

**Chapter 7**  
**Drinking Water Regulations**

**INTRODUCTION**

**§ 7.01. Scope**

Drinking Water:

History and sources of law [7.02] ▪ Constructing and operating public water systems [7.03–7.11]  
▪ Regulation of water sources and well-siting [7.05] ▪ Maximum contaminant levels, treatment, and monitoring [7.07–7.08] ▪ Cross connection bans and backflow prevention [7.09] ▪ Public notification and consumer reporting [7.10] ▪ Enforcement [7.11] ▪ Private water systems and regulation by health departments [7.12] ▪ Municipal regulation of drinking water [7.12 below] ▪ Trends shaping drinking water law [7.13]

**II. HISTORY AND SOURCES OF REGULATION**

**§ 7.02. Federal Safe Drinking Water Act and Ohio Regulation**

Background:

- The State of Ohio has regulated public water systems since at least 1908, when the legislature created the Ohio Board of Health. Before that, the legislature allowed municipalities to protect their own municipal water systems and their sources of water both within and outside their municipal boundaries.
- Then in 1974, the federal legislature passed the Federal Safe Drinking Water Act, which set federal baseline requirements for public water systems. In response, Ohio amended its existing statutory framework and enabled the Director of Ohio EPA to assume and retain primary enforcement authority of Ohio's drinking water.. (Compare to Air & Water federal delegation)
- Ohio Drinking Water laws are found in R.C. Chapter 6109 and OAC Chapters 3745-81, 3745-82 and 3745-83. The Drinking Water program is part of Ohio EPA's Division of Drinking and Ground Water (DDAGW).
- Private water systems remain regulated by local health districts.

### III. PUBLIC WATER SYSTEMS

#### § 7.03. Defining Public Water Systems

- A water system is regulated under R.C. Chapter 6109 if it is:
  - “a system for the provision to the public of water
  - for human consumption
  - through pipes or other constructed conveyances
  - if the system has at least 15 service connections and/or regularly serves at least twenty-five individuals.”
- “regularly serves” means servicing an average of at least 25 people daily at least sixty days out of the year.

Exemptions: systems that consist only of distribution and storage facilities and do not have collection and treatment works; systems that obtain all water from a public water system; a system that does not sell water to any person or is a carrier which conveys passengers in interstate commerce.

- A public water system must be licensed and renew its license annually.

#### § 7.04. Water System Plan Approval

- No person shall begin construction or installation, or make a substantial change in a public water system until Ohio EPA approves plans for the activity.
  - Strategic Point: “Substantial change” is a term of art which is partially defined in the regulations. It includes, but is not limited to, changes in facilities, equipment or process, but it excludes repairs, maintenance and “like-kind replacement.”
- Ohio regulations list the requirements for a public water system plan.
  - Ohio EPA sets standards for the review the technical sufficiency of plan applications. Ohio EPA will also consider generally acceptable engineering design practices and standards of the American Water Works Association.

Caution: There’s no set timeline for the Director’s review, and she has considerable discretion when doing the review. In other words, applicants should plan on a lengthy review. (Is this good?)

## § 7.05. Regulatory Review of Water Sources and Well-Siting

- Goal: Ohio drinking water laws for public water systems are focused on making certain humans have access to clean, safe drinking water. Therefore, regulations center around water “treatability” and review of available water quantity.
- An exception to the limited authority described above is the broad regulation by Ohio EPA of the use and placement of wells for public water systems.
  - The location of any well used in a public water system must comply with specific setback requirements in relation to potential sources of contamination, property boundaries, surface waters, roads and buildings.
  - The well must be constructed to meet requirements for the geologic conditions. Once a well is constructed, it must undergo pump tests, sampling and disinfection and an Ohio EPA inspector must confirm compliance before the well can be licensed and used.

NOTE: The general requirements for well drilling, well construction, well log reporting and water withdrawal registration are managed by ODNR.

- In terms of water quantity, Ohio EPA may require an investigation to determine if sufficient quantity exists for the intended purpose, and a pump test to determine safe yield and drawdown. Yet, Ohio EPA has stated that the purpose of these regulations is only to determine whether a well will meet the proposed design capacity. Regulations do not specify that Ohio EPA must or should consider impacts to other current or proposed uses. Ohio EPA has stated that other current and proposed uses are considered only to the degree that they could interfere with the ability of the proposed well to meet design capacity.

