



BANYAN WATER[®]

The Banyan

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Water

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Analysis

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Trends &

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Emerging

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Risk

Report



The State of Water Risk in 2020

Water can no longer be ignored at the enterprise level. Our most essential resource faces unprecedented global risk driven by the debilitating combination of disproportionate water consumption, growing regional scarcity, accelerated urban population growth, weak and aging infrastructure, climate change and surging water rates.



Water use is growing at more than twice the rate of population increase in the last century, according to the United Nations.



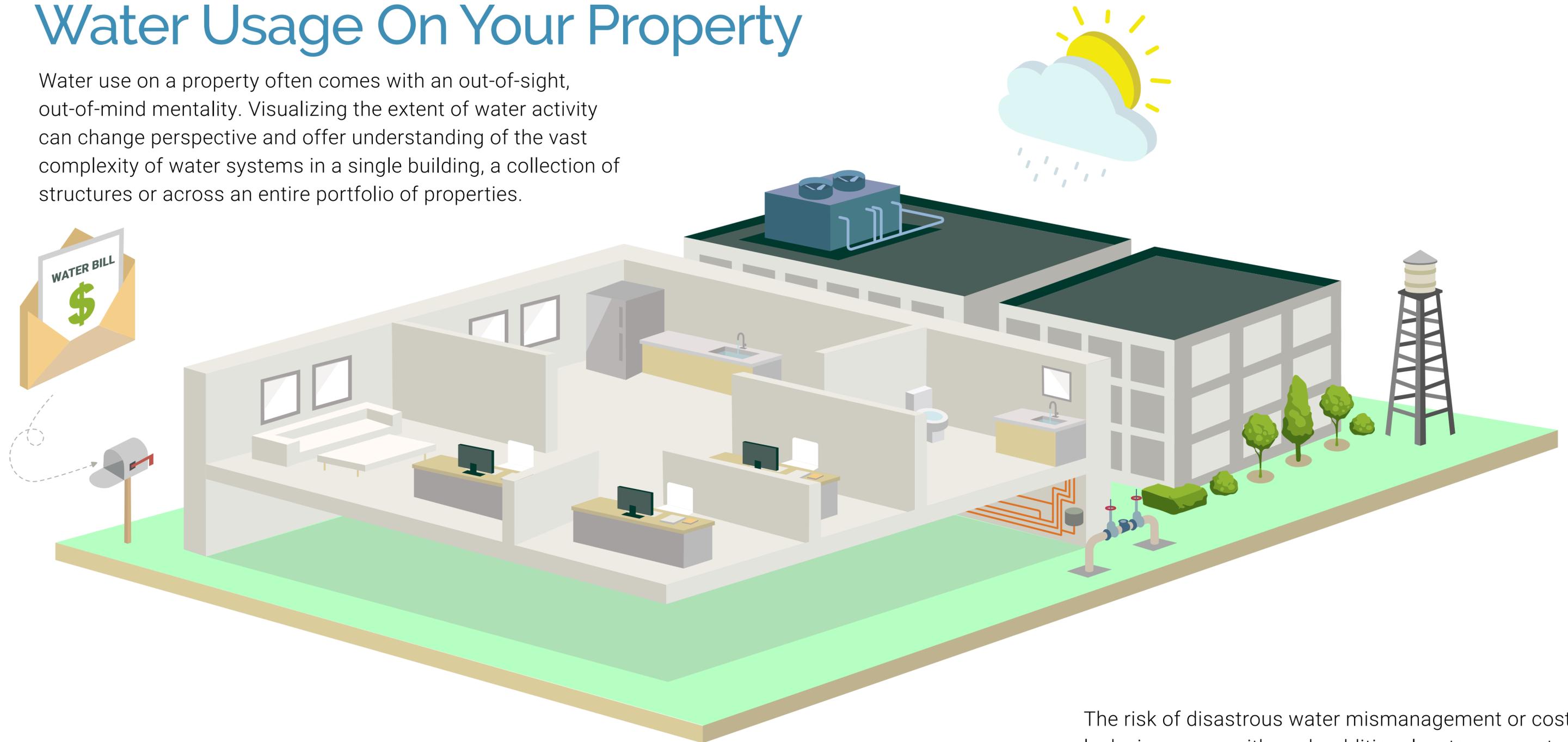
Infrastructure integrity continues to deteriorate. The ASCE's 2017 Infrastructure Report Card gave a D+ to America's overall infrastructure.



