



FY 2020-2021: Innovative Water Infrastructure Workforce Development Grant Program

Rowan University – *WaterWorks: Developing the New Generation of Workforce for Water and Wastewater Utilities*



INTRODUCTION

The Safe Drinking Water Act (SDWA) authorized the Environmental Protection Agency (EPA) to award grants to nonprofit professional or service organizations, nonprofit labor organizations, nonprofit community colleges, institutions of higher education, or other nonprofit training and educational institutions to (1) assist in the development and use of innovative activities relating to water workforce development and career opportunities in the drinking water and wastewater utility sector, and (2) expand public awareness about drinking water and wastewater utilities and to connect individuals to careers in the drinking water and wastewater utility sector.

A total of 9 organizations were recently selected by EPA to receive grant funding under this program. EPA has developed Fact Sheets on each of these projects that includes the language from the grant submission.

To learn more about the range of activities EPA is undertaking to support our Nation's water workforce, please go to [Sustainable Water Infrastructure-Water Sector Workforce](#).



PROJECT OBJECTIVES

The primary goal of the WaterWorks proposal is to foster awareness about employment opportunities in the drinking water and wastewater utilities workforce via K-12 educational programming. In addition to developing, piloting, and implementing both hands-on and virtual educational activities to inform students and educators about the critical roles that members of the water and wastewater workforce have in their communities, the proposed project will provide linkages

to employment opportunities in the water and wastewater utility workforces. We strive to cultivate and construct an everlasting pipeline connecting diverse members of our nation's youth to employment opportunities. Inside the confines of the classroom, K-12 students receive little to no exposure to what comprises the water and wastewater workforce and what these essential workers do on a daily basis. At secondary and higher education levels, students often struggle to translate concepts from their coursework to real-life practice. Our current generation of youth is the most technologically savvy to date; as such, they have much to contribute to the drinking water and wastewater utilities sectors given the greater likelihood of integration of technology in the optimization of various processes.



MAJOR ACTIVITIES

A series of educational modules that comprise WaterWorks; each module provides capacity to students to explore various career opportunities within the water workforce. WaterWorks is comprised of 1)WaterMOBILE, 2)WaterPAL, 3)WaterTALK, and 4)WaterCAVE.

- ◊ WaterMOBILE provides an experience for students to receive hands-on experience about the engineering and science behind water utilities via interaction with a 4-wheeled bin that is easily steered into classrooms.
- ◊ WaterPAL is an innovative mobile app that provides educators with access to learning modules and students with access to learning modules and students with access to a game in which they can virtually live through a day in a water worker's shoes
- ◊ WaterTALK consists of activities that integrate remote sensing technology and teach the core principles of data collection and analytics.



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MAJOR ACTIVITIES (CONTINUED)

◇ Finally, WaterCAVE immerses students in a virtually reality experience in which they can walk through simulated water utilities and learn how they are endangered by extreme weather events, such as storms and floods, that are predicted to be exacerbated by the looming climate crisis. Collectively, WaterWorks provides K-12 students and educators structured educational programming that will increase awareness and knowledge of opportunities in the water and wastewater utilities sector.



OUTCOMES

- ◇ Engage K-12 students (Grades 5-12) via innovative educational programming about opportunities in the water and wastewater utilities sectors
- ◇ Increase awareness and knowledge about the water workforce among K-12 students
- ◇ Support teachers and students in exploring and understanding the crucial role members of the water workforce play in the daily lives of their communities
- ◇ Integrate WaterWorks programming into K-12 curricula at the LEAP Academy High School and Camden Charter High School as well as recruit other interested K-12 schools
- ◇ Develop digital and print multimedia to ensure transferability of programming for implementation in other geographically diverse areas of the U.S.
- ◇ Serve as a national model for other undergraduate institutions in integrating WaterWorks programming in K-12 education
- ◇ Increase the participation of students from underrepresented populations in the water and wastewater utilities sectors



PARTNERS

WaterWorks marks an innovative partnership between Rowan University, Camden City School District (CCSD), and other established organizations in Camden to educate posterity about their future opportunities so that they are empowered to take responsibility for the well-being of not only themselves but also their community members. Partners include:

- ◇ CCSD
- ◇ American Water
- ◇ The Camden County Municipal Utilities Authority (CCMUA)
- ◇ The South Jersey Land & Water Trust (SJLWT).
- ◇ The Atlantic City Utilities Authority (ACUA) has also been selected as an external partner to test the transferability of the WaterWorks programming.

