



THE WATER TOWER

A GUIDE FOR RECRUITING AND RETAINING TALENT IN THE WATER SECTOR



Report by WaterRising Institute



The Water Tower Institute is a 501(c)(3) non-profit organization registered in Buford, Georgia, USA. The Water Tower's mission is to be a hub for solutions in research, technology, training and engagement for water utilities ensuring access to safe, affordable and resilient water services.

TheH2OTower.org



WaterRising Institute is a 501(c)(3) non-profit organization registered in Detroit, Michigan, USA. WaterRising's mission is to make water management inclusive for all genders by helping utilities, industries and government prioritize a gender-inclusive, water positive approach to solving our water crisis made urgent by the climate emergency.

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ACKNOWLEDGEMENTS

We are grateful for the support from the following people who have contributed to this white paper:

Melissa Meeker, Courtney Lee, Alicia Douglas, Jennifer Steffens, Sivan Schlecter, Jennifer Rider, David Totman, Andrew Marconi, Janine Witko, Neha Khandekar, Maddalena Guaglione, Yvonne Williams Forrest, Ann O'Beay, Tara Douglas, Antra Bhatt, Cindy Wallis-Lage, and Anna Falth.

We owe particular thanks to **The Water Tower** for partnering with us on this project.

This research has been supported by a grant from the U.S. Environmental Protection Agency's Innovative Water Workforce Development Grant Program.



A GUIDE FOR RECRUITING AND RETAINING TALENT IN THE WATER SECTOR

The men and women in the water and wastewater utility sector are the backbone of our communities. These dedicated professionals work around the clock to ensure safe drinking water and effective wastewater treatment, facing challenges like water main breaks and infrastructure failures. Their expertise is essential to public health, environmental protection, and the overall sustainability of our communities.

We believe through strong executive leadership and community engagement, water utilities can achieve a workforce development strategy to attract more women into the sector.

Despite its importance, the water sector faces a growing workforce challenge due to an aging employee base, insufficient recruitment pipelines, and the need for innovation in tackling complex water issues. Addressing these challenges requires strategic efforts to attract and retain a broader range of talent.

While the water workforce in the United States is made up of 1.7 million people, women currently represent less than 18%¹, indicating an opportunity to better leverage the full range of available talent in the U.S. labor pool. Understanding the barriers that limit participation and advancement can help utilities develop effective workforce strategies. An initial limited study conducted by WaterRising Institute was conducted to address this insight gap.

The survey of 16 U.S. water utilities identified several key challenges:

- **Underrepresentation** of women in full-time, part-time, and contractor roles.
- **Lack of work-life balance** policies, including paid parental leave.
- **Limited diversity programs** and inconsistent tracking of pay equity, promotions, and recruitment practices.

This white paper presents actionable recommendations to address these issues and strengthen the workforce, including:

- **Targeted recruitment strategies** to attract a broader range of talent.
- **Workforce benchmarking** to track sectoral progress and identify gaps.
- **Comprehensive support services** like flexible work policies and childcare assistance.
- **Professional development opportunities** to advance careers.
- **Pay equity and promotion tracking** for greater transparency and fairness.
- **Enhancements to workplace culture** to foster inclusivity and retention.

By adopting these strategies, water utilities can build a resilient, diverse, and sustainable workforce equipped to tackle future challenges and ensure reliable water services for their communities.



INTRODUCTION

The water sector plays a fundamental role in public health, environmental protection, and community well-being. However, workforce challenges, such as an aging employee base and limited recruitment pipelines, threaten the sector's ability to meet current and future demands.

A significant proportion of the current workforce is nearing retirement. In 2023, the American Water Works Association (AWWA) reported that nearly 30% of water sector

employees are eligible for retirement within the next decade². This exodus of experienced workers creates knowledge gaps and operational challenges. Additionally, traditional recruitment efforts have not sufficiently addressed the need for new, diverse talent to combat workforce shortages and create a sustainable pipeline of water labor and leadership.

