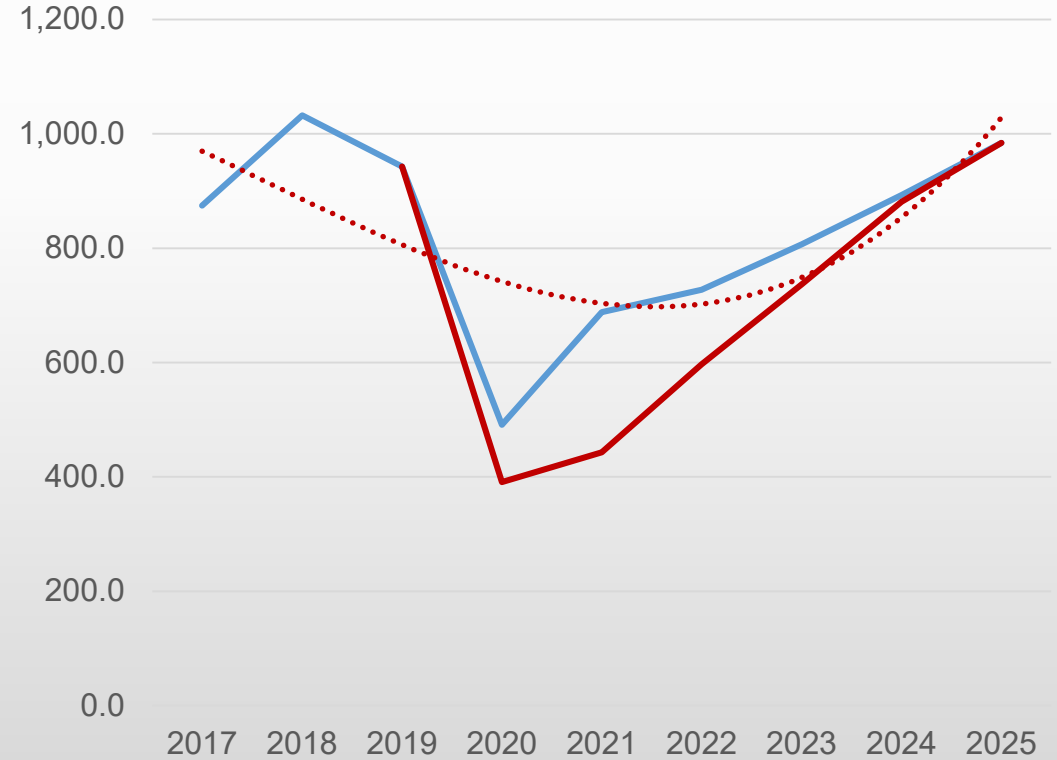
## Oil Prices

WTI, Per Barrel



## Rig Counts

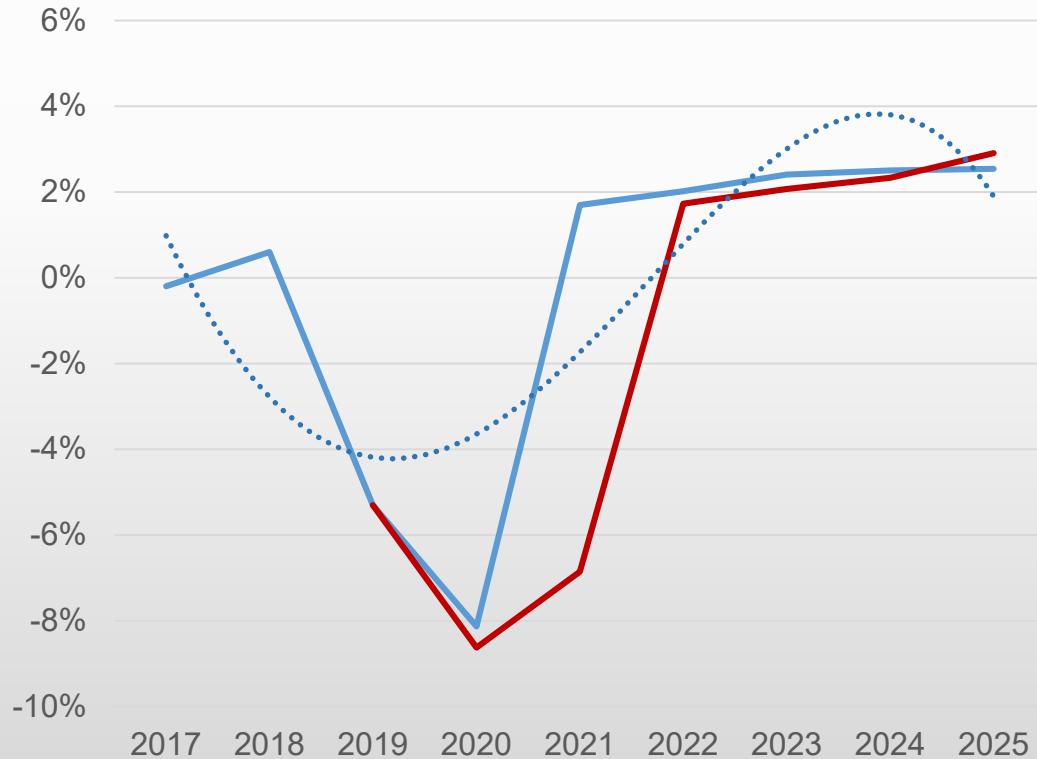
Thousands



# Nonresidential & Public – “U & W”

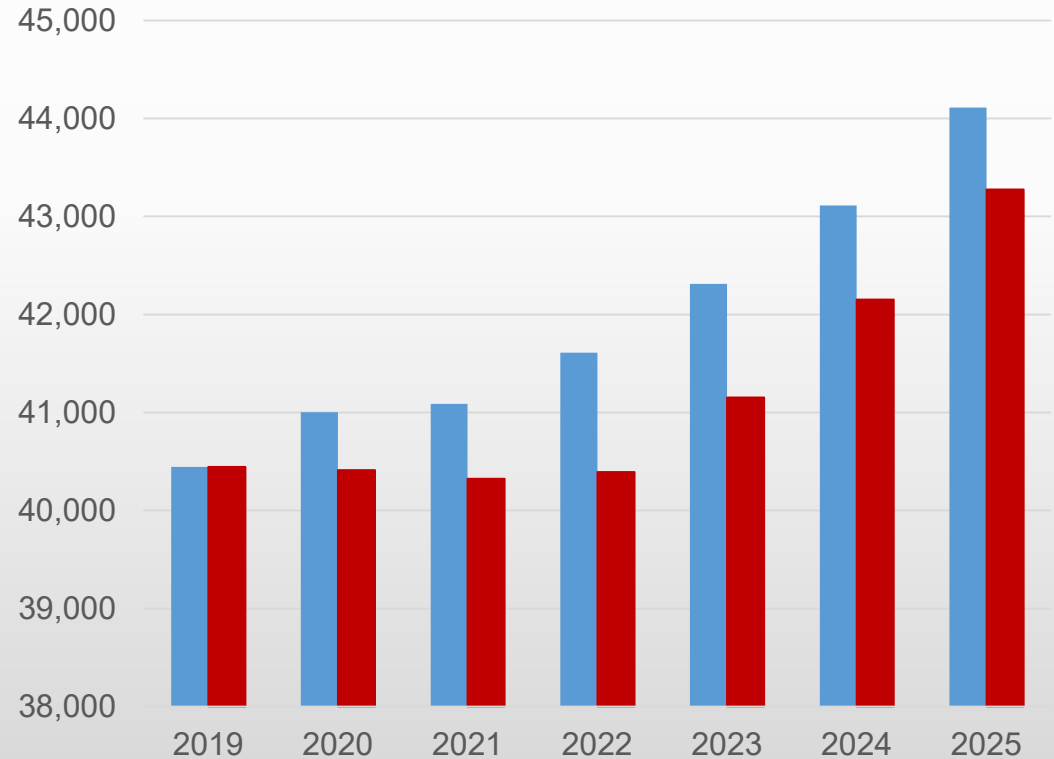
