



Safe Drinking Water Act

An Online Continuing Education Course for Engineers

Course Number: EN-6006

Credit: 6 Hours / 6 PDH / 6 CPD

Course Structure

- Statutory & Regulatory Info
- Scope of Course
- National Primary Drinking Water Regulations
 - Contaminant Goals: MCLGs & MRDLGs
 - Contaminant Levels: MCLs & MRDLS
 - Contaminant Rules
 - Arsenic
 - Radionuclides
 - Lead & Copper
 - Total Coliforms
 - Disinfectants & Disinfection Byproducts
 - Ground Water Rule
 - Sanitary Surveys
 - Monitoring
 - Surface Water
 - Unfiltered systems
 - Filtered systems
 - Conventional and Direct
 - Other (slow sand, diatomaceous earth, and alternative)
 - Filtered Systems: Bin Classification
 - Public Information
 - Consumer Confidence Reports

- Public Notification
- National Secondary Drinking Water Regulations
- Underground Injection Control
 - Class I Wells
 - Class II Wells
 - Class III Wells
 - Class IV Wells
 - Class V Wells
 - Description
 - Regulations
- Drinking Water State Revolving Fund
 - Eligible Systems and Projects
 - Public Involvement
 - Small & Disadvantaged Communities
 - Preventing Future Threats to Drinking Water
 - Set-Asides for Other Program Management Purposes

Statutory & Regulatory Info

Safe Water Drinking Act (SDWA) is actually the more common name for Title XIV “Safety of Public Water Systems” under the Public Health Service Act. Title XIV was added by Public Law 93–523 on December 16, 1974; and thereafter amended in 1986 and 1996. Title XIV consists of sections (§) 1400-1465.

After the SDWA and its amendments were passed, the House of Representatives standardized the text of the law and published it in the United States Code (U.S.C.) as follows:

- Title 42 - The Public Health and Welfare
 - Chapter 6A - Public Health Service
 - Subchapter XII - Safety of Public Water Systems, §300f-300j

The USC, in turn, authorized the Environmental Protection Agency (EPA) to enforce the SDWA. To do this, the EPA interprets the text of the USC and publishes regulations in the Code of Federal Regulations (CFR) as follows:

- Title 40 Protection of the Environment
 - Part 35 Subpart L: Drinking Water State Revolving Fund
 - Part 141: National Primary Drinking Water Regulations
 - Part 142: National Primary Drinking Water Regulations Implementation
 - Part 143: National Secondary Drinking Water Regulations
 - Part 144: Underground Injection Control Program
 - Part 145: State UIC Program Requirements
 - Part 146: Underground Injection Control Program: Criteria and Standards
 - Part 147: State, Tribal, and EPA-Administered Underground Injection Control Programs
 - Part 148: Hazardous Waste Injection Restrictions
 - Part 149: Sole Source Aquifers

Finally, EPA grants a significant level of autonomy to individual states in enforcing regulations in the CFR, through their EPA-approved drinking water programs.

Scope of Course

This course is intended for civil or environmental engineers involved with construction, repair, maintenance, or operation of public water systems. The focal content will be Title 40 of the Code of Federal Regulations (40 CFR), which is the regulatory foundation for EPA and the States to enforce the Safe Drinking Water Act. As such, the author uses citations from the CFR as opposed to the actual Act itself. Although the author has directly inserted several EPA publications into the following course material, the reader should note that these publications are ultimately derived from the parts of 40 CFR, listed previously.

Course material will focus on facility water systems. As such, this course will not address Aircraft Drinking Water under 40 CFR Part 141, Subpart X. Regarding the Underground Injection Control (UIC) program, the author has omitted Class VI from discussion due to their specialized nature. And because the author only intends to present federal UIC requirements versus those for individual States, 40 CFR Part 147 will not be addressed. Finally, Part 149 is not discussed because its content mostly applies to just San Antonio, Texas.

National Primary Drinking Water Regulations

National primary drinking water regulations (NPDWRs, a.k.a. “primary standards”) listed in 40 CFR Part 141 apply to public water systems with the intent of protecting public health. A public water system (PWS) is defined as a system that has at least 15 service connections; or that regularly serves an average of at least 25 people at least 60 days out of the year. This includes collection, treatment, storage, and distribution facilities. PWS’s are either community or non-community. If the system is used by year-round residents or regularly serves at least 25 people, then it’s a community water system. Otherwise, it’s a non-community water system.

Non-community water systems

- Non-transient community water systems regularly serves at least 25 of the same connections at least 60 days out of the year.
- Otherwise, it’s a non-community water system.

EPA has published the following regulations into 40 CFR Part 141 in chronological order of publication:

- Chemical Phases Rule (January 14, 1991)
- Surface Water Treatment Rule (January 14, 1991)
- Total Coliform Rule (January 14, 1991)
- Lead & Copper Rule (June 7, 1991)
- Interim Enhanced Surface Water Treatment Rule (December 16, 1998)
- Stage 1 Disinfectants & Disinfection Byproducts Rule (December 16, 1998)
- Radionuclides Rule (December 7, 2000)
- Arsenic Rule (January 22, 2001)
- Filter Backwash Recycling Rule (June 8, 2001)
- Long Term 1 Enhanced Surface Water Treatment Rule (January 14, 2002)
- Stage 2 Disinfectants & Disinfection Byproducts Rule (January 4, 2006)

To view the remainder of the course material and to take the quiz for PDH credit, you must purchase the course.

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