Addressing these challenges requires attracting and retaining a broad range of talent. In the U.S., women currently make up less than 18% of the water workforce, estimated at 1.7 million people³. This underrepresentation is particularly pronounced in technical and leadership roles. Addressing these gaps requires tapping into a wider pool of talent to drive innovation, operational efficiency, and resilience.

Historically, workforce development initiatives have been broad in scope but lacked targeted strategies for attracting a diverse range of candidates. *The American Water Infrastructure Act of 2018*⁴ and subsequent federal efforts highlight the need for innovative approaches to workforce development. By improving recruitment practices, offering professional development, and enhancing workplace culture, the water sector can better meet its evolving demands.

To sustain the water sector's critical functions, utilities must modernize recruitment and retention strategies. This white paper highlights key findings from a survey of 16 U.S. water utilities and offers recommendations to enhance workforce development. These strategies are designed to support innovation, improve efficiency, and build a resilient workforce capable of addressing tomorrow's challenges.





ADDRESSING WORKFORCE GAPS IN WATER UTILITIES

Statistical Data and Trends

Current data highlights significant workforce gaps in the water sector.

Aging Workforce

Many employees are nearing retirement, creating gaps in expertise. According to the U.S. Environmental Protection Agency (EPA), by 2025, a large portion of the water sector's workforce will retire, intensifying the need for new talent⁵.

Limited Recruitment Pipelines

Traditional recruitment efforts are not meeting the demand for new talent. Utilities often struggle to attract younger workers and individuals from diverse backgrounds⁶.

Underrepresentation

Certain demographic groups remain underrepresented in technical and leadership roles. Women make up only 5% of leadership roles globally in the water sector⁷.

Efforts to address these issues are underway. For example, the *America's Water Infrastructure Act* and the *Bipartisan Infrastructure Law* have called for federal agencies to identify workforce challenges and highlight successful strategies. Organizations such as DC Water have reported progress in diversifying their leadership teams, demonstrating the benefits of a broader approach to talent development.

Comparison to Other Industries

Other industries offer successful models for improving workforce diversity and development that can serve as inspiration for the water sector:



Construction

Programs such as *Women in Construction* provide targeted training and support services like childcare assistance and mentorship. These initiatives have successfully integrated more women into traditionally male-dominated roles⁸.

Technology

Companies like Google and Microsoft have implemented mentorship programs, leadership development initiatives, and transparent pay equity policies. These strategies have significantly increased workforce diversity and fostered innovative workplace cultures⁹.



Healthcare

The healthcare industry has adopted policies supporting flexible work schedules, paid parental leave, and leadership pathways for employees. This approach has led to higher retention rates and a more diverse leadership structure¹⁰.

Finance

Financial firms like Goldman Sachs use diversity councils, mentorship programs, and public commitments to close gender pay gaps. These efforts have resulted in more balanced leadership teams and improved organizational performance¹¹.

Energy and Utilities

Globally, energy companies in the renewable sector have emphasized workforce diversity as a driver for innovation. Campaigns highlighting contributions to sustainability have attracted broader talent pools¹².

By adopting and tailoring these proven strategies, the water sector can address workforce challenges, promote new perspectives and innovation, and build a more resilient and dynamic workforce.

Barriers to Workforce Participation

Key challenges that limit participation in the water workforce include:

Structural Constraints

Limited access to training and career pathways. Many utilities lack formal programs that provide pathways for new entrants to progress into technical or leadership roles¹³.

Cultural Norms

Perceptions of the sector as male-dominated discourage broader participation. Studies by the World Bank¹⁴ indicate that entrenched stereotypes can limit recruitment success.

