



Market Insight (Sample Slides)

Opportunities in U.S. Industrial Water:
Market Size, Trends & Forecast 2018-2022

December 2018

why BLUEFIELD

The combination of data-driven analysis, research transparency, and breadth of experience drive more informed, independent insights for our clients.

FOCUSED ON RESEARCH



Independent perspectives without the distractions and influences of event management, news distribution, and corporate sponsorships.

EXPERTS IN WATER



We guide companies addressing critical questions in water across municipal & industrial water sectors with in-depth business insights.

GLOBAL PERSPECTIVES



Our global team of water experts in Boston, Barcelona, Orlando, and San Francisco apply diverse experiences from business, engineering, and infrastructure sectors.

TRANSPARENT METHODOLOGY



Proven analytical model stressing industry structure, market dynamics, competitive positioning, and strategy drivers for companies across the value chain.

END-TO-END ACCOUNTABILITY



Proprietary databases built in-house, without a reliance on outsourced expertise, giving clients greater confidence in our bottom-up, research methodology and analysis.

ACCESS TO OUR TEAM

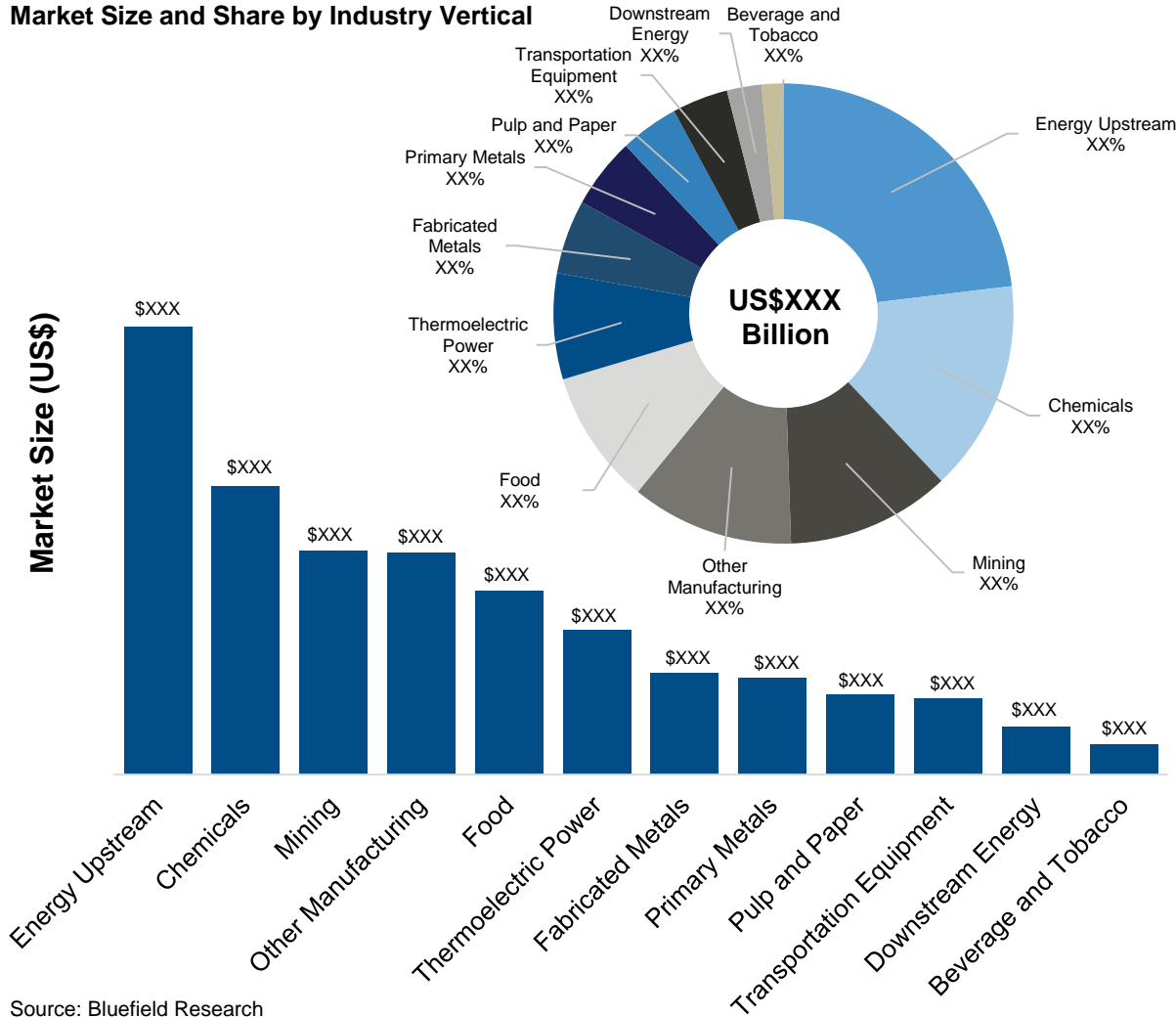


Ongoing support provided on a 24/7 basis, including assumption verification, methodology reviews, and follow-up analysis to strengthen key decisions.

Sizing the Industrial Water Markets by Vertical

