



2022 W.A.T.E.R REPORT

Water Analysis Trends
Emerging Risk



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2021 Findings Summary

ABOUT BANYAN WATER

Founded in 2011, Banyan Water is the leading provider of data-driven water conservation software for the built environment.

Using smart devices and real-time monitoring and analytics, Banyan protects Earth's most precious resource while significantly reducing expenses for clients. Since the company's inception, Banyan has saved more than 4.5 billion gallons of water—enough to supply households in the city of Los Angeles for about a month during the current water crisis. The company also secured the esteemed EPA WaterSense label on select products and, in 2021, increased customer asset value by \$20 million.

Banyan Water offers a combination of hardware, browser-based software, and professional services to help businesses conserve water and avoid costly property damage.

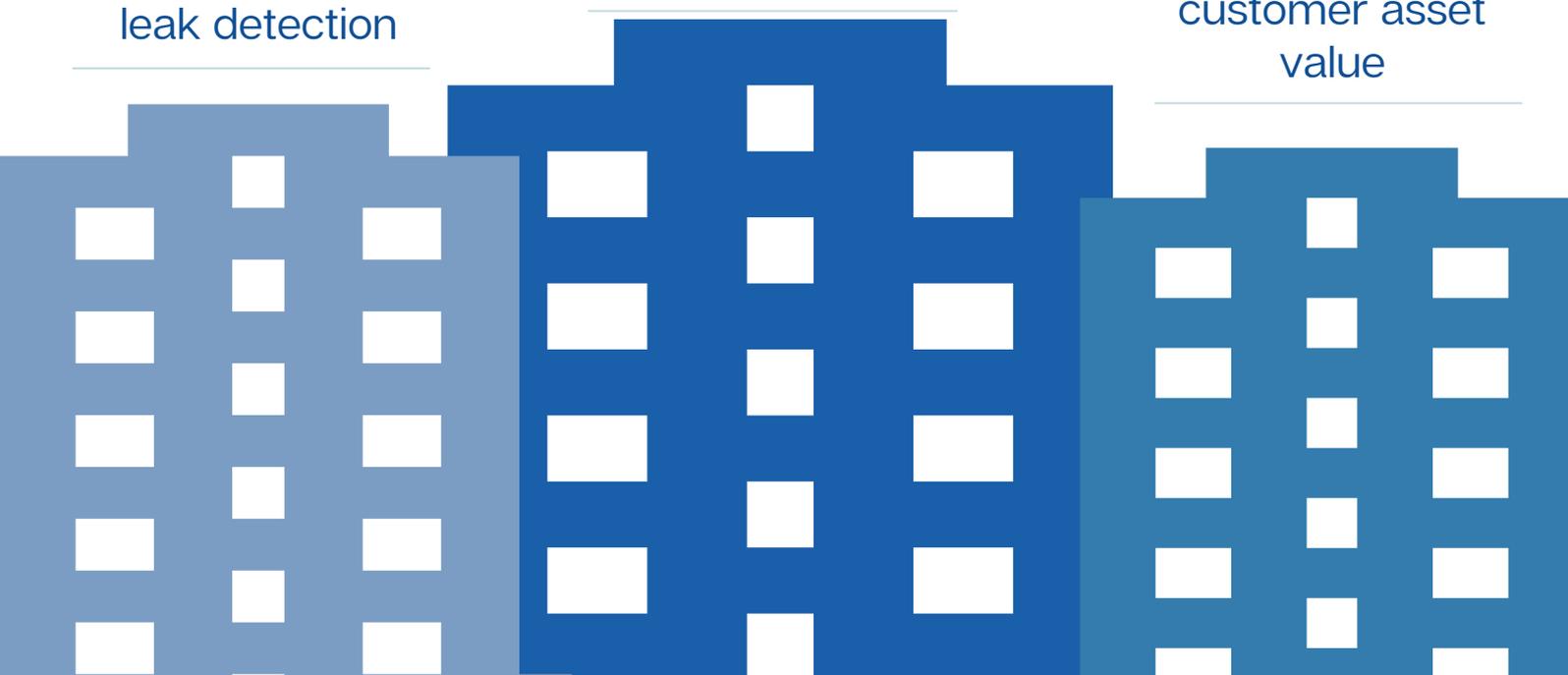
These offerings can be grouped in several general categories each with their own specific features and functionalities:

