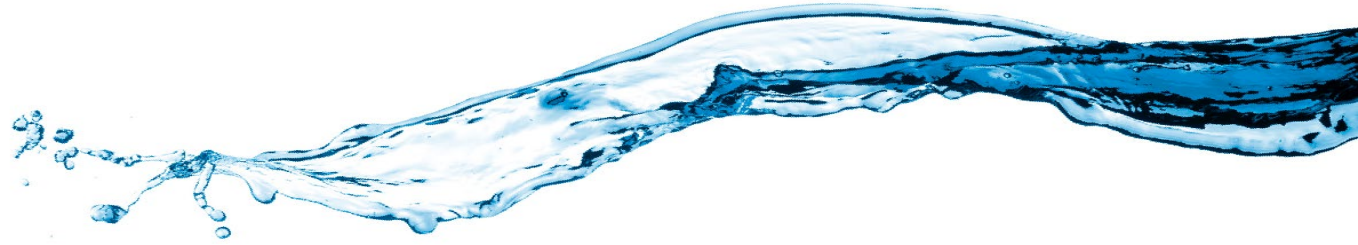




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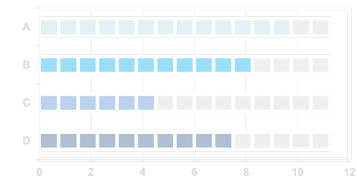
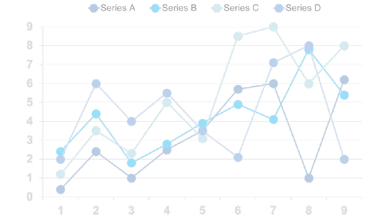
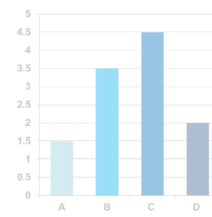
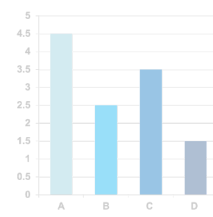
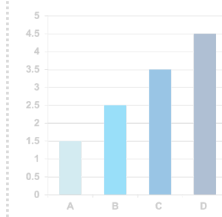


SAMPLE

FOCUS REPORT

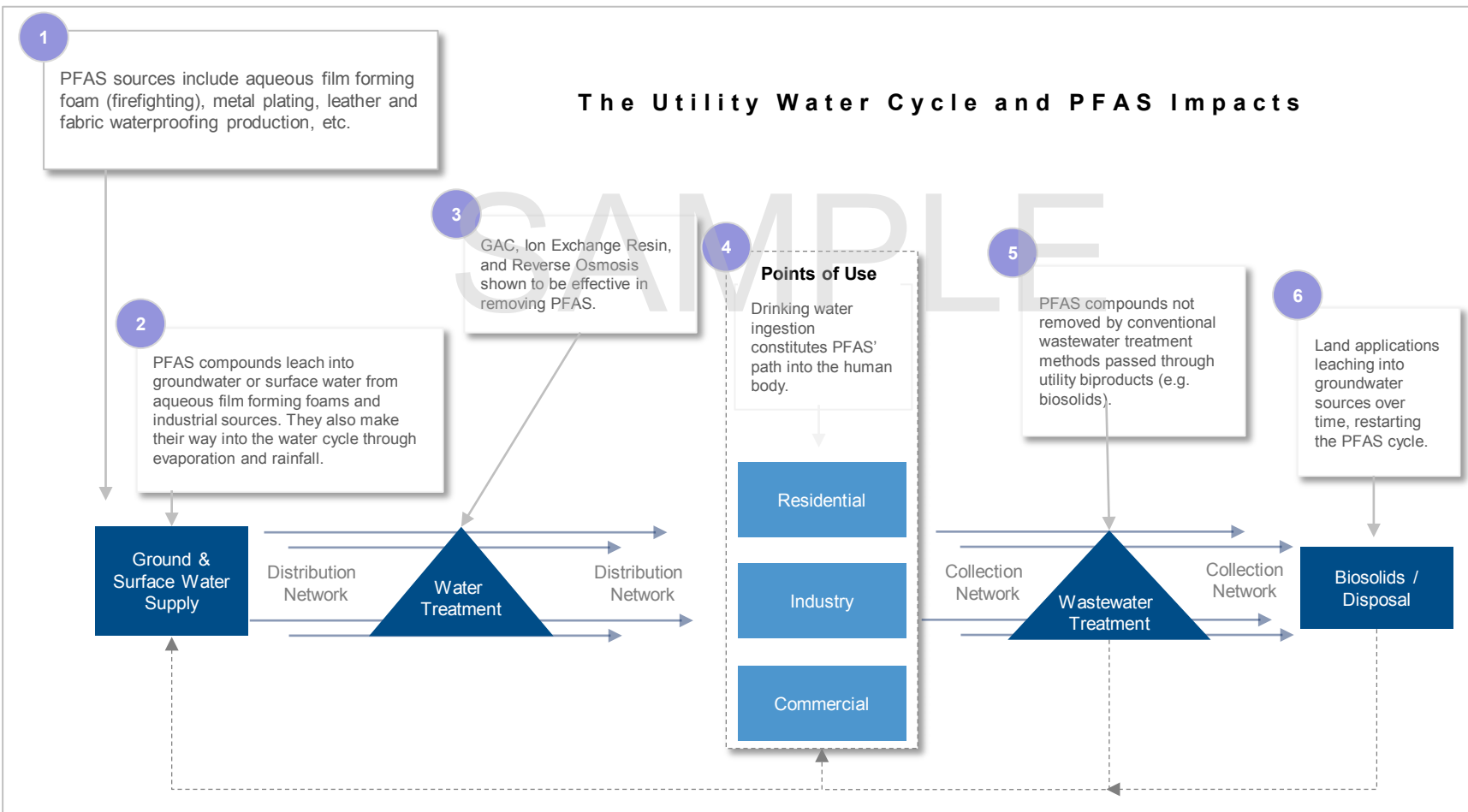
PFAS, The Next Challenge for Water Utilities: Emerging Regulations, Technologies, and Forecasts 2020-2030

