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National Industry Association Develops Competency-Based Apprenticeship Program for Water and Wastewater Operations Specialists

- Ensuring a continuing pipeline of qualified workers
- Capturing the experience of an aging workforce approaching retirement
- Elevating the status of the profession for workers and the public

Introduction

How can the skilled worker needs of the water industry be met when it is anticipated that a substantial portion of the existing workforce will retire over the next decade? The National Rural Water Association (NRWA) addressed this concern by establishing the WaterPro Apprenticeship program to train the next generation of skilled workers and standardize training across the nation for water and wastewater operations specialists.

To implement this initiative, the NRWA developed the National Standards of Apprenticeship for Water and Wastewater Systems Operation Specialists. The U.S. Department of Labor (USDOL) approved these national standards on July 13, 2017. After working with their state apprenticeship agencies to customize these guidelines to meet their area needs, 15 states have approved apprenticeship programs for these occupations and ten more are in progress. One state, Indiana, already has enrolled apprentices in their approved program.¹

Workforce Need

Due to retirements, utilities are facing the need to replace many of their most experienced employees. According to the NRWA, over the next decade the water sector is expected to lose between 30 and 50 percent of its current workforce due to retirements.² Job openings to replace departing workers are expected to provide employment opportunities for water and wastewater plant and system operators, and job prospects will be best for those with training or higher education in water or wastewater systems and good mechanical skills.³

Approach

“The development of a Registered Apprenticeship program for water and wastewater operations was a good continuum for us,” says Matthew Holmes, Deputy CEO, NRWA. “We routinely work with industry experts from state member associations that develop continuing education for the water and wastewater workforce to make them successful. As a next step, NRWA developed the National Standards of Apprenticeship guidelines based on the need to produce a fully competent water worker. We also were the beneficiary of an investment of \$250,000 from CoBank, a national cooperative bank serving vital industries across rural America, to underwrite our apprenticeship framework as part of their corporate responsibility and mission.”

The program requires 4,000 hours of on-the-job training spanning two years; 144 hours of related training instruction per year; documented onsite work hours and periodic worksite checks. Upon satisfactory completion of the requirements of the program, the apprentice will receive a Certificate of Completion from USDOL. NRWA used the USDOL, Employment and Training Administration’s Water and Wastewater Competency Model as a conceptual framework in developing these standards. This correlation is documented in a number of the

