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# Innovative Safe Water Program Improvement E-Learning for Environmental Health Professionals

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**Editor's Note:** NEHA strives to provide up-to-date and relevant information on environmental health and to build partnerships in the profession. In pursuit of these goals, we feature this column on environmental health services from the Centers for Disease Control and Prevention (CDC) in every issue of the *Journal*.

In these columns, authors from CDC's Water, Food, and Environmental Health Services Branch, as well as guest authors, will share insights and information about environmental health programs, trends, issues, and resources. The conclusions in these columns are those of the author(s) and do not necessarily represent the official position of CDC.

## Introduction

The Centers for Disease Control and Prevention's (CDC) National Center for Environmental Health released a free e-learning curriculum in January 2018 titled Safe Water Program Improvement (SWPI). With approximately 34 million American residents served by privately owned wells (National Ground Water Association, 2016), there is a need for training on how health departments can improve their services to homeowners. CDC developed the curriculum for state, local, tribal, and territorial health departments as a resource to improve safe drinking water programs focused on private wells and other federally unregulated drinking water. CDC designed the SWPI curriculum using the 10 Essential Environmental Public Health Services (EPPHSs) (Figure 1) and the

Environmental Public Health Performance Standards (Centers for Disease Control and Prevention, 2014) as frameworks.

CDC developed the SWPI e-Learning series through a partnership with the National Network of Public Health Institutes (NNPHI); the Texas Health Institute; Tulane University School of Public Health and Tropical Medicine, Center for Applied Environmental Public Health; and the National Environmental Health Association (NEHA). Two environmental health subject matter experts authored the nine courses with continual feedback from all partners. The SWPI e-Learning series uses the latest technology for enhanced learner centric interaction with engaging graphics. The average time to finish each course ranges from 1–2 hr depending on how the learner uses the resources and tools.

## Course Highlights

The SWPI e-Learning series is firmly rooted in best public health practices consisting of an introduction and three core public health functions: assessment, policy development, and assurance. The SWPI e-Learning series consists of nine courses that take the learner through lessons and activities following the 10 EPPHSs. Each course lesson has knowledge checks to help the learner understand and apply the content. There are scenarios that help the learner think through and resolve problems using course content. Following a required introductory course, SWPI 101, eight courses cover the 10 EPPHSs (Table 1).

The SWPI e-Learning curriculum employs a “branching role play” technique that presents a complex, real-life example of a public health problem associated with private wells. The courses help the learner to understand how to operationalize the 10 EPPHSs as the problem unfolds. Additionally, learners have the opportunity to access tools and resources to improve partnering, outreach, communications, and research and evaluation skillsets. An engaging graphic from SWPI 104 (Figure 2), shows a methodical approach that the learner can use when developing a health communication plan. Resources linked to this course provide communication examples.

Particularly useful for the learner is how some courses define the role of the environmental health professional in safe water programs focused on federally unregulated drink-

