Portland Cement Association

Market Intelligence

Contact: Ed Sullivan, Chief Economist and Group Vice President, (847) 972-9006, esullivan@cement.org

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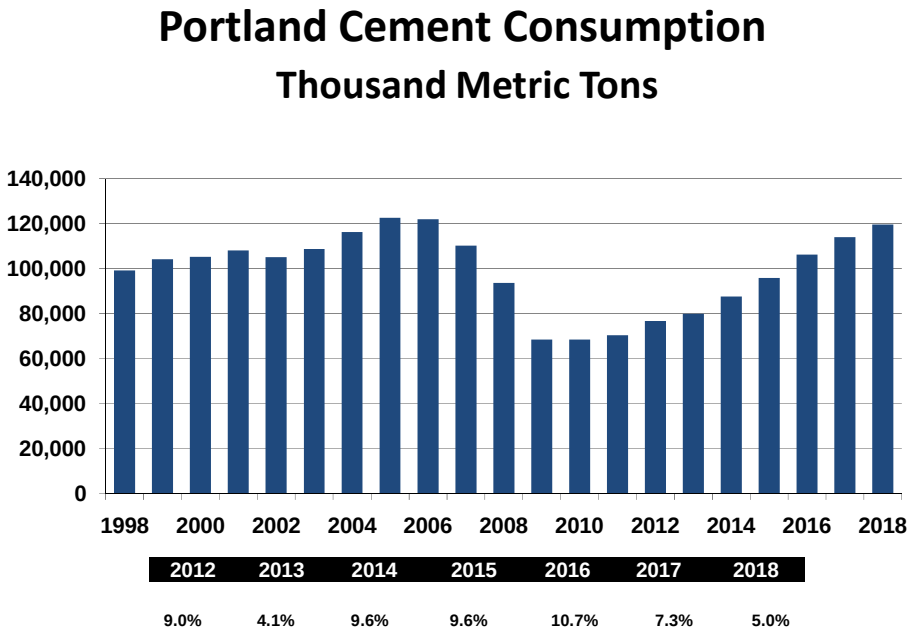
Cement Outlook Update

Overview

PCA has made minor adjustments to its spring forecast. The core fundamentals driving the economy, construction activity, and cement consumption remain basically unchanged and PCA's outlook remains modestly optimistic. Even with this optimism, PCA has not abandoned its core philosophy regarding forecast risks and believes there are near and medium term upside risks to our projections. While 2013 projections for cement consumption have been reduced since our spring forecast from 6% to 4%, this reflects the unusually wet spring and early summer which postponed concrete projects. PCA expects stronger economic growth will materialize in 2014 and beyond and cement consumption is expected to grow at near double-digit rates during the next few years. By the end of the forecast horizon (2018), PCA expects cement consumption will reach more than 120 million metric tons. According to this scenario, the past cyclical peak is reached in 2019 – implying a 14 year peak-to-peak recovery.



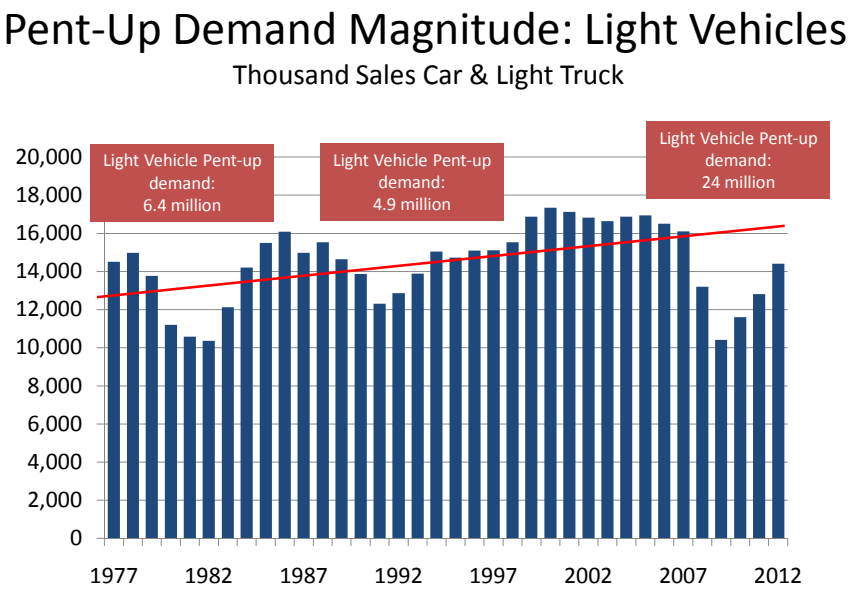
Economic Outlook

PCA's real GDP forecast projections were made prior to the large 2nd quarter upward revisions raising to GDP growth from 1.7% to 2.5%. This is a significant revision. Had the revisions been available at the time of the forecast, it is unlikely that our April economic projections would have been adjusted.

PCA expects real GDP growth in excess of 3% will soon materialize on a sustained basis. This assessment is based on the continued improvement in the underlying fundamentals, stronger consumer and investor confidence, and the gradual release of huge amounts of pent-up demand.

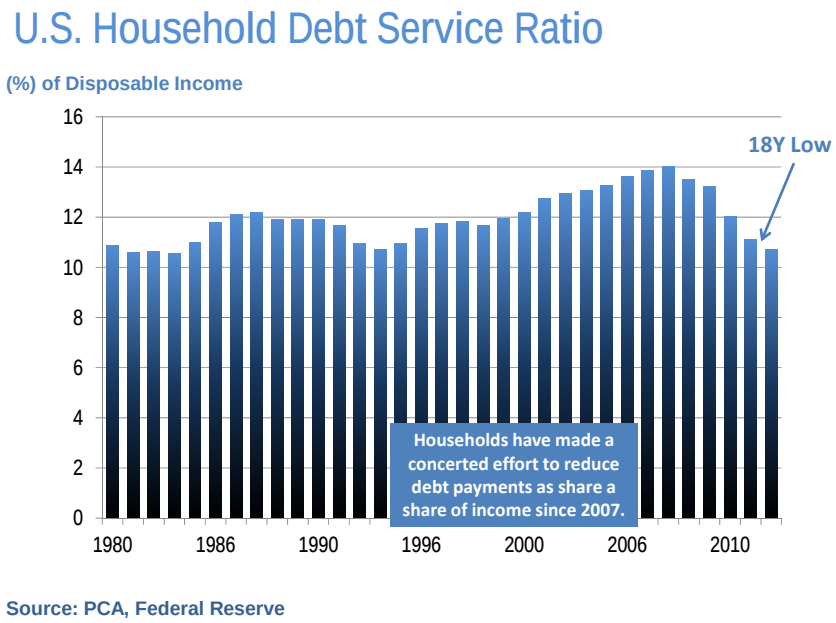
Recessions correct imbalances generated during previous boom periods. The larger the imbalance typically implies a longer correction process. Sub-trend economic growth has generally characterized the economy for the better part of six years – an extraordinarily long period of time and implying huge pent-up demand has been generated and may be waiting on the sidelines for its release.