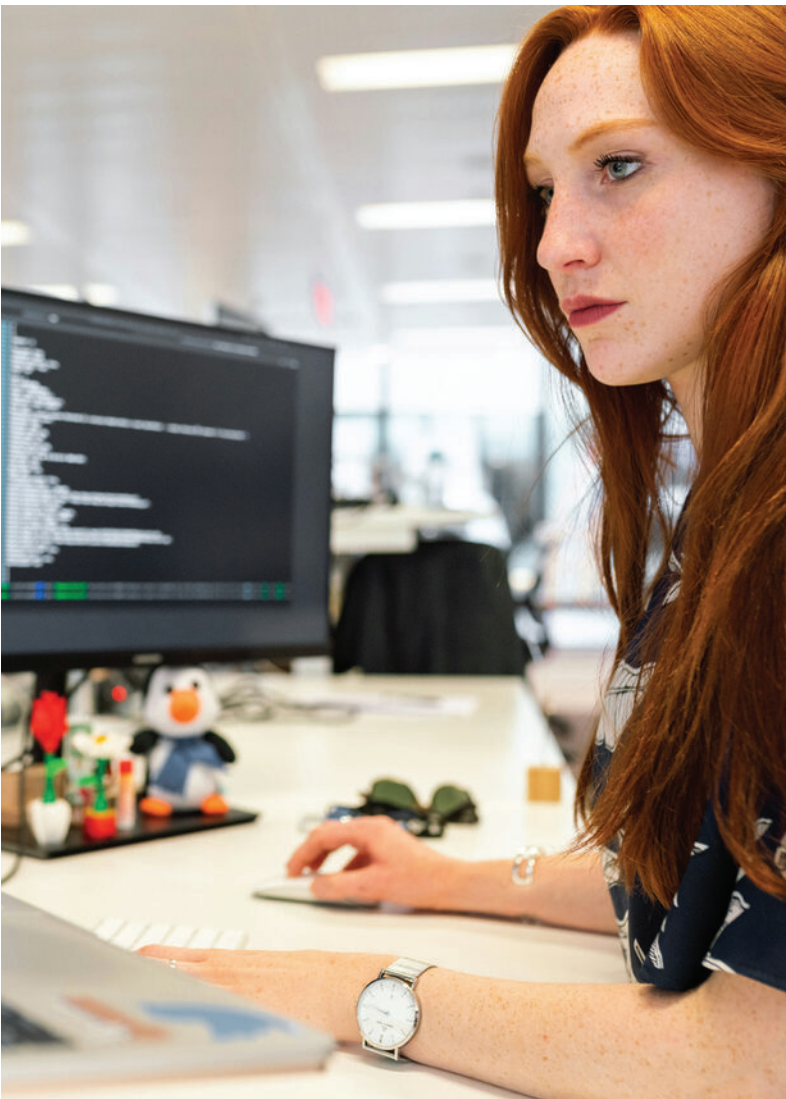
Workplace Policies

Gaps in work-life balance initiatives impact retention. Utilities that fail to offer flexible work options or parental leave struggle to retain talent¹⁵.

Lack of Mentorship

Few formal mentorship programs limit professional development. Mentorship is critical for career growth, particularly for individuals entering technical fields¹⁶.

Addressing these barriers through targeted policies, training programs, and workplace improvements can help attract and retain a broader range of talent.





WATER UTILITY GENDER STUDY

Methodology

In November 2024, a survey of 16 U.S. water utilities was conducted by **WaterRising Institute** to assess workforce gender diversity programs, policies, and practices. The survey framework was based on the *UN Women's Empower Principles (WEPs) Gender Analysis Tool*¹⁷.

SUMMARY OF FINDINGS

The survey revealed significant gender imbalances across all workforce categories. While some positive practices exist, gaps in pay equity, promotion tracking, and work-life balance policies highlight the need for a more systematic approach to gender equality in the workforce. Addressing these challenges is essential for creating a resilient and equitable water sector.