## Nonresidential

Real PIP, Y-O-Y Percent Change



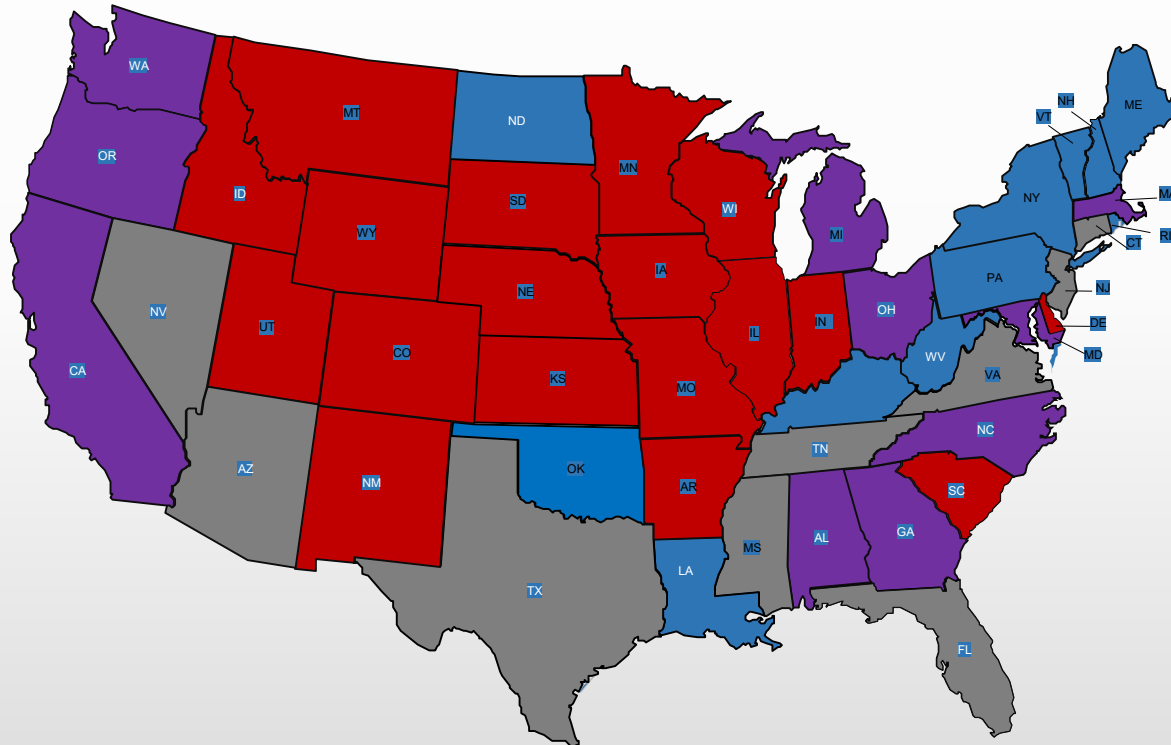
## Public

Real PIP

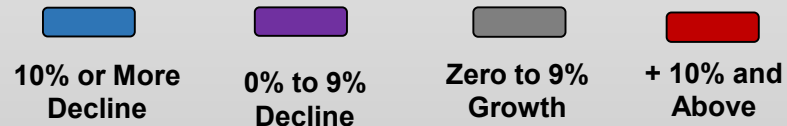