The US industrial water market in 2017 reached US\$XXX billion, with nearly XX% of the market originating in Upstream Energy, Chemicals and Mining.

Market Size and Share by Industry Vertical



Source: Bluefield Research

Analysis

Upstream Energy, Chemicals and Mining lead among industry verticals with a combined water management spend of over US\$XXX.

- Upstream Energy alone accounted for over XX% of total spend, highlighting the impact of oil and gas and a revitalized U.S. energy sector.
- Commodity driven verticals, such as upstream energy and mining, make up XX% of spend in 2017 and are subject to volatile, risky international commodity markets.

Manufacturing (heavy and light) accounted for over US\$XXX in spend in 2017.

- Chemicals lead manufacturing verticals with a XX% share of industrial water management.
- Heavy manufacturing verticals such as Chemicals or Primary Metals represent larger markets than light manufacturing verticals such as beverage, electrical equipment or textile manufacturing.
- Food manufacturing stands out as the exception among light manufacturing verticals with a US\$XXX market for water management driven by the high facility count (+XX,XXX in 2017).

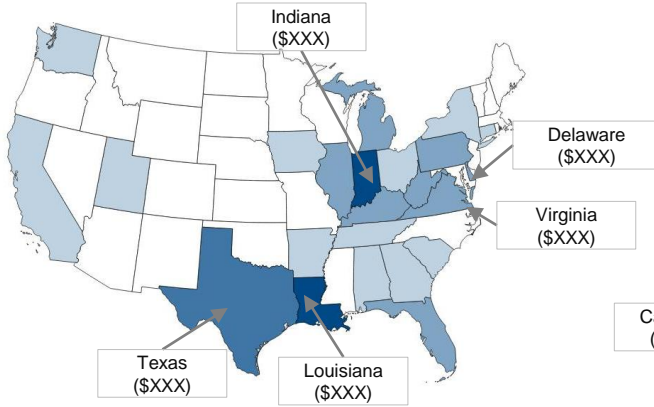
Mapping Industrial Water Market Value by State

The market for industrial water solutions is concentrated in manufacturing and power generation bases in the Eastern U.S. as well as mining-bases in the Southwest.

