

NJ WATER ASSOCIATION'S APPRENTICESHIP PROGRAM

SUPPORTING UTILITY SUCCESSION
PLANNING INITIATIVES

2022 ANNUAL CONFERENCE

ATLANTIC CITY NJ

OCTOBER 19, 2022

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BACKGROUND

- ✓ **Licensed Operators ensure** communities have access to safe drinking water and properly treated wastewater to protect our rivers, streams, and groundwater
- ✓ **These ESSENTIAL lifeline services would fail** without highly trained Licensed Operators
- ✓ Water and wastewater **utilities face challenges in recruiting, training, and retaining** operators

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BACKGROUND

- ✓ **A national assessment** (January 2018) involving the USEPA, Water Environmental Foundation, American Water Works Association projected that **upwards of 50% of the licensed operator workforce may retire this decade**
- ✓ **Other factors thin the workforce:**
 - Increasing Professional Demands - Advancements in treatment technologies & Ever-increasing regulatory requirements
 - Lack of Exposure to Employment Opportunities
 - Competition with other Trades
- ✓ **These factors create an ever-growing demand for Licensed Water/Wastewater Operators**

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SUCCESSION PLANNING -

LACK OF PREPARATION

- ✓ **AWWA's State of the Water Industry Reports** (2014 & 2019) indicate that fewer than 1% of utilities are prepared for/planning to cope with their retiring workforce
- ✓ **Other Observations:**
 - Reservations - Many approaching retirement adopt the mind-set that it's not my problem
 - Employment Concerns - I'm not going to bring someone onboard that will take my job
 - Changing Dynamics - due to economics the retirement age is expanding creating a buffer to the projection of 50% retirements
 - Competing Priorities - Succession planning is not a top priority for managers/operators, consumed with day-to-day operational & maintenance issues, regulatory compliance, and infrastructure projects
- ✓ **These factors hinder Succession Planning Activities**

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SUCCESSION PLANNING -

THE IMPORTANCE

✓ **Long-Term Sustainability and Resiliency** of water and wastewater operations involves many critical activities:

- Providing Resilient & Redundant Infrastructure
- Preparing Emergency Response and Asset Management Plans
- Developing Long-term Sustainable Rate Strategies and Structures
- Establishing Energy Efficient Operations
- Ensuring Resiliency to Climate Change
- Ensuring **SUCCESSION PLANNING & KNOWLEDGE TRANSFER**

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SUCCESSION PLANNING -

THE IMPORTANCE

✓ **Succession Planning** - the process of

- anticipating future staffing needs
- taking timely action to recruit and train employees to ensure necessary skills & abilities
- fill critical positions

✓ **Succession Planning is vital to the success of business operations & objectives**

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APPRENTICESHIP PROGRAMS

- ✓ The U.S. Dept of Labor indicates that partnering with a **registered** apprenticeship program is a **recommended model for workforce development** because it:
 - Reduces Employee Turnover
 - Reduces the Costs associated with recruiting and onboarding new employees
 - Increases Productivity
 - Minimizes the Skills Gap
 - Creates a more Diverse Workforce
 - Provides an Entry Point for long-term career pathways

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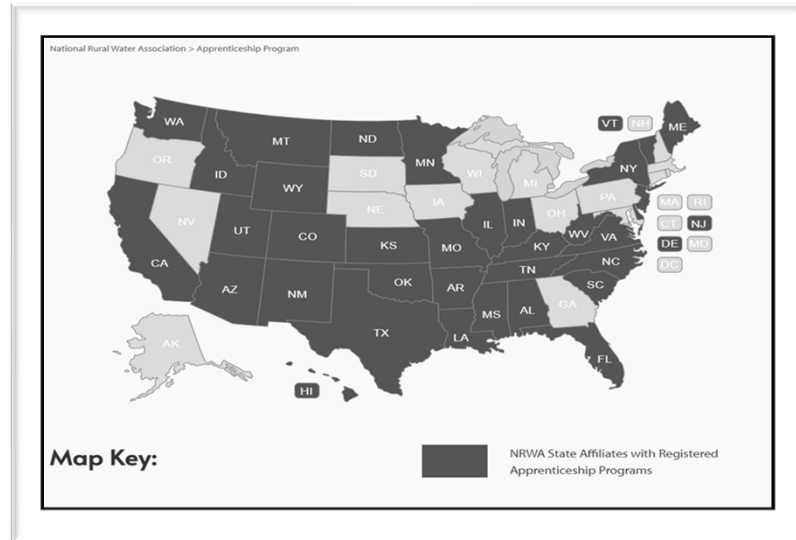