The 2017 Infrastructure Report Card also states that there are an estimated 240,000 water main breaks per year in the United States and according to the American Water Works Association, an estimated \$1 trillion is necessary to maintain and expand service to meet water demand over the next 25 years.

Total Water Management: Water Usage On Your Property

Water use on a property often comes with an out-of-sight, out-of-mind mentality. Visualizing the extent of water activity can change perspective and offer understanding of the vast complexity of water systems in a single building, a collection of structures or across an entire portfolio of properties.



The risk of disastrous water mismanagement or costly leaks increases with each additional water account or access point on a property and multiplies when enterprises lack the predictive, intelligent technology to monitor water flow and use in real time.

Total Water Management: Water Usage On Your Property

APPLIANCES AND FIXTURES

Indoor appliances and fixtures yield different flow rates and increase the risk of leaks (Sinks, toilets, kitchen, etc.)

CLIMATE

Variations in climate impact available water on a property

WATER ACCOUNTS AND SOURCES

Properties leveraging multiple water sources (e.g. city water, groundwater, water reuse, etc.) in numerous locations with varied rate structures and price points must monitor and optimize each asset



BILLING CYCLE

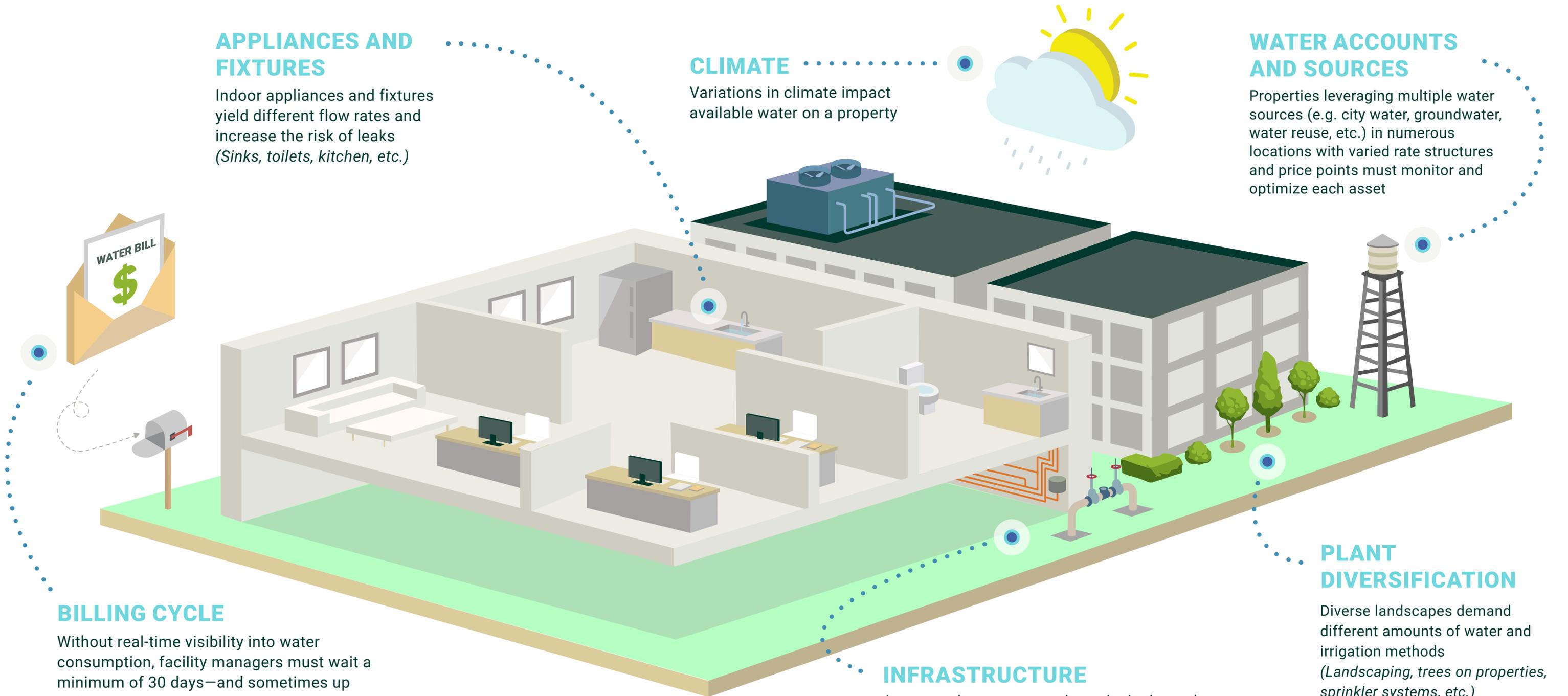
Without real-time visibility into water consumption, facility managers must wait a minimum of 30 days—and sometimes up to 90—to review water usage on their properties via their standard water bill