June 2020



How PFAS Makes Its Way Across the Water Utility Lifecycle

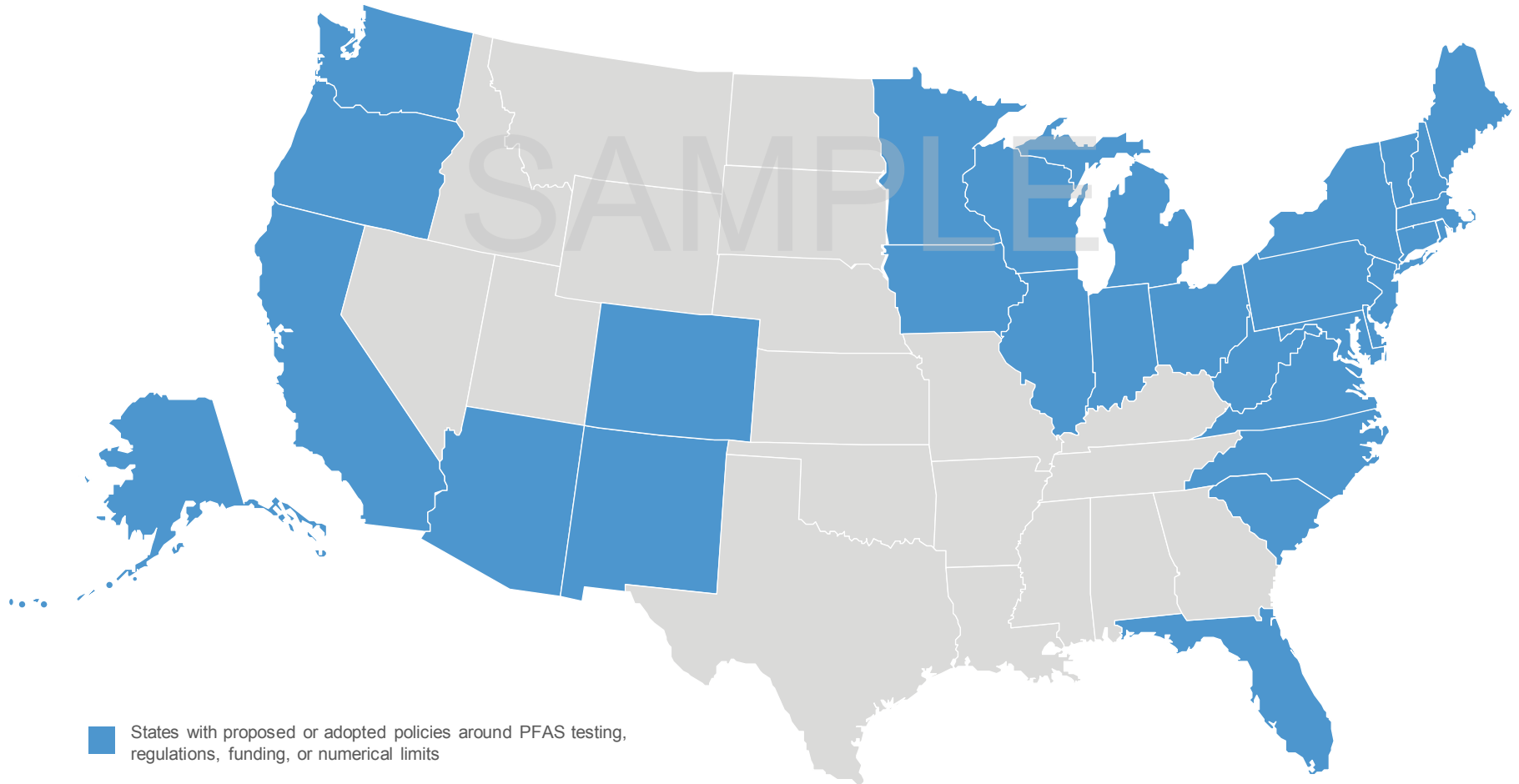
PFAS compounds flow through the water cycle in perpetuity if not addressed by technologies designed to remove them through filtration or destroy them with high temperature incineration.



