



According to the American Water Works Association's 2026 State of the Water Industry report, water utilities are facing a convergence of challenges that extend far beyond infrastructure renewal alone. Aging assets, financing constraints, long-term water supply reliability, emerging contaminants, workforce pressures, cybersecurity risks, and climate-related uncertainty are all competing for attention at a time when many organizations are struggling to fully recover costs through rates and fees. As utilities work to balance these interconnected demands, the conversation is shifting from simply delivering projects to demonstrating long-term value. The question is no longer whether sustainability should be considered in infrastructure decisions, but how organizations can systematically integrate resilience, operational performance, community outcomes, and financial stewardship into the way investments are planned and delivered.

The issue for many organizations is not whether sustainability matters; it is how to incorporate sustainability into infrastructure decision-making in a way that creates measurable value.

The organizations achieving the greatest value from sustainability are not treating it as a separate initiative. They are embedding sustainability considerations into existing planning, asset management, capital investment, and decision-making processes.

The water sector has always managed complexity. Utilities and public agencies routinely balance aging infrastructure, regulatory requirements, affordability concerns, environmental stewardship, and the need to provide reliable service every day.

Today, however, that complexity is growing.



EMBEDDING SUSTAINABILITY INTO DECISION-MAKING

Most utilities already have goals that align with sustainability principles.

Whether framed as resilience, asset management, operational efficiency, environmental stewardship, community engagement, or risk reduction, organizations have established priorities that reflect a long-term view of infrastructure performance.

The challenge is often implementation.

Sustainability efforts can lose momentum when they are viewed as separate initiatives rather than integrated business practices. Without clear

connections to organizational priorities, it can be difficult to secure leadership support, demonstrate value, or maintain long-term commitment.

Successful organizations tend to take a different approach. Rather than treating sustainability as an additional objective, they embed it into the way decisions are evaluated and projects are delivered.

This is where sustainability frameworks can provide significant value.



The **Guichon Creek Restoration Project** in Burnaby, BC, Canada (Envision Platinum, 2025) is a great example of the benefits of this integration. Jill Roth, Vice President and Senior Consultant at Iuuceo consulting inc. stated, "This project is an example of an organization creating change by making sustainability a core principle. The groundwork was laid with the Campus Plan which allowed for a swift delivery project execution that not only addressed the issue of a sinkhole but also expanded access to nature on campus while enhancing resilience. BCIT's dedication is proof that embedding sustainability principles into project delivery does not have to create a burden."

WHY FRAMEWORKS MATTER

CONSISTENT DECISION MAKING

A sustainability framework creates structure and consistency around decision-making. Rather than relying on individual perspectives or project-specific priorities, teams can apply a consistent set of considerations across projects, programs, and departments, leading to more transparent and repeatable decision-making.

Instead of asking, “What sustainability initiatives should we pursue?” organizations can ask a more useful question: “How do we evaluate infrastructure decisions through a sustainability lens?”

This approach was used by the project team on the **Denver Water Northwater Treatment Plant** (Envision Gold, 2020). From project inception, sustainability was a primary objective, along with modularity, quality, safety, and ease of maintenance. Pursuing Envision verification was one method set out by the project’s executive sponsors and project management team (PMT) to validate the project’s sustainability achievements. When the project was verified, the benefits of this approach were emphasized by Project Manager, Jill Crockett (then with Jacobs), who noted, “The Envision guidance provided by our design and sustainability consultant, AECOM, combined with a talented team of engineers and architects from multiple local firms, really pushed our team to make smart decisions and enhance the project’s sustainability in impressive ways.”

HOLISTIC VIEW

Traditional project evaluations often focus on technical requirements, schedule, and capital cost. Sustainability frameworks encourage teams to consider a wider range of factors, including resilience, resource efficiency, stakeholder impacts, long-term operations, and future adaptability, helping organizations identify opportunities and tradeoffs that might otherwise be overlooked.

COMMON LANGUAGE

Infrastructure projects bring together professionals from engineering, operations, planning, finance, communications, and leadership—each with their own priorities and perspectives. A sustainability framework creates a shared vocabulary that helps these groups communicate more effectively, align around common objectives, and understand how individual decisions contribute to broader organizational goals.

For this reason, some organizations, like Los Angeles County Public Works, emphasize education. During his closing keynote at ISI’s 2024 Annual Conference, Sustainability Director TJ Moon noted that they encourage everyone to get their Envision Sustainable Professional Credential (ENV SP), saying “...from legislation to finance, to planners, we include everyone because everyone is part of the project and everyone needs to be able to speak the same language, use the same words, understand the same vision. ...Educating staff is a really important first step.”