According to rough PCA estimates, the amount of pent-up demand now present in the economy is unprecedented. Consider the United State's light vehicle market. During the recessions of the 1980's and 1990's demand for light vehicles receded below long-term demand estimates, which are based largely on demographics. In each of these recessions, pent-up demand was estimated at five to six million vehicles. The current recession's pent-up demand is estimated at 24 million vehicles – a huge multiple of past recessions. The generation of huge pent-up demand balances is repeated over and over in many durable goods markets. Few economists doubt the generation of large pent-up demand over the past several years.



The existence of pent-up demand provides fuel for the economy to generate strong growth in real GDP and a principal reason strong growth rates characterize the recovery process. At issue is the timing of this pent-up demand release. The initial stage of this economic recovery has not experienced strong real GDP growth rates. The imbalances that created the recession took time to heal. PCA believes the timing of this release may be closer at hand than many suspect and may begin to materialize in 2014. Consider the following:

- **Private Debt:** Private debt has been in decline as a share of disposable income since 2005. Not only have consumers been paying down their bills, they've also been taking advantage of low interest rates. The extremely low rates of recent years have allowed households to refinance everything from credit cards to homes. As a result, the cost to *service* this debt has approached an 18 year low even in the context of high private debt. By reducing the interest portion of payments, consumers have effectively increased their disposable income, which going forward will likely be a benefit to economic growth.



Source: PCA, Federal Reserve

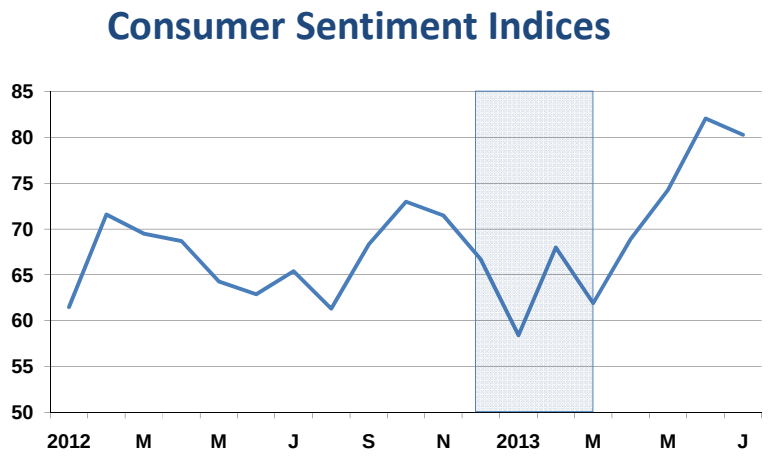
- **Corporate Liquidity:** Private businesses are flush with cash. REITs, which often engage in speculative development, have also taken advantage of low rates and deleveraged. Corporations, by looking at the aggregate current ratio or measure of assets over liabilities, have liquidity rates at all time highs due to efficiency driven strong profits in recent years. In terms of actual dollars, nonfarm, nonfinancial corporate businesses have $15.5 trillion in total financial assets, an increase of 20% from that prior to the recession. In addition to the high liquidity, many businesses have benefited from favorable debt levels, low bond rates, and improved earnings. It is tough to argue that businesses do not have the means to fuel private recovery.

- **Banking Strength:** Banks are healthy again. Depository institutions have raised hundreds of billions in new capital putting important benchmark ratios near all-time highs. Tighter under-writing since the recession has greatly improved credit conditions. The quality of commercial and

industrial loans, credit cards, and auto loans has improved dramatically. Even among first mortgage loans, the number of delinquencies between one and two months is at a record low.

While the economy is positioned for stronger growth, it needs a trigger to unleash this potential. The trigger lies with consumer and businesses willingness to spend and reinvest in capital. Sentiment and confidence indices are extremely volatile. Sporadic gains in consumer sentiment were recorded during 2012 in spite of the adverse implications for the economy surrounding the fiscal cliff. Business sentiment, now stands at pre-recession levels. Assuming Congress has learned its lesson from the fiscal cliff and will take a more rational approach with the upcoming debt limit discussions, political uncertainty and its adverse impact on the economy is expected to dissipate.

According to PCA's scenario consumer and business attitudes are expected to increasingly focus on the positive economic fundamentals rather than the adverse political uncertainty. Since the first quarter, consumer sentiment has recorded uneven gains and now stands more than 30% higher. Further gains are expected to materialize in the second half and initialize the beginning of pent-up demand release and eventually push real GDP growth rates to levels in excess of 3%.



Residential Outlook

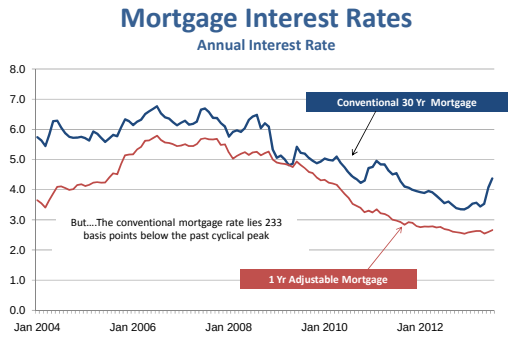
Nearly two-thirds of the anticipated growth in 2013 cement consumption is expected to be accrued to gains in residential construction. Inventories are lean and home prices are rising during 2013. This sends a clear signal to homebuilders to accelerate building activity. This assessment is further amplified in the context of stronger second half 2013 economic growth, job creation and consumer sentiment. Housing starts are expected to reach nearly one million units, with single family construction near 650,000 starts during 2013 and are expected to reach over one million starts by 2015. Strong multifamily construction is expected to persist throughout the forecast horizon.

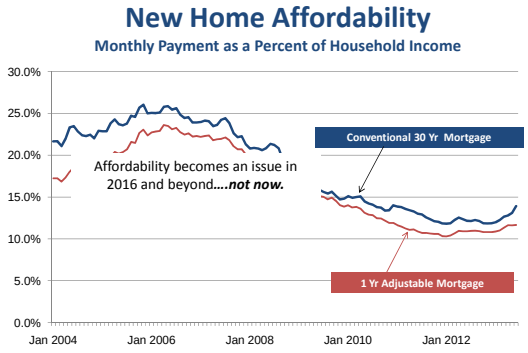
Single Family Sales Outlook

The single family sales outlook is based upon PCA's assessment of lending standards, home prices, and mortgage rates, as well as income and job growth. Home sales increased by roughly 10% in 2012 and stood at 60% of pre-recession levels. During 2013, PCA expects home sales will increase nearly 12% with even stronger rates of growth anticipated for 2014 and 2015. Some analysts are concerned that the recent and rapid run-up in mortgage interest rates coupled with on-going increases in home prices could derail the emerging recovery in the housing market.