- Banyan Water Central
- Irrigation Insight[®]
- Indoor Insight[®]
- Embedded Hardware
- Professional Services

58 Million Gallons
Saved via
leak detection

4.5 Billion Gallons
Water saved since
inception

\$20 Million
Increase in
customer asset
value



OVERVIEW

Water shortages consistently rank, among global risks, as the greatest concern to policy-makers and business leaders (World Economic Forum, 2019).

In the United States, the three major consumers of water are inpatient healthcare centers (26.3%), lodging buildings (18.3%), and offices (17%). Collectively, these structures consume 839 billion liters of water per year (BlueTech Research 2021).

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.

Methodology and Sources

Banyan Water conducted an analysis across its portfolio of properties throughout 2021 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.

Large commercial buildings consume an estimated 1,360 billion liters of water per year (U.S. EIA)

Banyan's report analyzes 2021 data from its portfolio of properties, identifying major enterprise-level water risks jeopardizing large-scale conservation amidst historic droughts. The report also identifies the millions of dollars in hidden costs properties face due to water mismanagement coupled with rising regional water rates.

Combined with market data on water usage and climate in the U.S., the analysis explores:

The impact of critical water leaks

U.S. drought conditions and water cost risk

Rate variability and risks to multi-site building owners

The importance of real-time leak detection for indoor buildings

Water inefficiencies in landscaping

THE STATE OF WATER

Water, Earth's most precious resource, is in jeopardy. Water reserves are threatened as historic and persistent droughts intensify due to climate change, global consumption increases, and aging infrastructure deteriorate. As water rates also surge, enterprise-level water conservation is at a pivotal moment and it's time to take action.

The American Society of Civil Engineers' 2021 infrastructure Report Card gave America's collective infrastructure a C-, while water subgroups earned D-range grades.

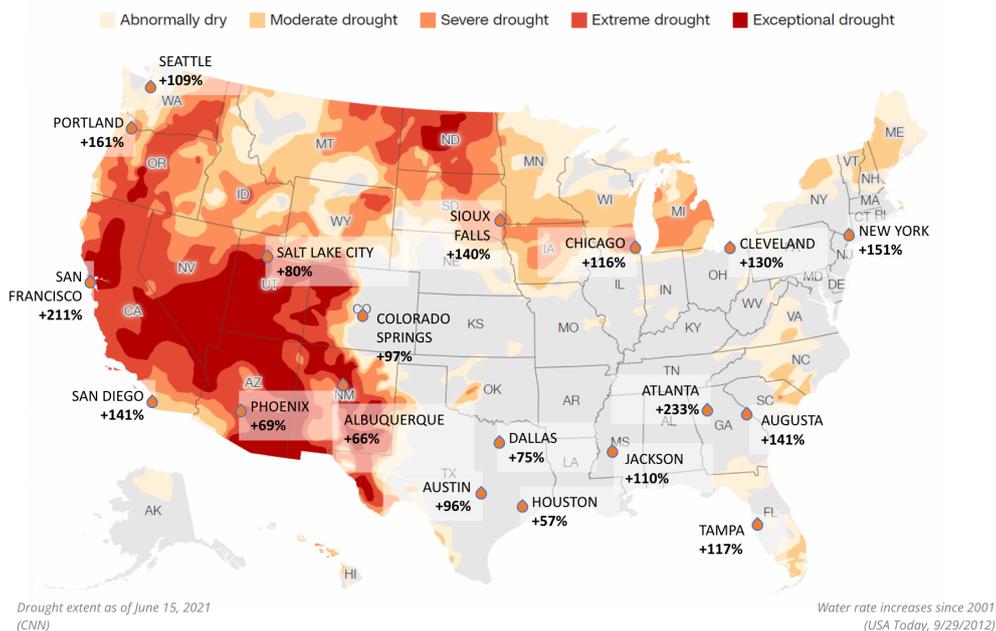
The 2021 Infrastructure Report Card also states a water main break occurs every two minutes in the United States, wasting approximately 6 billion gallons of treated water each day.