INFRASTRUCTURE

A property's water usage integrity is dependent on its local water infrastructure, which may be aged, at risk of leaks or subjected to reconstruction (Piping within the walls, cracking foundation, leaky pipes, etc.)

PLANT DIVERSIFICATION

Diverse landscapes demand different amounts of water and irrigation methods (Landscaping, trees on properties, sprinkler systems, etc.)



2019 Water Risk Report & Analysis

Banyan Water conducted an analysis across its portfolio of properties throughout 2019 to identify the hidden costs of water mismanagement and to illustrate water's risk potential due to the interconnectedness of numerous water variables on a property. Combined with market data on water usage and climate in the U.S., the analysis explores:



The impact of critical water leaks



Variations in average daily rainfall across regions



Changes in water rates by region



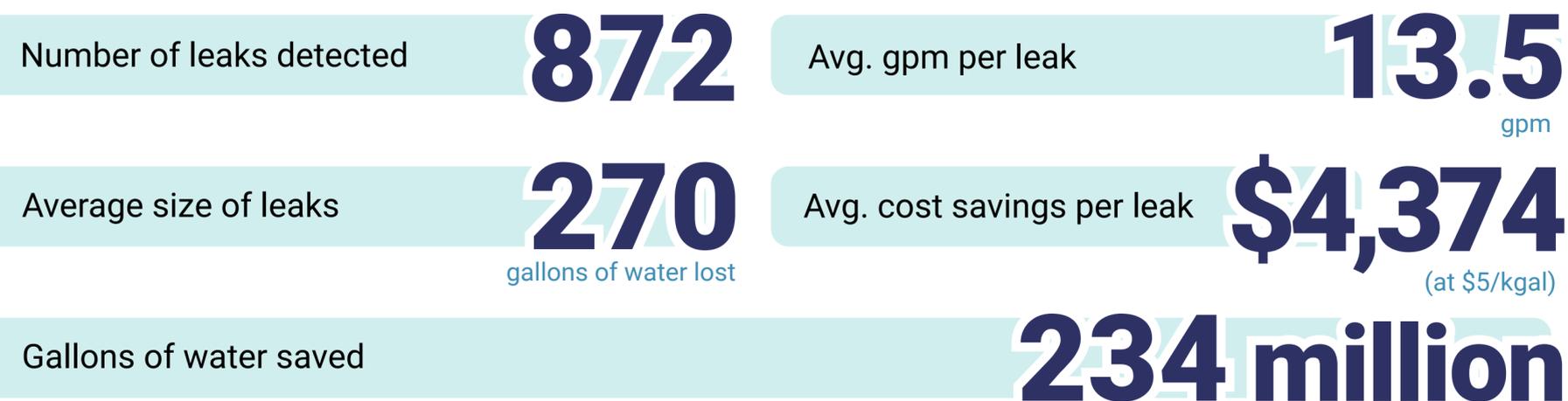
Flow rate comparisons in appliances and fixtures