Source: Bluefield Research

PFAS Drinking Water Policy Landscape Overview

To date, 29 states have implemented policy efforts to address PFAS, including testing requirements and prohibitions on specific materials for packaging, manufacturing, and firefighting foam.

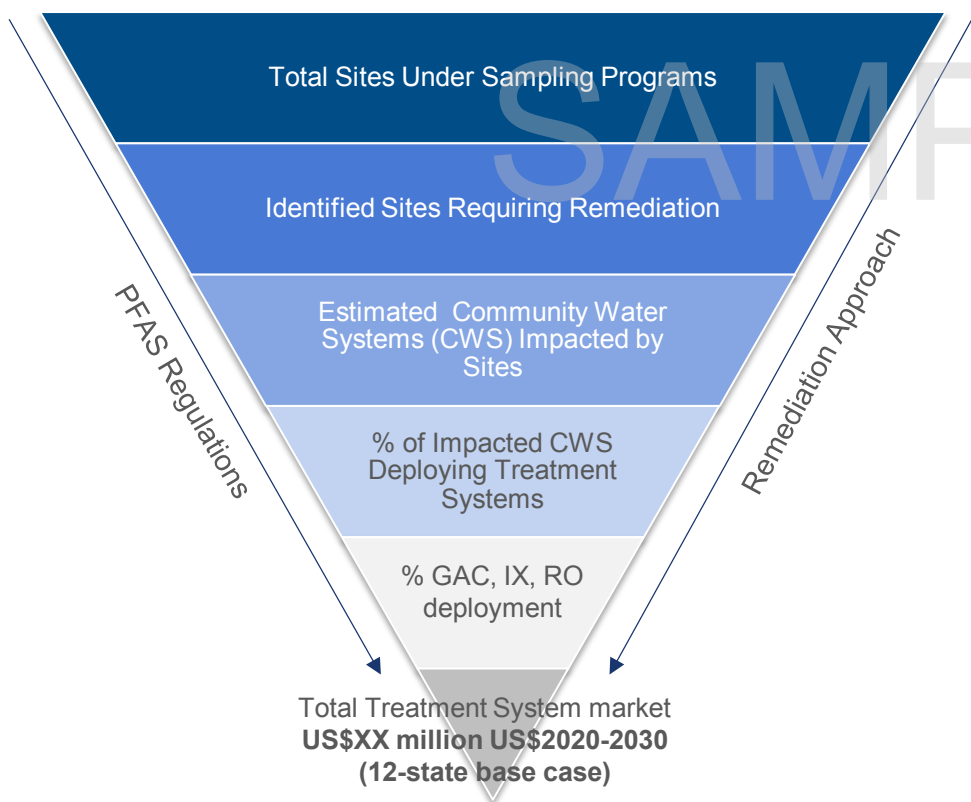


Source: Bluefield Research

Key Market Assumptions: Treatment System Addressable Market

Bluefield translated sampling sites under the current state-specific monitoring programs into potential demand for treatment systems based on community water systems impacted, procurement trend, and likely expansion of site identification.