The recent run-up in mortgage rates reflects rising long-term interest rates, even though short-term interest rates remain relatively stable. This is referred to as a steepening of the yield curve (long rates less short rates). Steepening of the yield curve is typically an indicator of either anticipated stronger future economic growth, higher inflation, or both. For the near term, PCA interprets the recent steepening of the yield curve as a vote of confidence in the PCA macroeconomic projections calling for stronger real GDP growth rates. Inflation, given the existence of substantial slack in the economy, is not on the near-term horizon.

While the steepening of the yield curve may be a good sign for the economy as a whole, it is also important to assess the potential that these interest rate increases could hinder the recovery in housing. PCA does not believe the recent run-up in mortgage rates is cause for concern. Mortgage interest rates have increased 92 basis points during the past three months, but remain 230 basis points below the past cyclical peak. Mortgage rate increases, coupled with the on-going recovery in home prices have combined to increase the average monthly payment by $150. Average monthly payments, however, remain 32% below the past cyclical peak.





While the recent increases in interest rates and home prices has led to an increase in monthly payments, these gains must be considered in the context of a strengthening job market, as well as modest increases in income and a slow easing in residential lending standards.

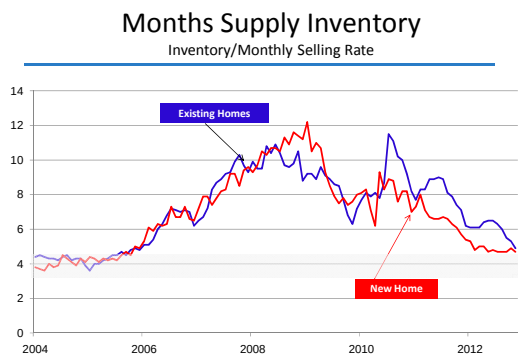
PCA expects a slow and continued erosion in new home affordability conditions throughout the forecast horizon – but from very favorable prevailing conditions. While affordability conditions do not represent a near-term threat to the housing recovery, it may pose a problem in the later years to the forecast horizon. PCA has taken this into consideration and moderates the late-year outlook, but weighs it against stronger economic conditions, firmer income growth, and the potential of more pent-up demand being released.

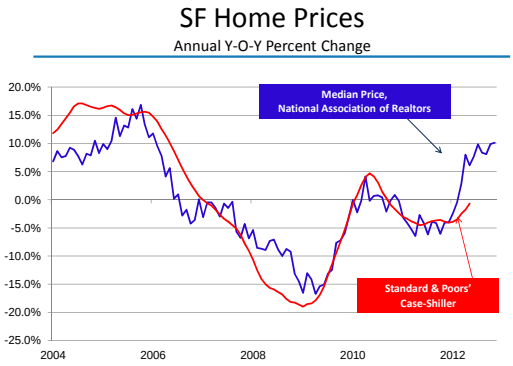
While the economic environment seems poised to support strong double-digit gains in overall home sales, starts are driven by new home sales and inventory conditions. Based on a 20 year average, new home sales represented 14% of all home sales. Since 2009, this number was cut more than in half to 6.7%. The decline is not surprising given builders' aversion towards risk in a declining market and more importantly, their inability to compete on price with distressed properties. As foreclosures and short sales exit the market, the share of new home sales is expected to increase.

Distressed properties will remain on the market for years to come but with gradually diminishing negative influences. This increases the possibility that new home construction may recover at a faster rate than home sales due to rising market share. PCA expects this to materialize more so in 2014 and beyond as distressed properties will be fewer in number and, therefore, carry less impact on home prices. The timing and rate of improvement pose upside risks to the housing outlook.

Single Family Starts Outlook

Homebuilders are not expected to accelerate construction activity until two critical conditions are met, including: (1) low levels in inventory of unsold new homes reflecting no higher than five months supply, and (2) stable or rising home prices. Both conditions are necessary to ensure an adequate return on investment (ROI) for homebuilders to spur an increase in building activity. Lacking either condition, a substantive recovery in home building will not materialize.





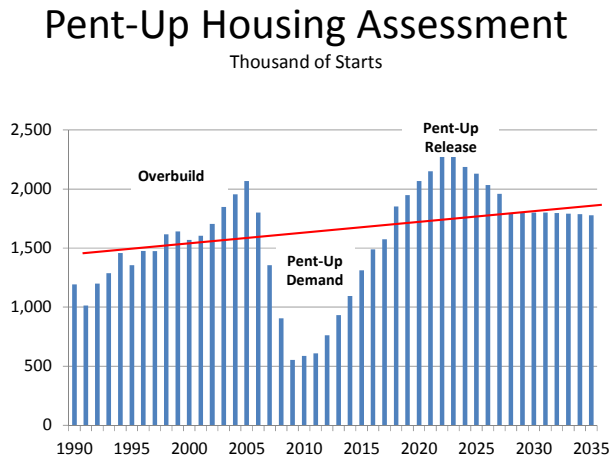
Gradual improvements in these areas have materialized over the past year. Home inventories currently stand at slightly more than 2.0 million homes or 4.2 months supply. This roughly represents a 120,000 reduction of homes on the market and a significant improvement from 6.0 months supply a year ago. New home inventories have increased modestly, but the selling pace has increased as well, leaving month's supply at less than four months compared to nearly five months a year ago. Keep in mind, this measure is based on the current daily selling rate. The expected future increase in home sales will likely translate directly to new home construction given the very lean inventories. Furthermore, home prices are rising according to the data collected by the National Association of Realtors and Standard and Poor's Case-Schiller metropolitan index. With respect to inventory and price conditions, the signal for home builders to accelerate starts activity is in place and is expected to result in a significant acceleration in starts activity during the next several years.

Multifamily construction continues to grow at a strong pace, and PCA expects this trend to continue as favorable fundamentals fuel the sector. Multifamily starts recorded a 55% gain in 2011 and 36% growth in 2012. PCA expects an additional growth of 27% in 2013 to 315,000 units. Household formation

continues to strengthen while damaged credit due to foreclosure activity and tight mortgage lending standards have combined to create robust apartment demand. Furthermore, the U.S. population is aging and through the foreseeable future, demand for multi-unit, assisted living complexes and condominiums will increase further. This bright outlook has reduced banks' perceived lending risk to multifamily investments resulting in greater access to capital markets. The formula of strong demand conditions and easier access to capital equates to sustained gains in multifamily construction over the next several years.

Pent-Up Demand Risks

Pent-up demand refers to under-building in housing construction relative to the growth in population and household formation. This condition has been ongoing since 2006. Pent-up housing starts were estimated to be near 3 million units by the end of 2012. Since PCA projections for starts during the remainder of the forecast horizon lies below demographic drivers of longer term starts, pent-up demand is expected to grow to roughly 5 million starts by 2017.



If a ten year release horizon is assumed beginning in 2018, and allowing for incomplete recapture of lost demand, the release of pent-up demand would add more than 365,000 starts annually above the levels determined by demographics. This represents roughly a 22% increase over "normal" starts associated with household formation.

