

Overview of Chapter 109 by Subchapters and links to additional resources

Regulatory hierarchy:

109 Chapter
 A. Subchapter
 .1 Section
 (a) Subsection
 (1) Paragraph
 (i) Subparagraph
 (A) Clause
 (V) Subclause
 (-a-) Item
 (-1-) Subitem

The hierarchy terms (section, subsection, paragraph, subparagraph, etc...) are used repeatedly throughout the text in Chapter 109 especially as cross-references. In order to read the correct cross-reference text, you must be familiar with these terms. (Think of them as cross-reference navigational terms)

For instance, 109.301(6) is a paragraph that describes the monitoring requirements for SOCs.

Within this paragraph, there are several clauses (A), (B) (C), and (D) found under the subparagraphs (i), (ii), (iii), (iv), (v), (vi), and (vii).

When reading the text about specific clauses, it's important to understand that clauses identified are listed **within the subparagraph unless the text states the subparagraph in addition to the clause.**

Example 1: "...the criteria in clause (B), (C), or (D) are met."

To find clause (B), you must continue reading this specific subparagraph until you get to clause (B).

Example 2: "the Department may allow the system to monitor in accordance with subparagraph (ii)C"

To find subparagraph (ii)(C), you must look for subparagraph (ii)(C) which precedes this particular subparagraph.

These cross-referencing concepts apply to all levels of hierarchy, not just those used in the above example.

There is a complete Chapter 109 index on the Drinking Water website under “**Drinking Water Regulations, Standards and Resources**” link on right pane.

Chapter 109 index:

<http://files.dep.state.pa.us/Water/Drinking%20Water%20and%20Facility%20Regulation/DrinkingWaterPortalFiles/watersupply/2011%20Chapter109%20Index.pdf>

Subchapter A. General Provisions 109.1

This subchapter contains:

- Definitions
- Scope
- General Requirements
- Organization of Chapter
- Inspection Authorization

In addition to our Chapter 109 definitions, here’s a link to a glossary of drinking water (and wastewater) terms used in DEP web based courses:

Web-based Course Glossary of Water and Wastewater Terms:

<http://www.padepelearn.com/resources/Glossary/~start.htm>

(click on “Universal Glossary” tab at top of site)

Section 109.4 General requirements. Public water suppliers shall: Protect the water sources under the supplier’s control, provide treatment adequate to assure that the public health is protected, provide and effectively operate and maintain PWS facilities, and take whatever investigative or corrective action is necessary to assure that safe and potable water is continuously supplied to the users.

- This section is used quite often when citing violations.

Section 109.5 Organization of Chapter This section provides the applicability requirements for the following Subchapters:

Subchapter H	Subchapter K
Subchapters B – G and I	Subchapter L
Subchapter J	Subchapter M

Subchapter B. MCLs, MRDLs or TT Requirements 109.201

This subchapter contains:

- MCLs, MRDLs and TT Requirements
- Unregulated contaminants
- Disinfection Profiling and Benchmarking

However, this subsection does not contain **MCL values**.

MCL and Treatment Technique Requirements web page:

http://www.depweb.state.pa.us/portal/server.pt/community/drinking_water_regulations%2C_standards_resources/10544

Not all **TTs** are contained in the subchapter. Several are found in Subchapter G, K, L, and M.

Subchapter C. Monitoring Requirements 109.301

This subchapter contains:

- Monitoring Requirements
- Sampling Requirements
- Analytical Requirements
- Fees
- **All compliance determinations are now included under each contaminant group (coliforms, VOCs, SOCs, IOCs, DBPs and precursors, disinfectant residuals, and RADs)**
- We incorporate-by-reference some of this information, including:
 - Analytical methods
 - Sample collection procedures

- Chapter 109.304(c) contains a listing of contaminants that may be performed by a certified operator, a person using SOPs or accredited lab (also known as accredited- by-rule parameters), such as:
 - Cl₂ residual
 - pH
 - Alkalinity
 - Turbidity,
 - Fluoridation operation
 - Orthophosphates
 - Silica
 - Temperature
 - Calcium
 - Conductivity
 - Daily chlorite
 - Magnesium hardness

Here are the web pages that provide additional resources to the contaminants for which water suppliers are required to monitor.