Top-Down View of Addressable Market



Analysis

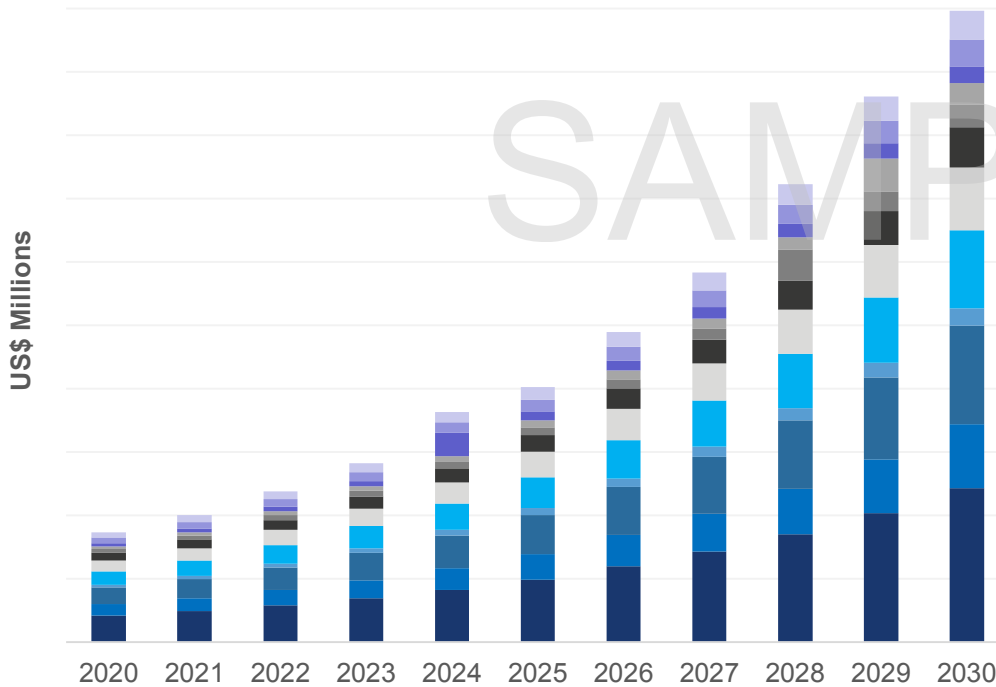
- A dataset of approximately 50,000 water systems and over 1,500 sites were evaluated.
- The number of PFAS-impacted community water systems (CWS) deploying treatment systems is used as the benchmark for total addressable market.
- The data was filtered by
 - Number of PFAS sites identified and projected.
 - Neighboring CWS to sites segmented by size.
- The results were then filtered by
 - % of sites likely to require treatment systems.
 - % of adoption of each treatment technology.
 - Current costs per technology.

Source: Bluefield Research

Base Case Forecasts by State 2020-2030

State-by-state forecasts show treatment systems and operating expenditures scaling from US\$XX million in 2020 to US\$XX million in 2030.

**Base Case CAPEX + OPEX
by Key State, 2020-2030**



Analysis

- Overall, CAGR of XX% is anticipated through 2030 as state markets scale up from zero with new regulation.
- The number of sites in Michigan put it at the leading edge of technology deployment. Through 2030, XX%, or US\$XX million, are forecasted.
- New Jersey is positioned as second largest market at a combined US\$XX million because of more aggressive legislation and large number of systems impacted by industrial sites requiring treatment for remediation.
- Massachusetts is the largest New England market, where regulation is picking up momentum. It is forecasted to reach US\$XX million.
- California leads Western markets due to total number of systems, multiple industrial sites (US\$XX million).

Source: Bluefield Research



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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