Avoidable water loss jeopardizes historically low water reserves as the U.S. Bureau of Reclamation anticipates declaring Colorado River's first water shortage if critical reservoirs continue to drop.

As of April 19, 2022-The Palmer Drought Index states that 46.35% of the U.S. and 55.38% of the lower 48 states are in drought

As America slowly improves its overall infrastructure, water sectors fall further behind.

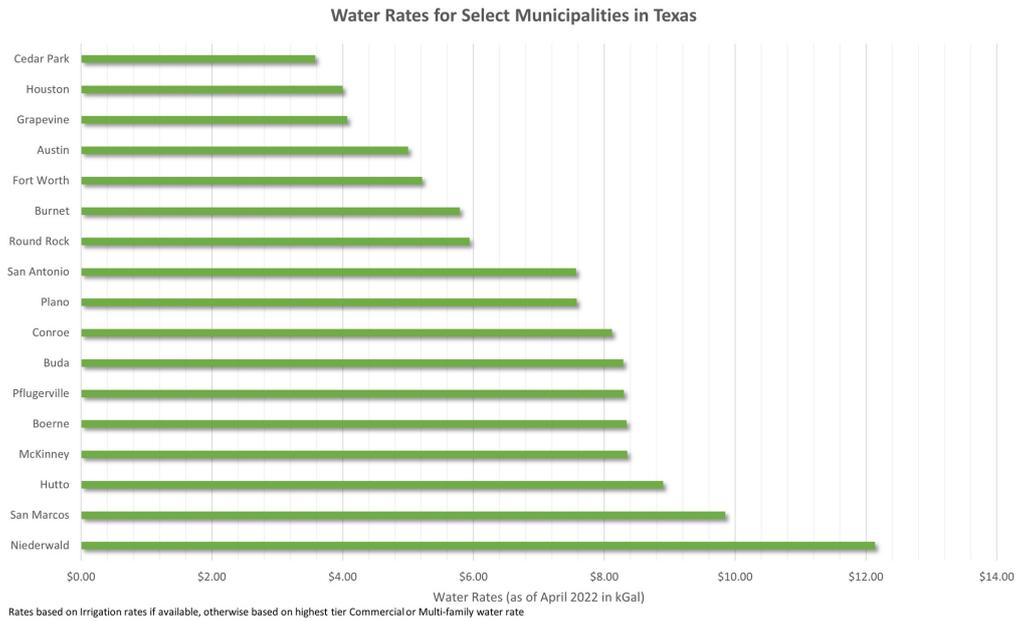
Many cities are experiencing triple digit rate increases due to drought and infrastructure upgrades



