SURVEY OF PORTLAND CEMENT CONSUMPTION BY USER GROUP

XXXX QUARTER 20XX

SAMPLE

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ACA Market Intelligence Group

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Survey Overview

The American Cement Association's (ACA's) Market Intelligence Group conducts a quarterly survey of portland cement consumption by user segment. The intent of this report is to help member companies, ACA staff, and promotional allies better evaluate market conditions surrounding the use of concrete and other cement based products.

Data for eighteen user segments is collected:

- **Building Materials Dealers**
- **Concrete Brick & Block Manufacturers**
- **Fiber-Cement Siding**
- **Concrete Pipe**
- **Concrete Roof Tile**
- **Interlocking Pavers**
- **Oil & Gas Well Drilling**
- **Packaged Product Producers**
- **Precast Concrete**
- **Prestressed Concrete**
- **Ready-Mixed Concrete**
- **Full- Depth Reclamation (FDR) Paving**
- **Soil-Cement (SC) Paving**
- **Roller Compacted Concrete (RCC) Paving**
- **Soil-Cement/ Roller Compacted Concrete (SC/RCC)-Water Resources**
- **Streets & Highways Contractors**
- **Waste Solidification & Stabilization (S/S)**
- **All Other Manufacturers and Contractors**

Survey forms are sent to all ACA member cement companies in the United States. Totals exclude masonry and white cement. Cement tonnage is reported in metric tons.

Survey results are adjusted to correspond to U.S.G.S. (U.S.) cement consumption volumes as reported by cement companies in their respective monthly surveys to those agencies. Although this survey excludes white cement, white cement consumption cannot be excluded from the U.S.G.S. survey and may account for up to 1.5% of quarterly volume.

NOTE: *Survey of Portland Cement by User Group* has historically covered data for both the U.S. and Canada. Beginning in Q3 2013, total consumption and figures for individual segments reflect U.S. volumes only.

Survey Response Rate

The following companies/plants reported for the X Quarter of 20XX:

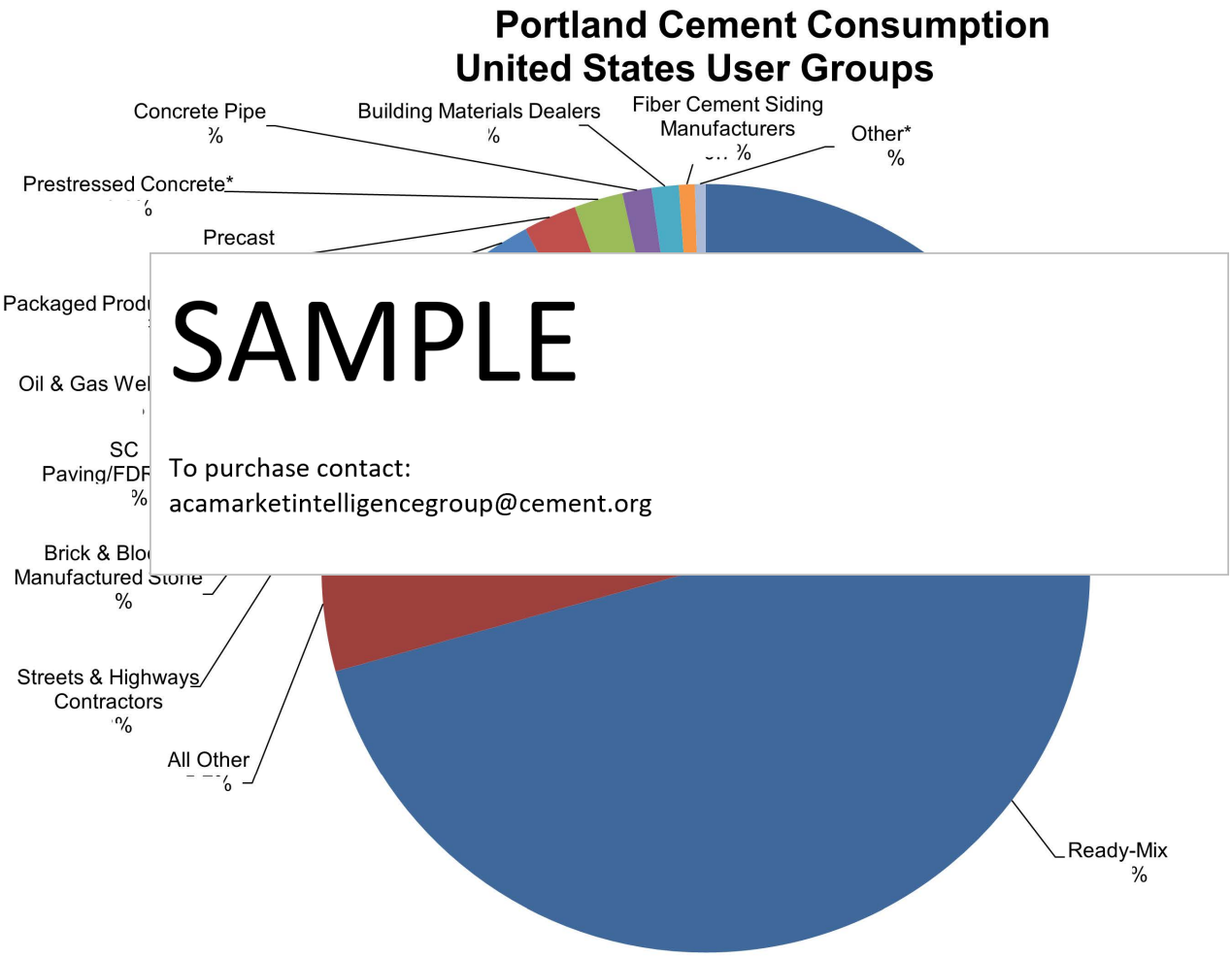
Industry Response Rate*: XX%

***Due to non-members and non-respondents, ACA uses a footing methodology to adjust to U.S.G.S. totals.**

Portland Cement Consumption

XX Quarter 20XX

Cement consumption in the XX quarter of 20XX was XX metric tons (mt), down X.X% compared to the XX quarter of 20XX. In XX quarter 20XX, Ready-Mixed Concrete captured X.X% of total consumption, followed by All Other (X.X%), Streets & Highways Contractors (X.X%), Brick and Block Manufactured Stone (X.X%), SC Paving/FDR/RCC (X.X%), and Oil & Gas Well Drilling (X.X%).

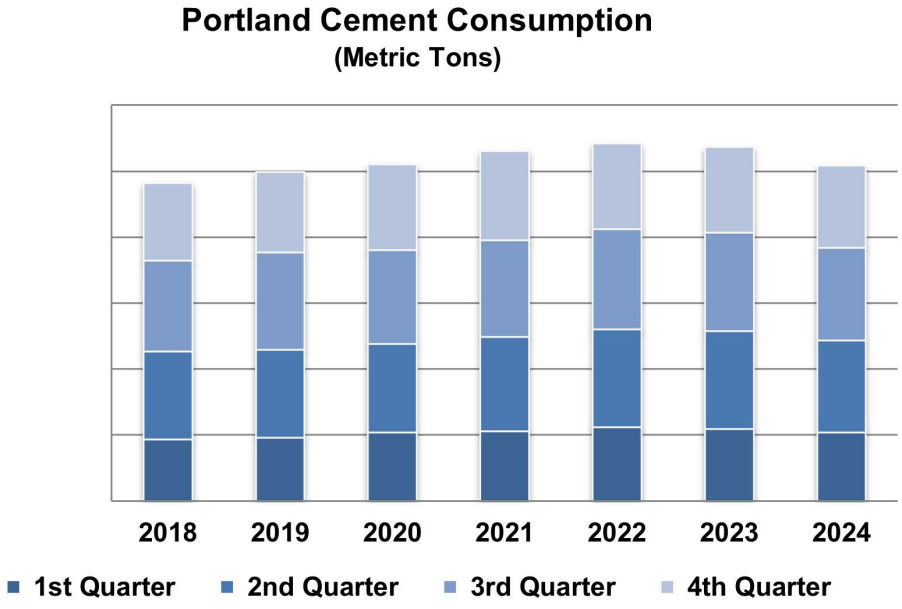


*Includes: Interlocking Pavers, Waste S/S, SC/RCC Water Resources, & Concrete Roof Tile Manufacturers

NOTE: Portland cement consumed by the ready-mixed market and used in street and highway construction may be reported under Ready-Mixed Concrete and not under Streets & Highways Contractors.