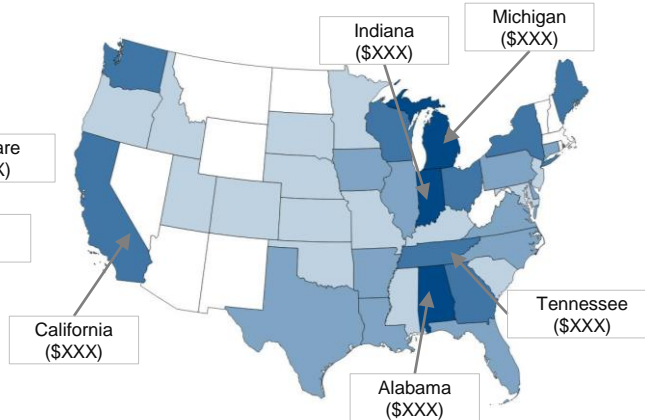
Small Market

Large Market

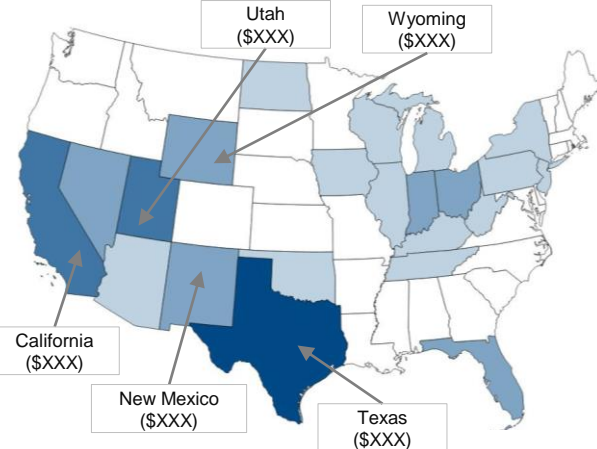
Heavy Manufacturing (US\$XXX)



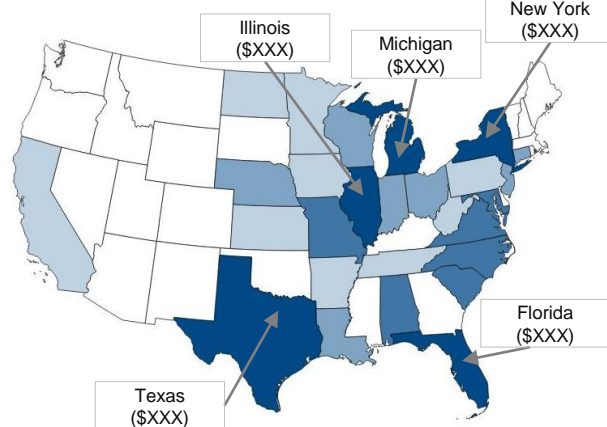
Light Manufacturing (US\$XXX)



Mining (US\$XXX)



Power (US\$XXX)



