Case Study:
Climate Risk Disclosure for Equitable Climate Action

Introduction

As climate change accelerates, water utilities across the United States are facing mounting challenges, including extreme weather, flooding, droughts, wildfires, and heatwaves, which undermine their financial health, operational stability, and capacity to serve all in their communities equitably. These challenges necessitate efforts to assess, manage, and effectively communicate climate risks. Clear communication about these risks and associated resilience strategies can bolster a utility's financial stability, build public trust, and ensure the continued delivery of vital water services (EPA Report 1).

Defining Climate Risk Disclosure

This case study uses the term "disclosure" to broadly refer to the communication of climate risks and any activities taken by water and wastewater utilities to address climate resilience. This can include, but is not limited to, voluntary public reporting (e.g. public meeting presentations), providing climate and extreme weather planning information in official and related bond statements for credit rating agencies and investors, sharing climate risk mitigation activities with insurers, and disclosures prescribed by regulatory agencies such as the Securities and Exchange Commission (SEC) or otherwise required by law (EPA Report 1).

Climate risk disclosure – the practice of communicating climate risks and related utility adaptation and planning efforts – is integral to ensuring transparency and accountability for utilities, their investors, and the communities they serve. How a utility assesses and communicates climate risk, adaptative measures, and planning strategies has far-reaching implications for financial resilience, service delivery, long-term affordability, and community participation in decision-making. Transparent disclosure also helps align climate action with broader equity goals, ensuring that underserved populations are prioritized in adaptation efforts

Who to disclose risk to, and why?

Effective disclosure practices are essential for managing financial risks and fostering community trust.

Disclosure to investors and credit rating agencies is essential to maintaining their trust and, in turn, can help secure more favorable bond and credit ratings. Communicating climate risks, plans, and investments with community groups also helps to build trust and support inclusive decision-making. Transparent and clear risk communication is essential not only for managing potential liabilities but also for engaging with and building trust among community stakeholders (Gonzalez, 2024).Tailoring communications to each audience is essential for maximizing their impact.

- **Investors and Credit Rating Agencies:** Disclosing climate-related risks, and adaptation and planning strategies to investors and credit rating agencies is essential for mitigating financial impacts and securing favorable bond ratings. Utilities that clearly communicate their climate risks and resilience strategies may score higher on Environmental, Social, and Governance (ESG) metrics that bond rating agencies use, and therefore may be viewed as more reliable and resilient in the face of climate shocks and stressors (S&P Global Ratings). 2022. Through the ESG Lens 3.0: the Intersection of ESG Credit Factors and U.S. Public Finance Credit Factors; S&P Global Ratings. 2019. The Role of ESG Credit Factors in our Ratings Analysis). Utilities that secure more favorable bond ratings generally pay lower interest rates on capital projects, thereby supporting rate affordability (EPA Report 1). Climate disclosure, therefore, can be beneficial to rate payers, including low-income customers.

Utilities that disclose climate risks and actions may also be viewed as less risky investments by institutional investors, attract more capital, and demonstrate a commitment to long-term sustainability to regulators, stakeholders, and the communities they serve (EPA Report 1). Additionally, providing detailed risk disclosures may lead to better terms for securing insurance and lower chances of increased premiums or coverage loss in an increasingly costly and wary insurance market (S&P Global, 2020). Lower premiums can translate to reduced costs for ratepayers.