APPRENTICESHIP PROGRAM FOR THE WATER INDUSTRY

- ✓ Apprenticeship programs established **nationwide** serve as a catalyst for attracting talented individuals from many different backgrounds
- ✓ Apprenticeship Programs serve to develop a **robust, diverse, highly skilled, and sustainable** workforce

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NATIONAL EFFORT



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APPRENTICESHIP PROGRAM

- ✓ **Scope:** Water & Wastewater Utilities in NJ
- ✓ **Job Classification:** Operations Specialist (licensed operator)
- ✓ **Training Approach:** Time-Based

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APPRENTICESHIP PROGRAM

- ✓ Apprenticeship Program - Water Industry was **approved by and registered** with the US Department of Labor
- ✓ Partners include **US Dept of Labor, NJ Dept. of Labor,** and our **National Water Association**
- ✓ A fully implemented program with **Registered Apprentices and Participating Employers**
- ✓ **NJWA is the Program sponsor** and provides administrative oversight, technical training, and on-going support to the employer and apprentice
- ✓ **NJWA is not a direct employer** of apprentices
- ✓ **NJWA serves to connect** participating employers with apprenticeship candidates to fill operator trainee positions

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APPRENTICESHIP PROGRAM

PARTICIPATING EMPLOYERS

Trenton Water Works - 6/2020 / Middlesex W. Co. - 7/2020
 Agra Environmental - 7/2020 / East Windsor MUA - 10/2020
 Water Resource Mgt. - 12/2020 / Pine Beach Borough - 3/2021
 Hammonton W. Dept - 3/2021 / Gloucester City W. Dept - 8/2021
 Beach Haven W. Dept. - 11/2021 / O&M Solutions - 12/2021
 Mounty Holly MUA - 4/2022 / Borough of Spring Lake Hts. - 4/2022
 Borough of Woodbine - 5/2022 / Woodard & Curran - 5/2022
 Brick Township MUA - 6/2022 / Fayson Lakes W. Co. - 7/2022
 Kearny MUA - 7/2022

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APPRENTICESHIP PROGRAM

OVERVIEW

- ✓ **Provides a pathway** for apprentices to develop the knowledge and skills in the operation and management of water and wastewater utilities
- ✓ **Two-year program** consisting of 4000 hours of on-the-job training and 288 hours of related technical instruction
- ✓ **Primary Goals:**
 - Increase the pool of a highly skilled, licensed workforce that is demanded by the water/wastewater profession
 - Provide greater employment opportunities to historically under-represented groups (women, minorities, veterans, persons with disabilities)
- ✓ **Successful completion** of all program elements qualifies an apprentice to take the NJDEP licensing exam **for a Class I operator license**

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APPRENTICESHIP PROGRAM

STANDARDS OF APPRENTICESHIP

- ✓ **Section IV – Qualifications For Apprenticeship**
 - **Age** – must not be less than 18 year of age
 - **Education** – a high school diploma or equivalent
 - **Physical** – physically capable of performing the essential functions of an operations specialist
 - **Drug Screening** – prior to employment
 - **Background Check** – prior to employment
 - **Drivers License** – possess a valid NJ-issued drivers license

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✓ **Section VI - SUPERVISION OF APPRENTICES**