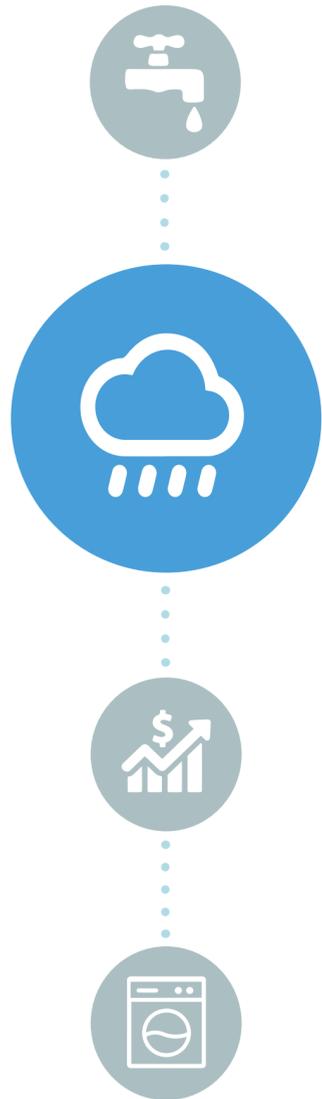


If left unchecked, leaks are perhaps the greatest source of water risk for enterprises and can lead to massive resource loss with severe impact on profitability.

2019 LEAK DETECTION ANALYSIS*



*Data reported by Banyan Water.



Enterprises can't control external factors related to climate change, but they can adapt to it. Its consequences—including enduring drought, rising temperatures, new precipitation patterns and increased strain on infrastructure—create fluctuations in water supply and demand that make property management more difficult and prone to loss.

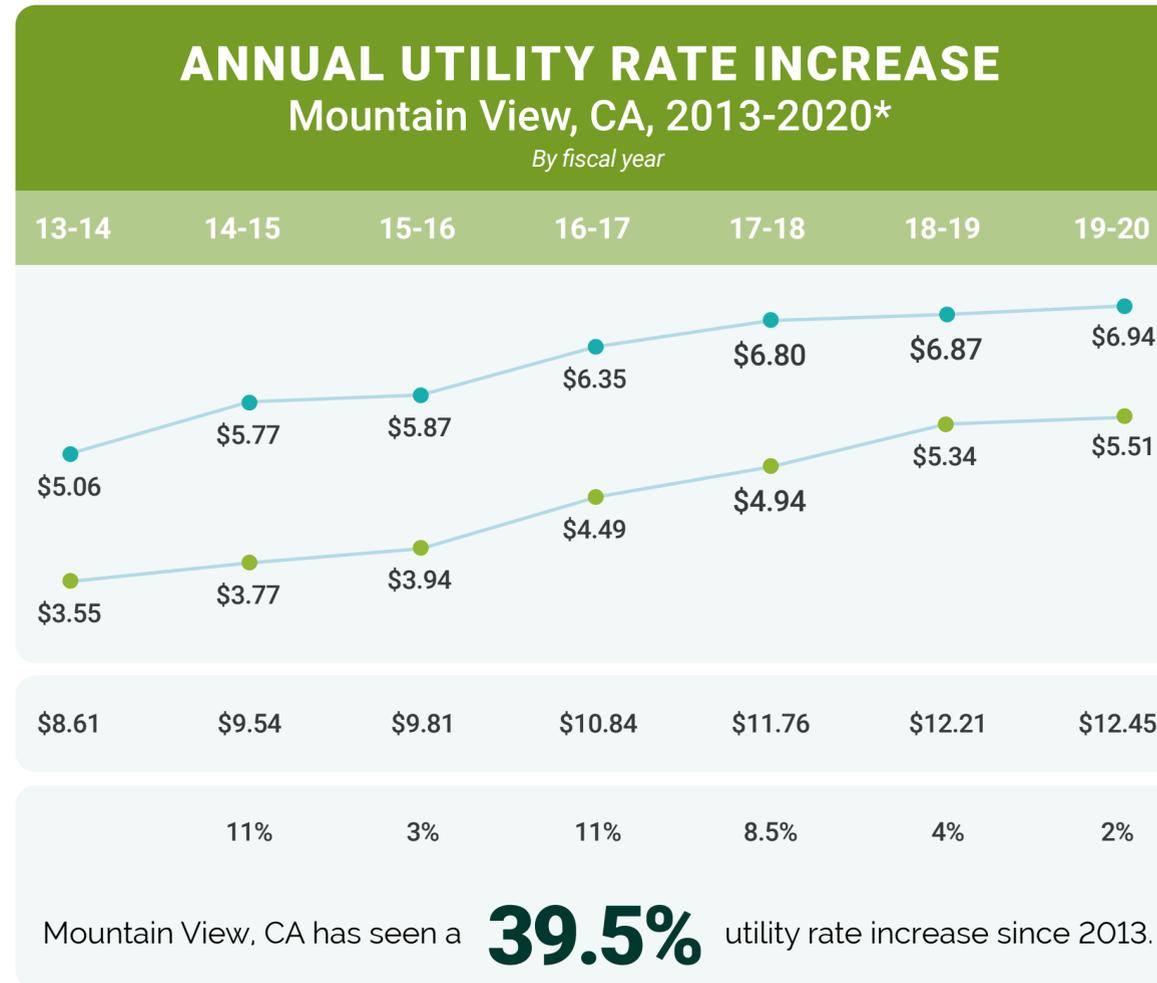
According to NASA, there is an **80%** likelihood of a decades-long megadrought in the Southwest and Central Plains between the years 2050 and 2099 if greenhouse gas emissions continue to increase.