Strategic Point: The question of reconciling competing uses of an aquifer or water body is not a regulatory question for Ohio EPA, but one of property rights and determination of reasonable use. See Chapter 5 above.

- While Ohio EPA has limited direct regulatory authority over the source of supply, it exercises significant indirect regulation of source issues.
  - All public water systems must undertake periodic sanitary surveys.
    - Ohio EPA’s extensive source water protection program is designed to enable systems to identify and address potential sources of contamination and to develop contingency plans. All community water systems annually must report information to their users regarding the source of supply.

## § 7.06. Classifying Public Water Systems

### [1] Operator Classification

- The owner of a public water system is responsible for complying with requirements to place operation of a system under control of an operator who has achieved and maintains the proper certification.
  - For purposes of determining appropriate level operating expertise, public water systems are classified into Class A, I, II, III, and IV.
    - Classification is based on (1) indicators of potential health risk, (2) the source of the water supply, (3) the quality of the source, (4) the complexity of the treatment and distribution, (5) the amount of water consumption, and (6) the system's potential for public health hazards.

### [2] Classification Based on Size

- Public water systems are categorized based on the size of the population served. This classification is used to determine feasibility of treatment technologies, implementation schedules and a host of other regulations.
  - Most people in Ohio get water from the largest systems, known as “community water systems,” or CWS, which face the most stringent regulations.
    - A **community water system** is defined as a public water system that has at least 15 service connections used by year-round residents or that regularly serves at least 25 year-round residents.
    - A “**noncommunity water system**”, or NCWS, is any public water system that is not a CWS.
      - A NCWS can be a “**nontransient noncommunity water system**,” defined as a NCWS that regularly serves 25 of the same residents in a six month period. BUT, serves fewer than 25 of the same residents in a six month period, it is classified as a “**transient noncommunity water system**.”

### [3] Classification Based on Source Water

- Public water systems also are classified by source water to determine the appropriate modes of treatment processes and technology.
  - Source water that is open to the atmosphere and subject to surface water runoff is classified as “surface water.” Surface water systems must monitor and remove contaminants (like microbes) originating in the atmosphere and from land, contaminant origins that groundwater systems do not often encounter.
  - Source water that comes from a well and meets other criteria is considered “groundwater,”
    - BUT, many systems use groundwater recharge systems or are so connected to surface water that treatment for human consumption that they are treated like surface water. These are known as as “groundwater under direct influence of surface water” or GWUDI.

## § 7.07. Maximum Contaminant Levels and Treatment

- The regulatory backbone of the federal Safe Drinking Water Act are the treatment standards that apply to water piped for human consumption.
  - The upper limit of permissible contaminants in treated, or “finished,” water delivered to any user are called Primary Maximum Contaminant Levels (MCLs).
    - The MCLs change. Under the federal Safe Drinking Water Act, every 5 years U.S. EPA is required to study additional contaminants and determine if new MCLs should be added.
      - Strategic Point: MCLs are health based standards that apply to drinking water but do not apply generally to the environment. Nonetheless, MCLs are often referenced in other areas of environmental regulation, such as in the groundwater standards of the Voluntary Action Program.
  - Ohio’s drinking regs also require monitoring of “Secondary Maximum Contaminant Levels.”
    - Secondary MCLs are “the advisable maximum level of a contaminant in water which is delivered to a free-flowing outlet of the ultimate user of a public water system.” Secondary MCLs have been established for aluminum, chloride, color, odor, corrosivity, fluoride, and others.
- A public water system must install Best Available Technology or BAT.
  - For drinking water, BAT is the best technology, treatment techniques or other means which the Director may approve, after examination for efficacy under field conditions and taking cost into consideration, for a public water system to use for achieving compliance with a MCL. In some instances, BAT is specified by rule. In other cases, determination of BAT is a point of negotiation between public water systems and Ohio EPA.
- Public drinking water must meet standards (MCLs) all the way to your faucet.
  - Eg. Systems must maintain a specified minimum chlorine residual while it travels through the distribution system to users, but it also cannot exceed maximum levels of chlorine anywhere in the system.