Arsenic web page:

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=553922&mode=2>

Chloramine web page:

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=553919&mode=2>

Fluoride web page:

http://www.portal.state.pa.us/portal/server.pt/community/public_drinking_water/10549/fluoride/816515

***Giardia* and *Cryptosporidium* (Waterborne Disease web page):**

http://www.portal.state.pa.us/portal/server.pt/community/waterborne_diseases/10551

Surface Water Filtration web page:

http://www.portal.state.pa.us/portal/server.pt/community/public_drinking_water/10549/surface_water_filtration/553912

Long Term 1 Enhanced Surface Water Treatment Rule web page:

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=553887&mode=2>

Monitoring Waiver Resources for IOCs/VOCs/SOCs web page:

http://www.portal.state.pa.us/portal/server.pt/community/drinking_water_regulations%2C_standards_resources/10544/monitoring_waivers/821540

Radionuclide Rule web page:

http://www.portal.state.pa.us/portal/server.pt/community/new_regulations/10547/radionuclide/553895

Stage 1 Disinfectants/Disinfection Byproducts Rule web page:

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=553891&mode=2>

Stage 2 Disinfectants/Disinfection Byproducts Rule web page:

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=553892&mode=2>

Subchapter D. Public Notification 109.401
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This subchapter contains:

- PN requirements
- CCR Requirements
- Special notice for significant deficiencies by NCWs
- Special notice for failure to conduct source water Cryptosporidium monitoring or failure to determine bin classification.

This subchapter does not contain specific information about water supply warnings (Tier 1 PN), such as:

- Boil Water Advisories
- Do Not Consume Notices
- Do Not Use Notices

PN web page:

To find the policies, PN templates, handbooks and other resources related to the PN rule, go to the PN website at this link:

http://www.depweb.state.pa.us/portal/server.pt/community/public_drinking_water/10549/public_notification/553901

There are 2 specific policies that relate to the PN revised regulations and they are located on this site. They are:

- The “*Policy for Issuing and Removing Water Supply Warnings*” (383-2129-005)
- The “*Policy for Determining When Loss of Positive Pressure in the Distribution System Requires One Hour Reporting to DEP and Issuing Tier 1 PN*” (383-2129-004)

CCR web page:

There is a CCR website that is located at this link:

http://www.depweb.state.pa.us/portal/server.pt/community/public_drinking_water/10549/consumer_confidence_reports/553926

- The CCR page includes CCR templates, a link to the CCR “detect data”, and other CCR resources.

Section 109.417 contains the special notice for significant deficiencies by noncommunity water systems.

Section 109.418 contains the special notice for failure to conduct source water *Cryptosporidium* monitoring or failure to determine bin classification.

Subchapter E. Permit Requirements 109.501
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This subchapter contains:

- Permitting requirements for CWSs and NCWSs.

Permit Application Modules on eLibrary:

<http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-9489>

<http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-9485>

Subchapter F. Design and Construction Standards 109.601
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This subchapter contains:

- Design and construction standards

In most cases, we simply reference the appropriate Public Water Supply Manual.

40 CFR contains BATs. Chapter 109 does not.

Public Water System Manual – Part II: CWS Design Standards (5/06):

<http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-47843/01%20383-2125-108.pdf>

Public Water System Manual – Part IV: NCWS Design Standards (05/01):

<http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-47496/383-2128-108.pdf>

NSF Water Treatment Chemicals and Water System Component Standards:

http://www.nsf.org/business/water_distribution/index.asp?program=WaterDistributionSys

Subchapter G. System Management Responsibilities 109.701

This subchapter contains:

- Reporting and Recordkeeping
- Various Plan/Program Requirements
- Operator Certification
- Planned Service Interruptions
- Disinfectant Residual in Distribution System
- Wellhead Protection
- Filter profile, filter self-assessment and CPE (individual filter exceedances)

Also, several TTs are located here.

Recordkeeping and Reporting 109.701

Chapter 109.701(a)(3) One-hour reporting requirements.

Chapter 109.701(a)(3)(iii)(F) Overfeed of drinking water chemical

Chapter 109.701(a)(3)(iii)(G) Loss of positive water pressure...

To find policies related to the overfeed and loss of positive water pressure situations, go to PN web page:

http://www.depweb.state.pa.us/portal/server.pt/community/public_drinking_water/10549/public_notification/553901

There are 2 specific policies that relate to the PN revised regulations and they are located on this site. They are:

- The *“Policy for Issuing and Removing Water Supply Warnings”* (383-2129-005) addresses overfeeding a drinking water chemical.
- The *“Policy for Determining When Loss of Positive Pressure in the Distribution System Requires One Hour Reporting to DEP and Issuing Tier 1 PN”* (383-2129-004) addresses the loss of positive pressure situation.