# Cement Consumption Actual: Year-to-Date

## Percent Change, Year Ago



### Y-O-Y Change

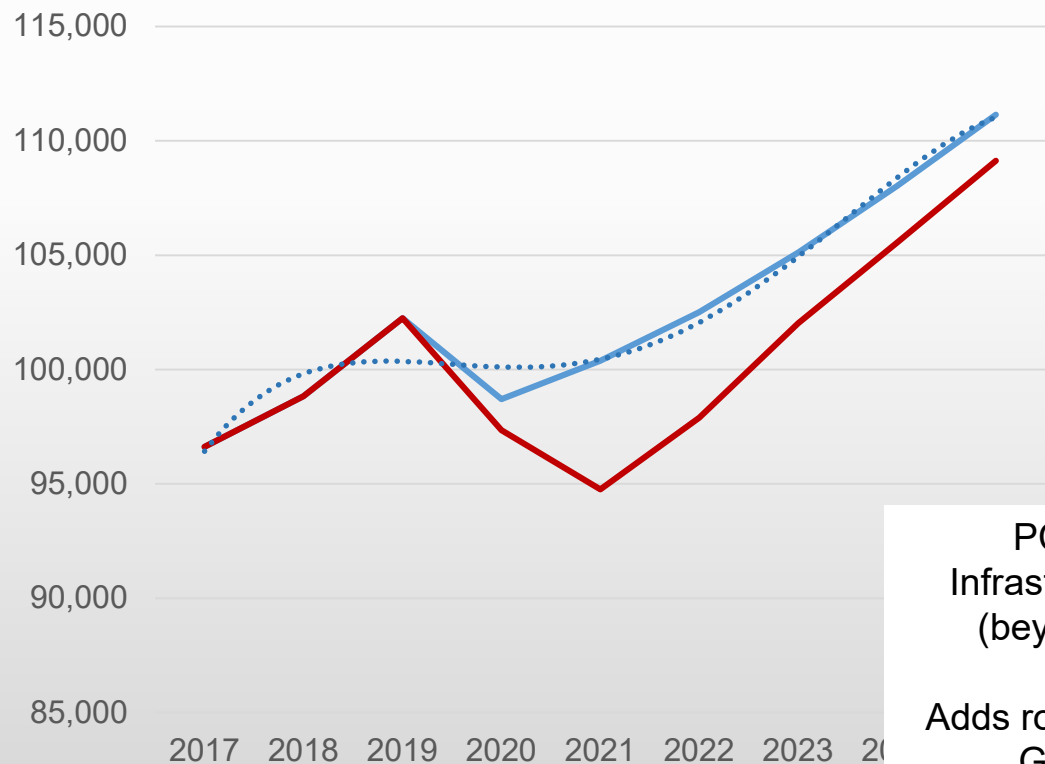


West North Central	<b>+19.9%</b>
West South Central	<b>+0.2%</b>
New England	<b>-0.5%</b>
East North Central	<b>1.2%</b>
Middle Atlantic	<b>-14.2%</b>
South Atlantic	<b>-3.4%</b>
East South Central	<b>1.2%</b>
Pacific	<b>-2.2%</b>
Mountain	<b>+14.5%</b>
<b>United States</b>	<b>+0.5%</b>