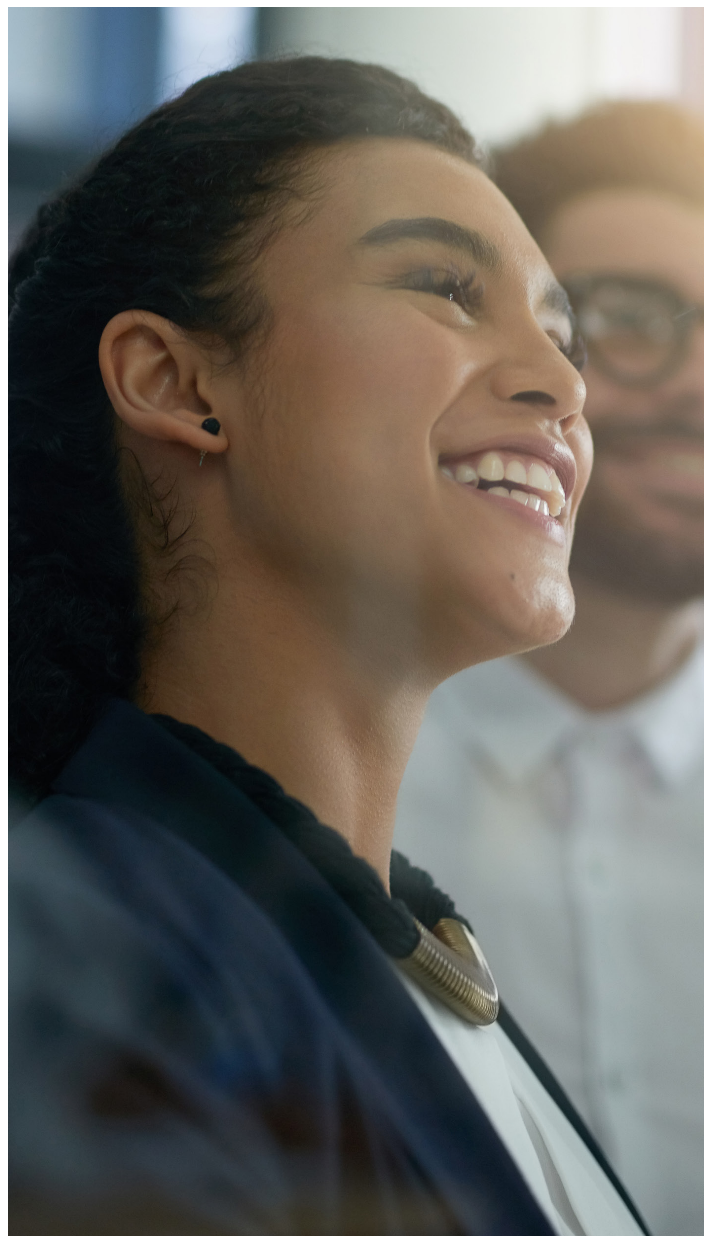
- **Community Groups and Ratepayers:** Transparent risk disclosure in community engagement is vital for building trust and ensuring the success of climate adaptation projects. By including community members in risk discussions, utilities can identify and prioritize projects that address specific vulnerabilities, ensure local voices are heard, and promote transparency and accountability in decision-making (USDN, 2017). Furthermore, involving communities helps mitigate litigation risks as informed stakeholders are more likely to support initiatives and feel their concerns are adequately addressed (Gonzalez, 2024). Clear and understandable communication empowers community members to understand risks, formulate advocacy agendas, and participate in decision-making, leading to more equitable outcomes.

How to communicate and disclose climate risk?

Utilities can communicate their climate resilience efforts through various channels tailored to specific audiences.

- **For financial institutions,** approaches like capital improvement plans (CIPs), long-term business plans, budgets, and/or formal ESG (Environmental, Social, and Governance) reports are key to demonstrating financial resilience and attracting investment. Documents such as preliminary bond statements and equity-focused sustainability reports can also highlight a utility's climate strategy, providing key information to investors and board members related to utility expectations and strategies for long-term viability.
- **For broader audiences**, public-facing tools like websites and dashboards can provide transparency on water quality and resilience efforts.
- **For community engagement**, utilities may rely on public meetings, workshops, and dedicated outreach initiatives. These platforms allow for dialogue and input, ensuring resilience strategies are inclusive and address the needs of underserved populations.

While disclosures to financial institutions emphasize risk management and investment strategies, community-facing communications prioritize transparency, accessibility, and empowerment, allowing for informed advocacy and participation in decision-making. As such, in practice, climate risk disclosures should be created with consideration to relevant audiences, resulting in targeted communications for different stakeholders. Targeted approaches enhance the effectiveness of engagement with financial stakeholders and community members.



The role of climate risk disclosure in equitable climate action

Equitable climate disclosure extends beyond describing the technical aspects of risks and includes ensuring accessibility and inclusiveness in risk-related communications. The ways a utility assesses and communicates climate risk have far-reaching implications for financial resilience, equitable service delivery, long-term affordability, and community participation in decision-making.

Specifically, transparent and accessible climate risk disclosure can:

- **Enhance Financial Resilience:** By improving investor confidence, creditworthiness, and access to affordable insurance coverage, utilities can better withstand financial challenges.
- **Build Physical Resilience:** Through regularly grappling with and disclosing climate risks, utilities can strengthen resilience through infrastructure investments.
- **Promote Equitable Service Delivery:** Building trust with communities, empowering marginalized groups, and championing advocacy efforts for historically underserved populations can lead to more equitable and affordable service provision.
- **Facilitate Access to Funding:** Clear climate risk disclosures can make utilities better positioned to attract funding and investment.
- **Ensure Long-Term Affordability.** Assessing and communicating climate risks supports effective financial management, which helps utilities mitigate risks and avoid unexpected costs that could otherwise lead to rate increases.
- **Strengthen Trust and Accountability.** Transparent climate disclosures help reinforce public trust and hold utilities accountable for addressing risks equitably. This accountability can enhance a utility's reputation and foster stronger relationships with stakeholders, including regulators, customers, and investors.

