



**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.<sup>1</sup> 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.<sup>2</sup> Additionally, about 37 percent of water jobs are concentrated in just 25 metropolitan areas, leaving smaller communities struggling with capacity gaps.<sup>3</sup>

To replace those retiring or transitioning to other careers, the water sector will require approximately 10,300 new workers annually.<sup>4</sup> 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.<sup>5</sup>

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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# Internships



Internship programs combine academic learning and real-world experience, equipping participants with practical skills, industry exposure, and professional connections that shape their career trajectories.

Internships are an investment in both individuals and organizations. For participants, they offer hands-on training, mentorship, and a pathway to career advancement. For employers, internships create a pipeline of emerging talent, support succession planning, and bring fresh perspectives into the workplace.

The programs highlighted in this section showcase innovative approaches to internships 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 internship programs within their organizations. By sharing proven strategies and successful models, we can build industry capacity and support a thriving water workforce for generations to come.



## Organization:

**Camden County Municipal Utilities Authority, New Jersey (via Mastery Schools)**

**Program Name:** Career Pathways Program

**Utility Size:** Large

**Utility Type:** Wastewater

**Program Type:** Internship

### Program Description

In 2022, Mastery Charter Schools launched its Career Pathways Program in collaboration with the Camden Education Fund and Camden Works, creating a bridge between education and meaningful employment. Targeted at second-semester high school seniors, the program offers paid internships designed to provide hands-on work experience and practical career exposure.

Interns commit to working two eight-hour days per week during their final semester, gaining valuable skills and insights into real-world career opportunities, particularly in the water utility sector. The program's impact and success in advancing talent and addressing workforce needs is evident through its partnership with the Camden County Municipal Utilities Authority (CCMUA), which has hired six interns over the past few years.

### Key Program Features

- Structured work experience
- Pathway to employment
- Community and industry collaboration
- Comprehensive support systems
- Emphasis on skill development and certification

**The Career Pathways program is an example of how targeted, well-supported internships can empower students while benefiting the broader community. By integrating practical experience with structured career development, this initiative opens doors for students while providing organizations with skilled and motivated talent, driving progress on both individual and community levels**

### Program Information

Program Creation Year:	2022
Yearly Program Cost:	Less than \$50,000
Funding Sources:	Self-funded by CCMUA
Number of Dedicated Staff:	None
Yearly Participation Rate:	1–50 participants
Job Placement/Retention Rate After Completion:	81–100 percent
Post-Program Completion Employment Types:	Full-time opportunities
Paid vs. Unpaid Opportunity:	Paid
Transportation Support:	Yes
External Partners and Collaborators:	Mastery High School of Camden

## Organization:

### Central Arkansas Water, Arkansas

**Program Name:** Central Arkansas Water Internship Program

**Utility Size:** Large

**Utility Type:** Drinking water

**Program Type:** Internship

## Program Description

Central Arkansas Water's Internship Program offers high school and college students a gateway into the water industry, providing firsthand experience across various water-related fields. Through hands-on learning, students gain industry-specific skills and explore career pathways in water management, engineering, and environmental science.

What sets this program apart is its dual impact: alongside student development, it actively engages high school teachers by offering education on the water industry and its diverse career opportunities. This approach extends the program's reach, empowering educators to inspire more young people to consider careers in the water sector.

## Key Program Features

- Comprehensive exposure to the water industry
- Hands-on learning and skill development
- Teacher involvement and curriculum integration
- Community and industry partnerships
- Career guidance and professional development

**Central Arkansas Water's internship program shows how strategic design can create ripple effects of change. By blending student training, educator engagement, and talent cultivation, it not only addresses immediate workforce needs but also nurtures the next generation of water industry leaders.**

## Program Information

Program Creation Year:	2019
Yearly Program Cost:	Less than \$50,000
Number of Dedicated Staff:	1–5 full-time
Yearly Participation Rate:	1–50 participants
Paid vs. Unpaid Opportunity:	Paid
Academic Credit Offered:	Not offered
Transportation Support:	Not offered
External Partners and Collaborators:	Maumelle School District, University of Arkansas, Little Rock, and Tjuana Byrd Summer Internships

## Organization:

## Los Angeles Department of Water and Power, California

Program Name: **Student Engineering Program**

Utility Size: **Large**

Utility Type: **Combined utility**

Program Type: **Internship**

### Program Description

The Los Angeles Department of Water and Power (LADWP) Student Engineering Program (SEP) offers college-level engineering students an unparalleled opportunity to gain hands-on experience in the water and power sectors. Designed to bridge the gap between academic learning and professional practice, SEP provides participants with practical on-the-job training, career mentorship, and theoretical instruction.