VARIATIONS IN DAILY RAINFALL BY REGION 2017-2019*

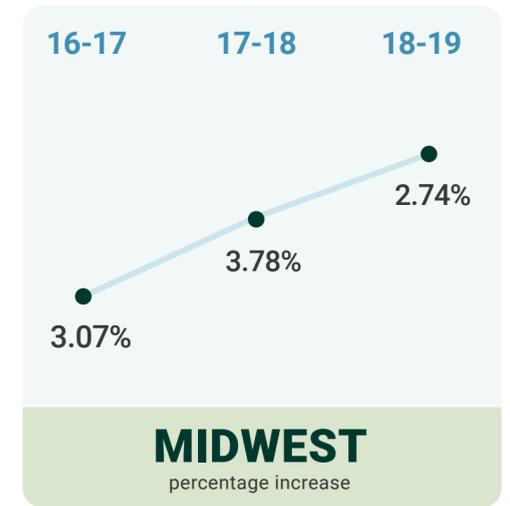
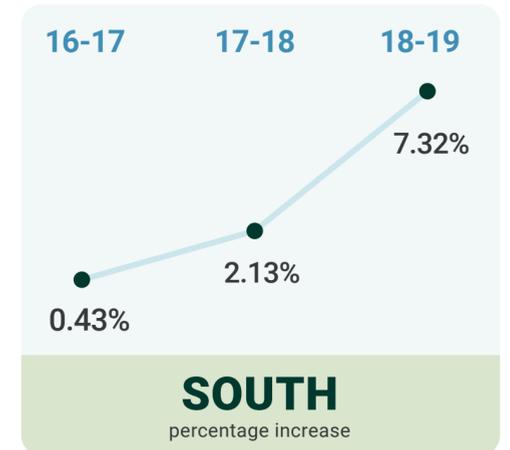


*Data reported by Banyan Water.

Unpredictable rates across regions only exacerbate water scarcity issues and pose a new challenge for portfolio managers, who will bear the responsibility of mitigating water risk at individual sites.