While substantial pent-up demand has been generated during the last several years, at issue is the timing and magnitude of its release into the market. Such high volumes of vented pent-up demand will probably not materialize soon. Rather, the release of pent-up demand will probably leak gradually into the market over time and add support to underlying near-term fundamentals. PCA assumes vibrant demand punctuated with a strong release of pent-up demand will not materialize until after 2018.

Nonresidential Outlook

PCA expects nonresidential construction will accelerate during 2014 and beyond. These gains are expected to be driven by growth in the expected return on investment (ROI) for commercial properties. ROI, according to the PCA model, has two essential components including net operating income (NOI)

and asset appreciation potential. Between the two, PCA believes NOI is the more important metric to focus on since it also plays a role in determining asset appreciation potential.

Several issues confront a recovery in nonresidential expected ROI's and construction activity including depressed occupancy and usage rates, soft leasing rates, declining commercial asset prices, and tight lending standards. Job creation, either directly or indirectly, translates into higher occupancy and leasing rates. Combined, these factors determine the expected return on investment for most commercial properties.

Prospective asset appreciation adds to potential commercial property owners overall expected ROI. Unfortunately, the prospect of sustained low occupancy and leasing rates prompted a decline in commercial real estate asset values compared to peak levels related to the housing boom. PCA believes commercial property values have troughed. Asset prices may now be entering a stage of gradual improvement, boosting the expected return on investment. If so, this could signal a broader based recovery in nonresidential construction.

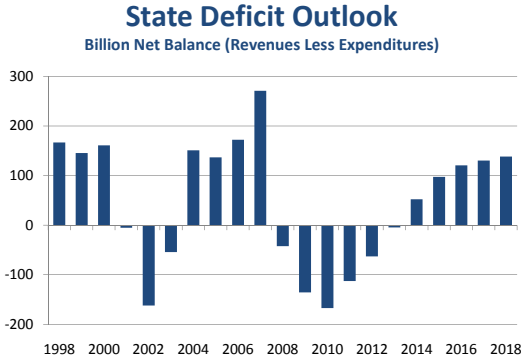
Public Outlook

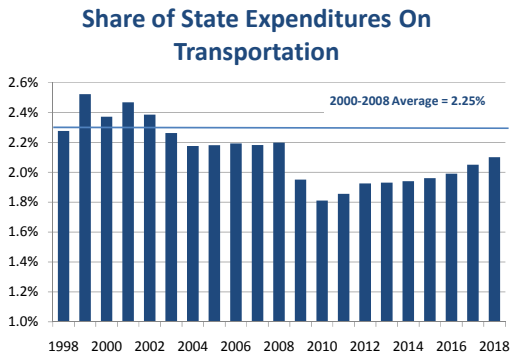
As the economy gains momentum in 2014, job gains will add strength to states' ability to spend and rising home prices will eventually support stronger construction spending at the local level as well. Both these conditions, however, still have some time to brew before resulting in a positive impact on public spending.

Roadway construction accounts for the largest area of public cement consumption. While public sector conditions are expected to remain adverse for a bit longer, PCA expects this sector will record successive gains during the back end of the forecast horizon. The expected growth in road construction is not tied to a new robust highway bill.

In terms of highway spending, MAP-21 allows for a 1.5% increase for inflation in fiscal 2014. Thereafter, PCA holds nominal spending constant throughout the remainder of the forecast horizon. Inflation is expected to gradually reduce the potency in each successive year in the forecast. A new highway bill, funded at higher levels would imply upside risks to our forecast.

Rather, it is tied to a recovery in state and local finances. State revenue collections have been increasing in tandem with job creation. PCA expects 2.2 million jobs will be created in 2013, 2.3 million in 2014, and

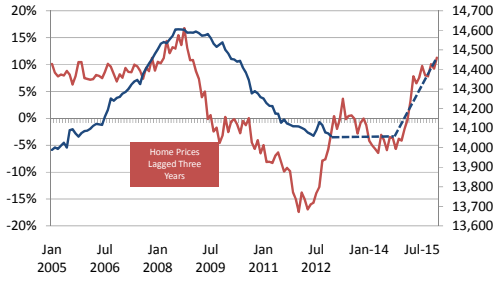


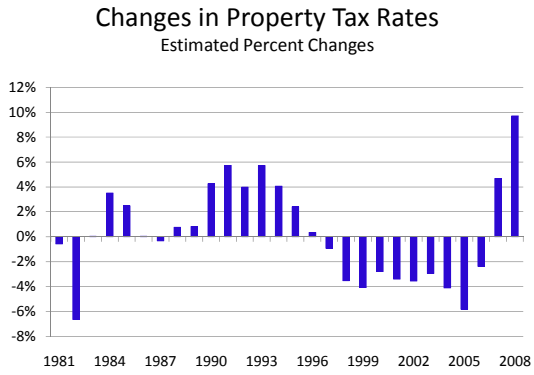


even stronger job growth in the out years of the forecast. This suggests continued strong growth in state revenue collections and an eventual return to surpluses by fiscal 2015.

With this, PCA expects an increase in state spending. Keep in mind, discretionary state construction spending was hit hard during the recession. During the ten years preceding the economic downturn, state highway/road construction discretionary spending accounted for roughly 2.4% of total state expenditures. Cutbacks in state discretionary highway/roads spending accounted for only 2.1% in 2008, 1.9% in 2009, and 1.8% in 2010. PCA expects the share of state spending dedicated to road construction will increase once state fiscal conditions turn to surpluses. According to our scenario, the share rises to 2.0%. This increase in spending share is mindful of competing state spending priorities, but also recognizes that infrastructure spending has been neglected during the downturn and the potential of pent-up demand has been generated. The combination of stronger fiscal conditions and the potential of a gradual increase in emphasis on infrastructure spending within state budgets implies stronger state spending.

Furthermore, the new highway bill reinforces the likelihood that state and local spending will increase significantly during the forecast horizon. According to the new highway bill, a ten-fold increase in funding of The Transportation Infrastructure Finance and Innovation Act (TIFIA) is planned. Compared to existing funding levels of $122 million, TIFIA funding increases to $750 million in fiscal 2013 and $1 billion in 2014. These increases provide greater ability for state and local governments to finance large-scale construction projects.