# Cement Outlook – “U & W”

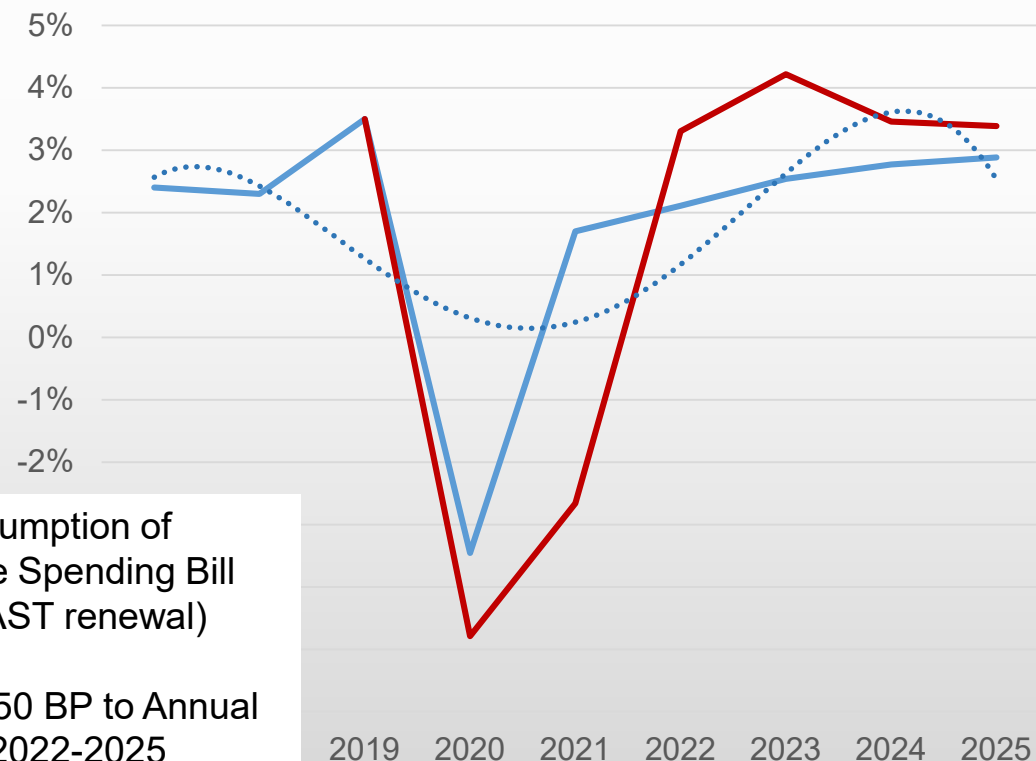
## Cement Consumption

Thousand Metric Tons



## Cement Consumption

Y-O-Y Percent Change



PCA Assumption of Infrastructure Spending Bill (beyond FAST renewal)  
Adds roughly 50 BP to Annual Growth 2022-2025



# Regions Will Behave Differently

Based on IHME Projections

## Low Risk (Below Past Peak. 100% or Less)

State	Oct		Cement % Share
	% Past Peak	Daily Deaths	
Alaska	0%	1	0.1%
California	64%	50	11.1%
Connecticut	0%	0	0.6%
Idaho	0%	0	2.0%
Illinois	12%	13	3.0%
Indiana	11%	5	2.0%
Kansas	58%	4	1.3%
Louisiana	6%	4	2.0%
Maryland	48%	25	1.3%
Massachusetts	1%	1	1.0%
Minnesota	78%	18	1.7%
Mississippi	63%	1-	0.8%
Missouri	77%	12	1.8%
Montana	50%	1	0.3%
New Jersey	0%	1	1.4%
New York	0%	1	3.0%
Ohio	23%	10	3.6%
Oklahoma	36%	3	1.8%
Pennsylvania	3%	4	2.9%
South Dakota	0%	0	0.5%
Vermont	0%	0	0.1%
Washington	86%	18	2.0%

**Total Low Risk 44.5%**

## Medium Risk (Above Past Peak. 101% to 500%)

State	Oct		Cement % Share
	% Past Peak	Daily Deaths	
Alabama	162%	21	1.3%
Delaware	139%	13	0.3%
Florida	300%	144	7.6%
Georgia	450%	162	3.4%
Kentucky	111%	10	1.1%
Iowa	229%	32	2.0%
Nevada	181%	15	1.5%
New Hampshire	350%	21	0.3%
North Dakota	350%	7	0.7%
Rhode Island	114%	16	0.1%
Texas	250%	78	16.7%
West Virginia	100%	2	0.7%
Wisconsin	441%	49	2.0%

**Total Medium Risk 37.7%**

## High Risk (Above Past Peak. 501% and Above)

State	Oct		Cement % Share
	% Past Peak	Daily Deaths	
Arizona	864%	190	2.5%
Arkansas	7350%	147	1.0%
Colorado	437%	118	2.5%
Hawaii	30800%	308	0.3%
Maine	14300%	143	0.2%
Nebraska	3275%	131	1.3%
New Mexico	628%	57	0.7%
North Carolina	3891%	661	2.7%
Oregon	750%	23	1.1%
South Carolina	635%	64	1.7%
Tennessee	6500%	325	1.8%
Utah	7050%	141	1.5%
Wyoming	1250%	13	0.3%