Interns are immersed in meaningful work, contributing to significant infrastructure projects and gaining exposure to a diverse range of engineering functions. Integrated into technical teams, they work directly alongside seasoned engineers, developing skills and insights that prepare them for successful careers in the field.

### Key Program Features

- Comprehensive, real-world training
- Structured mentorship and career development
- Integration with LADWP teams
- Extended opportunities beyond the initial internship
- Competitive compensation and accessibility
- Focus on professional growth and networking

**LADWP's Student Engineering Program highlights the power of combining practical training, mentorship, and real-world project work to create transformative learning experiences. It not only equips students with essential skills but also helps the organization cultivate a pipeline of talented engineers ready to meet the challenges of the future.**

### Program Information

Program Creation Year:	2010s
Yearly Program Cost:	\$50,000–\$100,000
Funding Sources:	Self-funded
Number of Dedicated Staff:	1–50 full-time
Yearly Participation Rate:	51–100 participants
Employment Type Post Participation:	Full-time
Paid vs. Unpaid Opportunity:	Paid
Academic Credit Offered:	Not offered
Transportation Support:	Not offered
External Partners and Collaborators:	None

## Organization:

### Metropolitan Water Reclamation District of Greater Chicago, Illinois

Program Name: MWRD Internship Program

Utility Size: Large

Utility Type: Combined utility

Program Type: Internship

#### Program Description

The Metropolitan Water Reclamation District of Greater Chicago (MWRD) Internship Program provides paid opportunities for students to explore rewarding careers in wastewater treatment, stormwater management, and related fields. Participants gain firsthand knowledge and practical experience across various departments, engaging in critical water management practices that protect and sustain local ecosystems.

Through hands-on training and exposure to diverse functions within MWRD, interns develop both technical expertise and professional skills. The program's structured approach prepares participants for future careers in the water industry, equipping them to address the evolving challenges of water management.

#### Key Program Features

- Comprehensive learning opportunities
- Pathway to full-time employment
- Mentorship and professional development

**MWRD's Internship Program stands out as a model for workforce development in the water sector. By combining experiential learning, professional growth, and alignment with industry needs, the program cultivates a skilled and inspired pipeline of future water management professionals.**

#### Program Information

Program Creation Year:	2013
Yearly Program Cost:	\$50,000–\$100,000
Funding Sources:	Self-funded
Number of Dedicated Staff:	1–5 full-time
Yearly Participation Rate:	1–50 participants
Job Placement/Retention Rate After Completion:	0–20 percent
Post-Program Completion Employment Types:	Full-time opportunities
Paid vs. Unpaid Opportunity:	Paid
Transportation Support:	No
Academic Credit Offered:	Able to provide internship credit upon request
External Partners and Collaborators:	Wright Community College



## Organization:

### Louisville/Jefferson County Metropolitan Sewer District, Kentucky

Program Name: SummerWorks Internship

Utility Size: Large

Utility Type: Wastewater

Program Type: Internship

#### Program Description

The SummerWorks Internship Program at Louisville/Jefferson County Metropolitan Sewer District (MSD) provides a six-week paid opportunity for young people (ages 16 to 21) in Jefferson County, Kentucky, to explore careers in clean water while serving as community ambassadors for MSD's vital utilities: wastewater, stormwater, and flood protection.

This program has two core objectives: to expose participants to a range of career paths within the water industry and to empower them as advocates for clean water initiatives. Interns gain hands-on experience, participate in mentorship opportunities, and engage in community education activities that highlight the importance of sustainable water management.