Source: Bluefield Research

Analysis

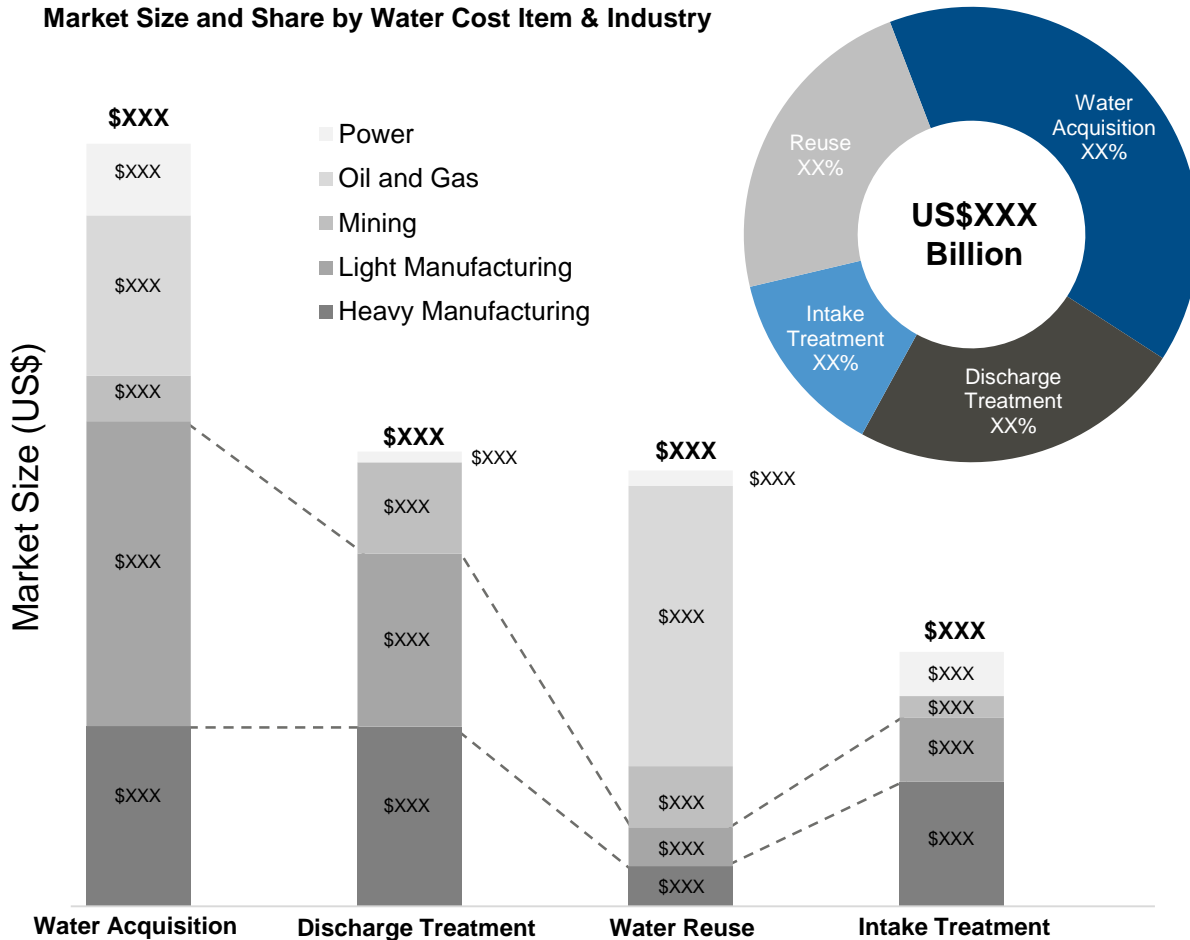
Industrial market segmentation is demonstrated in geographic breakdown.

- Light manufacturing is the most fragmented industry segment, where 41 states reach over US\$XXX in annual spend each. Indiana, Michigan and Alabama stand out with a combined market of US\$XXX, or XX% of total spend in light manufacturing.
- The nine remaining states instead have primarily extraction-based economies.
- The top 5 states for heavy manufacturing – downstream energy, chemicals, primary metals, fabricated metals – exceed US\$XXX, or XX% of total spend. Texas and Louisiana, combined, account for XX% of the total, driven by chemical manufacturing and downstream energy.
- Mining activity is predominantly in the west, with the top 5 states forming a market of US\$XXX, or XX%, reaching combined withdrawals of XX billion gallons per day.
- Power opportunities are east of the Mississippi, with the largest markets in New York, Michigan, Illinois, Florida and Texas where spend reaches US\$XXX, or XX%, and withdrawals exceeding XX billion gallons per day.

Breaking Down the Industrial Water Management Spend

Water acquisition, discharge treatment, and reuse drive water management spend, accounting for XX% of total spend, or US\$XXX.

Market Size and Share by Water Cost Item & Industry



Source: Bluefield Research

Analysis

Acquisition and discharge treatment spend is propelled by Power, Upstream Energy and Light Manufacturing.

- Water management spend is segmented into acquisition, intake treatment, reuse and discharge treatment.
- Combined spend on acquisition and discharge treatment is driven by the water intensive power and mining industries. Light manufacturing, while not very water intensive at a facility level, accounts for a large market share due to the high number of facilities.

Heavy manufacturing represents a major industry for intake treatment spend while upstream energy dominates reuse spend.