## **HOW IS YOUR WATER KEPT SAFE?**

### **§ 7.08. Monitoring and Certified Labs**

- How is MCL compliance determined? - MCLs is determined by extensive monitoring requirements on public water systems.
  - Ohio regulations and individual licenses specify the timing, frequency, location and method of monitoring hundreds of contaminants. Regulations also specify reporting and recordkeeping requirements. Monitoring occurs at the source, throughout the treatment system, throughout the distribution system, and even at the user's tap. Monitoring requirements vary depending on the classification of the public water system in terms of size and source water. All sample analysis must be conducted by a state-certified laboratory.

### **§ 7.09. Cross Connection Ban and Backflow Prevention**

- To ensure the quality of piped water in a public water system, the Safe Drinking Water Act bans all cross connections between the public water system and any auxiliary water system a user may have.
  - Users who have an auxiliary system which uses any water source other than the public water system—such as a separate pond or groundwater for a fire suppression system—must have approved backflow prevention devices.

### **§ 7.10. Public Notification and Consumer Reporting**

- Public water systems are required to provide notification of certain violations using language specified in Ohio regulations.
  - In addition, public water systems must make required statements when disruptive events occur, such as water main breaks that result in loss of water or water pressure.
  - Annually, public water systems are required to report to their customers on the source of water supply, information on detected contaminants, compliance with drinking water laws, health warnings and other information.

### **§ 7.11. Enforcement**

- Operation of a public water system in violation of R.C. Chapter 6109 or an Ohio EPA rule, plan approval, license, variance or exception is subject to injunctive relief and a civil penalty of up to \$25,000 per day per violation. Can use DFFOs, too.

## IV. PRIVATE WATER SYSTEMS

### § 7.12. Private Water Systems and Local Regulation

#### [1] Department of Health and Private Water Systems

- What is a private water system - any source of water for human consumption that does not qualify as a “public water system.”
  - The Public Health Council, under the Ohio Department of Health, develops the “sanitary code” applicable to “private water systems.”
  - Sanitary regulations adopted by the Public Health Council form a baseline of regulation that cities and local health districts must meet, though local regulation can be more stringent.
    - Local health departments issue permits to construct, alter or seal private water systems pursuant to OAC Chapter 3701-28. Local health departments inspect and enforce regulation of private water systems, though subject to oversight by the director of the department of health.
  - The Ohio Department of Health also has authority to investigate outbreaks of illness, which can include illness that may arise from potable water.

#### [2] Municipal Regulation of Drinking Water

- Municipalities long have had authority to operate and regulate their own water systems.
  - The Ohio Constitution provides that municipalities may operate a public water utility, enact local sanitary regulations, and exercise eminent domain outside their municipal boundaries.
    - municipal ordinances to protect the sources of supply are valid within municipalities and up to 20 miles outside municipal boundaries.

## V. TRENDS SHAPING DRINKING WATER REGULATION

### § 7.13. Trends Shaping Drinking Water Regulation

Various trends have influenced the application of current regulations and the direction of developing regulation.

- Terrorism threats - public water systems are now required to conduct vulnerability analyses and to prepare emergency plans for continued operation in the event of various challenges. Ohio EPA has a webpage about this.
- Toledo - August 2014, the City of Toledo, Ohio was completely cut off from its drinking water supply (Lake Erie) due to the presence of toxins from massive algae blooms in the western basin of Lake Erie. Over 400,000 residents of the City and surrounding suburbs were without drinking water for multiple days while the City, Ohio EPA, and U.S. EPA attempted to address the presence of these toxins.
- Endless battle of maintaining and upgrading aging infrastructure and meet new regs in an era when many central cities are losing population. Huge budget impacts.
  - Ex. In 2015, the City of Flint, Michigan discovered lead levels exceeding health standards its drinking water following the City's switch to a new drinking water source, which lead to the leaching of lead into drinking water from the City's aging drinking water infrastructure. This ongoing issue has led to other municipalities in Ohio to more thoroughly evaluate their own drinking water systems, which has uncovered some additional lead impacts to water to a lesser extent in Sebring, etc . . . . In response Gov. Kasich signed House Bill 512, effective on September 9, 2016. HB 512, requires Ohio EPA to amend current drinking water rules to improve lead detection notifications for community water systems and nontransient, non-community public water systems.