Chapter 109.701(g)((2)(iii) Stage 2 DBP monitoring plan requirement

Stage 2 DBP monitoring plan template on eLibrary:

<http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-10727>

Chapter 109.701(h) Reporting and Recordkeeping for systems recycling their waste streams

Filter Backwash Recycling Rule Recordkeeping form on eLibrary:

<http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-8884>

Chapter 109.701(j) Electronic Reporting

Operation and Maintenance Plan 109.702

O & M Plan template files on eLibrary:

<http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-8798>

Operator Certification 109.704

Operator Certification web page:

http://www.depweb.state.pa.us/portal/server.pt/community/operator_certification/10526

Emergency Response Plan 109.707

Emergency Response Plan Template files on eLibrary:

<http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-8776>

Filter Profile, filter self-assessment and comprehensive performance evaluations 109.714

Electronic tools for disinfection profile and Filter-Self Assessment Example Report:

http://www.portal.state.pa.us/portal/server.pt/community/drinking_water_regulations%2C_standards_resources/10544/electronic_tools/553846

Subchapter H. Laboratory Certification 109.801

This subchapter contains:

- Certification requirement
- Reporting and notification requirements

Most of this subchapter was reserved with the General Update.

Lab Accreditation web page:

http://www.portal.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

PA Accredited Lab list (6/7/12):

http://files.dep.state.pa.us/RegionalResources/Labs/LabsPortalFiles/zAccredited_Laboratories.pdf

Subchapter I. Variances and Exemptions Issued by the Department 109.901
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This subchapter contains:

- Requirements for a variance and an exemption.

We have never issued a variance or exemption.

Subchapter J. BVRBs 109.1001
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This subchapter contains all the requirements for bottled, vended, retail and bulk water systems, including:

- MCLs, MRDLs and TTs
- Monitoring requirements
- PN
- Permitting
- Design/construction standards
- System management responsibilities
- System operational requirements

Bottled, Vended, & Bulk Water Systems web page:

http://www.portal.state.pa.us/portal/server.pt/community/public_drinking_water/10549/bottled%2C_vended%2C_and_bulk_water_systems/947094

Subchapter K. Lead and Copper 109.1101
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This subchapter contains all the requirements for the regulation of lead and copper, including:

- Scope
- Action levels and treatment technique requirements
- Monitoring requirements
- Public education and notification
- Permit requirements
- Design standards
- System management responsibilities
- Fees

Lead and Copper Rule web page:

http://www.depweb.state.pa.us/portal/server.pt/community/regulations/10547/lead_and_copper_rule/975048

NSF Standard 61 relating to the new 2014 SDWA definition of “lead free” web page:

http://www.nsf.org/business/mechanical_plumbing/annexg.asp?program=MechanicalPluSysCom

Subchapter L. Long-Term 2 Enhanced Surface Water 109.1201

This subchapter establishes or extends treatment technique requirements in lieu of maximum contaminant levels for *Cryptosporidium*., including:

- Scope
- Monitoring requirements
- Bin classification and treatment technique requirements
- Grandfathering previously collected data
- Reporting and recordkeeping requirements.

Long Term 2 Enhanced Surface Water Treatment Rule web page:

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=553888&mode=2>

Subchapter M. Additional Requirements for Groundwater Sources 109.1301

This subchapter provides additional requirements for groundwater sources including:

- Scope
- Treatment technique requirements
- Triggered monitoring requirements for groundwater sources.
- Assessment source water monitoring
- Compliance monitoring
- Information describing 4-log treatment and compliance monitoring.
- System management responsibilities

Groundwater Rule web page:

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=553898&mode=2>

Appendix A to Subchapter L Long-Term 2 Enhanced Surface Water 109.1201

This Appendix includes the following information:

- Table 1: CT Values for *Cryptosporidium* Inactivation by chlorine dioxide
- Table 2: CT Values for *Cryptosporidium* Inactivation by ozone
- Table 3: UV Dose Table for *Cryptosporidium*, *Giardia lamblia*, and virus inactivation credit

**Appendix B to Subchapter L Long-Term 2 Enhanced Surface Water
109.1201**

This Appendix includes the following information:

- Microbial Toolbox Summary Table: Options, Treatment Credits and Criteria

**Appendix C to Subchapter L Long-Term 2 Enhanced Surface Water
109.1201**

This Appendix includes the following information:

- Microbial Toolbox Reporting Requirements

Additional Web Pages:

Distribution System Optimization web page:

http://www.portal.state.pa.us/portal/server.pt/community/distribution_system_optimization/20526

Municipal Finance Programs and Capability Enhancement Program web page:

http://www.portal.state.pa.us/portal/server.pt/community/municipal_finance/10564/municipal_finance_programs/554058#Capability

Electronic Tools (Surface water):

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=553846&mode=2>

Drinking Water Reporting System web page:

<http://www.drinkingwater.state.pa.us/dwrs/HTM/Welcome.html>

Operator Certification and Exam Fees web page:

http://www.depweb.state.pa.us/portal/server.pt/community/operator_certifications/10527/fees/553663

Operator Continuing Education web page:

http://www.depweb.state.pa.us/portal/server.pt/community/education_training/10530