



**US Water
Alliance**

Water Workforce and Leadership Library

Introduction

Water management in the United States stands at a critical crossroads, reflected in the anticipated wave of retirements among the 300,000 employees that make up our nation's water utility workforce. In the next decade, one-third of US water utility operators will be eligible to retire.¹ Smaller and rural utilities, which comprise most of the sector, face unique challenges. Eighty-five percent of water utilities have three or fewer employees, and over 80 percent of drinking water utilities serve fewer than 500 people, making it difficult to attract and retain skilled workers.²

Additionally, about

37 percent of water jobs are concentrated in just 25 metropolitan areas, leaving smaller communities struggling with capacity gaps.³

To replace those retiring or transitioning to other careers, the water sector will require approximately 10,300 new workers annually.⁴ This urgent need to hire and train the next generation of water workers is aligned with an opportunity to widen the talent pool considering water careers. As of 2017, the national water workforce is 85 percent male and 66 percent white, revealing a need to reach underrepresented groups to develop a water utility workforce that reflects the racial and gender composition of the communities these utilities serve.⁵

Re-thinking how we build the water utility workforce holds transformative potential for communities across the country. Water sector jobs offer higher-than-average wages in addition to requiring less formal training and providing more on-the-job training than other sectors, creating opportunities for workers to achieve economic stability and grow professionally. To help realize the individual and community benefits of working in the sector, water utilities can implement effective training, recruitment, and retention programs to foster the development of a diverse and skilled next generation of water workers.

The Water Workforce and Leadership Library supports those who seek to sustainably cultivate a skilled workforce within the water utility sector by highlighting inspiring, forward-looking examples of training, recruitment, and retention programs that are shifting business-as-usual practices. By collecting and sharing these models, we hope to connect organizations to others working on similar challenges, creating opportunities for workforce programs nationwide to be replicated, refined, and/or scaled.

These programs were submitted following a national call for examples of water workforce **apprenticeship, internship, leadership development, and regional collaborative programs** that could serve as replicable models. The following entries provide a diverse snapshot of programs and strategies from utilities and their partners, initiating a nationwide workforce programming repository of resources.

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Acknowledgments

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Leadership Development Programs



As the water sector navigates a period of generational transition, leadership development programs are becoming more essential for maintaining and transforming institutional knowledge, advancing innovation, and solving industry challenges.

Leadership development programs are an investment in both individuals and organizations. For individuals, these programs offer career advancement, recognition, and mentorship opportunities. For organizations, leadership development strengthens succession planning, builds a pipeline of skilled managers and executives, and ensures operational continuity.

The programs highlighted in this section showcase innovative approaches to leadership training within the water sector. This section of the Water Workforce and Leadership Library serves as a resource for those seeking to develop, refine, and/or expand leadership programs within their organizations. By sharing proven strategies and successful models, we can build industry leadership capacity and support a thriving water workforce for generations to come.



Organization:

San Francisco Public Utilities Commission, California

Program Name: Leadership Development Program

Utility Size: Large

Utility Type: Combined Utility

Program Type: Leadership Development

Program Description

The San Francisco Public Utilities Commission (SFPUC) Leadership Development Program is a comprehensive 12-module (48-hour) training initiative specifically designed for frontline supervisors at SFPUC. This program equips supervisors with essential people management and leadership skills that align with the organization's commitment to fostering an inclusive and respectful workplace.

The program's focus is to support frontline supervisors in enhancing trust, communication, and team cohesion while navigating the challenges of leadership. By developing these skills, supervisors are better positioned to create work environments that are respectful, inclusive, and aligned with SFPUC's core values.

Key Program Features

- Customized training for frontline supervisors
- Modular structure for practical application
- Building leadership integrity
- Enhancing communication and inclusivity
- Developing performance management skills
- Coaching for employee development
- Ongoing performance review and assessment
- Support for organizational culture

The SFPUC Leadership Development Program serves as a model for other programs with its focus on targeted skill-building, practical application, and alignment with organizational values to ensure that participants leave equipped not only to lead but also to contribute meaningfully to a respectful and inclusive workplace culture.

Program Information

Program Creation Year:	2024
Yearly Program Cost:	Staff time
Funding Sources:	Self-funded
Number of Dedicated Staff:	1–5 full-time
Yearly Participation Rate:	200–300 participants
Paid vs. Unpaid Opportunity:	Unpaid
Academic Credit Offered:	Not offered
Transportation Support:	Not offered
External Partners and Collaborators:	In development with external contractors

Organization:

The Water Environment Federation

Program Name: InFlow Program

Program Type: Leadership Development

Program Description

The Water Environment Federation's (WEF) InFLOW (Introducing Future Leaders to Opportunities in Water) Program is an initiative by WEF aimed at enhancing diversity and inclusion in the water workforce. The program consists of two tracks, CareerTech and STEMpath, targeting different groups of students and young professionals to provide structured pathways into water sector careers.

CareerTech Track

This track focuses on introducing youth from local WEF Technical Exhibition and Conference (WEFTEC) host communities, such as Chicago and New Orleans, to the wide array of career opportunities within the water industry. Through partnerships with community-based organizations and The Corps Network, participants receive tailored job readiness training and are exposed to various aspects of water quality management. During WEFTEC, scholars participate in facility tours, network with industry leaders, and engage in hands-on activities like behind-the-scenes tours of the "Operations Challenge" and community service projects. Following the conference, scholars are given ongoing access to networking opportunities, WEF membership, and resources to continue their career journey in the water sector.