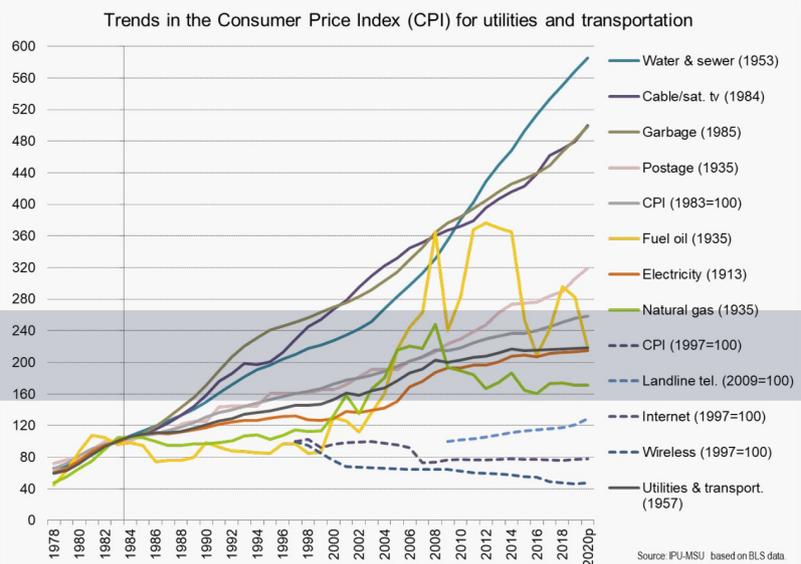
THE STATE OF WATER

Water Rate Variability Poses Risk to the Multi-Site Building Owner

There are over 148,000 public water systems in the United States (EPA). Unpredictable rates across regions only exacerbate water scarcity issues and pose a new challenge for the multi-site building owner, who will bear the responsibility of mitigating water risk at individual sites.



Water is rising faster than other utilities like electricity and natural gas



THE STATE OF WATER

WATER IS THE FASTEST RISING UTILITY COST

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Unprecedented water restrictions ordered as MWD declares water shortage emergency.

LA Times, April 27, 2022

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El Pasoans to see increase in water bill in Spring

KFOX 12, Jan. 14, 2022

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Utility looking to double water rate, increase sewer rates by as much as 50%

April 6, 2022 - Northwest Indiana

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Allen's water rates increase this month

Rate adjustments for North Texas Municipal Water District cities have happened every year since 2006.

Dallas Morning News, Nov. 1, 2021

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LEAK DETECTION

Leaks are silent water-wasters that can go undetected for months at a time. Oftentimes, facility or property managers are not alerted to leaks until a costly water bill lands on their desk.

The leading cause of property loss for real estate owners and managers is water damage.

The three most prominent ways water can cause property damage are: leaks, flooding, and surface water runoff.

Leak damage (non-weather related) costs the insurance industry over \$2 billion in claims annually

Depending on the size of the leak and the time of year, a leak may not even be detected. This can add tens of thousands of dollars onto a facility's or property's water bill, especially as water rates continue to rise year-over-year throughout the U.S.