APPRENTICESHIP PROGRAM

STANDARDS OF APPRENTICESHIP

- No apprentice shall work without proper or adequate supervision of the Operations Specialist (Licensed Operator)/**Mentor**
- The mentor is responsible for making work assignments, providing on-the-job learning, and ensuring safety at the worksite
- The mentor is readily available to the apprentice; is making sure the apprentice has the necessary instruction and guidance to perform tasks safely, correctly, and efficiently

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APPRENTICESHIP PROGRAM

MENTORS

- ✓ **Mentor/Apprentice Ratio** initially 1:1
- ✓ **May 2021** - USDOL approved a petition by NJWA to increase the ratio to 1:3 (one mentor up to 3 apprentices)
- ✓ **Mentors** under Program standards **must be licensed operators** in the tract that the apprentice is pursuing: TI, WI, SI, CI- and above

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✓ **Section X – APPRENTICE WAGE SCHEDULE**

**APPRENTICESHIP
PROGRAM**

**STANDARDS OF
APPRENTICESHIP**

- Apprentices are paid a progressively increasing schedule of wages based on the acquisition of increased skill and competence on the job and related technical instruction
- Advancement is subject to satisfactory performance in OJL and RTI
- The progressive wage schedule can be an increasing percentage or schedule of wages culminating with a fully proficient licensed operator wage rate

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✓ **NJDOL GRANT - Growing Apprenticeships in Non-Traditional Sectors (GAINS) - FY2022**

**APPRENTICESHIP
PROGRAM**

**SALARY
REIMBURSEMENT**

- Employers of Registered Apprentices are eligible for salary reimbursement for the first 52 work weeks (from 6 months) of the apprenticeship
- Compensation is 50% of the apprentice's wages (hourly rate)
- Minimum hourly rate is \$16/hour (from \$15/hour)
- Maximum claim per apprentice is up to \$8000 (from \$7800)
- Employer submits monthly pay stubs to NJWA and NJWA processes the claim with NJDOL and issues reimbursement check to the employer

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APPRENTICESHIP PROGRAM

SALARY REIMBURSEMENT

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APPRENTICESHIP PROGRAM

STANDARDS OF APPRENTICESHIP

✓ Section XIII – RELATED INSTRUCTION

- Each apprentice is required to participate in coursework as outlined in Appendix A
- A minimum of 288 hours of related instruction

✓ Section XIV – SAFETY & HEALTH TRAINING

- The apprenticeship program requires 27 hours of Safety & Health training

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APPRENTICESHIP PROGRAM
STANDARDS OF APPRENTICESHIP

✓ **SAFETY & HEALTH TRAINING**

- 1. **OSHA-10, General Industry**
 - Introduction to USDOL Occupational Safety & Health Administration
 - Hazardous Chemical Safety
 - Blood Borne Pathogens
 - Confined Space Awareness
 - Electrical Hazard Awareness
 - Personal Protective Equipment (PPE)
 - Slip, Trip and Fall Hazard Protection
 - Fixed and Portable Ladder Safety
 - Fire Prevention, Protection and Emergency Egress Safety
 - Dangers of unguarded equipment
 - Forklift Safety
 - Lockout/Tag Out
- 2. **Drug and Alcohol Awareness** - 2 hours
- 3. **Egress and Emergency Action Plans** – 30 minutes
- 4. **Hand and Portable Power Tools** – 1 hour
- 5. **Roadside Safety Awareness** - 1.5 hours (OSHA/NJWA)
- 6. **CPR/AED/First Aid Certification** – 6 hours (Certified Instructor)
- 7. **Trenching & Shoring** – 3 hours (offered by NJWA)
- 8. **Hazard Communication/Right to Know/Global Harmonization** – 3 hours (offered by NJWA)

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**CURRICULUM FRAMEWORK
RELATED TECHNICAL INSTRUCTION (RTI)**

Appendix A-1 Water Year I	Appendix A-1 Wastewater (Treatment) Year I	Appendix A-2 Wastewater (Collections) Year I
Intro W & WW - 180 Hours	Intro W & WW - 180 Hours	Intro W & WW - 180 Hours
Orientation - 6 Hours	Orientation - 6 Hours	Orientation - 6 Hours
Professional Requirements - 12 Hours	Professional Requirements - 12 Hours	Professional Requirements - 12 Hours
Health & Safety - 27 Hours	Health & Safety - 27 Hours	Health & Safety - 27 Hours
Emergency Response - 12 Hours	Emergency Response - 12 Hours	Emergency Response - 12 Hours
Total Hours - 237	Total Hours - 237	Total Hours - 237