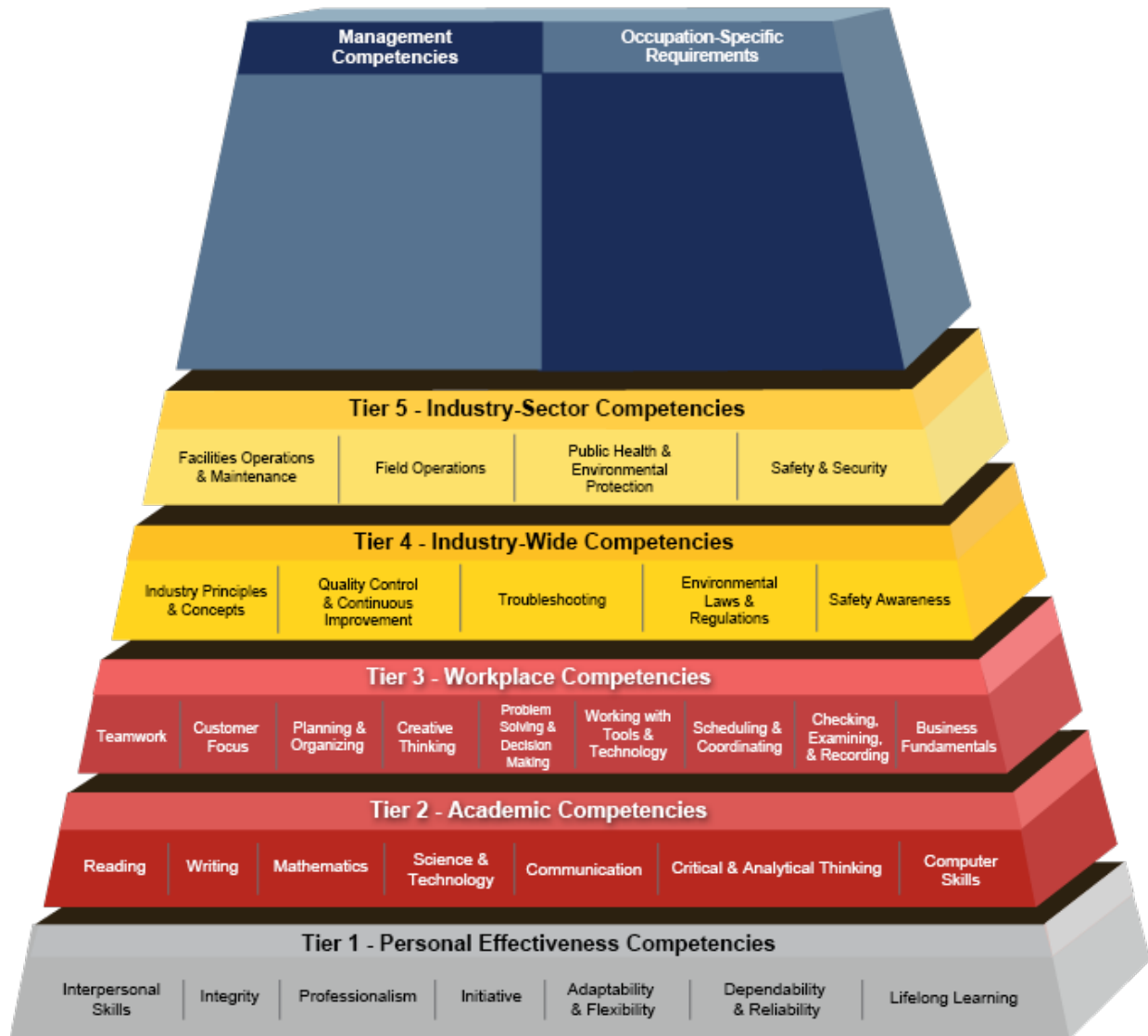
¹ National Rural Water Association, <https://nrwa.org/initiatives/apprenticeship-program/>

² Ibid.

³ Bureau of Labor Statistics, Employment Projections, 2016-2026, <https://www.bls.gov/emp/tables/occupational-separations-and-openings.htm>

section titles that NRW used in developing the National Standards for Apprenticeship. These include the following topics: Ethics (Tier 1 Personal Effectiveness Competencies); Science and Technology (Tier 2 Academic Competencies); Managing Projects, Customer, Planning and Prioritizing and Keeping Stakeholders Informed (Tier 3 Workplace Competencies); and Safety (Tier 4 Industry-Wide Competencies).

Water and Wastewater Competency Model



Indiana WaterPro Apprenticeship Program in Action

"In December 2017, we began our first cohort of six apprentices, with backgrounds that included construction, electronics and factory work, for the Steuben Lakes Regional Wastewater District, says Connie Stevens, Executive Director, Alliance of Indiana Rural Water. "They are scheduled to complete the program in early 2020. Eight more are set to enroll shortly, and we will continue to recruit at job fairs and Career Days area high schools. In addition to the acquisition of technical skills, we stress the importance of good communication skills since these apprentices are the 'face' of our industry and have the opportunity to educate the public about the importance of skilled water and wastewater management to ensure safe drinking water and environmental

protection. We also emphasize how important it is to interact with existing workers (average age 58) who have a legacy of knowledge to pass on to the next generation before they retire. At the end of this two year program, our apprentices will be well rounded in the water and wastewater industry and capable of moving into industry leadership roles.”

Next Steps

“We will put the national standards out to the industry at our annual WaterPro conference in Fort Worth, Texas this September,” says Bill O’Connell, Program Manager, NRWA. “After that, our next milestone is to establish a national tracking and learning management system that will enable us to track and document the progress of individuals enrolled in our apprenticeship programs. We also plan to create additional training to include stakeholders such as regulators.”

Related Links

National Rural Water Association
<https://nrwa.org/>

WaterPro Community – a virtual network for water and wastewater professionals to share ideas and resources
<http://www.waterprocommunity.org/>

Competency Model Clearinghouse, Water and Wastewater Competency Model
<https://www.careeronestop.org/CompetencyModel/Competency-Models/water-sector.aspx>