

PA-DEP Public Notification Revisions Training

Community Water Supplier Workbook Job Aid



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Table of Contents

	Page Number
Introduction	1
Lesson 1: PN Handbook	1-1
Lesson 2: Policy for Issuing and Removing Water Supply Warnings	2-1
Lesson 3: O & M and ERP Templates	3-1
Lesson 4: Policy on Loss of Positive Pressure Situations	4-1
Summary	1
Appendices:	
Appendix A: O & M Plan Template Section 7	
Appendix B: Excerpts from ERP Template	
Appendix C: County EMA List	
Appendix D: PN Regulations in Pa Bulletin	
Appendix E: Scenario Answer Keys	

Introduction



Objectives:

The purpose of this introduction is to:

- Introduce the trainers.
- Review the course agenda.
- Review the course objectives.
- Provide a course format.

Course Agenda

2009 PN Revisions Training	
Water Supplier Course Agenda (7.5 Contact Hrs)	
Time	Topic
8:00 – 8:30	Registration
8:30 – 8:45	Introduction and Course Agenda (15 min)
8:45 – 10:00	Lesson 1: PN Handbook and scenario (2 hrs 30 min)
10:00 – 10:15	BREAK
10:15 – 11:30	Continue Lesson 1
11:30 – 12:30	Lesson 2: Policy for Issuing/Removing Water Supply Warnings (1 hr 30 min)
12:30 – 1:00	LUNCH
1:00 – 1:30	Continue Lesson 2
1:30 – 2:30	Lesson 3: O & M and ERP Template Revisions (1 hr)
2:30 – 2:45	BREAK
2:45 – 4:55	Lesson 4: Policy for Loss of Positive Water Pressure (2 hrs 10 min)
4:55 – 5:00	Summary (5 min)
5:00	Adjourn

Course Objectives:

As a result of taking this course, participants will be able to:

- Use the Public Notification (PN) Handbook as a reference guide for all public notification requirements.
- Implement both DEP policies regarding water supply warnings and loss of positive water pressure situations.
- Update the Operation and Maintenance (O&M) and Emergency Response Plan (ERP) with the new PN planning requirements.
- Implement the PN revisions that became effective May 9, 2009 and plan and prepare for the Tier 1 PN direct delivery requirements that will become effective May 10, 2010.

Course Format:

- 4 lessons (and a brief introduction and summary)
- 7.5 hour course (excluding breaks) = 7.5 CEUs for certified operators
- Scenarios designed to give you an opportunity to apply information.

Lesson 1

PN Handbook



Objectives:

The purpose of this lesson is to:

- Walk through the Public Notification (PN) Handbook for Community Water Systems.
- Summarize the new PN revision requirements.
- Complete a scenario to implement new PN revision requirements.
- Discuss water system experiences with automatic telephone dialing services and the estimated costs for contracting for automatic telephone dialing services.

Background

- We revised the PN rule in 2009 to improve the Tier 1 PN delivery requirements and the PN planning elements under the Operation and Maintenance Plan (O & M) and the Emergency Response Plan (ERP).

PN Handbook for Community Water Systems

- We have revised the PN Handbook for Community Water Systems to incorporate the new PN revision requirements.

Section 1: Introduction

- Tables 1 and 2 describe the PN Tier classification system and deadlines for contacting DEP and delivering the notice.

Section 2: How to Use This Handbook

- DEP has identified response steps that you can take to produce an effective public notice in response to a situation at your facility.

Section 3: Summary of Requirements

- Table 1 lists the different delivery method and deadline requirements for each tier.
 - To further explain “transient and nontransient” service connections, we mean service connections that serve transient and nontransient users. This means that any community water supplier that provides water to any connection beyond a residential connection will be required to issue a Tier 1 PN using the radio or TV to alert those users that won’t be getting a direct delivery message at their home.
- Table 2 provides a specific description of each violation and the associated Tier classification system.
- The PN Delivery Deadline Job Aid summarizes the deadline and delivery requirements on one side and the other side provides violation descriptions and the link to the PN website.
- **All DEP PN templates include the 10 content elements and the mandatory Spanish statement regarding the importance of the notice.**
- Pages 11 and 12 pose questions about abbreviating the content of a Tier 1 PN.