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CURRICULUM FRAMEWORK RELATED TECHNICAL INSTRUCTION (RTI)

Appendix A-1 Water Year 2	Appendix A-1 Wastewater (Treatment) Year 2	Appendix A-2 Wastewater (Collections) Year 2
Advanced Water Operations - 90 Hours*	Advanced Wastewater Operations - 90 Hours*	Advanced Wastewater Collections - 45 Hours*
Electives Training - 27 Hours	Electives Training - 27 Hours	Electives Training - 27 Hours
Emergency & Security - 24 hours	Emergency & Security - 24 hours	Emergency & Security - 24 hours
Required Total: 51 Hours	Required Total: 51 Hours	Required Total: 51 Hours
Optional Total: 90 Hours	Optional Total: 90 Hours	Optional Total: 45 Hours
Total 2 Years - 288 Hours w/ advanced course 351 Hours	Total 2 Years - 288 Hours w/ advanced course 351 Hours	Total 2 Years - 288 Hours w/ advanced course 306 Hours
*Qualifier: apprentices choosing to take training for T2, W2, S2, C2 licenses during the two-year apprenticeship period, the hours spent in class for any of the Advanced courses can be credited (hour-for-hour), towards the 27-hours of Electives		

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APPRENTICESHIP PROGRAM

STANDARDS OF APPRENTICESHIP

✓ **4,000 Hours On-the-Job Learning**

- Tools, Equipment & Workplace Safety – 240 Hrs
- Vehicles & Specialized Equipment – 400 Hrs
- Systems Operation & Maintenance – 1,920 Hrs
- Quality Control – 960 Hrs
- Logistics, Reports and Supervision – 480 Hrs

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APPRENTICESHIP PROGRAM

METHODS OF ESTABLISHING APPRENTICES

- ✓ **Direct Entry - incumbent employee(s) of a participating employer**
 - The employee must be in an occupation (job title/responsibilities) related to the occupation(s) of the Apprenticeship Program
- ✓ **AP Candidate List - new hires**

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APPRENTICESHIP PROGRAM

BENEFITS TO PARTICIPATING EMPLOYERS

- ✓ **Support Succession Planning Efforts** – Improved knowledge transfer through employer's subject matter expert
- ✓ **Enhanced new Employee Retention**
- ✓ **Highly Skilled Employees - OJL & RTI**
- ✓ **Safer Workplace** - emphasis on safety training
- ✓ **NJWA supports outreach & recruitment of candidates**
- ✓ **NJWA developed curriculum for technical training**
- ✓ **NJWA assigns curriculum requirements and monitors/tracks the progress**

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APPRENTICESHIP PROGRAM

BENEFITS TO APPRENTICES

- ✓ **Paid on the job training** – Earning while they learn
- ✓ **An education to improve skills and competences** – little to no educational debt
- ✓ **Potential for a successful long-term career**
- ✓ **Competitive Salary**
- ✓ **National credential:** a national credential is issued to the apprentice by the USDOL when they successfully complete the Program

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SUMMARY

- ✓ **Succession Planning** is a **critical course of action** to ensure the success of business operations & objectives
- ✓ NJWA's Apprenticeship Program **provides a reasonable, structured, and comprehensive pathway** for educating and training new hires in water/wastewater operations
- ✓ NJWA's Apprenticeship Program **supports implementation of utility succession plans/workforce development initiatives**
- ✓ **Let's Collaborate, and Bridge the Gap** to the industry's need for the **next generation** of skilled operators
- ✓ **Become a Participating Employer**

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FOR MORE INFORMATION

➤ Visit: njwater.org

➤ Contact:

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