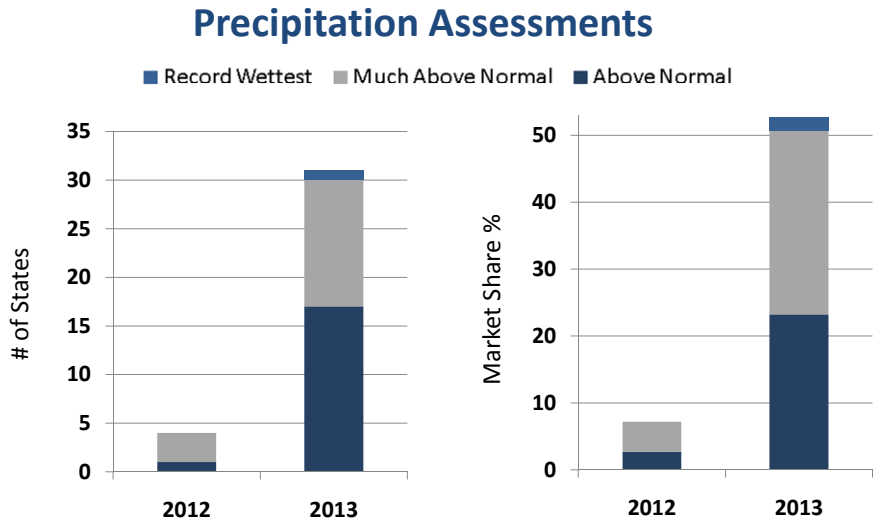




Finally, PCA expects an increase in local spending on public construction beginning in fiscal 2016. While localities receive state and other funding, roughly 75% of tax revenues are based from property taxes. Unfortunately, property values declined dramatically during 2006-2011 – thereby reducing local budgets and construction spending. Using local employment as a proxy for local spending activity and home prices as a proxy for property taxes, PCA estimates there is a three year lag between changes in home prices and local spending activity. Home prices, on a national basis, began recording sustained gains in mid-2012. This implies an increase in local spending activity could begin in mid-2015 (fiscal 2016). Furthermore, rough analysis suggests that municipalities have gradually increased the tax rates applied to properties. As home prices rise, therefore, there is the potential that localities receive an additional boost to budgets via the higher property tax rates.

Cement Outlook

While 2013 projections for cement consumption have been reduced since the spring forecast from 6% to 4%, this reflects the unusually wet spring and early summer which postponed concrete projects. At mid-year, cement consumption was roughly equal to 2012 levels. With better weather in July, cement consumption recorded a preliminary 12% gain over July 2012 –boosting year-to-date gains to more than 2.5%. August appears strong as well. September 2013 will be compared against weak 2012 levels. All combined, PCA expects third quarter cement consumption will record a 2.4 million gain over 2012 levels. Even if no gains in cement consumption are recorded during the fourth quarter, the third quarter gains will translate into a 4% annual gain in 2013. Our 2013 projections, therefore, contain no growth in the fourth quarter. Given the improving fundamentals of the economy, it is likely some gains will materialize in the fourth quarter – leaving our projections with upside risk.



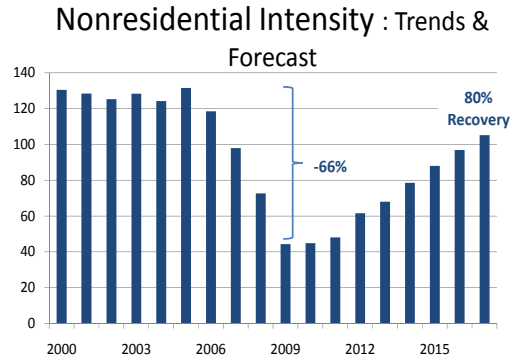
As the economy gains a stronger footing, improved gains in cement consumption are expected to materialize during 2014-2018 – and near double digit growth at least initially. PCA has always embraced a conservative approach toward forecasting. That strategy has served us well during the recent downturn. The downturn, however, has been so severe and the recovery so modest that mindsets change and future expectations for the market can be influenced. The potential that the industry will approach past peaks during the forecast horizon, given the change in mindsets, is often greeted with heavy skepticism. PCA has strong reason to believe that not only will past peaks of cement consumption will be approached during the forecast horizon – but possibly exceeded.

For a moment, take a turn away from the forecast details. Focus on three compelling long-term data trends. First, during the years preceding the economic downturn (1995-2005), construction spending activity averaged 5.3% of total real GDP activity. The recent and unusually harsh recession was construction focused and construction's contribution to real GDP declined to an average of 3.2% during the past several years – unusually low. As the United States' economy regains its footing, construction spending contribution to real GDP is expected to approach past levels of 5% or more.

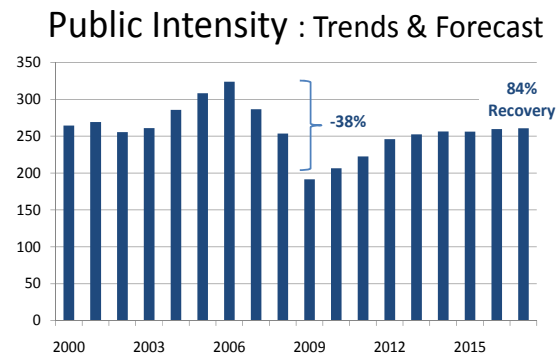
During the downturn, a second phenomenon occurred adversely impacting cement consumption. Cement intensities (metric tons per million dollars of real construction activity) declined to historic lows. During 1995-2005, cement intensities averaged 160 tons. During the downturn, cement intensities retreated to a low of 126 tons. As the economy recovers and construction activity returns to "normal" activity experienced during the 1995-2005 period, cement intensities should be expected to rise near historical levels – or near 160 tons per million dollars of real construction activity.

Third, real GDP growth rates will accelerate. During 1995-2005, real GDP averaged 4%, excluding the mild 2001 recession. This growth rate reflected relatively stable economic conditions. It could be argued that structural changes in the economy have materialized since the downturn. Some of these changes include: fiscal tax and spending initiatives, demographics of aging and consumer debt strategies that could significantly reduce future real GDP growth – hindering the ability to achieve past "normal" levels of growth.

The past recession was the worst cyclical downturn since the great depression. Typically, real GDP growth experiences strong growth rates emerging from a recession. One key factor for this engine of accelerated economic growth is "pent-up" demand , or consumption that was needed but delayed due to harsh economic times. According to PCA estimates, the amount of pent-up demand generated during the recent downturn was massive – and growing. The release of this pent-up demand, in our view, will more than offset possible structural impacts affecting the economy – by a wide margin. In the foregoing assessment, economic growth over the forecast horizon reaches just the average of the 1995-2005, or 3% annually.



100% Recovery Boosts Nonresidential Cement Consumption by 4 MMT



100% Recovery Boosts Public Cement Consumption by 3 MMT

From 2013, combine 3% annual real GDP growth with 5% of the amount going to construction and 160 tons of cement consumption per construction dollar and a rough cross check can be achieved. This check can be applied to PCA's 2018 projection of cement consumption of 120 million metric tons – which is still 2% below the past cyclical peak and 14 years later. The calculation yields 128 million metric tons. PCA believes it is conservative in its out year estimates for cement consumption. Despite the massive decline and the slow recovery, if even conservative metrics are applied, the industry will return to near past peak levels within the next five years.

This bold projection contains risk. Cement consumption is dictated by the level of construction activity and by the prevailing cement intensity. During the recession, cement intensities declined to record lows. Cement intensities have been in recovery for two years but remain well below pre-recession averages. In previous forecasts, PCA adopted a recovery path for cement intensities and assumes a gradual improvement in intensity levels – although 2018 cement intensities for buildings remain well below pre-recession averages.