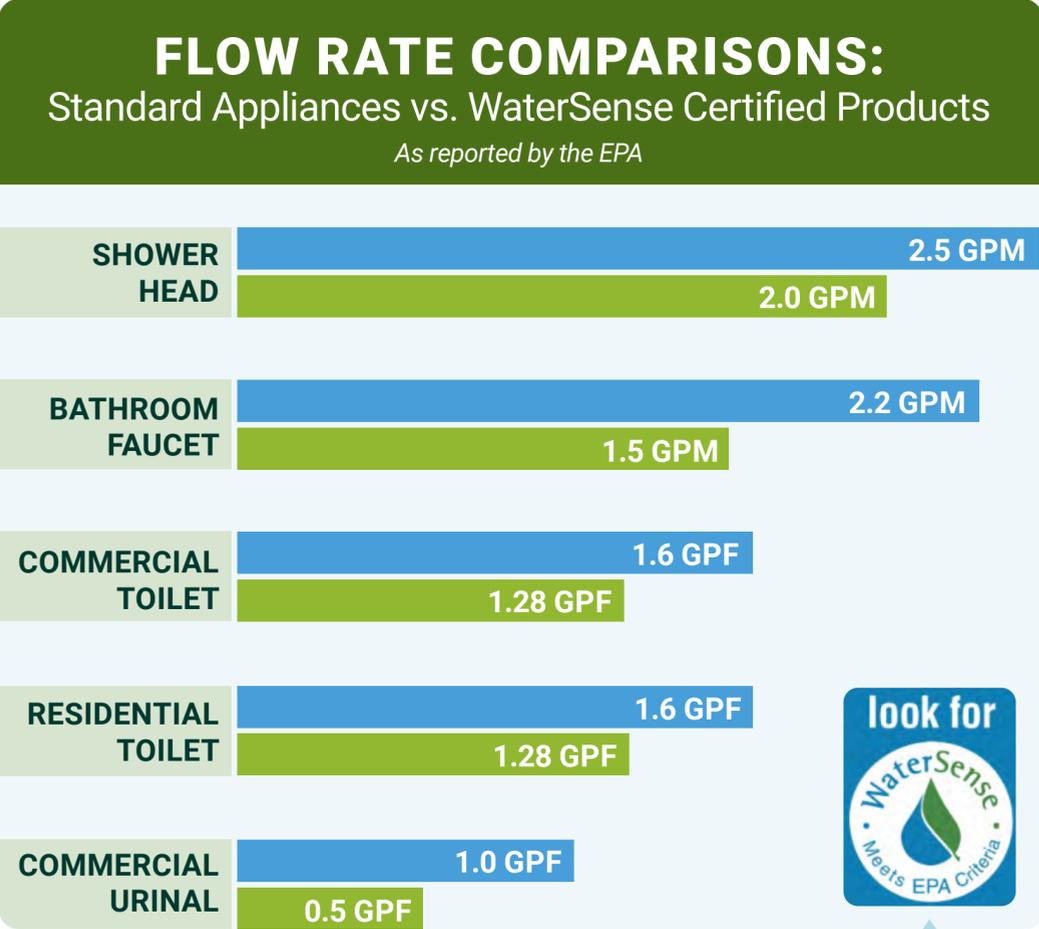


CHANGE IN WATER RATES BY REGION 2016-2019*



*Data reported by Banyan Water.

Existing buildings and local infrastructure are not standardized across the United States. Population, local rates based on infrastructure integrity, funding, improvement timelines, local contextual factors and evolving water sources make it difficult to anticipate water-related expenses throughout a property's lifetime.



■ Standard flow rates (gallons of water per minute/flush)
 ■ WaterSense products flow rates (gallons of water per minute/flush)

One of the challenges in operating multiple properties throughout the United States is maintaining consistency across properties and property management partners. By working with Banyan Water for intelligent water management, LivCor has created a consistent water optimization strategy that stabilizes its water budget and allows for accurate budget forecasting. As LivCor adds properties to its portfolio, it is able to factor water conservation opportunities into its decision-making to more clearly understand investment opportunities.

With the right technology that properly monitors water use at scale, learns and adapts to an individual water system, and ultimately visualizes a property's water data to provide actionable insights on water-related decisions, facility managers can mitigate water risk throughout their portfolios.

Advances in data collection and predictive analytics, automation and machine learning afford decision-makers the power to eliminate guesswork that could lead to millions of gallons of water waste and ultimately convert what were once areas of emerging risk into crucial cost-saving opportunities.

Ready to reduce your water risk?

CONTACT BANYAN WATER TODAY.



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ABOUT BANYAN WATER

Founded in 2011, Banyan Water is the leading provider of total water management software for the built environment. Using smart devices and real-time monitoring and analytics, Banyan protects Earth's most precious resource while generating untapped revenue for clients. Since the company's inception, Banyan has saved more than 3 billion gallons of water—equivalent to the resources required to make 150 million pints of beer—and in 2018, increased customer asset value by \$20 million. For more information, visit www.banyanwater.com.

METHODOLOGY

Banyan Water's flagship software platform, Banyan Water Central, gathers data from a variety of sources throughout a company's properties under management, encompassing thousands of flow sources throughout the United States. Onsite flow monitors are tracked 24/7, sending alerts in real time when leaks occur.

