Total Cement Consumption

Index, 2000=100

Source: USGS, PCA
Timeline of COVID-19 Mitigation
Statewide Shelter in Place Orders through March 2020

March 23
9 statewide orders

March 26
21 statewide orders

March 30
30 statewide orders

Source: New York Times
Timeline of COVID-19 Mitigation

Notable Shutdowns in the Northeast

- **March**
  - MA: Boston shut down all but emergency construction

- **April**
  - NY: March 31st Nonessential Construction Ban
  - MI: Statewide Shutdown, Construction NOT Exempt
  - PA: April 1st Statewide Shutdown, Construction NOT Exempt

- **May**
  - MI: May 7th, Plans Announced to Restart Construction
  - PA: May 1st Construction Largely Exempt

- **June**

Source: New York Times
Based on IHME’s estimated infections which include those not tested as well as asymptomatic.

Source: IHME, Census, PCA
## IHME Projected Beds Needed vs. Beds Available

<table>
<thead>
<tr>
<th>State</th>
<th>% Past Peak</th>
<th>Past Peak</th>
<th>Proj Peak</th>
<th>Avg Beds Need</th>
<th>Beds Avail</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Jersey</td>
<td>1%</td>
<td>3</td>
<td>0</td>
<td>84</td>
<td>7,815</td>
</tr>
<tr>
<td>New York</td>
<td>0%</td>
<td>928</td>
<td>2</td>
<td>-</td>
<td>13,000</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>11%</td>
<td>127</td>
<td>14</td>
<td>403</td>
<td>14,400</td>
</tr>
<tr>
<td>Illinois</td>
<td>9%</td>
<td>107</td>
<td>10</td>
<td>400</td>
<td>14,500</td>
</tr>
<tr>
<td>Indiana</td>
<td>15%</td>
<td>40</td>
<td>6</td>
<td>178</td>
<td>8,485</td>
</tr>
<tr>
<td>Michigan</td>
<td>1%</td>
<td>143</td>
<td>2</td>
<td>87</td>
<td>10,100</td>
</tr>
<tr>
<td>Ohio</td>
<td>14%</td>
<td>43</td>
<td>6</td>
<td>250</td>
<td>14,300</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>18%</td>
<td>11</td>
<td>2</td>
<td>67</td>
<td>5,100</td>
</tr>
<tr>
<td>Connecticut</td>
<td>1%</td>
<td>99</td>
<td>1</td>
<td>25</td>
<td>1,700</td>
</tr>
<tr>
<td>Maine</td>
<td>0%</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>1,000</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>3%</td>
<td>170</td>
<td>5</td>
<td>65</td>
<td>4,800</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>33%</td>
<td>6</td>
<td>2</td>
<td>175</td>
<td>1,000</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>7%</td>
<td>15</td>
<td>1</td>
<td>17</td>
<td>800</td>
</tr>
<tr>
<td>Vermont</td>
<td>0%</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>533</td>
</tr>
</tbody>
</table>

Source: IHME
Total Cement Consumption – Northeastern U.S.

Index, 2000=100

Source: USGS, PCA

Dashed Lines = “W” Shaped Recovery
Total Cement Consumption – Northeastern U.S.

Index, 2000=100

Source: USGS, PCA

Dashed Lines = “W” Shaped Recovery
Economic Outlook
Employment Recovery

Percent Change in Employment (March through April)

Percent of Employment Losses Recovered (March Low to June)

Note: Based on U.S. June report, 36.1% of jobs have been recovered

Source: BLS, PCA
Manufacturing, Energy, and Agriculture Exposure

Source: PCA
Manufacturing Exposure
10% or Greater Manufacturing Share of Total Employment

Mid American Production Index

Manufacturing Employment (000s)
Residential Outlook
Housing Permits – Northeastern U.S.

Seasonally adjusted, year-over-year percent change.

Source: PCA
Favorable Regional Home Affordability Could Provide Support

Home Price-to-Household Income, SA

Source: NAR, BEA, BOC, Moody's
Residential Cement Consumption – Northeastern U.S.

Index, 2000=100

Annual % Change

<table>
<thead>
<tr>
<th>Region</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE</td>
<td>-7.0%</td>
<td>2.1%</td>
</tr>
<tr>
<td>MATL</td>
<td>-5.7%</td>
<td>2.6%</td>
</tr>
<tr>
<td>ENC</td>
<td>-3.7%</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

Source: USGS, PCA
Residential Cement Consumption – Northeastern U.S.

Index, 2000=100

Source: USGS, PCA

Dashed Lines = “W” Shaped Recovery
Potential Shift in Homebuyer Preferences?

Metric Tons of Cement Per Housing Unit

- 21% of agents reported buyers seeking the benefits of new homes, such as office space or backyards. (Source: NAR Research Group Survey)

- Potential for intrastate moves from urban to suburban/exurban locations.