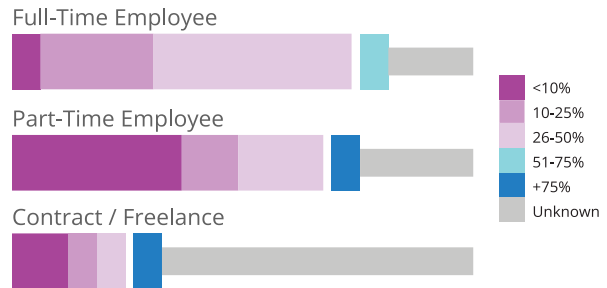


Key Findings

Workforce Composition

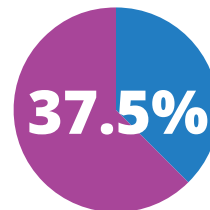
Most utilities reported fewer than 50% of women in full-time roles. For part-time positions, the majority had less than 25% women. Gender distribution among contractors was poorly tracked, with most respondents unsure of the breakdown.

PERCENT OF WOMEN BY EMPLOYMENT TYPE

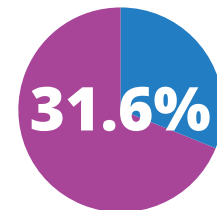


Leadership Representation

Only six out of 16 utilities had 50% or more women in leadership roles (37.5%). The majority reported fewer than 40% female representation on advisory boards – an average of 31.6% across all respondents.



Report Leadership Role Equality



Average Percentage of Women on Board

Workforce Gender Policies

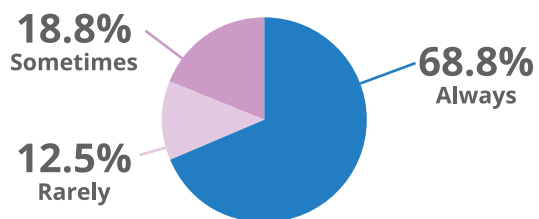
Just 3 of 16 (19%) utilities had formal gender equality action plans. Pay equity and promotion tracking were inconsistent, with only six utilities monitoring these metrics.



Recruitment Practices

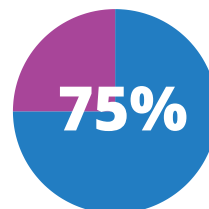
Fewer than 70% of respondents used inclusive language in job postings, but others rarely or inconsistently applied this practice.

REPORT USING GENDER-SENSITIVE LANGUAGE IN JOB POSTINGS AND ADVERTISEMENTS

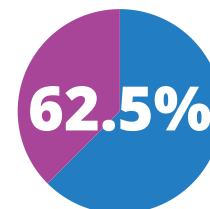


Workplace Support

25% of respondents lacked work-life balance policies. While educational programs were widely available (100% of all respondents), paid parental leave was offered by only 10 of 16 utilities.



Report Having Policies Promoting Work-Life Balance



Report Having Paid Parental Leave for All Genders



APPLICABILITY TO SUB-TARGET GROUPS

Achieving gender equity in the water sector requires addressing the unique needs of specific sub-target groups. Tailoring initiatives to these groups can maximize the impact of gender equity efforts.

Low-Income Women and Single Mothers

Low-income women and single mothers face barriers like lack of childcare, transportation, and flexible work options. Programs such as Moore Community House Women in Construction (WinC) in Mississippi provide effective models by offering support services¹⁸.

Solutions

- Provide childcare stipends or on-site childcare facilities.
- Offer transportation assistance for training and work.
- Implement flexible work hours or remote options where feasible.

Women from Marginalized Racial and Ethnic Groups

Women of color face compounded challenges due to intersecting biases. Programs like PIVOT use a lived experience and mentorship framework through personal coaching and lifelong support through its alumni groups.¹⁹.

Solutions

- Develop targeted outreach and recruitment campaigns using gender-inclusive language and imagery.
- Establish mentorship programs connecting women of color with industry leaders.
- Create safe spaces and DEI training to foster inclusive workplace cultures.



Justice-Impacted Women

Justice-impacted women face challenges like stigma and employment gaps. Programs like PIVOT provide personalized career pathways, structured training, and comprehensive support to help formerly incarcerated women successfully reenter the workforce²⁰.

Solutions

- Partner with reentry programs to create training-to-employment pipelines.
- Offer expungement assistance and legal support.
- Implement workplace policies to address stigma and promote second chances.