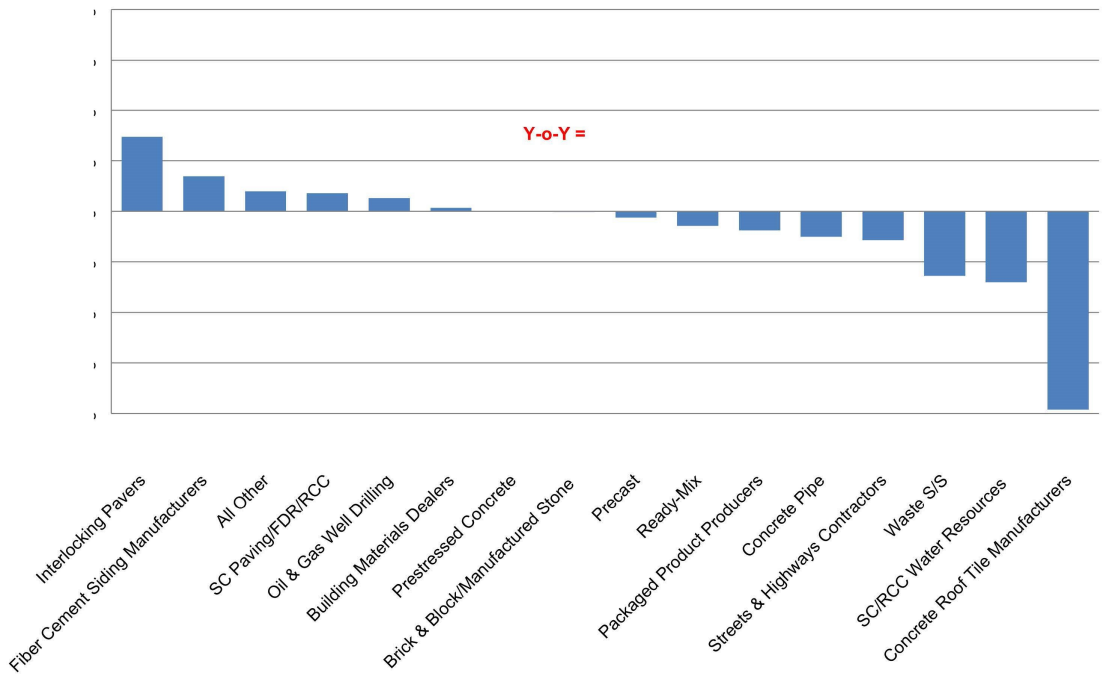
Portland Cement Consumption, XX Quarter 20XX: Data

U.S. Shipments			
(Metric Tons)			*ge*
Ready-Mix			%
Streets & Highways Contractors			%
Precast			%
Brick & Block/Manufactured Stone			%
Packaged Product Producers			%
Oil & Gas Well Drilling			%
SC Paving/FDR/RCC			%
Building Materials Dealers			%
Concrete Roof Tile Manufacturers			%
Prestressed Concrete			%
Concrete Pipe			%
Interlocking Pavers			%
Fiber Cement Siding Manufacturers			%
Waste S/S			%
SC/RCC Water Resources			%
All Other			%
Total			%

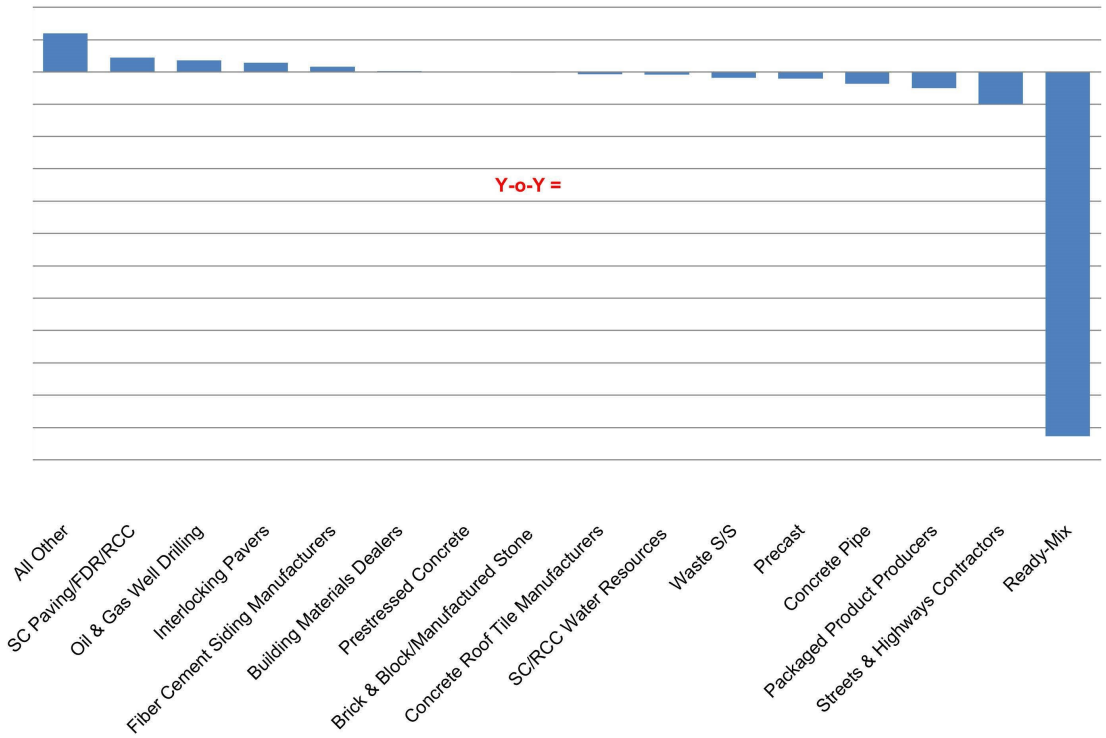


Portland Cement Consumption, XX Quarter 20XX: Analysis

Market Dynamics: Leaders & Laggards
Y-o-Y Change (%)



Market Dynamics: Leaders & Laggards
Y-o-Y Volume Change (000 mt)



Portland Cement Consumption: Forecast

Cement Consumption (000 mt)	Actual	% Change Y/Y	PCA Projection	% Change Y/Y
United States				
Ready-Mix				
Streets & Highways Contractors				
Precast				
Brick & Block/Manufactured Stone				
Packaged Product Producers				
SC/RCC/FDR Paving				
Building Materials Dealers				
Prestressed Concrete				
Oil & Gas Well Drilling				
Concrete Pipe				
Concrete Roof Tile Manufacturers				
Fiber Cement Siding Manufacturers				
Interlocking Pavers				
Waste S/S				
SC/RCC Water Resources				
All Other				
Total				

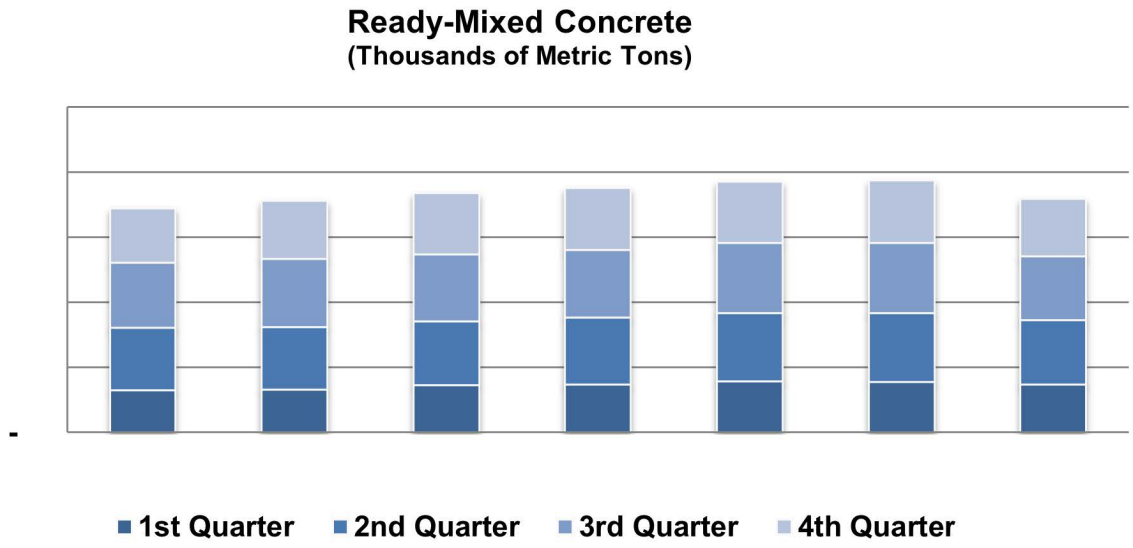
User group projections are developed using estimated distributions of segment cement volumes, allocated to primary construction sectors, and linked to the most recent U.S.G.S. data through November 2024 and supplemented with internal ACA data for annual projections.

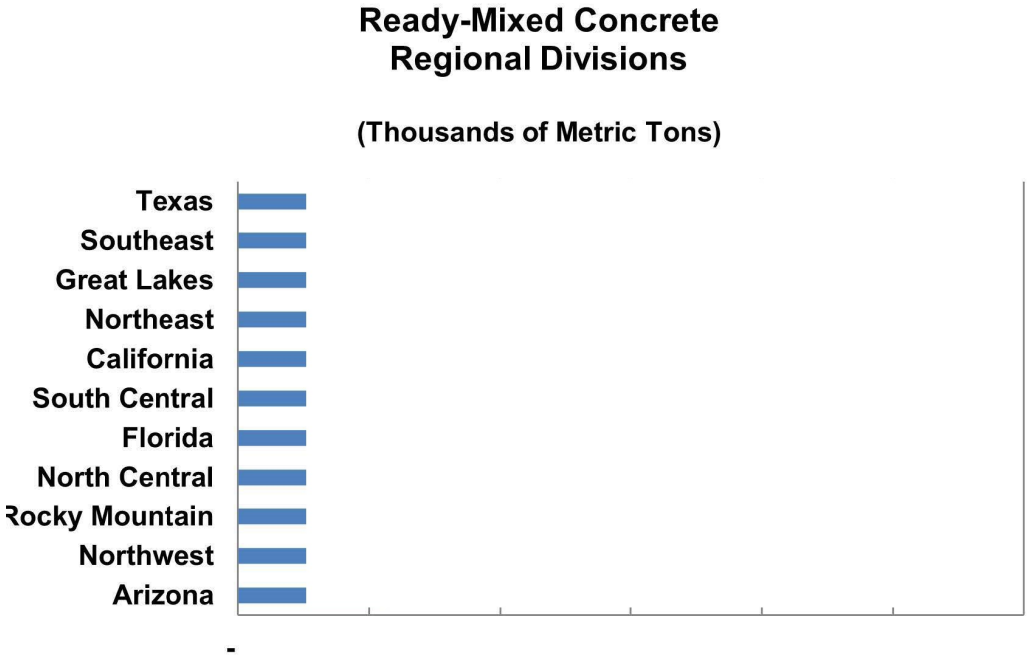
Market	Residential	Nonresidential	Public
Ready-Mixed Concrete			
Streets & Highways Contractors			
Brick & Block/ Manufactured Stone			
Precast Concrete			
Oil & Gas Well Drilling			
SC/RCC/FDR Paving			
Building Materials Dealers			
Packaged Product Producers			
Concrete Pipe			
Prestressed Concrete			
Interlocking Pavers			
Fiber Cement Siding			
Waste S/S			
Concrete Roof Tile			
SC/RCC Water Resources			

USER GROUPS

Ready-Mixed Concrete: Data

Ready-mixed concrete accounted for X.X% of total U.S. cement consumption in the XX quarter of 20XX (XXXX). This reflects a X.X% decrease from the XX quarter of 20XX. The largest regional cement consumer for the ready-mixed segment was Texas with XXXX mt, followed by the Southeast with XXXX mt.