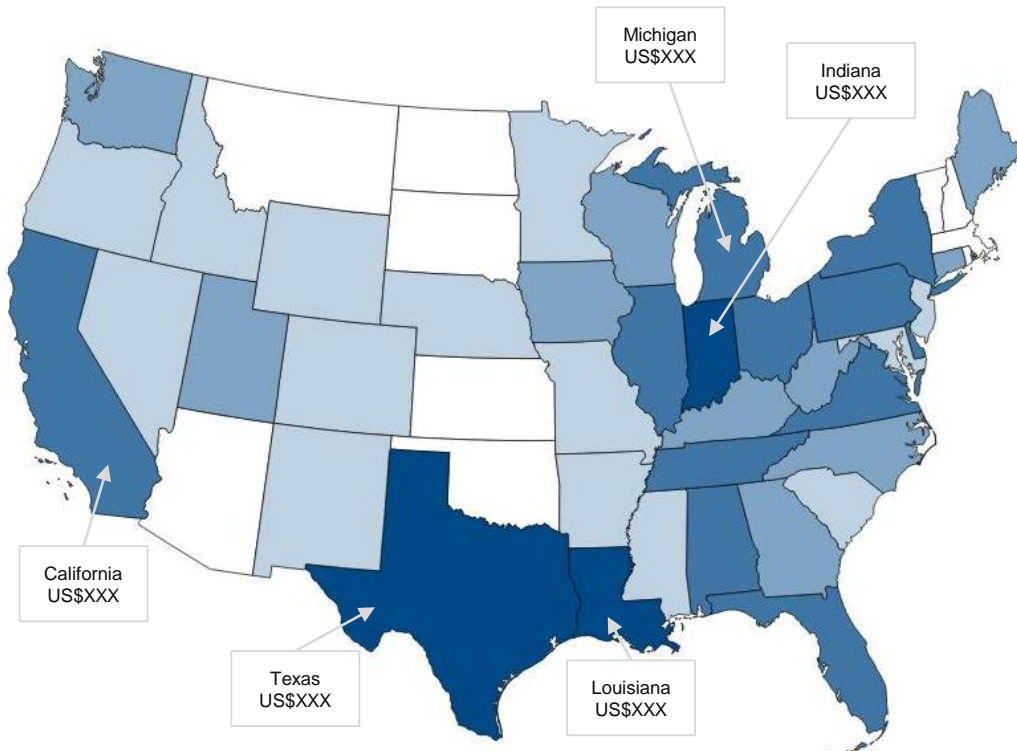
- Chemical manufacturing, within heavy manufacturing, accounts for the largest share of intake treatment by industry, driving XX% (US\$XXX) of spend on intake treatment across all industries.
- Due to oil and gas' high water intensity, public and regulatory pressure and high costs, spend on reuse by the oil and gas sector for fracking reached US\$XXX, or XX% of industrial water reuse spend, in 2017.

Mapping the Market Outlook

Top Markets such as Louisiana, Indiana and Texas will hold their positions in 2022, while Florida, New York and Illinois gain market share and overtake certain historic industrial centers.