Assuming a gradual return to pre-recession averages, however, may be optimistic. Such an assumption suggests that the structural environment against competing materials remains unchanged over the past ten years. In truth, concrete's competitive price position against lumber has eroded – hindering concrete's ability to achieve market share gains in the residential and nonresidential market segments. Furthermore, code changes have been slowly leaning against concrete as competing materials have aggressively positioned themselves to gain share and efforts to reduce construction costs, at the expense of resiliency. Both these issues, arguably suggest that a ***full*** return of intensities to pre-recession averages may not materialize. PCA's assumption of an incomplete return of intensities among buildings may have merit. Some analysts suggest, however, that code changes could cost the industry considerably more than implied in our forecast.

PCA's assumption in terms of the paving market, however, may contain upside risk. Clearly, concrete has enhanced its competitive price position since the onset of the recession. Contained in our forecast for public construction is an incremental 2 million ton gain accrued to this enhanced position by 2018. State and local paving agencies, have engaged in a paving strategy aimed at stretching budgets and have engaged in temporary fixes such as thin asphalt overlays – to the detriment to concrete paving gains. As the economy recovers and states' fiscal picture brightens, the thin overlay "band-aid" approach may ebb – opening the door for concrete gains. If so, given the relative price advantages of concrete versus asphalt, the gains in concrete paving could be considerably larger.

Import Outlook

Given PCA's outlook for cement consumption, according to our assumptions regarding capacity, the industry operating rate is expected to approach 90% utilization. Future capacity is calculated by assuming only 50% of planned expansion materializes and no further expansion plans are announced. Furthermore, one third of temporary shut downs are assumed to become permanent. Wet kiln reductions and NESHAP further reduce capacity. The combination of expected increases in consumption and static capacity levels give way to high utilization rates. This forces the industry to turn to imports as supplementary supply by the end of the forecast horizon. Keep in mind, the percentage increases contained in our import projections reflects a small starting base, distorting the percentage gains.

Portland Cement Association

Market Intelligence

U.S. Forecast Tables

Summer 2013

Source: Portland Cement Association's Market Intelligence Group based on publicly available sources believed to be reliable; however, accuracy cannot be guaranteed. The Portland Cement Association assumes no legal responsibility for the outcome of decisions or commitments made on the basis of this information.

PCA Portland Cement Association

Market Intelligence

United States Forecast
Summer 2013

Economic Forecast

	2011	2012	2013	2014	2015	2016	2017	2018
General Economic Factors								
- Real GDP Growth (%)	**2.1%**	**2.0%**	**2.0%**	**3.0%**	**3.2%**	**3.0%**	**2.9%**	**2.8%**
- Unemployment Rate (%)	8.9%	8.1%	7.4%	6.9%	6.6%	6.4%	6.2%	5.8%
- Employment	132,498	134,691	136,913	139,253	141,809	144,581	147,329	149,609
- Change in Employment	2,152	2,193	2,222	2,340	2,556	2,772	2,748	2,280
- Inflation Rate (%)	3.1%	2.1%	1.8%	2.1%	2.4%	2.5%	2.3%	2.2%
- Consumer Sentiment Index (Year End)	63.6	63.8	77.7	83.0	85.5	87.8	90.1	93.1
- Total Housing Starts (000)	611	784	953	1,186	1,370	1,617	1,759	1,836
- Oil Price, WTI Per Barrel	$95.08	$94.20	$96.99	$92.96	$94.00	$98.85	$105.56	$110.19
- Note: Oil Rig Count	1,875.3	1,921.0	2,132.3	2,065.2	2,156.1	2,230.3	2,282.9	2,282.9
Key Interest Rates								
- Mortgage Rate - 30 Yr Fixed (%)	**4.46**	**3.66**	**4.10**	**4.93**	**5.38**	**5.88**	**6.38**	**7.13**
- Federal Funds Rate	0.10	0.13	0.13	0.13	0.88	2.38	3.88	4.63
- Three Year Treasury (%)	0.75	0.38	1.47	1.38	1.53	3.08	4.58	4.63
- BAA Bond (%)	5.66	4.94	5.47	5.03	4.83	6.18	7.58	7.43
- Implied Corporate Risk Premium	4.91	4.55	4.00	3.65	3.30	3.10	3.00	2.80
Key Single Family Factors								
- Single Family Starts (000)	**434**	**537**	**638**	**856**	**1,021**	**1,259**	**1,391**	**1,460**
- Average New Home Sq Footage	2,249	2,249	2,249	2,249	2,249	2,249	2,249	2,249
- Total Single Family Sq Footage (Million)	976	1,208	1,435	1,925	2,296	2,831	3,128	3,283
- Average Cement Tons Per Start	19.3	19.5	19.5	19.5	19.5	19.5	19.5	19.5
- Mortgage Rate - 30 Yr Fixed	4.46	3.66	4.10	4.93	5.38	5.88	6.38	7.13
- Median Home Price (000)	$200.6	$214.5	$232.7	$245.5	$253.9	$262.0	$270.4	$278.7
- Home Appreciation Rate	-4.1%	6.9%	8.5%	5.5%	3.4%	3.2%	3.2%	3.1%
- Average Monthly Payment	$1,012	$982	$1,124	$1,307	$1,422	$1,551	$1,688	$1,879
- Home Affordability Index (1999=100)	85.1	77.7	83.7	96.7	98.6	105.8	114.1	122.7
Key Multi-Family Factors								
- Multi-Family Starts (000)	**177**	**247**	**315**	**330**	**349**	**358**	**368**	**376**
- Average New Home Sq Footage	1,281	1,281	1,281	1,281	1,281	1,281	1,281	1,281
- Total Multi-Family Sq Footage (Million)	227	316	404	423	447	459	471	482
- Average Cement Tons Per Start	4.2	4.2	6.8	6.8	6.8	6.8	6.8	6.8
- Vacancy Rate (%)	9.5	8.5	8.0	7.8	7.5	7.3	7.2	7.1
- Mortgage to Rent Index (1999=100)	1.5	1.7	1.7	1.5	1.5	1.5	1.4	1.3
- Target Rental Population (20-29) Index	115	115	115	116	117	117	118	118
Key Nonresidential Factors								
- Capacity Utilization (%)	75.5	76.3	76.7	77.2	78.4	79.1	79.6	80.2
- Office Vacancy Rate (%)	17.5	17.2	16.7	15.3	14.6	13.8	12.9	12.0
- Office Worker Employment Index (2002=100)	96.1	98.7	100.8	103.1	105.3	107.8	110.4	113.1
General Cement Ratios								
- Cement Consumption (Per 000 Capita)	225.0	242.9	250.6	272.3	295.8	324.6	345.3	359.2
- Cement Tons Per Mil Construction	**149.9**	**151.6**	**152.3**	**155.2**	**155.8**	**157.9**	**158.1**	**157.9**

Contact: Ed Sullivan, Chief Economist, PCA, (847) 972-9006

Portland Cement Association

Construction Put-in-Place [1]