- A 10% compositional shift from multi to single family would amount to roughly 70k MTs annually in NE, 150k in MATL, and 250k MTs in the ENC.

Source: PCA, NAR
U.S. Net Farm Income

Real 2019 $s, billions

Share of U.S. Gross Farm Receipts
Illinois: 4.5%
Indiana: 2.8%

Source: U.S. Department of Agriculture (USDA): Farm Income and Wealth Statistics
Manufacturing Sentiment

Empire State: % Change, NSA, Philly Fed: % Change SA

## Industrial Production

### % Change

<table>
<thead>
<tr>
<th>(% Change)</th>
<th>20-Jan</th>
<th>20-Feb</th>
<th>20-Mar</th>
<th>20-Apr</th>
<th>20-May</th>
<th>20-Jun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total IP</td>
<td>-0.4</td>
<td>0.1</td>
<td>-4.4</td>
<td>-12.7</td>
<td>1.4</td>
<td>5.4</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-0.1</td>
<td>0</td>
<td>-5.1</td>
<td>-15.9</td>
<td>3.8</td>
<td>7.2</td>
</tr>
<tr>
<td>Durable goods</td>
<td>-0.6</td>
<td>0.2</td>
<td>-7.7</td>
<td>-21.9</td>
<td>6.8</td>
<td>11.6</td>
</tr>
<tr>
<td>Motor vehicle and parts</td>
<td>2.2</td>
<td>3.1</td>
<td>-29.4</td>
<td>-76.3</td>
<td>120</td>
<td>105</td>
</tr>
<tr>
<td>High-tech</td>
<td>-0.6</td>
<td>-1.4</td>
<td>0.2</td>
<td>-2.8</td>
<td>-0.4</td>
<td>1.8</td>
</tr>
<tr>
<td>Nondurable goods</td>
<td>0.3</td>
<td>-0.3</td>
<td>-2.3</td>
<td>-10</td>
<td>1.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Mfg ex motor vehicle and parts</td>
<td>-0.3</td>
<td>-0.3</td>
<td>-3.2</td>
<td>-12.3</td>
<td>1.9</td>
<td>3.9</td>
</tr>
<tr>
<td>Business equipment</td>
<td>-2.8</td>
<td>-0.4</td>
<td>-7.9</td>
<td>-23.4</td>
<td>7.4</td>
<td>11.8</td>
</tr>
<tr>
<td>Capacity Utilization (%)</td>
<td>76.9</td>
<td>76.9</td>
<td>73.5</td>
<td>64.2</td>
<td>65.1</td>
<td>68.6</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>75.2</td>
<td>75.2</td>
<td>71.3</td>
<td>60</td>
<td>62.3</td>
<td>66.9</td>
</tr>
</tbody>
</table>

- Many factories are weary of making long term plans
- IP is starting to pick up and eat away at the lost ground due to COVID-19
- Motor vehicle segment was hit especially hard, but has recovered strongly in recent months
  - This impacts IL, IN, OH, and MI the greatest

**Source:** Board of Governors of the Federal Reserve System
Non-Residential Cement Consumption – Northeastern U.S.

Index, 2000=100

Dashed Lines = “W” Shaped Recovery

Source: USGS, PCA
Public Outlook
State Rainy Day Funding – FY2020

Rainy day balances as share of general fund expenditures

Current National Average: 7.6%
Prior to Great Recession: 4.5%

Kansas and Illinois effectively have $0 balances, Pennsylvania and New Jersey are roughly 1%

Oil revenue reliant states of New Mexico, North Dakota and Wyoming have respective balances of 27%, 30% and 109%

Source: NASBO Fall 2019 Fiscal Survey of the States
Reduction in Vehicle Miles Traveled Relative to COVID-19 Cases

Percent change in VMT the second week of April vs. first week of March

Source: University of California, Davis
Employees returning to Work...

Percentage change from baseline visits—Workplace

Source: Google Mobility Report, PCA

Plateau suggests more permanent work from home
States Have Been Increasingly Less Reliant on Federal Funds

Source: Federal Tax Administrators, FHWA, PCA
Laws enacted between 2013 and 2019

More Recent Increases

Earlier Increases Circa 2013-2014

Source: Institute on Taxation and Economic Policy
Consumers Showing Recent Apprehension

Percentage change from baseline visits—Retail & Recreation

Source: Google Mobility Report, PCA
States with High Sales Tax Exposure at Risk

Sales tax as a share of total tax collections

Source: Census State Government Tax Collections Report, PCA
Public Cement Consumption – Northeastern U.S.

Index, 2000=100

Source: USGS, PCA

Dashed Lines = “W” Shaped Recovery
Coronavirus Regional Briefing:
Northeastern U.S.

Joe Chiappe, Regional Economist

July 2020