Ready-Mixed Concrete: Analysis

Ready-mixed refers to concrete that is batched for delivery from a central plant instead of mixed on the job site. Ready-mixed concrete is shipped to every market segment in North America. As a result, the market drivers for ready mix users generally mirror total cement demand. The principal exception is large highway construction projects which tend to rely on Street & Highway contractors.

Ready-Mixed Concrete *(000 mt)*

Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

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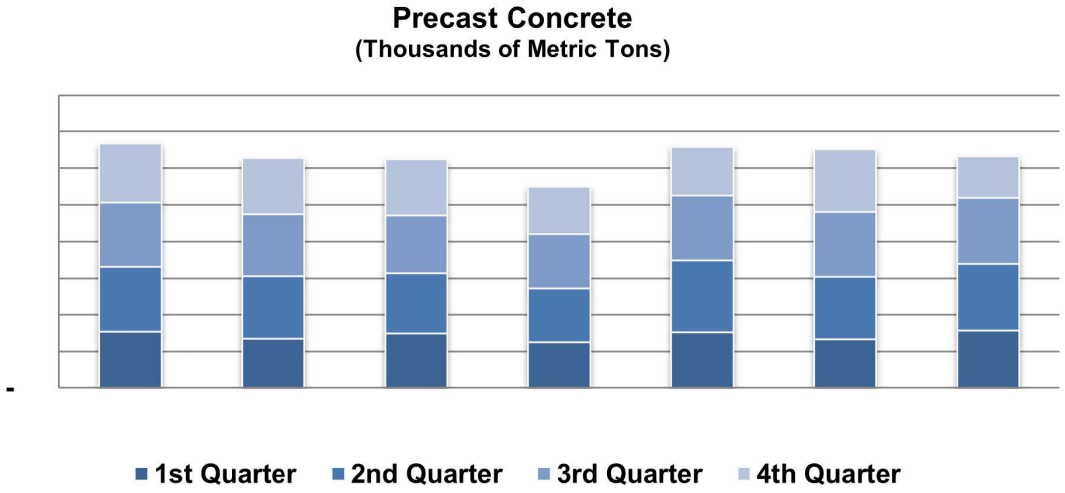
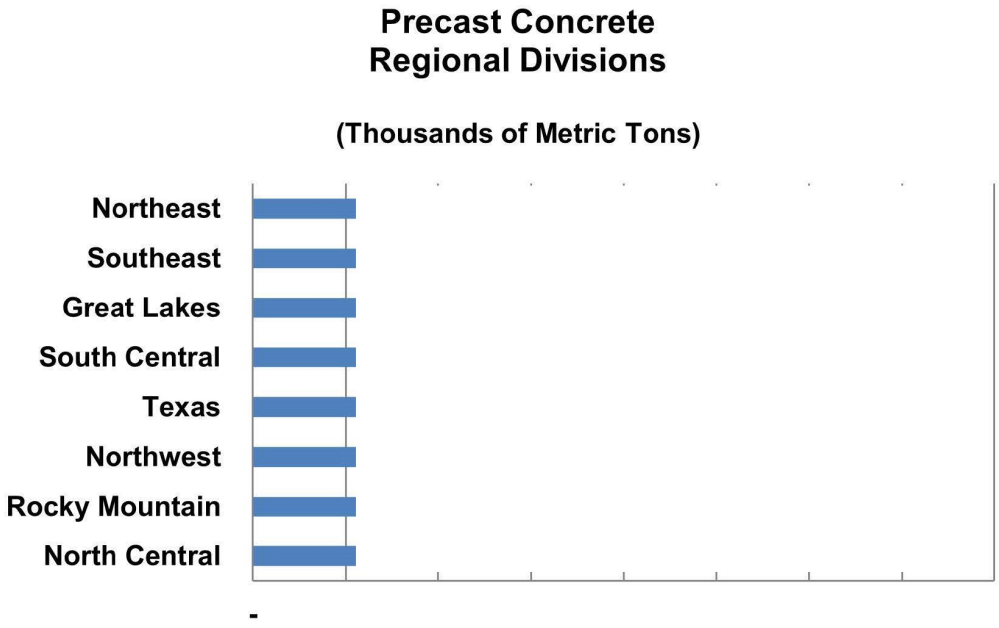
Precast Concrete: Data

Shipments of portland cement to U.S. precast manufacturers decreased X.X% to XXXX mt during the XXXX quarter of 20XX when compared to the year-ago levels. Precast concrete accounted for X.X% of total portland cement shipments in XXXX quarter 20XX. The Northeast region was the largest regional cement consumer in this category with XXXX mt, followed by the Southeast with XXXX mt.





Precast Concrete: Analysis

Precast concrete is concrete cast in forms in a controlled environment and allowed to achieve a specified strength prior to placement on location. Examples of products include, but are not limited to, architectural wall panels, catch basin covers, concrete furniture, and floor slabs.

Precast Concrete *(000 mt)*

Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

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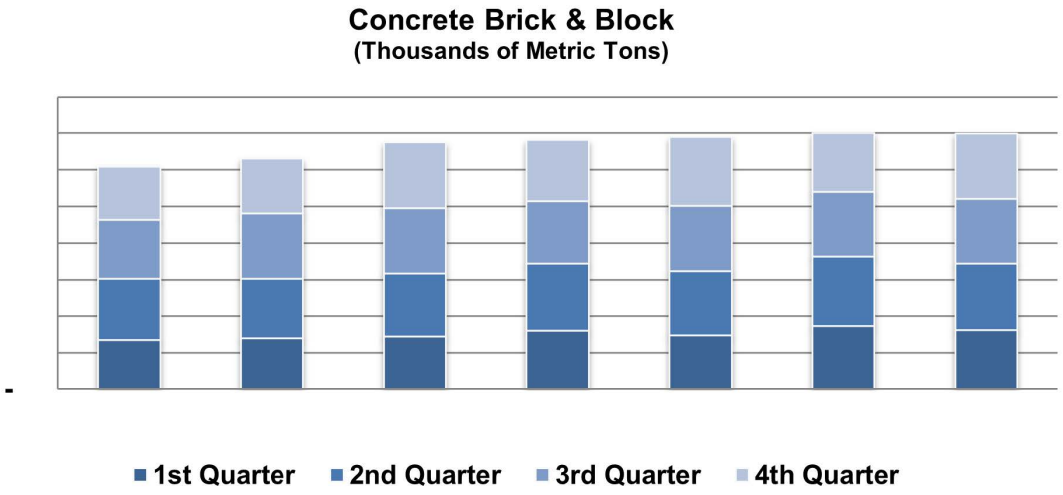
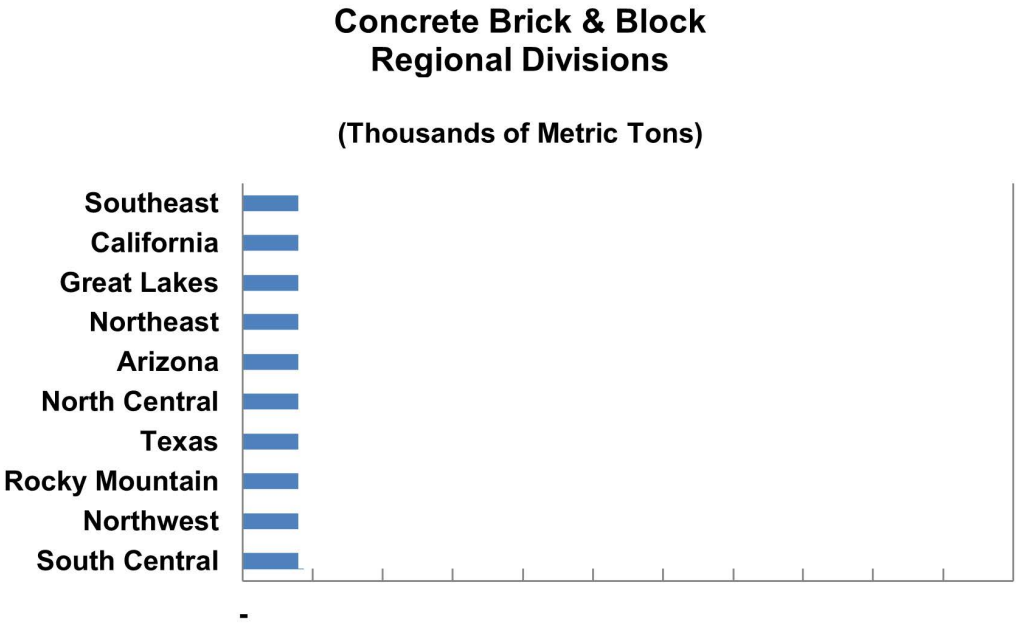
Concrete Brick & Block Manufacturers: Data

The Concrete Brick & Block Manufacturers segment was the XXXX largest user segment in XXXX quarter 20XX with a X.X% share of total U.S. consumption. Consumption was XXXX mt, up X.X% from XXXX quarter 20XX. During XXXX quarter 20XX, the Southeast was the largest regional cement consumer in this category with XXXX mt, followed by California with XXXX mt.