INTENTIONS TO OUTCOMES

Many organizations have sustainability, resilience, or strategic goals, but translating those ambitions into everyday decisions can be challenging. A framework helps bridge that gap by providing a structured way to evaluate performance, document decisions, and measure results, turning broad organizational aspirations into tangible actions and measurable outcomes.

For infrastructure owners and project teams, that shift can make sustainability far more valuable.





The **Bee Ridge Water Reclamation Facility** in Sarasota County, Florida (Envision Gold, 2025) was driven by a community-wide commitment to improve water quality in response to harmful red tide events that had significantly impacted Sarasota County's waterways and coastal areas. Sarasota County Public Utilities Assistant Utility Director Gregory Rouse noted that the verification illustrates the county's vision and leadership, as well as the community's support for prioritizing sustainable infrastructure, saying, "This recognition underscores the County's dedication to essential services and creating a lasting legacy for future generations. We are deeply proud of our commitment to environmental stewardship and extend our gratitude to the design and construction teams whose collaborative efforts made this achievement possible."

The Business Case: Creating Organizational Value

When evaluating whether to adopt a sustainability framework such as Envision, organizations often ask a simple question: What value does it create? The answer extends well beyond environmental performance.

PROJECT BENEFITS

Financial and Operational Performance

One of the most common misconceptions about sustainability frameworks is that they increase costs.

In practice, many organizations find that a lifecycle perspective helps reveal opportunities to reduce costs over time.

By encouraging teams to look beyond initial capital expenditures, frameworks can support decisions that improve operational efficiency, reduce maintenance burdens, extend asset life, and increase flexibility for future needs.

The result is often better-informed decision-making and a clearer understanding of long-term tradeoffs.

Stakeholder and Community Value

Infrastructure projects do not exist in isolation. They affect customers, neighborhoods, businesses, ecosystems, and future generations.

As expectations around transparency and accountability continue to grow, organizations are increasingly expected to demonstrate how infrastructure investments create broader community value.

A sustainability framework helps identify, evaluate, and communicate those benefits. Whether through improved environmental outcomes, enhanced public trust, workforce opportunities, or stronger stakeholder engagement, these considerations can become an important part of the overall business case.

Risk Reduction and Resilience

Risk management has become a central concern for water organizations.

Extreme weather events, changing regulations, supply chain disruptions, and infrastructure due for replacement all create uncertainty that can affect system performance and reliability.

A sustainability framework encourages project teams to consider future conditions and system vulnerabilities early in project development. Rather than addressing resilience as a separate exercise, resilience becomes integrated into planning and design decisions from the beginning.

Organizations that proactively evaluate risk are often better positioned to avoid costly retrofits, service disruptions, and unexpected operational challenges later.

Measurable Outcomes

One of the most substantial challenges facing sustainability initiatives is demonstrating results.

Without metrics, it can be difficult to show progress, secure support, or justify continued investment.

Frameworks provide a structured approach for measuring outcomes and documenting performance. This allows organizations to benchmark progress, communicate achievements, and support a culture of continuous improvement.

Perhaps most importantly, metrics help shift sustainability conversations from philosophy to performance.

ORGANIZATIONAL BENEFITS

Strategic Alignment and Organizational Buy-In

Most utilities have strategic goals related to reliability, affordability, resilience, customer service, workforce development, and environmental stewardship. A sustainability framework helps connect those organizational priorities to project-level decisions, creating a clear link between what an organization values and how infrastructure investments are planned and delivered.

This alignment also strengthens leadership support. Executives and governing boards are often responsible for balancing competing priorities and evaluating complex tradeoffs. Sustainability frameworks provide a structured basis for decision-making, helping leaders assess investments through a broader lens and communicate how infrastructure decisions support long-term organizational goals. Rather than operating as a separate initiative, sustainability becomes a mechanism for implementing organizational strategy.

