



# Environmental Systems: Basic and Advanced Water Resources

Youth Apprenticeship

## ENVIRONMENTAL SYSTEMS: BASIC AND ADVANCED WATER RESOURCES

Environmental systems youth apprentices learn core skills needed by the water industry to promote protection, improvement, and sustainability of water resources.

**Length of Apprenticeship:** One or two years

## OCCUPATIONAL COMPETENCIES

Youth apprentices work with a job site mentor to demonstrate the following competencies.

Year 1: Youth apprentices must complete a **total of 11** competencies. **Ten** must be from the list below. If necessary, employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment.

Year 2: Youth apprentices must complete a **total of 12** competencies. **Eleven** must be from the list below. If necessary, employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment.

YEAR 1 Competencies	YEAR 2 Competencies
1. Interpret work order	1. Assist with report submissions
2. Create work order	2. Prepare chemicals
3. Monitor operating conditions, meters, pumps, and gauges	3. Add chemicals to systems
4. Collect operational data	4. Perform start-up and shut down of pumps and equipment
5. Use operations software (such as SCADA, PLC, DBs)	5. Inspect operational equipment
6. Perform basic facility maintenance	6. Troubleshoot basic operations
7. Collect samples	7. Analyze lab results
8. Measure weight	8. Maintain schedules, communication, and documentation
9. Measure volume	9. Perform preventive maintenance (PM)
10. Perform calculations and conversions	10. Calibrate equipment
11. Conduct basic lab tests	11. Troubleshoot and repair equipment
	12. Analyze operational data for productivity/trends

## REGISTERED APPRENTICESHIP BRIDGING OPPORTUNITIES

The following Registered Apprenticeship is available in this area:

- Wastewater Treatment Plant Operator

## **POST-SECONDARY PATHWAY OPPORTUNITIES**

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There are several post-secondary pathway opportunities in this area. Following is partial list.

- Water Quality Technician
- Environmental Engineering