Concrete Brick & Block Manufacturers: Analysis

The Concrete Brick & Block Manufacturers segment consumes cement that is used to produce bricks manufactured from regular aggregate concrete to various mixtures of lightweight aggregates.

Concrete Brick & Block *(000 mt)*

Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

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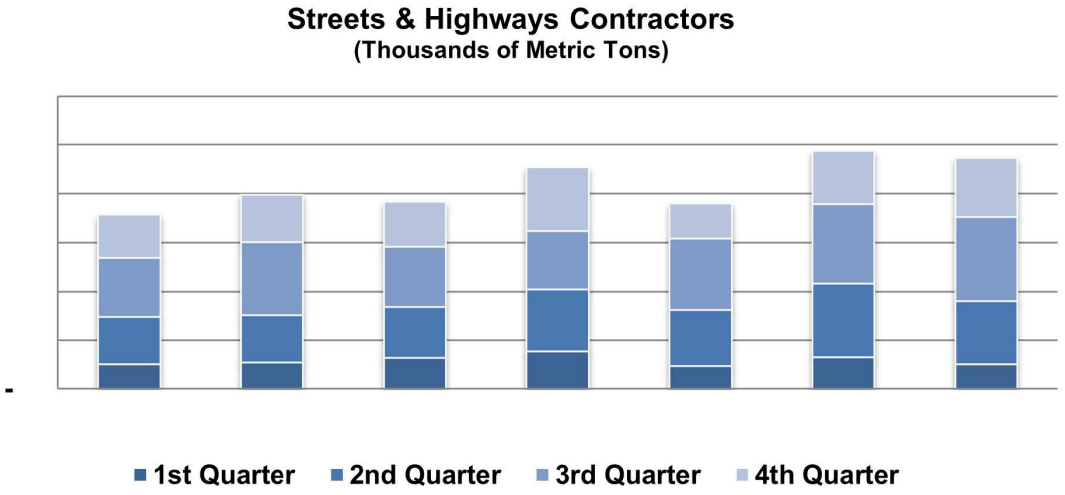
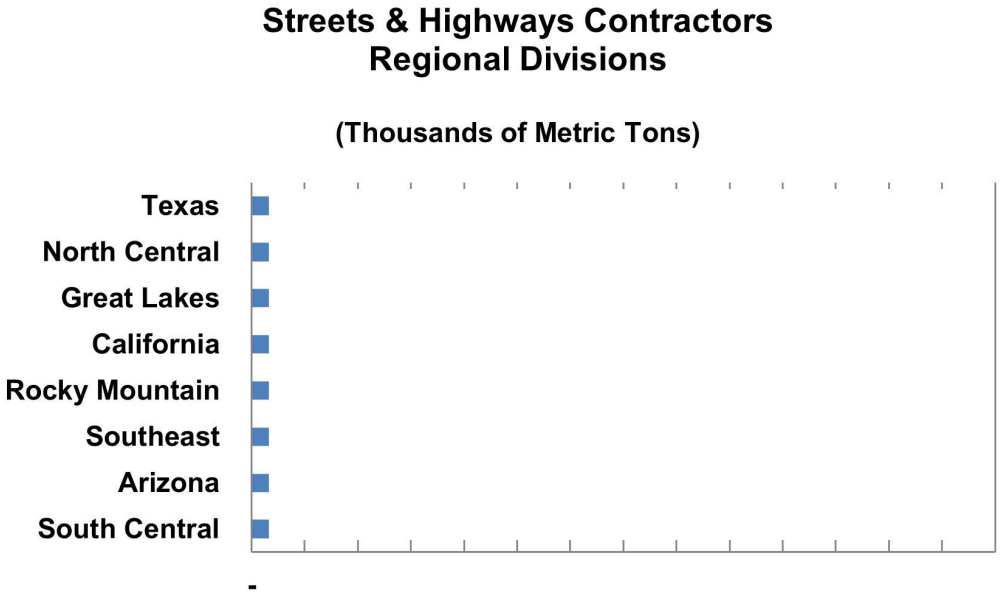
Streets & Highways Contractors: Data

The Streets & Highways Contractors segment was responsible for X.X% of total U.S. shipments in XXXX quarter 20XX, accounting for XXXX mt, and translates to an X.X% increase compared to the prior year. In XXXX quarter 20XX, Texas was the largest regional cement consumer in this category with XXXX mt, followed by the North Central with XXXX mt.

NOTE: This segment does not equal the total amount of portland cement used to pave streets and highways because it does not include cement used to make ready-mixed concrete, which is then used by streets and highways contractors.





Streets & Highways Contractors: Analysis

The outlook for Streets & Highways contractors cement volume is based on three key assessments including: 1) the magnitude of state and local discretionary infrastructure outlays, 2) federal highway funding commitments through legislation as recently witnessed with FAST, and 3) the proportion of street & highway projects in which cement is sold to a contractor and mixed on-site.

Streets & Highways Contractors *(000 mt)*

Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

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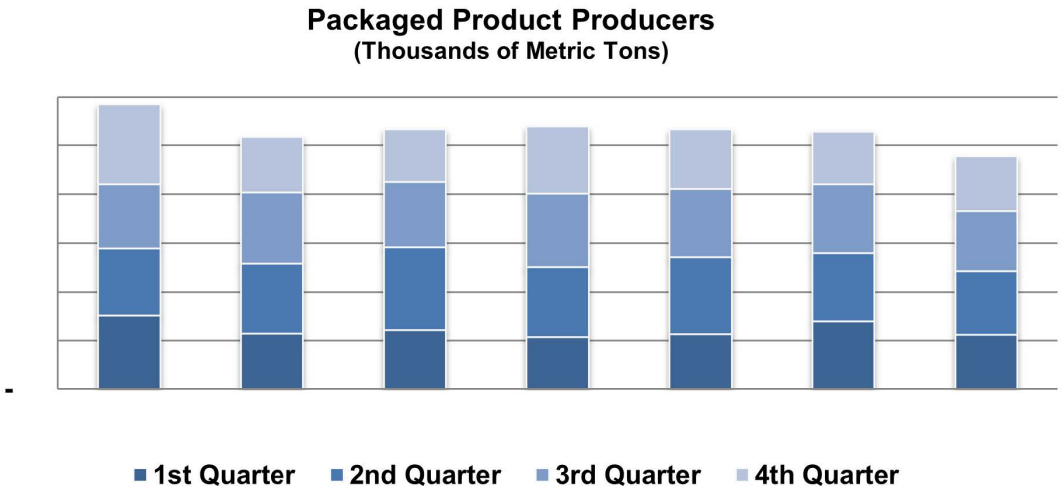
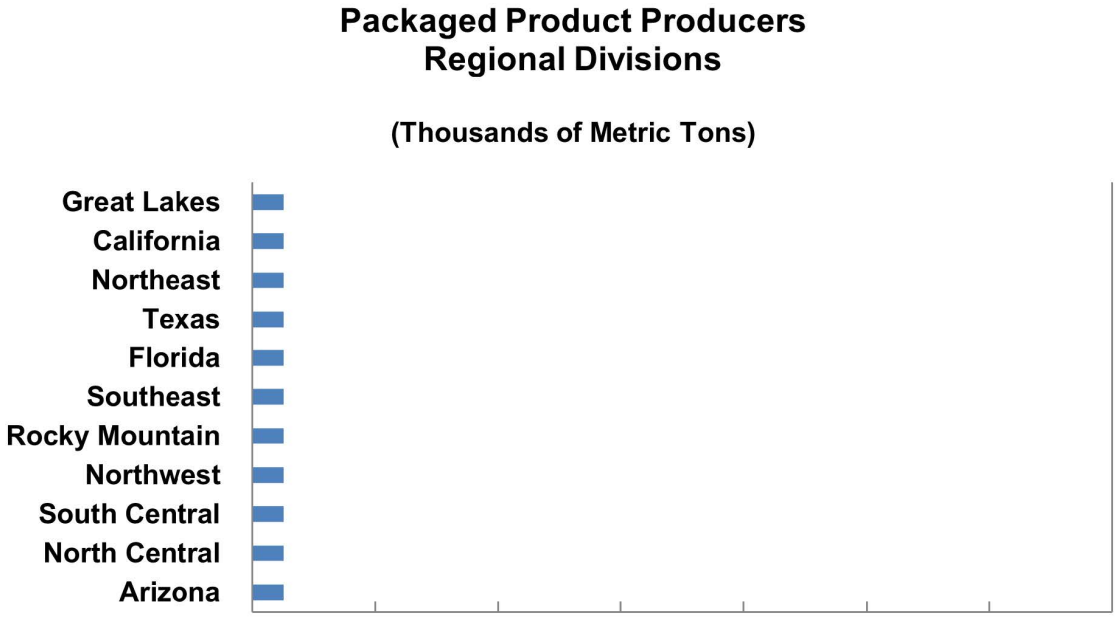
Packaged Product Producers: Data

This user segment consumed approximately XXXX mt of portland cement during the XXXX quarter of 20XX, an X.X% increase from XXXX quarter 20XX. The Packaged Product Producers segment account-ed for X.X% of total consumption. During XXXX quarter 20XX, the Great Lakes was the largest regional cement consumer in this category with XXXX mt, followed by California with XXXX mt.