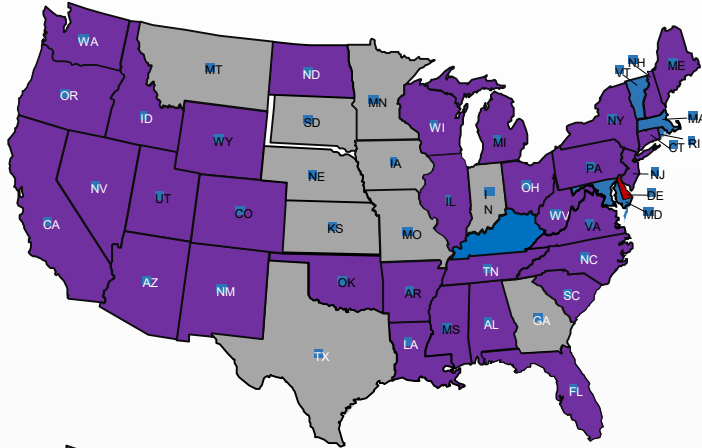
**Total High Risk 17.8%**



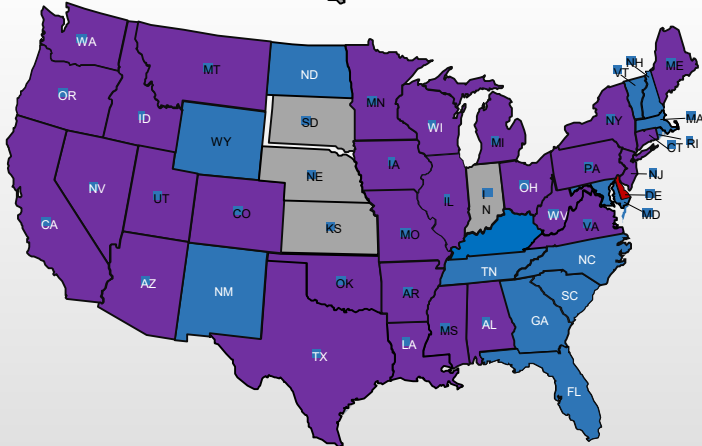
# Cement Consumption Outlook: Average Growth 2020-2021

## Percent Change, Year Ago

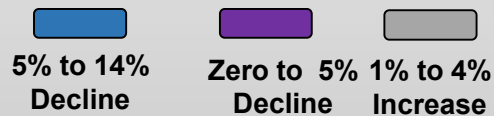
“U”



“W”