4 Average gallons lost per minute

240 Gallons lost per hour

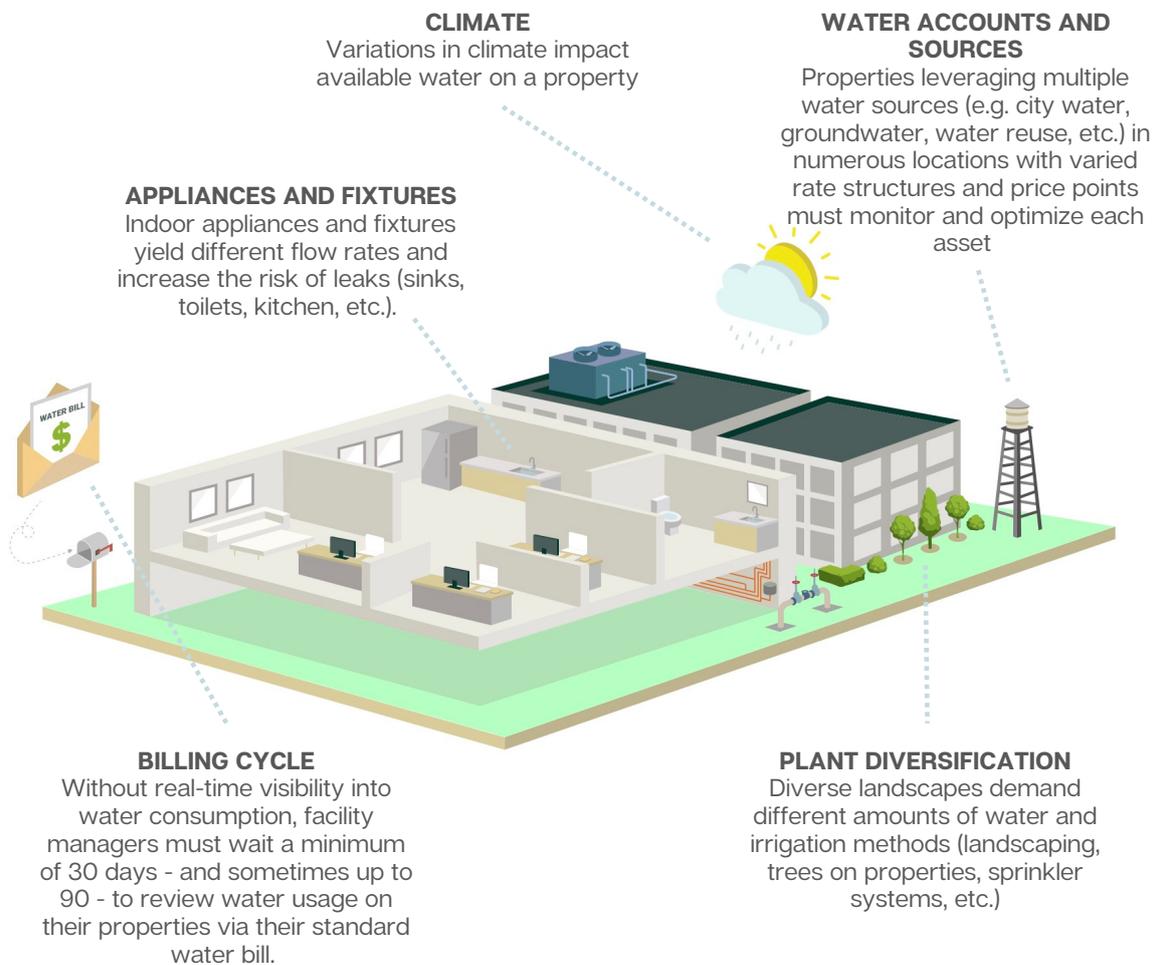
5,760 Gallons lost per day

*Methodology: Banyan installs master valves to ensure no water runs during active leak events. Banyan's software tracks the flow rate of the leak and time to resolution and records this in the Banyan system. The resolution time is then compared against the industry standard of 45 days to resolve a leak. Banyan calculates the estimated difference in prolonged usage over the course of 45 days, and the actual water usage measured from the leak.

TOTAL WATER MANAGEMENT

Water use on a property is often overlooked. Visualizing the extent of water activity can change the way you view water usage and consumption and provide an education on the 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 increase with each additional water account or access point on property and multiplies, when enterprises lack of predictive, intelligent technology to monitor water flow and use in real-time.

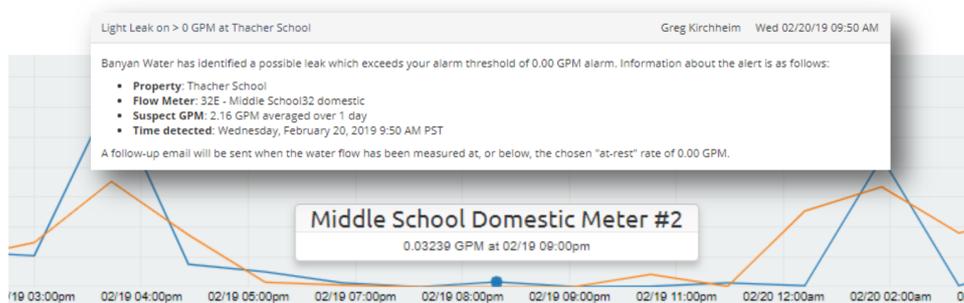


Banyan Water Solutions

- Insight + Data Visibility** - Gained insights and impact on water usage
- Value Optimization** - Cost savings, water savings, prompt leak detection
- Capital Preservation** - Aid improved decision-making and faster action, mitigate risk, drive valuation beyond operational savings

INDOOR INSIGHT - FLOW MONITORING

Small leaks can often go undetected for long periods of time in buildings-and if not detected-can lead to water waste and property damage. Real-time visibility plays a vital role for building owners who want to increase operational efficiency and change occupant behavior.