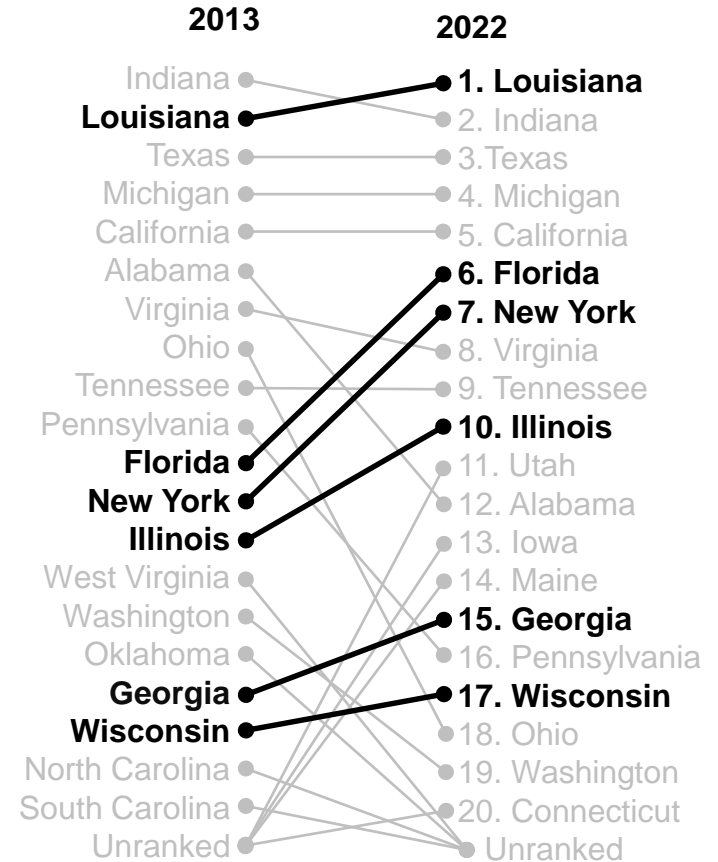
Market Size by State (2022)**

Small Market  Large Market



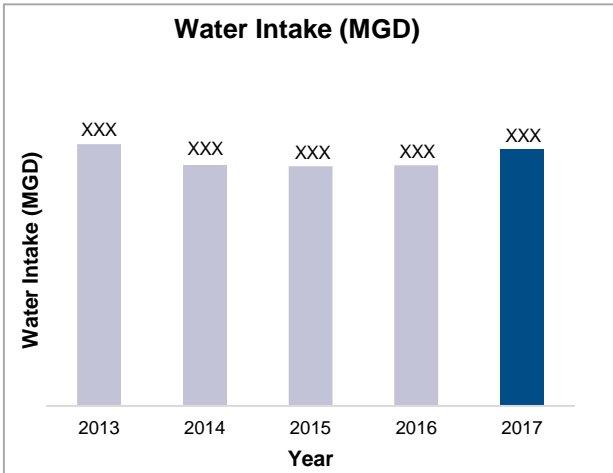
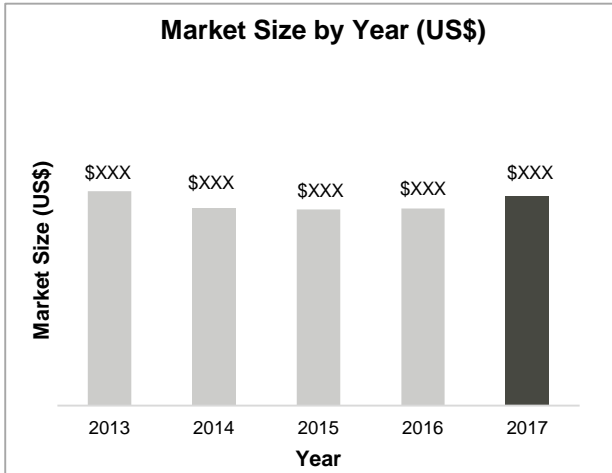
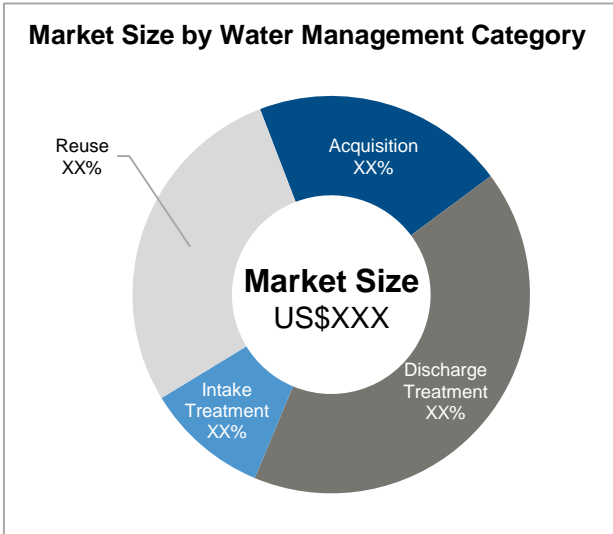
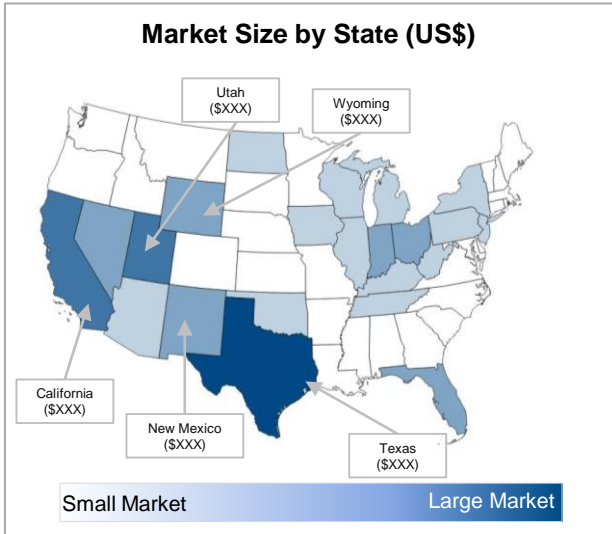
**Does not include Upstream Energy