The following case studies include examples from leading utilities from across the country that are implementing climate risk disclosure practices. Insights included were gathered from conversations with utility staff and utility publications. The Additional Resources section at the end includes further reading on this topic from the EPA's Climate Finance Working Group.

Examples of Water Utilities' Climate Risk Disclosure Practices

Proactive Climate Communication to Ensure Water Resilience: Southern Nevada Water Authority

Using transparent, consistent, and early messaging

Description

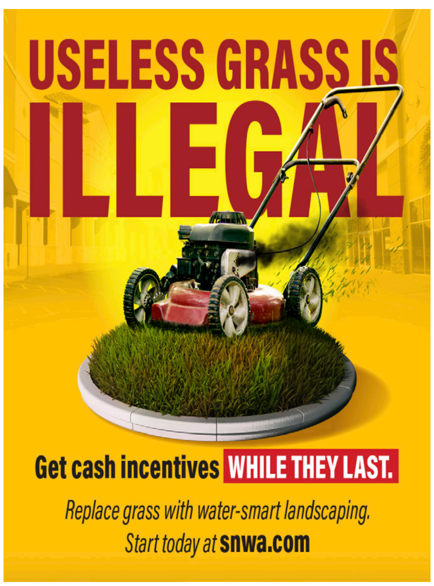
More than 90% of Southern Nevada's drinking water comes from the Colorado River, via Lake Mead, a resource that is increasingly strained by drought and overallocation. More than 25 years ago, the Southern Nevada Water Authority (SNWA) recognized the growing threat and took action, launching progressive and comprehensive water conservation initiatives and major infrastructure projects to safeguard the region's water future.

As SNWA continues to invest heavily in securing Southern Nevada's water supply, the utility has found that lasting solutions are best implemented with broad community support. Risk disclosure through clear, transparent, and frequent communication is at the heart of SNWA's approach, ensuring that stakeholders—including residents, community groups, investors, and credit rating agencies—understand the urgency of the threats, the solutions needed, and the associated costs. By fostering awareness and support, SNWA is driving Southern Nevada toward a more water-secure and climate-resilient future.

Building Community Awareness to Drive Action

Securing Southern Nevada's water future requires significant investment in policies, programs, incentives, and infrastructure. These efforts relate to personal and commercial economic activity, making public support essential. To foster this, SNWA prioritizes transparent communication and community engagement, ensuring residents, public officials, and other stakeholders understand the necessity and benefits of water conservation.

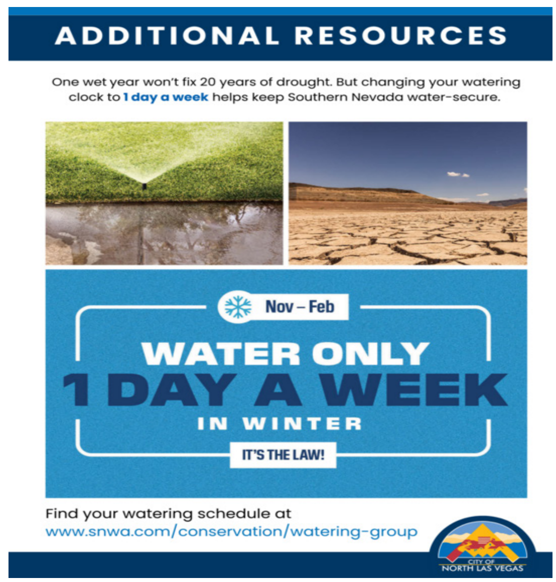
For example, legislation was passed in 2021 to reduce non-functional grass in the Las Vegas metropolitan area. The law, which takes effect in 2027, prohibits property owners from irrigating non-functional areas of commercial, multifamily, and homeowner association (HOA) developments, including medians, streetscapes, and parking lots. Once fully implemented, the law is expected to save approximately 4.5 billion gallons of water annually. To drive awareness, SNWA launched a public education campaign emphasizing that decorative grass serves no recreational purpose and is consuming the region's limited water supply.