Funding, Capital Planning, and Long-Term Value

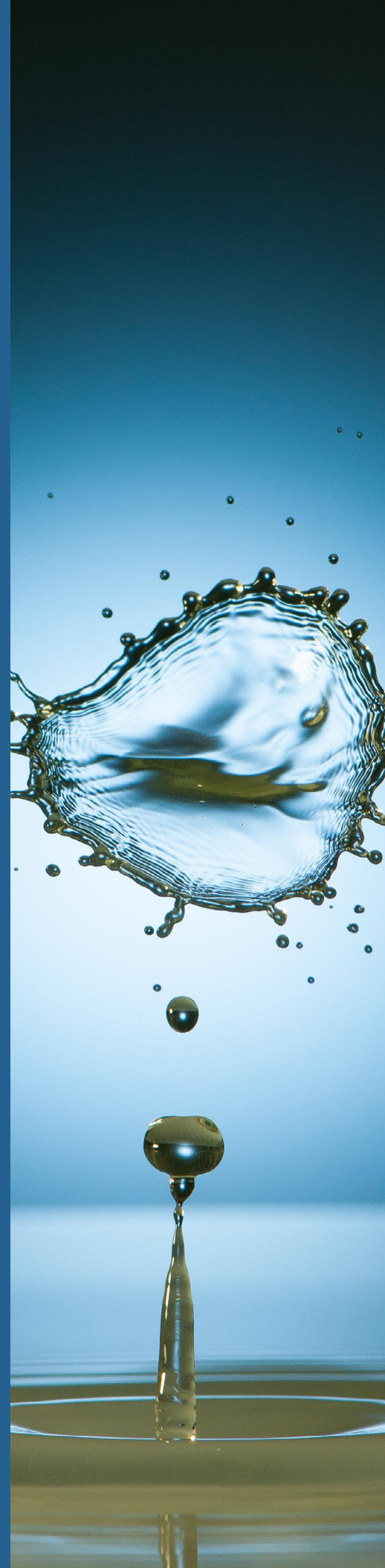
As capital needs continue to grow, utilities face increasing pressure to demonstrate the value of infrastructure investments. Funding agencies, regulators, governing boards, and customers increasingly expect evidence that projects deliver benefits beyond minimum compliance requirements. Sustainability frameworks help organizations document lifecycle value, quantify co-benefits, and communicate how investments support resilience, operational efficiency, community outcomes, and long-term financial stewardship.

Many organizations begin by applying sustainability frameworks at the project level, but the greatest value often emerges when sustainability considerations are integrated into capital planning and asset management processes. Incorporating sustainability criteria into project prioritization, alternatives analysis, and long-range planning helps ensure that organizational objectives are reflected consistently across an entire infrastructure portfolio, supporting more strategic investment decisions over time.

Risk Management and Regulatory Preparedness

Infrastructure decisions increasingly involve multiple forms of risk. In addition to physical risks such as extreme weather and asset failure, organizations must consider financial uncertainty, regulatory changes, workforce constraints, supply chain disruptions, and evolving stakeholder expectations. Sustainability frameworks encourage a more comprehensive evaluation of risk, helping organizations identify vulnerabilities and opportunities before they become costly challenges.

This broader perspective also supports regulatory preparedness. As requirements continue to evolve in areas such as water quality, wastewater treatment, climate resilience, environmental justice, and infrastructure funding, organizations that routinely evaluate projects through a sustainability lens are often better positioned to adapt. By incorporating broader performance considerations into planning and decision-making from the outset, they can reduce the need for reactive project modifications and respond more effectively to changing expectations.





SUSTAINABILITY WORKS BEST WHEN IT IS INTEGRATED

There is no single pathway to implementation.

Some organizations begin by implementing Envision on a pilot project or conducting a retrospective review of a completed project. Other organizations start by using Envision to incorporate sustainability considerations into capital planning processes, design standards, or organizational policies.

What successful organizations have in common is that they avoid treating sustainability as a standalone function.

Instead, sustainability becomes embedded within existing decision-making processes.

That integration often begins by framing sustainability in terms that resonate with different stakeholders.

Executives may focus on strategic priorities and risk management. Finance teams may focus on lifecycle value. Engineers may prioritize resilience and performance. Operations staff may emphasize maintainability and reliability.

When sustainability is connected to outcomes people already care about, organizational buy-in becomes much easier to achieve.

WHAT ORGANIZATIONS CONSISTENTLY LEARN

Across sectors and project types, several lessons emerge repeatedly.

- Start with alignment to organizational priorities rather than verification goals or point totals.
- Engage diverse stakeholders early in the process. Stronger outcomes often emerge when multiple perspectives are considered.
- Document and communicate results. Demonstrating measurable outcomes helps build momentum and creates opportunities for broader adoption.
- Focus on continuous improvement rather than perfection. Organizations do not need to transform overnight to begin realizing value.
- Build sustainability into existing decision-making processes. Organizations see the greatest value when sustainability is integrated into planning, capital investment, and project delivery processes, with leadership support and lifecycle thinking helping shape decisions before major commitments are made.

Sustainability in Practice

The value of sustainability frameworks becomes most visible when organizations apply them to real-world challenges.



Using Infrastructure Investment to Deliver Community Outcomes

NE 16th Street & Jefferson Avenue
NE Stormwater Green Streets
Project, Renton, Washington, USA;
Envision Verified, 2024

The City of Renton, Washington, used Envision to guide the installation of Green Stormwater Infrastructure along sections of NE 16th Street and Jefferson Avenue NE in the Sunset neighborhood, demonstrating how sustainability frameworks can help transform infrastructure investments to support broader community outcomes. Rather than approaching the project solely as a stormwater management upgrade, the City used Envision to evaluate opportunities related to environmental performance, neighborhood revitalization, and equity. Guided by community input, the project incorporated permeable pavers, vegetated treatment areas, and stormwater management features designed to improve runoff management while enhancing the public realm. The result is infrastructure that not only supports water quality and system performance, but also contributes to neighborhood character, creates a more attractive streetscape, and supports long-term community revitalization. This project illustrates how sustainability frameworks can help organizations expand the value of infrastructure investments by connecting technical solutions to community priorities and long-term outcomes.