### Expected Y-O-Y Change

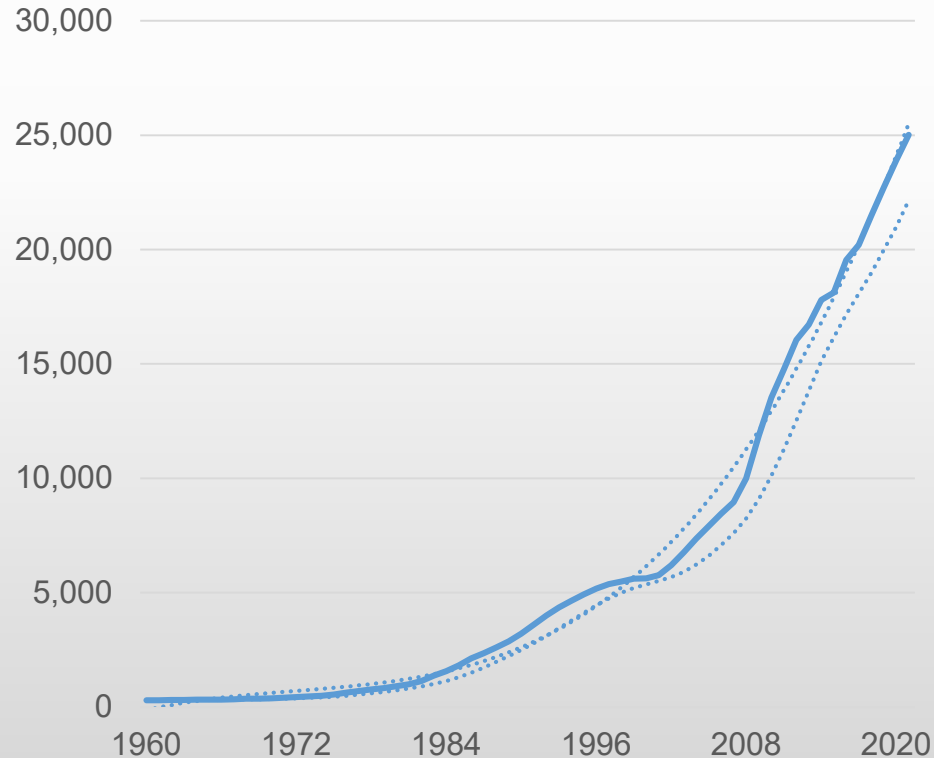


	“U”		“W”	
	2020	2021	2020	2021
<b>Total Cement</b>				
West North Central	2.9%	-0.3%	1.8%	-2.8%
West South Central	-2.6%	1.9%	-5.0%	-1.4%
New England	-6.2%	1.1%	-6.6%	0.1%
East North Central	-2.9%	1.4%	-3.2%	0.7%
Middle Atlantic	-7.6%	1.9%	-8.0%	0.9%
South Atlantic	-6.2%	-4.7%	-7.2%	-5.8%
East South Central	-6.9%	2.7%	-8.3%	-4.4%
Pacific	-4.0%	1.6%	-5.5%	-2.3%
Mountain	0.3%	-1.6%	-1.6%	-6.0%
<b>United States</b>	<b>-5.5%</b>	<b>1.7%</b>	<b>-5.9%</b>	<b>0.6%</b>

# Longer Term Issues

# Longer Term Considerations

## Federal Debt Trillion \$



### Longer term may usher in slower growth in nonresidential construction.

- Slower overall economic growth.
- On-Line retail gains at an accelerated pace at the expense of Brick & Block.
- Increased acceptance of “work-at-home” implies less need for traditional office space. (Space efficiency & alternative space use may offset some of this).
- Even after the Covid threat has past, there may be a new acceptance of e-meetings reducing business travel and hotel construction.
- On-line learning may gain more acceptance and reduce college construction.
- The priority of Covid came at the expense of revenue generating procedures, hindering hospitals’ fiscal position.

# Final Considerations

# The Vaccine Scenario.

- Increasingly, there has been optimism that a Covid vaccine will be available in the USA late 2020 or early 2021.
- Such a possibility suggests yet another economic outlook scenario. Under a Vaccine Scenario, consumer spending would return to normal much more rapidly than under either the U or W scenarios. With stronger consumer spending, real GDP, employment, construction & cement consumption all record stronger 2021 and beyond volume levels.
  - The Vaccine Scenario would still reflect economic scarring that has already materialized and result in more moderate growth scenario than pre-Covid projections.
- 14-15 Covid Vaccines are now in human testing. Even if these vaccines are successful, timing lags in bringing the vaccine to market could delay its introduction and delay the economic recovery associated with a vaccine.
- The US Government has invested \$1.6 Billion in a Novavax vaccine. It has also invested \$450 Billion in Regeneron Pharmaceuticals' vaccine. These cash infusions can enable a more rapid ramp-up and accelerate the economic recovery associated with a vaccine.
- PCA's Market Intelligence team is working on a "Vaccine Scenario".

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America's Cement Manufacturers™

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July 9<sup>th</sup> 2020

# US Cement Industry Outlook

Ed Sullivan, SVP & Chief Economist