Location: Thacher Private School

Onsite: Multiple dorms and classroom buildings with dynamic water use

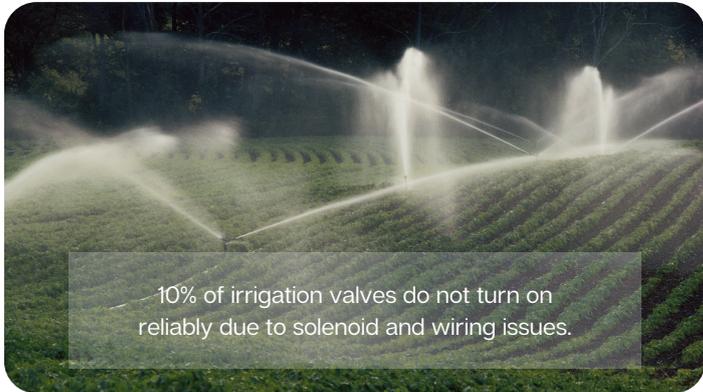
Situation: Banyan software and "light leak alerting" detected a very small leak (2 running toilets). Normally this would only be caught if reported or a routine inspection occurred

Benefit: Operational savings and efficiencies

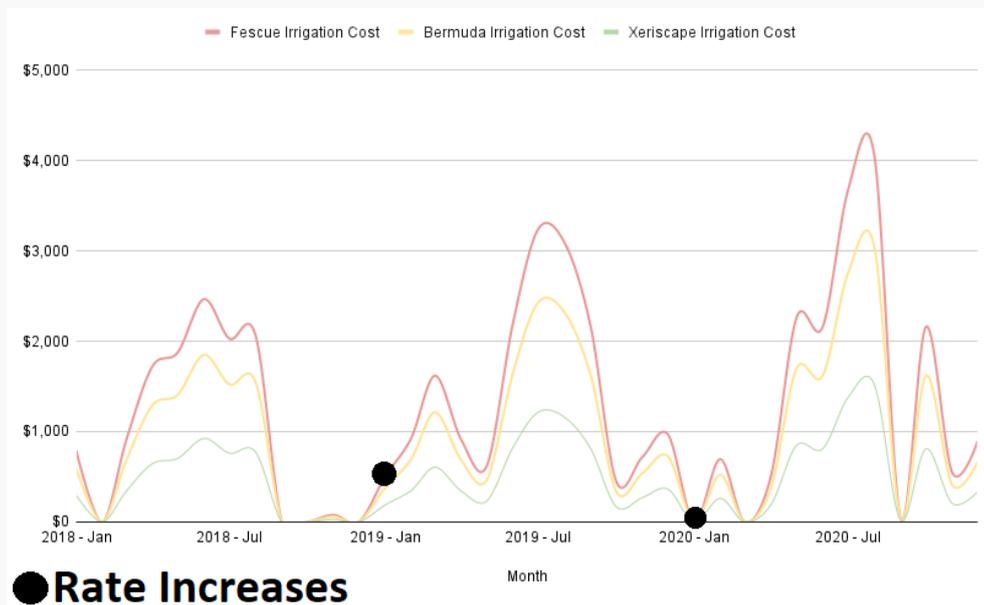
"Banyan's flexibility in data presentation and analysis cannot be overstated. Presenting students with microtrends based on each individual dorm's usage and showing board members macro-level trends campus-wide from the same tool has been hugely valuable for both the facilities team and the school as a whole."

– Ed Bennett, director of facilities for The Thacher School

IRRIGATION INSIGHT- LANDSCAPE EFFICIENCY



Our data shows the effects of water use and increased watering cost by plant type. This is for a commercial property in San Antonio where the watering requirements and cost for fescue (typically a cool season turf) are much higher than for Bermuda and drought resistant plants and are thus more suitable for warmer climates.



2021 SUMMARY

In 2021, Banyan Water saved millions of gallons of water and more...

1 billion gallons
Under management

50%
Portfolio Savings

500 million gallons
Water Saved

58 million gallons
Saved Via Leak Detection

4.5 billion gallons
Saved Since Inception

\$20 million
Increase in customer asset value



BANYAN W ^ T E R

smart water management

For more information about Banyan Water,
please visit us at: www.banyanwater.com