Rural and Underserved Community Women

Women in rural areas often lack access to training and infrastructure. Workforce development must address regional challenges through community-centered approaches²¹.

Solutions

- Develop virtual training and remote learning opportunities.
- Establish regional partnerships for localized training programs.
- Invest in infrastructure, such as broadband access, to support participation.

Young Women and Students

Early exposure to water sector careers can inspire young women to pursue technical and leadership roles²².

Solutions

- Develop STEM-focused programs in schools with an emphasis on water careers.
- Offer internships, apprenticeships, and mentorship opportunities.
- Collaborate with educational institutions to create career pathways.

Women with Disabilities

Women with disabilities face accessibility challenges in training and workplaces. Inclusive policies and adaptive environments are essential²³.

Solutions

- Ensure physical and digital accessibility in workplaces and training centers.
- Provide assistive technologies and accommodations.
- Develop inclusive recruitment and retention policies.





RECOMMENDATIONS

Closing the gender gap in the water sector requires innovative strategies and proven models from other industries. Women remain an underutilized talent pool. World Bank data shows that only 18% of water and sanitation utility workers worldwide are women, particularly in technical and leadership roles. Despite competitive pay and lower educational barriers, many women leave the sector, underscoring the need for systemic change.

The U.S. Department of Labor Women's Bureau provides tools to identify barriers and support gender equity. McKinsey's *Women in the Workplace 2023*²⁴ shows that companies with more women in leadership see higher profitability and innovation. The World Bank's *Women in Water Utilities*²⁵ highlights how diverse leadership improves adaptability and efficiency.

The WaterWoman Project, led by the WaterRising Institute, focuses on workforce recruiting, training, and assessing gender-responsive practices in the water sector. Establishing baseline assessments helps track progress and identify gaps for targeted interventions.

The need for immediate action is clear. As a significant portion of the current workforce nears retirement, water utilities must prioritize expanding and diversifying their talent pool to close the widening gap. By adopting these strategies, the sector can build a resilient, innovative, and sustainable workforce capable of meeting the challenges of tomorrow and ensuring reliable water services for all communities.

Drawing on prior sector research and the Institute's original limited study, it is recommended that water utilities adopt the following workforce development strategies to advance gender representation:

Workforce Benchmarking

Systematically collect data on workforce composition, pay equity, and promotions. Regular benchmarking helps identify gaps and measure progress over time²⁶.

Targeted Recruitment Strategies

Develop recruitment campaigns to reach untapped talent pools. Partner with educational institutions and community organizations to attract new talent²⁷.

Training and Development Programs

Implement mentorship programs and leadership development initiatives. Structured programs can help employees navigate career progression²⁸.

Wraparound Support Services

Offer services like child care assistance and flexible work arrangements. Programs such as the *Women in Construction* initiative have shown the effectiveness of these services²⁹.

Workplace Policies

Adopt policies supporting work-life balance and transparent pay practices. Flexible work policies enhance retention and productivity³⁰.

Organizational Culture and Retention

Foster inclusive workplace cultures through training and accountability measures. DEI training can improve workplace environments and employee satisfaction³¹.



CONCLUSION

A resilient water workforce is essential for public health, environmental protection, and community sustainability. By adopting strategic approaches to recruitment, professional development, and workplace culture, the water sector can better address workforce challenges and ensure long-term success. Leveraging the full spectrum of talent—including women and other underrepresented groups—will drive innovation, improve operational efficiency, and build a more adaptive and dynamic workforce.

This research and set of recommendations provides insight into the current gender representation landscape in the water sector, as well as a practical roadmap for utilities to cultivate a diverse, skilled workforce capable of meeting future demands. Strong partnerships, intentional investments in workforce development, and clear benchmarks will be key to progress. Utilities should begin by analyzing the local employment landscape to identify opportunities and challenges, enabling data-driven strategies and informed decision-making.

By incorporating these strategies, the water sector can break down barriers, create inclusive environments, and empower all workers to contribute meaningfully to the industry's critical mission of delivering reliable water and wastewater services.



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Revised December 23, 2024