Packaged Product Producers: Analysis

The Packaged Product Producers segment includes bagged cement and mixtures (i.e., SAKRETE®, QUIKRETE®) producers.

NOTE: Prior to 2005, cement consumption in this user segment was captured in the All Other category.

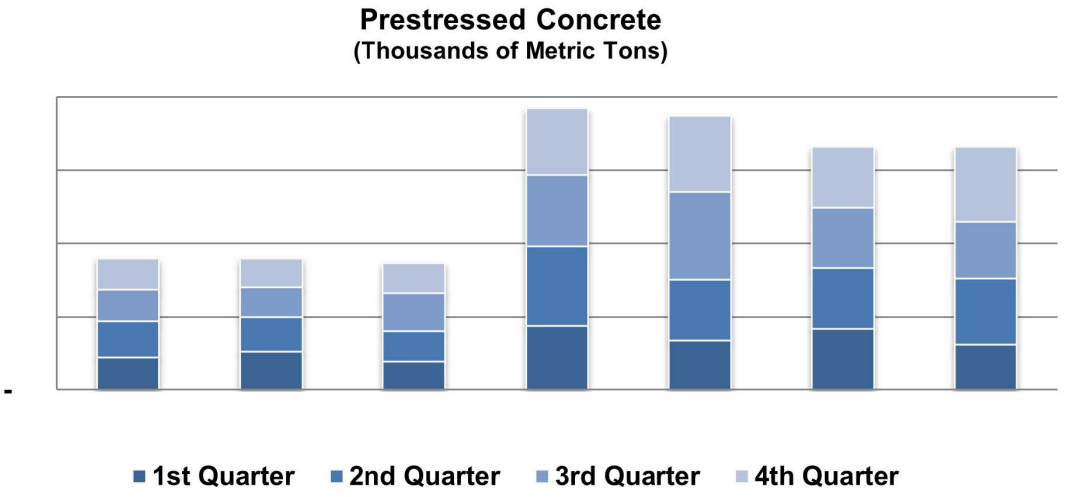
Packaged Product Producers *(000 mt)*

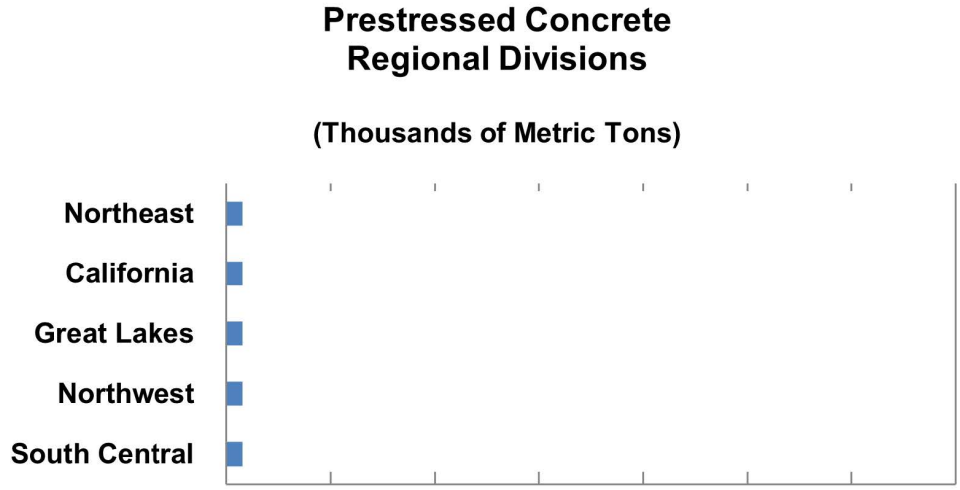
Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

Prestressed Concrete: Data

During XXXX quarter 20XX, the prestressed concrete segment consumed XXXX mt of cement, up X.X% from XXXX quarter 20XX. This segment accounted for X.X% of total cement consumption. During XXXX quarter 20XX, the Northeast was the largest regional cement consumer in this segment with XXXX mt, followed by California with XXXX mt.

NOTE: Prestressed concrete was added as a new segment in 2006. This user segment includes tons for the concrete railroad tie user segment which was eliminated in 2008. Prior to 2006, portland cement consumption for the Prestressed Concrete user segment was captured either in the All Other segment or the Precast segment.





Prestressed Concrete: Analysis

This segment includes cement applications in which compressive stresses are induced by high-strength steel bars in a concrete element. Loads are then applied to the element which will balance the tensile stresses imposed in the element during service. Applications include high-rise office buildings, landmark bridges, parking structures, correctional facilities, stadiums, and schools.

Prestressed Concrete *(000 mt)*

Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

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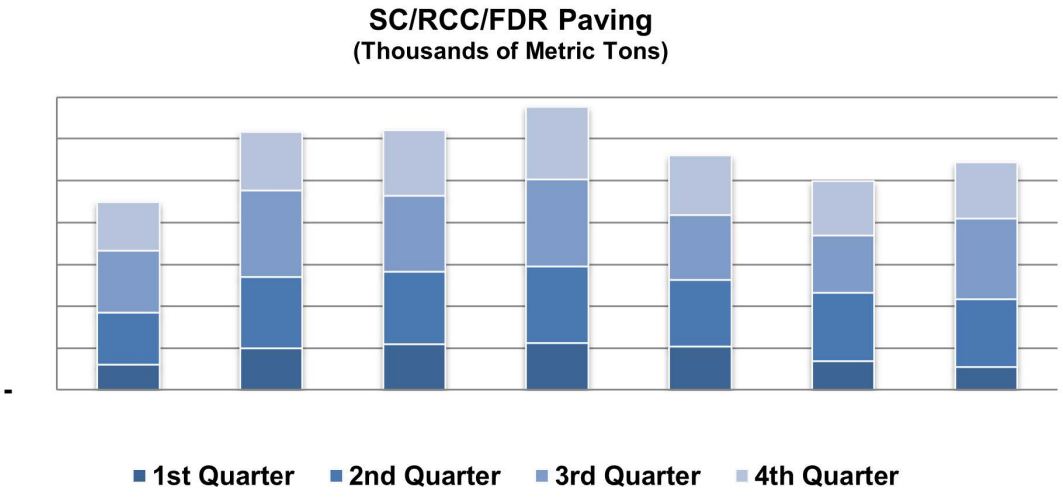
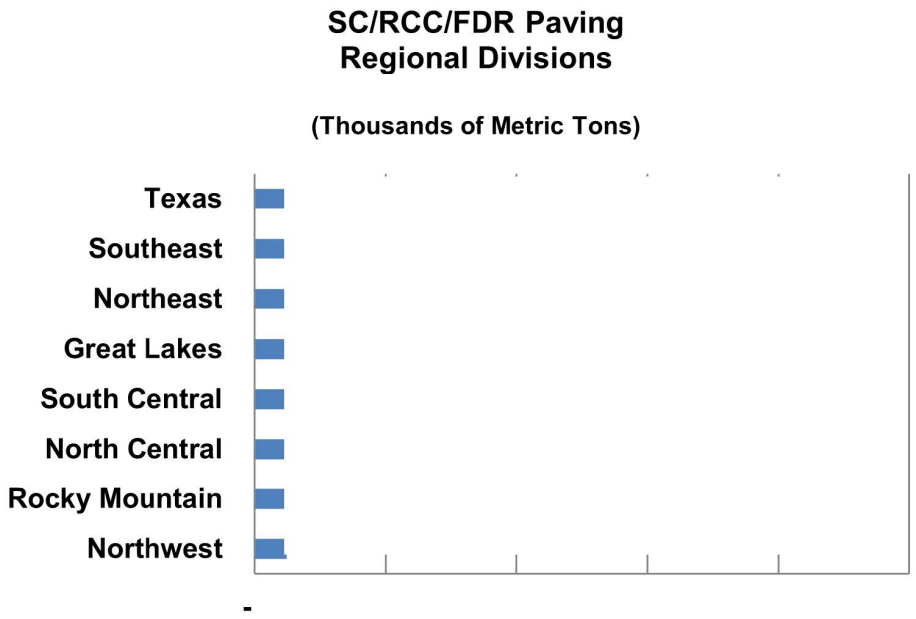
Soil-Cement/ Roller Compacted Concrete/ Full-Depth Reclamation for Paving: Data

SC/RCC/FDR paving projects consumed approximately XXXX mt in the XXXX quarter of 20XX (X.X% share of total cement consumption). This was an increase of X.X% from XXXX quarter 20XX. The larg-est regional consumer in the XXXX quarter of 20XX was Texas with XXXX mt, followed by the Southeast with XXXX mt.

NOTE: In 2008, cement consumption for the soil-cement and roller compacted concrete paving segments was split into three segments (SC, RCC, and FDR Paving), after having been combined in prior years.