(Billions 1996$)

United States
Summer 2013

	2011	2012	2013	2014	2015	2016	2017	2018
Total	**468.9**	**505.3**	**523.8**	**563.4**	**615.1**	**672.2**	**720.5**	**757.2**
Residential Buildings	**159.3**	**184.2**	**210.2**	**234.0**	**258.6**	**291.1**	**317.8**	**336.3**
New Housing Units	82.6	100.4	125.3	145.7	166.8	196.2	220.4	236.7
Single Family	72.7	86.2	106.0	123.9	142.6	170.6	193.1	207.9
Multi Family	9.9	14.2	19.4	21.8	24.2	25.6	27.2	28.8
Improvements	76.6	83.8	84.9	88.3	91.8	94.9	97.4	99.6
Nonresidential Buildings	**91.5**	**100.7**	**102.6**	**111.9**	**126.7**	**141.4**	**154.9**	**164.6**
Industrial	23.9	27.6	28.1	30.6	33.4	34.9	36.2	37.2
Office	14.7	16.6	17.2	19.1	22.4	25.8	29.4	32.1
Hotels, Motels	5.2	6.5	7.6	8.6	10.1	11.7	13.1	14.1
Hospitals, Institutions	14.8	14.8	14.3	15.3	17.0	18.7	20.0	21.1
Religious	2.7	2.4	2.3	2.3	2.5	2.9	3.3	3.4
Educational	7.3	8.6	8.5	8.8	9.6	10.4	11.0	11.4
Other Commercial	18.4	19.9	20.6	23.0	27.2	32.2	36.8	40.2
Miscellaneous	4.5	4.2	4.0	4.2	4.5	4.9	5.1	5.3
Public Utility & Other	**51.2**	**62.3**	**57.9**	**60.0**	**64.0**	**68.0**	**70.0**	**72.0**
Farm Nonresidential	**4.3**	**4.3**	**4.2**	**4.3**	**4.4**	**4.5**	**4.6**	**4.7**
Public Construction	**162.6**	**153.9**	**148.9**	**153.3**	**161.5**	**167.2**	**173.3**	**179.6**
Buildings [1]	63.8	58.3	53.1	54.7	59.5	61.5	63.7	66.5
Highways & Streets	44.0	42.7	41.7	41.9	43.4	45.6	48.0	50.0
Military/Public Security [1]	5.7	5.5	5.0	4.9	4.9	4.9	5.0	5.2
Conservation	4.3	3.5	3.0	3.2	3.3	3.4	3.5	3.6
Sewer Systems	13.3	12.7	12.4	13.6	14.7	15.4	15.9	16.4
Water Supply Systems	8.4	7.5	7.9	8.2	8.5	8.8	9.1	9.3
Miscellaneous	23.1	23.8	25.6	26.8	27.2	27.6	28.1	28.6

Percent Change

Total	**-5.4%**	**7.8%**	**3.7%**	**7.5%**	**9.2%**	**9.3%**	**7.2%**	**5.1%**
Residential Buildings	**-1.5%**	**15.6%**	**14.1%**	**11.3%**	**10.5%**	**12.5%**	**9.2%**	**5.8%**
New Housing Units	-4.1%	21.5%	24.8%	16.2%	14.5%	17.6%	12.3%	7.4%
Single Family	-4.6%	18.5%	23.0%	16.9%	15.1%	19.7%	13.2%	7.6%
Multi Family	-0.1%	43.5%	36.0%	12.5%	11.3%	5.7%	6.3%	5.8%
Improvements	1.5%	9.3%	1.4%	4.0%	4.0%	3.3%	2.7%	2.2%
Nonresidential Buildings	**-3.2%**	**10.1%**	**1.9%**	**9.0%**	**13.2%**	**11.7%**	**9.5%**	**6.3%**
Industrial	0.6%	15.6%	1.7%	9.2%	9.1%	4.4%	3.8%	2.6%
Office	-7.9%	12.6%	3.8%	11.3%	17.0%	15.2%	14.1%	9.0%
Hotels, Motels	-27.2%	24.8%	16.7%	12.0%	18.0%	15.7%	11.9%	8.2%
Hospitals, Institutions	-4.9%	0.4%	-3.7%	6.7%	11.4%	9.9%	7.1%	5.5%
Religious	-20.6%	-8.9%	-5.0%	1.0%	5.8%	15.6%	16.1%	1.4%
Educational	2.9%	17.3%	-0.7%	2.9%	9.6%	8.8%	4.8%	3.8%
Other Commercial	6.1%	8.2%	3.4%	11.6%	18.2%	18.5%	14.2%	9.2%
Miscellaneous	6.9%	-6.1%	-4.0%	3.8%	7.9%	8.0%	4.5%	3.3%
Public Utility & Other	**-8.2%**	**21.6%**	**-7.0%**	**3.6%**	**6.7%**	**6.3%**	**2.9%**	**2.9%**
Farm Nonresidential	**13.4%**	**-1.9%**	**-1.7%**	**1.7%**	**2.2%**	**2.5%**	**2.5%**	**2.5%**
Public Construction	**-9.7%**	**-5.4%**	**-3.3%**	**3.0%**	**5.4%**	**3.6%**	**3.6%**	**3.6%**
Buildings [1]	-7.4%	-8.6%	-8.8%	2.9%	8.8%	3.4%	3.6%	4.4%
Highways & Streets	-7.9%	-2.9%	-2.3%	0.4%	3.6%	5.1%	5.2%	4.2%
Military/Public Security [1]	-11.5%	-4.5%	-8.4%	-2.5%	0.0%	0.0%	3.3%	3.2%
Conservation	-1.9%	-19.2%	-14.0%	5.1%	4.7%	2.6%	2.4%	2.3%
Sewer Systems	-17.0%	-5.1%	-1.8%	9.4%	8.1%	4.8%	3.2%	3.1%
Water Supply Systems	-11.8%	-10.1%	5.7%	3.4%	3.8%	3.6%	3.0%	2.2%
Miscellaneous	-14.4%	2.8%	7.6%	4.9%	1.3%	1.5%	1.7%	1.8%

[1] New Commerce Department reporting now reflects new classification.