STEMpath Track

Designed for scholars currently pursuing undergraduate or graduate degrees in STEM fields, the STEMpath track identifies and engages students from historically underrepresented racial and ethnic groups. The program combines virtual programming with in-person experiences at WEFTEC, offering participants opportunities to build their professional networks and explore careers in water. Scholars participate in weekly virtual sessions leading up to the conference where they learn about the water industry and connect with mentors and peers. At WEFTEC, scholars engage in workshops, industry panels, and networking events. After WEFTEC, they are invited to continue their involvement with WEF through internships, scholarships, and young professional programs.

Key Program Features

- Comprehensive industry exposure
- Leadership development and professional growth
- Diversity and inclusion focus
- Pathways to employment
- Financial support
- Sustained engagement and resources

The WEF InFLOW program offers a model that integrates diversity, professional growth, and strategic industry engagement. Its combination of mentorship, real-world exposure, and career support creates a framework for cultivating future leaders in the water sector.

Program Information

Program Creation Year	2018
Yearly Program Cost	\$50,000–\$100,000
Funding Sources	Corporate sponsorships and individual donors
Number of Dedicated Staff	1–5 full-time
Yearly Participation Rate	1–50 participants
Job Placement/Retention Rate After Completion:	21–40 percent
Post-Program Completion Employment Types:	Full-time; part-time; matriculation into further training or engagement
Paid vs Unpaid Opportunity:	Travel per diem for WEFTEC
Academic Credit Offered:	Not offered
Transportation Support:	Yes
External Partners and Collaborators:	None

Organization:

The Water Environment Federation

Program Name: The Water Leadership Institute

Program Type: Leadership Development

Program Description

The Water Leadership Institute (WLI) offered by the Water Environment Federation (WEF) is aimed at educating and training emerging leaders across the nation in the water industry by using a blended learning approach that includes monthly webcasts, group chats, a two-day workshop in Alexandria, VA, a final project, and a one-day workshop at WEFTEC. The WLI program provides participants with opportunities to engage in management training and leadership development while building lasting relationships across the sector. Key topics covered include strengths-based leadership, communicating with impact, unconscious bias, public speaking, diversity, equity, and inclusion, managing vs. leading, emotional intelligence, and entrepreneurship and innovation.

Key Program Features

- Intensive leadership training
- Flexible learning approach
- Networking and relationship-building
- Project-based learning
- Cost and financial support

The Water Leadership Institute is a leadership model for integrating management training, industry engagement, and real-world problem-solving. Its blended learning approach, commitment to diversity, and focus on strategic industry challenges make it an effective platform for cultivating the next generation of water industry leaders.

Program Information

Program Creation Year:	2021
Yearly Program Cost:	\$50,000–\$100,000
Number of Dedicated Staff:	1–5 full-time
Yearly Participation Rate:	51–100 participants
Job Placement/Retention Rate After Completion	Not tracked
Paid vs. Unpaid Opportunity:	Unpaid
Academic Credit Offered:	Not offered
Transportation Support:	Not offered
External Partners and Collaborators:	Steering committee of alumni

Organization:**Duke University's Nicholas School of the Environment, North Carolina****Program Name:** Water Innovation Leadership Development Program**Program Type:** Leadership Development**Program Description**

The Water Innovation Leadership Development (WILD) Program at Duke University's Nicholas School of the Environment is an executive education program designed to empower the next generation of utility leaders to embrace transformative practices and implement innovative, equitable solutions to water infrastructure challenges. This cohort-based program is focused particularly on emerging leaders from water utilities that serve under-resourced communities. The program targets rising leaders who are motivated to drive meaningful change in the water sector by equipping them with the leadership skills and tools needed to address complex challenges. The program includes two intensive in-person workshops held on Duke's campus in Durham, NC, along with virtual sessions that allow participants to engage with the curriculum while balancing their professional responsibilities.

Key Program Features

- Cohort-based learning
- Leadership curriculum
- Capstone project
- Networking and professional growth
- Full scholarships and accessibility

The WILD program combines rigorous academic instruction, peer-driven learning, and real-world application. Its focus on innovation, equity, and practical leadership development makes it an exemplary model for cultivating leaders who can drive sustainable change in the water industry.

Program Information

Program Creation Year:	2020
Yearly Program Cost:	\$250,000–\$500,000
Funding Sources:	Private foundation
Number of Dedicated Staff:	1–5 full-time
Yearly Participation Rate:	1–50 participants
Job Placement/Retention Rate After Completion:	Not tracked
Post-Program Completion Employment Types:	Full-time
Paid vs. Unpaid Opportunity:	Paid
Academic Credit Offered:	Can count towards CEUs if requested
Transportation Support:	Yes
External Partners and Collaborators:	Guest speakers and collaborating facilitators

Notes

- 1 US Environmental Protection Agency, “America’s Water Sector Workforce Initiative: A Call to Action,” https://www.epa.gov/sites/default/files/2020-11/documents/americas_water_sector_workforce_initiative_final.pdf.
- 2 Brookings Institution, “Renewing the Water Workforce,” 2018, 32, <https://www.brookings.edu/wp-content/uploads/2018/06/Brookings-Metro-Renewing-the-Water-Workforce-June-2018.pdf>.
- 3 Brookings Institution, “Renewing the Water Workforce,” 18.
- 4 US Bureau of Labor Statistics, “Water and Wastewater Treatment Plant and System Operators,” 2024, <https://www.bls.gov/ooh/production/water-and-wastewater-treatment-plant-and-system-operators.htm#tab-1>.
- 5 Brookings Institution, “Renewing the Water Workforce,” 25–26.



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