Soil-Cement/ Roller Compacted Concrete/ Full-Depth Reclamation for Paving: Analysis

Soil-cement or cement-treated base (CTB) is a highly compacted mixture of soil/aggregate, portland cement, and water. Soil-cement is used as a base material under both asphalt and concrete applications such as streets, highways, parking lots, and commercial pavements.

Roller compacted (RCC) concrete is placed with modified asphalt type pavers and compacted. It is typically used for heavy-duty pavements due to its high strength, economy, and ease of placement.

Full-depth reclamation (FDR) with cement is a type of CTB that utilizes the existing asphalt and underlying base materials through an in-place recycling process that creates a strong, durable base that can be surfaced with either concrete, asphalt, or a chip seal.

SC/RCC/FDR Paving *(000 mt)*

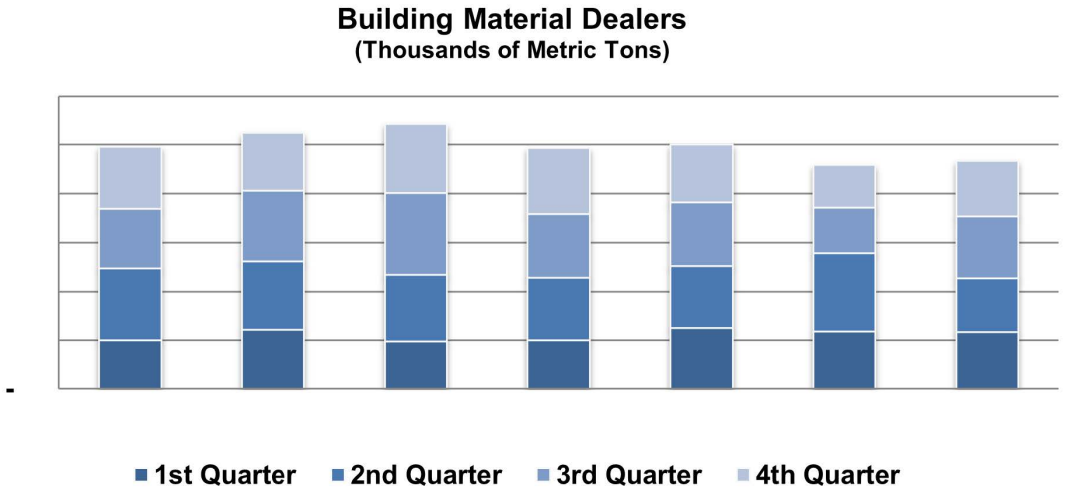
Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

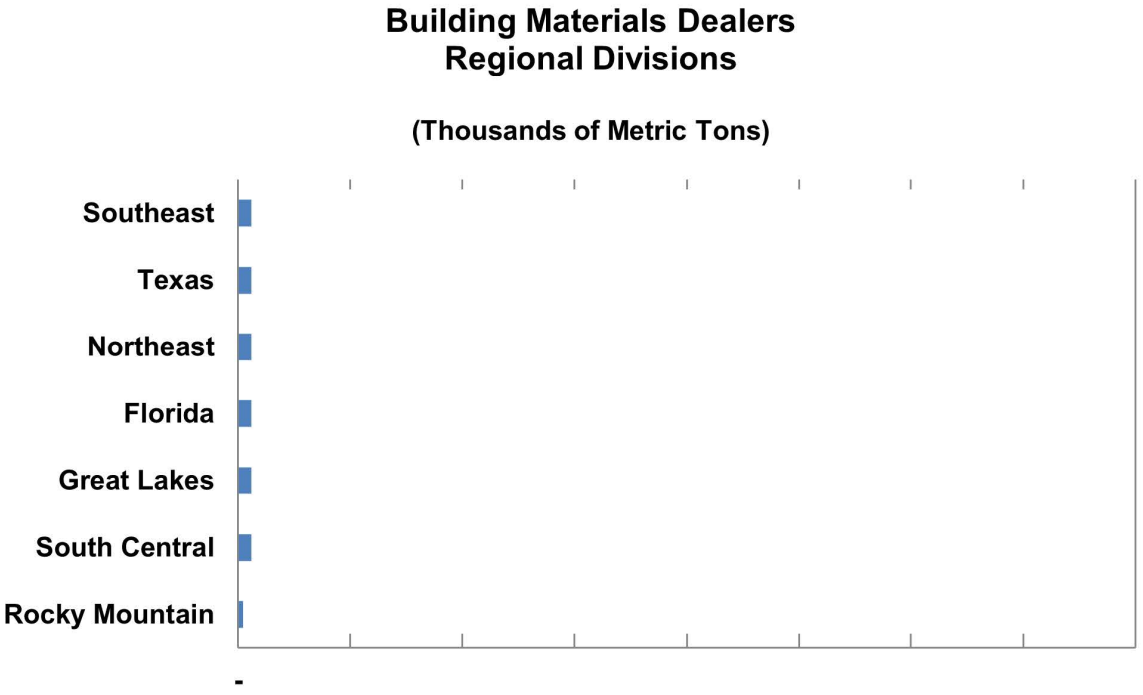
SC and FDR are primarily public works applications executed by state, county, or municipal DOT's. Parking lots and access roads offer private sector opportunities. As such, these applications are highly

Building Materials Dealers: Data

This user segment consumed approximately XXXX mt of portland cement during XXXX quarter 20XX, a X.X% increase from XXXX quarter 20XX. The Building Material Dealers segment accounted for X.X % of total consumption. The Southeast was the largest regional cement consumer in this category with XXXX mt, followed by Texas with XXXX mt.

NOTE: This segment was added to the survey in 2006. Prior to 2006, consumption for this category was captured in the All Other segment.





Building Materials Dealers: Analysis

This segment consists of enterprises (i.e. Home Depot, Lowes, Menards) engaged in retailing products such as manufactured bagged cement, fencing, glass, doors, plumbing fixtures and supplies, electrical supplies, prefabricated buildings and kits, and kitchen and bath cabinets and countertops.

Building Materials Dealers *(000 mt)*

Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

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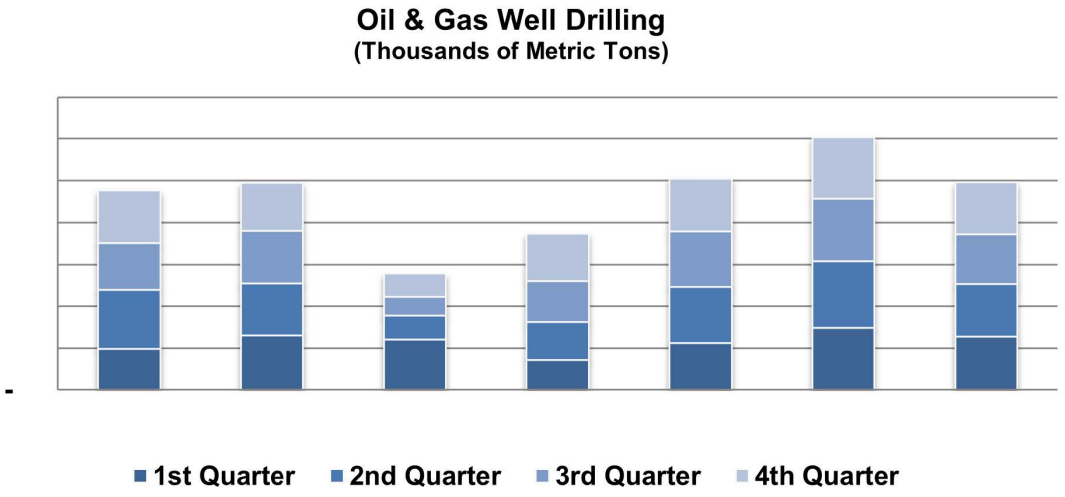
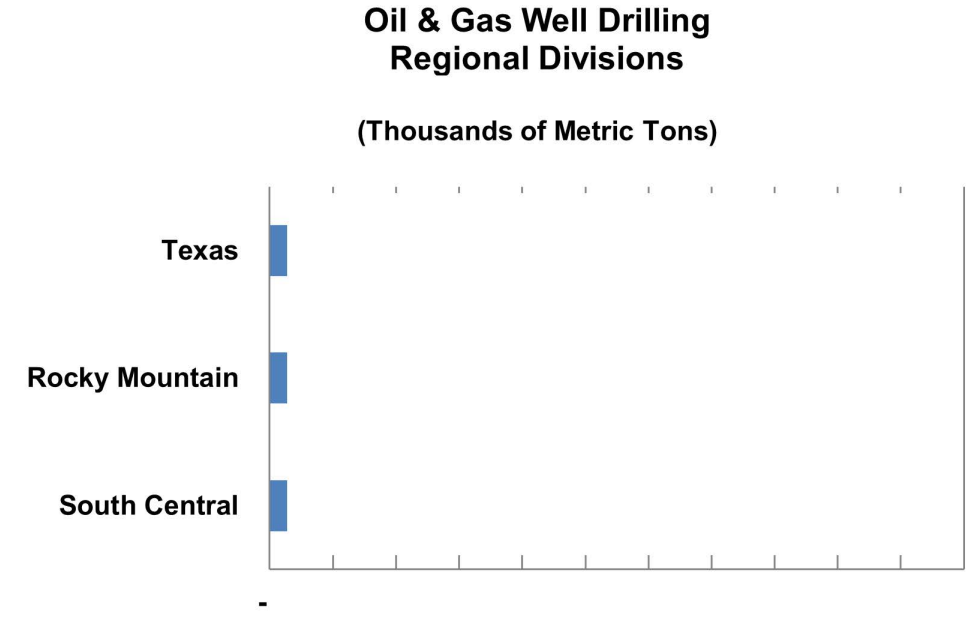
Oil & Gas Well Drilling: Data

In XXXX quarter 20XX, the Oil & Gas Well Drilling segment accounted for XXXX mt of portland cement, translating into a X.X% decrease compared to XXXX quarter 20XX. The Oil & Gas Well Drilling segment represented X.X% of total consumption. During XXXX quarter 20XX, Texas was the largest regional cement consumer in this category with XXXX mt, followed by the Rocky Mountain region with XXXX mt.