In 2022, Southern Nevada's primary water supply reservoir, Lake Mead, hit historic lows, sinking to just 28% of normal capacity—the lowest since the reservoir was filled in the 1930s. SNWA launched the "Get Real" campaign, focused on educating the public about the community's seasonal watering schedule. The campaign juxtaposed wasteful images of water from spray irrigation running off properties onto sidewalks and into gutters next to dramatic images of low lake levels and mud cracks to encourage property owners to follow the desired seasonal watering schedule and reduce outdoor water use. The effective campaign, which ran through 2024, helped increase watering schedule compliance from 60% to 76%.

These broad and community-wide outreach initiatives help ensure that projects and programs are developed and implemented equitably across the region.

Beyond traditional media, SNWA employs in-person approaches to disclose risks, meeting people in places they frequent, such as local business meetings, church groups, breakfast clubs, political gatherings, and industry conferences (see the community outreach table). By actively participating in these events, SNWA fosters direct conversations about critical water issues, from water supply and treatment to climate change, drought, and conservation efforts.



Las Vegas's large transient population presents a unique challenge. Because new residents arrive constantly, introducing and reinforcing conservation habits is essential. Consistent, clear messaging about policies and programs helps build an ethic and culture that makes water conservation second nature, ensuring the community remains engaged and informed.

Honest, transparent dialogue is key. SNWA does not shy away from tough conversations, ensuring the public understands the urgency of water conservation, their role in it, and the long-term benefits of conservation initiatives. Public trust is crucial to reducing climate risks and securing Southern Nevada's water future.

Audience	Communication Medium

▪ General public
▪ Customers/ratepayers
▪ Landscape companies
▪ Homeowner Associations (HOAs)
	▪ Ad campaign with messaging on the need for water conservation, given conditions in Lake Mead and the Colorado River
	▪ Ad campaign promoting water conservation programs, incentives and other educational resources
	▪ Direct messaging via billing
	▪ Education and outreach
	  ▪ Schools K-12 and university settings
	  ▪ Neighborhood meetings and social gatherings, local business, church groups, breakfast clubs, political gatherings
	  ▪ Industry conferences

▪ Board members ▪ Member agencies	▪ Regular Colorado River conditions and conservation program updates via board presentations ▪ Principle member agency meetings ▪ Water Resource Plan & Joint Conservation Plan ▪ Major Construction and Capital Plan

Clear Climate Communication for Investor Confidence

SNWA prioritizes clear, transparent disclosure of climate-related vulnerabilities to investors and credit rating agencies. When issuing municipal bonds, SNWA integrates climate hazards, potential water resource supply vulnerabilities, and risk mitigation actions into its financial disclosures, ensuring buyers and rating agencies gain a full understanding of the utility's assessments. This proactive approach not only enhances investor confidence but may also improve bond ratings, lower interest rates, and reduce insurance costs, ultimately helping SNWA manage rate pressures more effectively.

By embedding climate adaptation strategies into its financial planning, SNWA strengthens long-term resilience while meeting federal compliance standards. Lower borrowing costs help save money for rate payers amid increasing climate challenges.

SNWA communicates financial risks and conservation strategies through multiple channels, including:

- **Official Statements and Investor Website** – Providing clear insights for rating agencies and investors seeking reliability.
- **Operating and Capital Budgets and Comprehensive Financial Reports** – Detailing financial planning and risk mitigation efforts.
- **Water Resource Plan and Joint Conservation Plan** – Highlighting long-term water supply strategies and conservation goals.
- **Major Construction and Capital Plan** – Outlining infrastructure investments for a water-secure future.

SNWA's Water Resource Plan serves as an internal planning tool and as a publicly available report, projecting water resource risks and conservation needs over a 50-year horizon. Its data-driven, scenario-based approach captures future uncertainty and enables nimble, adaptive management strategies. This approach not only guides infrastructure and policy decisions but also strengthens SNWA's ability to secure state and federal funding. Climate impact data in the report supports grant applications that help expand conservation programs, ultimately reducing costs for the community while enhancing climate resilience.

SNWA sets a standard for how water utilities can integrate climate risk management, infrastructure and operational planning, and community-focused strategies. As climate challenges intensify, SNWA's approach underscores the importance of foresight, honesty, and collaboration in securing water resources for future generations.