Contact: Ed Sullivan, Chief Economist, PCA, (847) 972-9006

PCA
Portland
Cement
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Portland Cement Consumption

(000 Metric Tons)

United States
Summer 2013

	2011	2012	2013	2014	2015	2016	2017	2018
Total	**70,292**	**76,600**	**79,764**	**87,426**	**95,826**	**106,121**	**113,915**	**119,570**
Residential Buildings	**17,002**	**19,455**	**22,789**	**27,449**	**31,100**	**36,140**	**39,029**	**40,635**
New Housing Units	9,109	11,378	14,603	18,935	22,246	26,994	29,636	31,036
Single Family	8,358	10,350	12,471	16,680	19,860	24,547	27,120	28,466
Multi Family	751	1,028	2,132	2,256	2,386	2,447	2,515	2,570
Improvements	7,893	8,077	8,186	8,513	8,854	9,146	9,393	9,600
Nonresidential Buildings	**4,401**	**6,208**	**7,023**	**8,796**	**11,114**	**13,702**	**16,006**	**17,718**
Industrial	338	586	745	1,017	1,275	1,491	1,687	1,887
Office	312	500	619	813	1,096	1,443	1,823	2,051
Hotels, Motels	94	225	191	325	505	678	785	877
Hospitals, Institutions	459	619	686	839	1,071	1,307	1,540	1,688
Religious	58	59	69	89	109	143	172	195
Educational	846	1,165	1,234	1,576	1,920	2,257	2,519	2,786
Other Commercial	1,254	1,935	2,371	2,946	3,807	4,898	5,886	6,587
Miscellaneous	1,040	1,119	1,108	1,191	1,330	1,485	1,593	1,646
Public Utility & Other	2,105	2,427	2,507	2,598	2,771	2,944	3,031	3,118
Farm Nonresidential	6,917	6,952	5,776	5,874	6,003	6,154	6,307	6,465
Oil & Gas Wells	3,675	3,713	3,877	3,755	3,850	3,913	3,936	3,972
Public Construction	**36,192**	**37,845**	**37,792**	**38,954**	**40,988**	**43,268**	**45,606**	**47,661**
Buildings	1,425	1,424	1,355	1,641	2,083	2,461	2,932	3,527
Highways & Streets	26,521	28,285	27,955	28,060	28,974	30,313	31,655	32,750
Military/Public Security	134	131	125	122	122	122	126	130
Conservation	1,541	1,422	1,244	1,327	1,403	1,443	1,481	1,515
Sewer Systems	2,426	2,532	2,673	3,060	3,455	3,758	4,023	4,149
Water Supply Systems	2,188	2,029	2,264	2,464	2,642	2,827	3,003	3,162
Miscellaneous	1,957	2,021	2,175	2,281	2,311	2,346	2,386	2,429

Percent Change

Total	**2.9%**	**9.0%**	**4.1%**	**9.6%**	**9.6%**	**10.7%**	**7.3%**	**5.0%**
Residential Buildings	**0.8%**	**14.4%**	**17.1%**	**20.4%**	**13.3%**	**16.2%**	**8.0%**	**4.1%**
New Housing Units	-6.2%	24.9%	28.3%	29.7%	17.5%	21.3%	9.8%	4.7%
Single Family	-7.5%	23.8%	20.5%	33.7%	19.1%	23.6%	10.5%	5.0%
Multi Family	11.0%	36.9%	107.4%	5.8%	5.8%	2.6%	2.8%	2.2%
Improvements	10.3%	2.3%	1.4%	4.0%	4.0%	3.3%	2.7%	2.2%
Nonresidential Buildings	**3.9%**	**41.1%**	**13.1%**	**25.2%**	**26.4%**	**23.3%**	**16.8%**	**10.7%**
Industrial	31.4%	73.4%	27.1%	36.5%	25.5%	16.9%	13.1%	11.8%
Office	7.8%	60.3%	23.7%	31.4%	34.9%	31.7%	26.3%	12.5%
Hotels, Motels	-4.2%	139.4%	-15.1%	70.2%	55.3%	34.2%	15.8%	11.8%
Hospitals, Institutions	-2.0%	34.9%	10.9%	22.3%	27.6%	22.1%	17.8%	9.6%
Religious	-28.7%	1.9%	17.2%	28.0%	22.5%	31.4%	20.8%	13.2%
Educational	-10.3%	37.7%	5.9%	27.7%	21.8%	17.5%	11.6%	10.6%
Other Commercial	13.5%	54.3%	22.5%	24.2%	29.2%	28.7%	20.2%	11.9%
Miscellaneous	4.7%	7.6%	-1.0%	7.5%	11.7%	11.6%	7.3%	3.3%
Public Utility & Other	-23.2%	15.3%	3.3%	3.6%	6.7%	6.3%	2.9%	2.9%
Farm Nonresidential	40.3%	0.5%	-16.9%	1.7%	2.2%	2.5%	2.5%	2.5%
Oil & Gas Wells	57.2%	1.0%	4.4%	-3.1%	2.5%	1.6%	0.6%	0.9%
Public Construction	**-2.7%**	**4.6%**	**-0.1%**	**3.1%**	**5.2%**	**5.6%**	**5.4%**	**4.5%**
Buildings	-12.1%	-0.1%	-4.8%	21.1%	26.9%	18.2%	19.1%	20.3%
Highways & Streets	-0.3%	6.7%	-1.2%	0.4%	3.3%	4.6%	4.4%	3.5%
Military/Public Security	-29.5%	-2.4%	-4.6%	-2.5%	0.0%	0.0%	3.3%	3.2%
Conservation	-3.3%	-7.7%	-12.5%	6.6%	5.7%	2.9%	2.6%	2.3%
Sewer Systems	-6.9%	4.4%	5.6%	14.5%	12.9%	8.8%	7.1%	3.1%
Water Supply Systems	-11.2%	-7.3%	11.6%	8.8%	7.2%	7.0%	6.2%	5.3%
Miscellaneous	-8.0%	3.3%	7.6%	4.9%	1.3%	1.5%	1.7%	1.8%

Contact: Ed Sullivan, Chief Economist, PCA, (847) 972-9006

PCA
Portland
Cement
Association

U.S. Cement Consumption Forecast

(000 Metric Tons)

United States
Summer 2013

	2011	2012	2013	2014	2015	2016	2017	2018
Total Cement Consumption	**72,128**	**78,592**	**81,830**	**89,751**	**98,461**	**109,304**	**117,564**	**123,616**
Portland Cement	**70,292**	**76,600**	**79,764**	**87,426**	**95,826**	**106,121**	**113,915**	**119,570**
Masonry Cement	1,836	1,992	2,066	2,326	2,635	3,184	3,649	4,047
- Portland Share of Total, (%)	97.5%	97.5%	97.5%	97.4%	97.3%	97.1%	96.9%	96.7%
Cement and Clinker Imports	6,542	7,037	7,300	7,500	8,200	9,000	14,000	15,990
- Import Share, (%)	9.1%	9.0%	8.9%	8.4%	8.3%	8.2%	11.9%	12.9%
				Percent Change				
Total Cement Consumption	**2.7%**	**9.0%**	**4.1%**	**9.7%**	**9.7%**	**11.0%**	**7.6%**	**5.1%**
Portland Cement	2.9%	9.0%	4.1%	9.6%	9.6%	10.7%	7.3%	5.0%
Masonry Cement	-4.1%	8.5%	3.7%	12.6%	13.3%	20.8%	14.6%	10.9%
Cement and Clinker Imports	**-3.5%**	**7.6%**	**3.7%**	**2.7%**	**9.3%**	**9.8%**	**55.6%**	**14.2%**

Contact: Ed Sullivan, Chief Economist, PCA, (847) 972-9006