#### Key Program Features

- Structured learning and career exploration
- Mentorship and professional development
- Water quality technical apprenticeship certification
- Community engagement and ambassadorship
- Inclusion and accessibility
- Skills development for future careers
- Pathways to further education and employment

**By integrating technical training, professional development, and environmental advocacy, the SummerWorks Internship Program inspires the next generation of water professionals and community leaders. This holistic approach not only equips participants with valuable skills but also fosters a deeper understanding of the role clean water plays in building resilient, thriving communities.**

#### Program Information

Program Creation Year:	2010s
Yearly Program Cost:	Less than \$50,000
Funding Sources:	Government-funded
Number of Dedicated Staff:	1–5 full-time
Yearly Participation Rate:	1–50 participants
Job Placement/Retention Rate After Completion:	0–20 percent
Post-Program Completion Employment Types:	Full-time
Paid vs. Unpaid Opportunity:	Paid
Academic Credit Offered:	Not offered
Transportation Support:	Yes
External Partners and Collaborators:	Louisville Metro Government, KentuckianaWorks, and YouthBuild Louisville

## Organization:

### San Francisco Public Utilities Commission, California

Program Name: **Project Pull**

Utility Size: **Large**

Utility Type: **Combined utility**

Program Type: **Internship**

## Program Description

Established in 1996, Project Pull aims to "pull" highly motivated high school and college-bound students into public service by offering structured opportunities in STEAM (science, technology, engineering, arts, and mathematics) fields. This comprehensive program is designed to advance personal and professional growth, placing interns alongside experienced professionals to gain hands-on experience while cultivating a sense of community responsibility and empathy.

Through a combination of skill development, mentorship, and community engagement, Project Pull equips participants with the tools they need to excel in STEAM careers while encouraging a deeper connection to public service. Its emphasis on inclusivity, adaptability, and real-world learning empowers the next generation to tackle critical societal challenges with knowledge, innovation, and compassion.

## Key Program Features

- Targeted skill development
- Structured mentorship
- Community engagement and social responsibility
- Pathways to further education and employment
- Flexible internship structure

**For over two decades, Project Pull has served as a model of impactful workforce development, creating pathways for young people to succeed while strengthening the communities they serve.**

## Program Information

Program Creation Year:	1996
Yearly Program Cost:	\$500,000–\$1 million
Funding Sources:	Department-funded
Number of Dedicated Staff:	1–5 full-time
Yearly Participation Rate:	101–200 participants
Post-Program Completion Employment Types:	Part- and full-time opportunities
Paid vs. Unpaid Opportunity:	Paid
Academic Credit Offered:	Yes
Transportation Support:	Not offered
External Partners and Collaborators:	Community-based organizations and San Francisco schools

## Organization:

### Veolia North America, Connecticut

**Program Name:** W & WW Internship at Veolia North America

**Program Type:** Internship

## Program Description

Veolia North America's Water and Wastewater (W & WW) Internship Program provides high school youth with hands-on experience in water operations through a structured, year-long training initiative. Interns complete approximately 720 hours of training covering wastewater treatment, facility operations, maintenance, and lab testing—all under the supervision of a licensed operator.

To meet state certification requirements, interns enroll in an approved training program to earn Continuing Education Units (CEUs). Depending on location, interns complete coursework through California State University, Sacramento (CT & NY), or NEIWPCC Massachusetts Wastewater Operator Training—both of which are approved for Rhode Island operator licensing.

Upon obtaining their high school diploma or GED, interns are prepared to sit for the Wastewater Operator Grade 1 Exam, positioning them for state certification and entry-level employment in the industry. Now in its second year, the program has already seen success. Six interns participated in the first year and two secured full-time employment with Veolia. To further support participants, the program includes a structured training schedule, standard operating procedures, and a welcome packet, ensuring a smooth onboarding process and a strong foundation for a career in water and wastewater management.

## Key Program Features

- Extensive training and skill development
- On-the-job learning and exam preparation
- Certified curriculum
- Continuing education credits
- Professional mentorship and evaluation
- Safety-focused training environment

**Veolia North America's internship model emphasizes the importance of hands-on experience, professional development, and a structured pathway to certification in the water and wastewater sector, preparing interns for successful careers in the industry.**

## Program Information

Program Creation Year:	2023
Yearly Program Cost:	\$50,000–\$100,000
Number of Dedicated Staff:	6–10 full-time
Yearly Participation Rate:	1–50 participants
Job Placement/Retention Rate After Completion:	21–40 percent
Paid vs. Unpaid Opportunity:	Paid
Academic Credit Offered:	No
Transportation Support:	No
External Partners and Collaborators:	Connecticut tech schools, Davies Technical High School, local high schools in Seymour, CT, and New London, CT, and California State University, Sacramento

# 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](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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