Insights

- **Brutal Honesty:** Transparent communication about risks and costs builds long-term trust with stakeholders, even if initial conversations are difficult.
- **Early Investment:** Long-term initiatives, like SNWA's late-90s conservation programs, require years to deliver measurable results. Start early to stay ahead of future challenges.
- **Adaptability:** Conditions and technologies evolve. Adaptive management and scenario-based planning ensure flexibility in addressing uncertainties.
- **Collaboration:** Consistency in messaging across financial markets, regulatory agencies, and community forums fosters credibility and cohesion.

Additional Resources

For more information about SNWA and its disclosure efforts, please visit the links below:

- https://www.snwa.com/
- SNWA Water Resource Plan
- SNWA Joint Conservation Plan
- SNWA Major Construction and Capital Plan

Climate Risk Disclosure through ESG Reporting: DC Water

Integrating climate risk into financial planning to improve creditworthiness and benefit ratepayers.

Description

Since 2021, DC Water has disclosed its climate risks through an annual ESG+R (Environmental, Social, Governance, and Resilience) report. This transparency reflects the utility's focus on reducing its environmental and energy impacts while delivering affordable services to customers. As an early adopter of ESG reporting in the water utility sector, DC Water is a leader, paving the way for similar disclosures to gain traction across the sector.

DC Water's journey toward ESG alignment began in 2016, when it became the first water utility to issue a green bond to fund the DC Clean Rivers Project. This financing model required additional environmental reporting on the progress made in reducing combined sewer overflows. In 2021, investor feedback on DC Water's green bond reporting prompted the utility to formalize and expand its financial disclosures, integrating ESG frameworks. DC Water published its first ESG report for fiscal year 2021 and has released a report each year since. Now in its fourth year of publishing an annual disclosure report, DC Water continues to demonstrate how an ESG-focused approach can drive accountability, improve resilience, and support long-term sustainability.

Telling their own story

Climate risk disclosure is a critical element of DC Water's communications with key stakeholders, including rating agencies, bond buyers, investors, and insurers. Bond ratings consider more than just financial performance—they also assess management quality. By including the ESG+R report, which goes beyond financial metrics, DC Water proactively demonstrates its leadership and commitment to staying at the forefront of innovation in the water sector, developing forward-looking solutions to meet future goals, emerging risks, and community needs (DC Water FY 2023 ESG+R).

Unlike standard financial reports like the Annual Comprehensive Financial Report (ACFR), which focus on expenses, financial plans, and capital improvement projects, the ESG+R report provides a broader perspective on DC Water's operations and sustainability efforts. It includes metrics such as the utility's energy usage, solar energy generation, and combined heat and power project outcomes. The social section highlights succession planning and workforce development, while the governance section examines board operations, policy management, and organizational structure. These metrics showcase how sustainability and effective management are embedded into DC Water's overall strategy.

DC Water also discloses risk via the Task Force on Climate-Related Financial Disclosures (TCFD) Index. The TCFD framework focuses on four key components of climate risk: governance, strategy, risk management, and metrics and targets. DC Water presents these components in a clear, user-friendly format tailored for investors.

Impact of the report

DC Water's ESG+R report plays a critical role in supporting rate affordability. The utility's transparent reporting and open communication with investors and rating agencies have helped it maintain a AAA bond rating. Investment firms prioritize utilities that identify risks and address them through capital improvement projects and actionable plans while managing financial risk. DC Water's proactive approach to climate risk disclosure, emphasizing consistent and early communication, has strengthened its relationships with investors. This strategic reporting benefits customers by supporting effective financial management and management of cost pressures.

Insights

- **Understand Your Audience:** Tailor messaging to the needs of investors, rating agencies, and insurers. Highlight risks along with actionable plans to address them.
- **Transparency as Strength:** While risk disclosure may initially seem negative, it can build trust, especially when paired with a strategic and phased approach to implementation. In addition, including metrics beyond standard financial data is notable to rating agencies and insurers.
- **Proactive Engagement:** Regular communication with financial stakeholders ensures alignment with their expectations.

Learn More

For more information about DC Water's ESG reporting and Clean Rivers Project, please visit the links below:

- 2023 DC Water ESG Report
- DC Clean Rivers Project

Additional Resources

Climate Change in the Drinking Water and Wastewater Sectors and the Impact on Financial Resilience, Insurability, and Credit and Investment Quality. This report by the EPA's Climate Finance Working Group details the work group's initial discussions and findings from four convenings. The Climate Finance Working Group brings together experts from the financial and insurance industries, academia, and water sector utility managers to investigate the impacts of climate change on water utility bond ratings and creditworthiness.

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