FIGURE 1

**The 10 Essential Environmental Public Health Services Wheel**



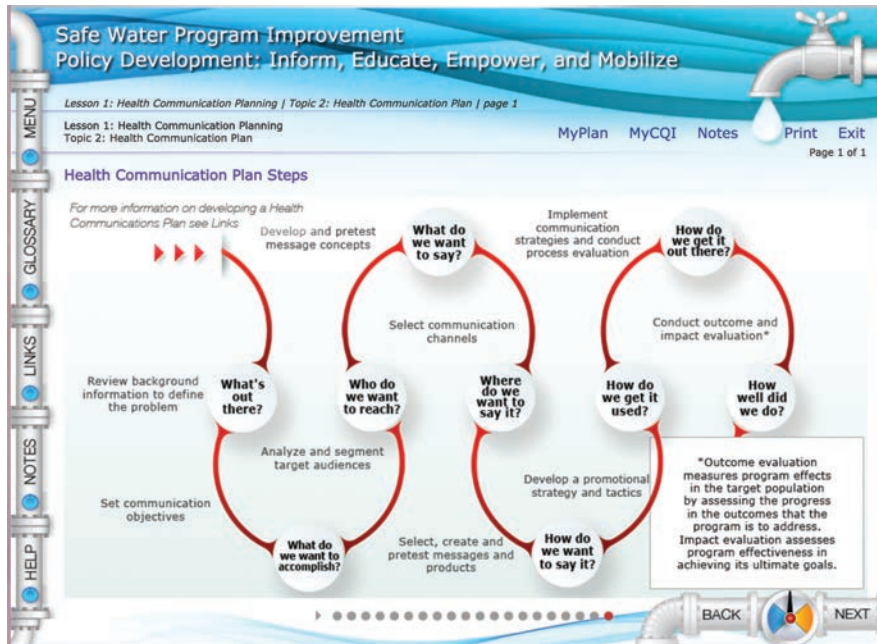
TABLE 1

**Safe Water Program Improvement (SWPI) E-Learning Courses and the 10 Essential Environmental Public Health Services**

Course #	Core Public Health Function	Course Name
SWPI 101	Introduction	The 10 Essential Environmental Public Health Services and Unregulated Drinking Water Programs
SWPI 102	Assessment	Monitor Health
SWPI 103		Diagnose and Investigate
SWPI 104	Policy development	Inform, Educate, Empower, and Mobilize
SWPI 105		Policies and Plans
SWPI 106	Assurance	Laws and Regulations
SWPI 107		Linking People to Services
SWPI 108		Assuring a Competent Workforce
SWPI 109		Evaluation and Research

FIGURE 2

**Example of the Safe Water Program Improvement E-Learning Course Screen on Health Communication Planning**



**Pilot Tester Feedback**

Drinking water and other environmental health staff tested each course in the Safe Water Program Improvement e-Learning series during the pilot testing phase. Of the pilot testers, 9 out of 10 said they would recommend the curriculum to colleagues. One pilot tester commented, “This course will allow me to think more about the sources of unregulated drinking water instead of totally focusing on public sources of water. It will also help me be ready with answers to questions from people using unregulated drinking water sources.”

tion, and emphasizes a proactive approach to comprehensive workforce planning

Individuals completing all courses and the final exam will receive a certificate of completion and have the option to receive continuing education credit through NEHA. In addition, the courses are crosswalked with the Public Health Accreditation Board domains and standards that can help programs working towards public health accreditation.

**Conclusion**

The SWPI e-Learning series provides much needed training at no cost to environmental and public health professionals working

ing water. This component is especially true in the courses addressing policies and plans, and laws and regulations. Another topic for environmental health managers who take the

training is how to maintain and assure a competent workforce. The curriculum also provides content for management and examples that address workforce recruitment and reten-

LEARN MORE

- Steps to Improve Drinking Water Programs: [www.cdc.gov/nceh/ehs/safe-watch/steps-to-improve.html](http://www.cdc.gov/nceh/ehs/safe-watch/steps-to-improve.html)
- Safe Water Program Improvement e-Learning Series: <http://lms.southcentralpartnership.org/swpi.php>
- Improving Environmental Public Health Services Performance to Meet Community Needs: [www.cdc.gov/nceh/ehs/envphps/docs/improving-eph-serv-perf-comm.pdf](http://www.cdc.gov/nceh/ehs/envphps/docs/improving-eph-serv-perf-comm.pdf)

in safe water programs focused on federally unregulated drinking water. The curriculum provides practical and informative examples

of operationalizing the 10 EEPHSs. There are course specific tools and resources to help learners apply their new knowledge in the field and help them improve their own program. The SWPI e-Learning series allows the learner to complete continuing education credit in a convenient, self-paced environment. The courses use a framework and learning approach that will benefit agencies seeking accreditation through the Public Health Accreditation Board. In addition to the references linked to each course, there are tools and resources at CDC's Water, Food, and Environmental Health Services Branch website under the Safe Water section ([www.cdc.gov/nceh/ehs](http://www.cdc.gov/nceh/ehs)) and through NNPHI's Public Health Learning Network ([www.nnphi.org/phln](http://www.nnphi.org/phln)). The SWPI e-Learning series is a practical tool for all environmental health professionals interested in improving the performance and quality of their safe drinking water programs. 🌍

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**References**

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National Ground Water Association. (2016). *Groundwater use in the United States of America*. Westerville, OH: Author. Retrieved from <http://www.ngwa.org/Fundamentals/Documents/usa-groundwater-use-fact-sheet.pdf>

# Did You Know?

Several of NEHA's food safety trainings and credential prep courses are available online. The Professional Food Manager, Professional Food Handler, Certified Professional–Food Safety, and a multitude of HACCP courses can be taken at your own pace from the comfort of your office or home. Visit [www.neha.org/store](http://www.neha.org/store) to learn more about NEHA's online courses.



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