Evaluating Infrastructure Through a Long-Term Lens

Bull Run Filtration Facility,
Multnomah County, Oregon, USA;
Envision Platinum, 2025

The Bull Run Filtration Facility, being developed by the Portland Water Bureau, illustrates how sustainability frameworks can help organizations evaluate infrastructure decisions beyond immediate compliance requirements. Faced with the need to improve drinking water quality and meet regulatory obligations, the project team used Envision to assess alternatives through a broader lens that included resilience, resource efficiency, environmental stewardship, and long-term community value. This approach influenced decisions ranging from facility siting and conveyance strategies to water recovery and energy optimization. For example, the project incorporated a zero-liquid-discharge treatment approach that recycles process water back into the system and leveraged a gravity-fed conveyance design that reduces long-term energy demands compared to pumped alternatives. By evaluating lifecycle impacts alongside technical and regulatory requirements, the project team developed a solution that not only addresses today's water quality challenges but also strengthens system reliability, operational efficiency, and resilience for future generations.

Turning Climate Adaptation into Long-Term Community Value

Lower Manhattan Coastal Resiliency
– Battery, New York, New York, USA;
Envision Platinum, 2024

The Lower Manhattan Coastal Resiliency – Battery project demonstrates how sustainability frameworks can help transform complex infrastructure challenges into opportunities for broader value creation. As part of New York City's larger coastal resilience initiative, the project was developed to reduce flood risk from coastal storms and sea level rise while protecting one of the city's most historic and heavily used waterfront destinations. Using Envision throughout project development, the team evaluated opportunities to strengthen environmental performance alongside resilience objectives. This led to strategies focused on reducing embodied carbon, improving stormwater management, minimizing construction waste, and lowering emissions associated with material transport. Through a structured material management approach, including reusing existing materials and selecting lower-carbon alternatives, the team achieved meaningful environmental benefits while identifying approximately \$3 million in cost savings. The result is infrastructure designed not only to protect Lower Manhattan over the coming decades, but also to preserve cultural assets and support long-term community resilience.



Looking Ahead

The water sector has always been in the business of protecting public health and supporting communities.

What is changing is the complexity of the challenges infrastructure investments must address.

Today's decisions will influence resilience, environmental outcomes, operational performance, affordability, and public trust for decades to come.

Sustainability frameworks do not provide all the answers. What they provide is a structured way to ask better questions, evaluate broader impacts, and make more informed decisions.

The growing adoption of Envision across the water sector reflects a broader shift in how utilities and public agencies approach infrastructure investment. Organizations are increasingly using the framework not only to pursue project verification, but also to strengthen planning, evaluate alternatives, manage risk, and communicate value throughout the project lifecycle. Water utilities, municipalities, and engineering teams have applied Envision to projects ranging from treatment facilities and biosolids programs to watershed initiatives and system-wide capital planning, demonstrating its versatility as a decision-making tool. As your organization considers its own sustainability journey, exploring Envision case studies, training opportunities, and implementation resources can provide valuable insight into how peers are translating sustainability goals into measurable business outcomes.

View the [Envision & the Water Sector Executive Brief](#).

Ultimately, the business case for sustainability is not about checking a box. It is about ensuring that the infrastructure we build today delivers the greatest possible value tomorrow.



**Institute for
Sustainable
Infrastructure**

The Institute for Sustainable Infrastructure is an education and research nonprofit (a 501c3) based in Washington DC. It was established in 2010 by the American Public Works Association (APWA), the American Society of Civil Engineers (ASCE), and the American Council of Engineering Companies (ACEC). Responding to the need for a comprehensive sustainability framework and rating system suitable for use in civil infrastructure development, ISI collaborated with the then Zofnass Program for Sustainable Infrastructure at the Harvard University Graduate School of Design to develop Envision.



Envision is a holistic sustainability framework and rating system that guides and assesses the sustainability and resilience of all types of infrastructure. It is a comprehensive tool created to assist agencies, municipalities,

consultants, contractors, and operators, in planning, designing, and delivering more sustainable infrastructure projects. The Envision framework is a decision-making tool that allows project teams to evaluate projects across a broad range of sustainability indicators, or "credits," that address environmental, social, and economic dimensions of sustainability to encourage systemic change. At its core, Envision is about supporting higher performance through better choices in infrastructure development.

**Learn more at:
sustainableinfrastructure.org/**