Market Size Rank Over Time



Mining

Riding a rebound in commodity prices and build out of facilities in New Mexico and Texas, mining water management reached US\$XXX in 2017, gaining XX% over the previous year.



Analysis

Mining opportunities are concentrated in the western U.S., with a focus on reuse and discharge treatment.

- Since the rebound of commodity prices following the difficulties of 2014, the market for water management in mining has seen year over year growth, reaching US\$XXX in 2017.
- New Mexico and Texas represent high growth states with over XX new mines established since 2013 and a combined market of US\$XXX.
- Since 2013, we have seen the mining sector move away from coal-rich Appalachia towards Western states.
- Due to regulatory and public pressure, mines have continued to focus on reuse, creating a US\$XXX market for water reuse solutions providers.

Source: Bluefield Research

About this Market Insight

Overall water use in the United States is estimated at 322 billion gallons per day, with manufacturing, mining, oil and gas, and power accounting for 47% of total withdrawals. While still significant in volume, withdrawals by these industries have steadily declined 30% to 152 billion gallons per day from 1985 to 2015.

Analysis of 300,000 industrial facilities in more than 3,000 counties highlights the extreme variations in water management spending across 20 industry verticals. For water solutions providers, the industrial verticals present significant opportunities, particularly as their attention to water increases.

Bluefield developed this new Market Insight to support companies and key decision-makers seeking to capitalize on growing opportunities in industrial water. The in-depth analysis is supported by a transparent methodology from data collection to volume and cost assumptions.

Key features include:

- **Market sizing for key industry verticals:** Chemicals, Energy, Manufacturing, Food & Beverage, Mining, Pulp & Paper
- **Bluefield's Industrial Water Index:** Industrial segment analysis and key drivers shaping water management including fragmentation, water usage, risk to water scarcity, regulations.
- **Rankings of Key Sectors and Outlooks**
- **Geographic Mapping by Industry Segment:** Number of facilities, water volumes at a state, county level, and water management spending
- **Segment Profiles:** Market size, spending for acquisition, intake treatment, reuse, and discharge across 10 industry segments

WHO SHOULD BUY THIS REPORT

- **Water technology firms** seeking insights into growth markets for produced water treatment.
- **Engineering firms** in need of critical analysis of industrial supply, treatment, storage & disposal trends by geography to validate strategic decisions.
- **Financial investors** evaluating market conditions and sizing across select industry verticals to evaluate landscape prior to M&A.
- **Supply chain companies** wanting in-depth analysis of key industry verticals and growth prospects going forward.
- **Industry outsiders** considering water and wastewater management in the U.S. as a potential opportunity for growth beyond current business activities.

The complete Market Insight is now available at www.bluefieldresearch.com

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Global companies across the value chain are developing strategies to capitalize on greenfield opportunities in water -- new build, new business models, and private investment. Bluefield Research supports a growing roster of companies across key technology segments and industry verticals addressing risks and opportunities in the new water landscape.

Companies are turning to Bluefield for in-depth, actionable intelligence into the water sector and the sector's impacts on key industries. The insights draw on primary research from the water, energy, power, mining, agriculture, financial sectors and their respective supply chains.

Bluefield works with key decision-makers at utilities, project development companies, independent water and power providers, EPC companies, technology suppliers, manufacturers, and investment firms, giving them tools to define and execute strategies.

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