NOTE: Cement for oil and gas well drilling is primarily used for below ground casing and grouting.





Oil & Gas Well Drilling: Analysis

The Oil & Gas Well Drilling segment refers to cement that is made according to API specifications, and is used for down-hole work.

Oil & Gas Well Drilling *(000 mt)*

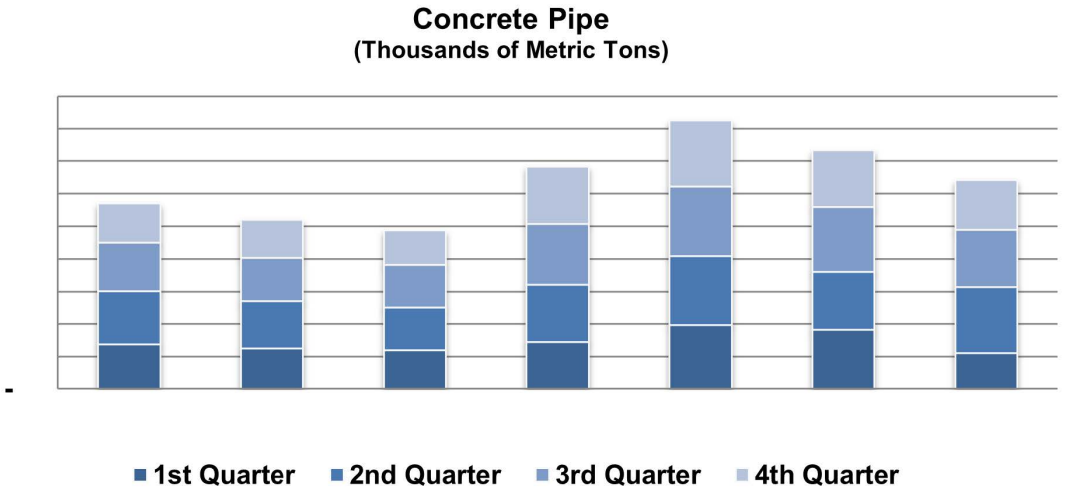
Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

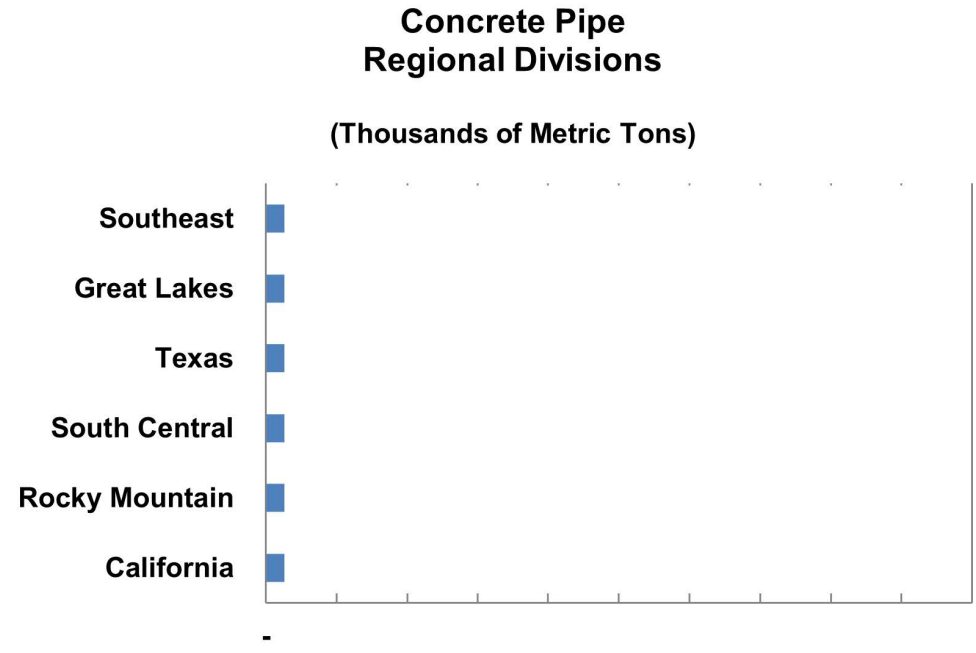
ACA relies on Energy Information Agency (EIA) projections contained in their short-term and long-term

ending with a decrease of 11.5%.

Concrete Pipe: Data

The Concrete Pipe segment consumed approximately XXXX mt of portland cement during the XXXX quarter of 20XX (X.X% share of total cement consumption). This reflects an X.X% decrease from XXXX quarter 20XX. During XXXX quarter 20XX, the Southeast was the largest regional cement consumer in this category with XXXX mt, followed by the Great Lakes with XXXX mt.





Concrete Pipe: Analysis

Concrete pipe serves as a conduit material for irrigation, water supply lines, sanitary sewers, culverts, and storm drains.

Concrete Pipe *(000 mt)*

Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

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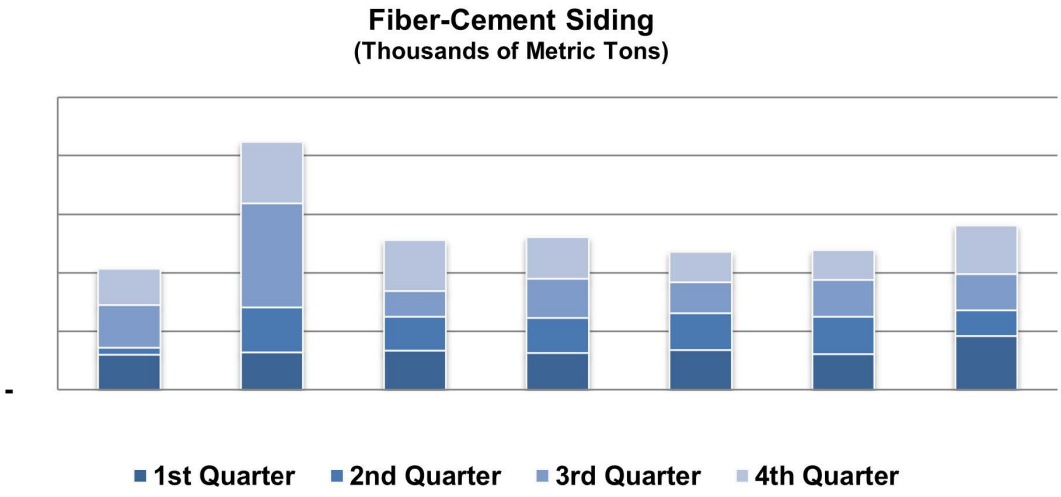
Fiber-Cement Siding: Data

The Fiber-Cement Siding segment consumed XXXX mt of portland cement during the XXXX quarter of 20XX. This accounted for X.X% of total cement consumption. Consumption in the Fiber-Cement Siding segment increased X.X% in the XXXX quarter of 20XX compared to 20XX.



NOTE: Regional data withheld due to confidentiality restrictions

Fiber-Cement Siding: Analysis

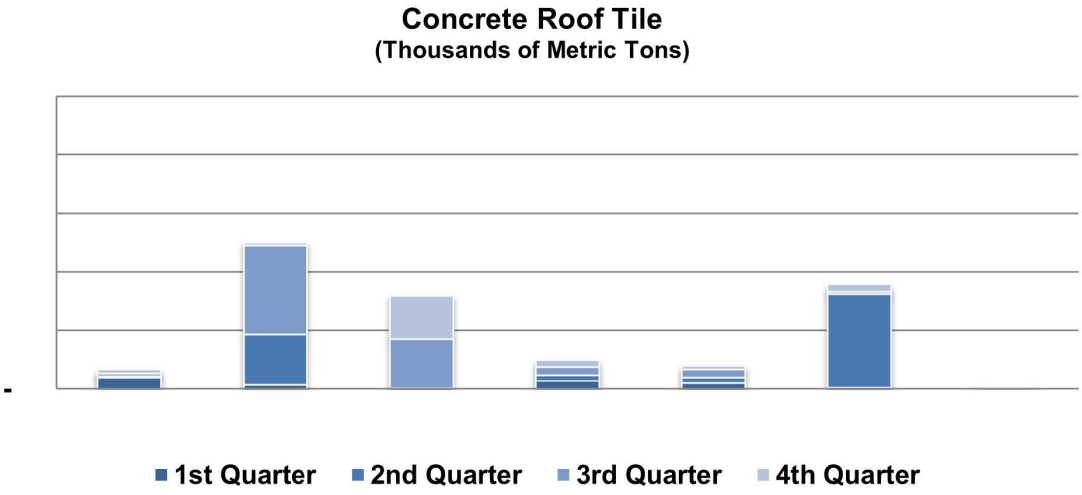
Fiber-Cement Siding offers the appearance of traditional wood-based siding materials with much lower maintenance requirements, while maintaining its shape and color much better than vinyl siding.

Fiber-Cement Siding *(000 mt)*

Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

Concrete Roof Tile: Data

The Concrete Roof Tile user segment consumed 0 mt of portland cement during the XXXX quarter of 20XX, a decrease of XX% from 20XX levels.



NOTE: Regional data withheld due to confidentiality restrictions

Concrete Roof Tile: Analysis

Concrete roofing tiles offer elegant, enduring aesthetics for house designs and improved marketability for the builder. They are also very versatile and provide greater protection to the homeowner.

Concrete Roof Tile *(000 mt)*

Year	2018	2019	2020	2021	2022
1st Quarter					
% Change Y/Y					
% Change YTD					
2nd Quarter					
% Change Y/Y					
% Change YTD					
3rd Quarter					
% Change Y/Y					
% Change YTD					
4th Quarter					
% Change Y/Y					
% Change YTD					
Total					
% Change Y/Y					

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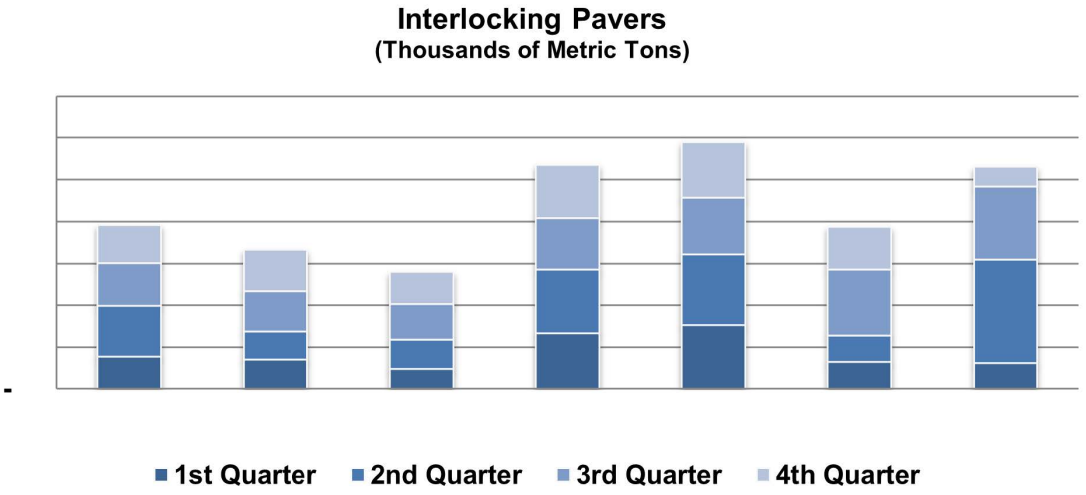
Interlocking Pavers: Data

The Interlocking Pavers segment consumed XXXX mt of cement in XXXX quarter 20XX, a X.X% decrease from XXXX quarter 20XX. The Interlocking Pavers segment accounted for X.X% of total cement consumption. During XXXX quarter 20XX, the Northeast was the largest regional cement consumer in this category with XXXX mt.

NOTE: The Interlocking Pavers category was added in 2006. Consumption for this user segment was previously captured in the Brick & Block or All Other categories.



NOTE: Regional data withheld due to confidentiality restrictions

Interlocking Pavers: Analysis

The Interlocking Pavers segment (also called pavers, concrete pavers, paving stones, paving block, and brick pavers) reflects paver applications used for foot traffic, light vehicle traffic, or special units used for heavy traffic. Pavers are primarily used for patios, walkways, driveways, and housing development roads which infiltrates storm water, thereby reducing or eliminating retention pond requirements.

Interlocking Pavers *(000 mt)*

Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

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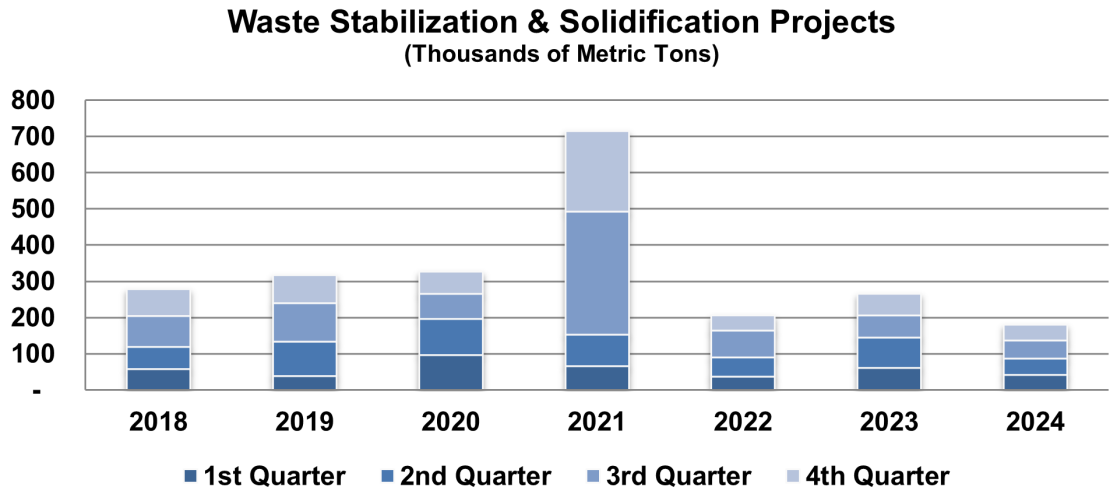
Waste Stabilization & Solidification (S/S): Data

Waste Stabilization & Solidification projects consumed approximately XXXX mt of portland cement during the XXXX quarter of 20XX (X.X% share of total cement consumption). This represented a decrease of X.X% from XXXX quarter 20XX.



NOTE: Regional data withheld due to confidentiality restrictions

Waste Stabilization & Solidification (S/S): Analysis

Waste stabilization/solidification (S/S) involves mixing cement into contaminated media or waste to immobilize contaminants within the treated material.

S/S Applications include:

- Brownfield clean-up and redevelopment of contaminated industrial and commercial sites.
- Superfund sites (Federal) to clean up hazardous waste sites.
- Management and disposal of radioactive waste.
- Federal facilities remediation projects conducted by Federal agencies other than EPA.

Waste S/S *(000 mt)*

Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

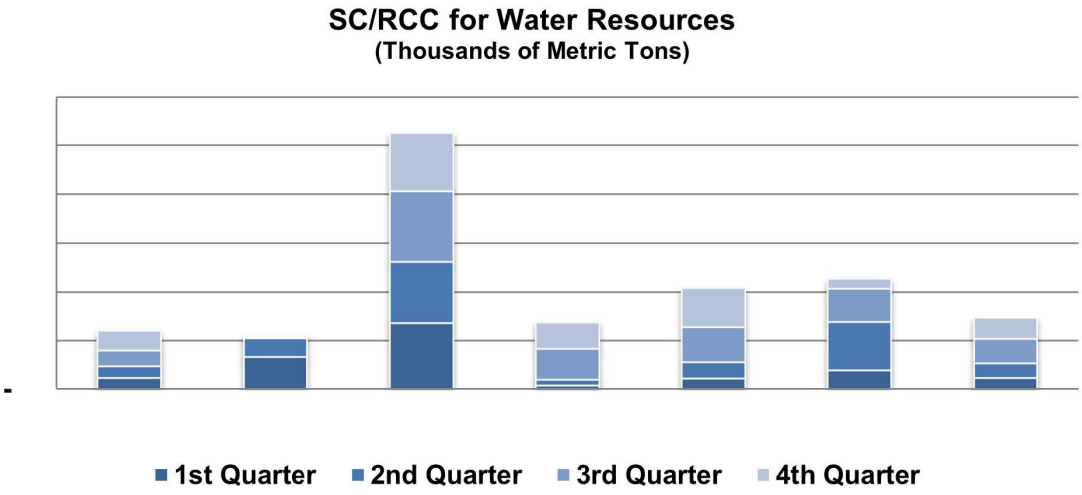
The application of cement for waste stabilization is not so much tied to the economics or performance of one particular construction sector, but rather the application and enforcement of environmental regula-

Soil-Cement/Roller Compacted Concrete for Water Resources: Data

There were XXXX mt of portland cement consumed in this segment for the XXXX quarter of 20XX.

This represents X.X% of total consumption for the quarter.

NOTE: Cement consumption in this user segment is subject to extreme fluctuations due to the project orientation.



NOTE: Regional data withheld due to confidentiality restrictions

Soil-Cement/Roller Compacted Concrete for Water Resources: Analysis

This segment encompasses soil-cement used for embankment slope protection, stream bank protection, grade control structures, and reservoir and channel linings. Roller compacted concrete (RCC) is a proven and economical alternative for building new dams and for replacing or rehabilitating existing dams. RCC is also used as emergency spillway or overtopping protection for earth embankment dams and as a low permeable liner for water and wastewater ponds.

SC/RCC Water Resources *(000 mt)*

Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y

All Other Manufacturers and Contractors: Data

The All Other segment (X.X% share of total cement consumption) consumed XXXX mt of cement in the XXXX quarter of 20XX. This segment includes government municipalities, specialty chemical manufacturers, mines, and general miscellaneous contractors. In the XXXX quarter of 20XX, portland cement consumption by this segment increased X.X% from the previous year. In XXXX quarter 20XX, Texas was the largest regional cement consumer in this category with XXXX mt, followed by Florida with XXXX mt.

All Other *(000 mt)*

Year
1st Quarter
% Change Y/Y
% Change YTD
2nd Quarter
% Change Y/Y
% Change YTD
3rd Quarter
% Change Y/Y
% Change YTD
4th Quarter
% Change Y/Y
% Change YTD
Total
% Change Y/Y