Section 4: Making PN Work

- Page 15 lists the planning requirements required under the Operation and Maintenance (O & M) and Emergency Response Plans (ERPs).
- The new PN revisions now require water suppliers to include social service agencies (e.g. agencies that serve the visually and/or hearing-impaired) within a water supplier’s service area.
- Page 18 describes the new PN revision that requires water suppliers to issue a “Problem Corrected” Tier 1 notice after suppliers have corrected the problem.

Section 5: Tier 1 Notice Requirements and Suggestions

- Pages 21 through 27 reiterate the Tier 1 PN requirements and provide suggestions for effective delivery.

- Pages 23 and 24 address the new Tier 1 PN direct delivery requirements and the “Problem Corrected” notice.

Section 6: Tier 2 Notice Requirements and Suggestions

- Pages 29 – 32 describe the Tier 2 PN requirements and provide suggestions for effective delivery.
- Page 30 introduces the subject of elevating Tier 2 event to a Tier 1 event and references the appropriate policy “Policy for Issuing and Removing Water Supply Warnings”, 383-2129-005.

Section 7: Tier 3 Notice Requirements and Suggestions

- Pages 33 – 36 describe the Tier 3 PN requirements and provide suggestions for effective delivery.
- Water suppliers can include their Tier 3 violation in their annual CCR if:
 - The CCR is delivered before the 12 month deadline for the Tier 3 PN notice **and**
 - The entire Tier 3 PN content (10 mandatory elements) is included in the CCR.

Appendices

- Page 37 lists the Appendices Table of Contents.
- There are 6 new Tier 1 templates under Appendix C:
 - BWA Due to Loss of Positive Water Pressure
 - “DO NOT DRINK” when health advisories are exceeded
 - “DO NOT USE” when health advisories are exceeded
 - “DO NOT DRINK” without health advisories
 - “DO NOT USE” without health advisories
 - Abbreviated Message

Appendix A: NPDWR Violations and Other Situations Requiring PN

- Pages 39 – 42 contain all violations and their associated Tier classifications and endnotes.

Appendix B: PN templates

- Pages 43 – 53 contain the MCL, MRDL, and TT levels and the standard health effects language for each primary drinking water contaminant that is required when an MCL, MRDL, or TT is exceeded.

Appendix C: PN templates

- Page 54 contains the “Boil Water Advisory for Loss of Positive Pressure” template which can be used when water suppliers need to issue a boil water advisory as a result of loss of positive water pressure.
- Page 71 contains the “Problem Corrected” template which can be used to satisfy the requirement to issue a “Problem Corrected” Tier 1 PN for each original Tier 1 PN.
- Page 73 contains the “Abbreviated Message” template which can be used to create an abbreviated message for automatic telephone dialing services, TV scrollers or radio station news flashes.
- Page 76 contains the “Do Not Drink” PN when an EPA Health Advisory (HA) level has been exceeded.
- Page 79 contains the “Do Not Use” PN when an EPA Health Advisory (HA) level has been exceeded.
- Pages 82 - 87 contain the “Do Not Drink” and a “Do Not Use” notices when no health advisory level exists.
- Pages 90 – 100 contain the Tier 2 PN templates.
- Pages 101 and 102 contain the Tier 3 PN template.

Appendix D: Translated Public Notice Phrases

- Pages 103 – 107 contain translated phrases in Korean, Laotian, Oromo, Polish, Punjabi, and Russian languages for the following phrases:
 - “This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.”
 - “Boil your water before using.”
 - “Don’t drink the water.”

- “Children under 12 months old should not drink the water. Don’t use the water to make formula.”

Appendix E: PN Certification Form

- Page 108 contains the PN certification form that must be submitted to DEP within 10 days of delivering the PN.

Appendix F: For More Information...

- Page 110 contains the link to the PN website and other sources of information.

New PN Revision Requirements:

Normally new regulatory requirements become effective the date they are published in the *PA Bulletin* which was May 9, 2009.

However, DEP received many comments requesting a compliance period for the direct delivery requirements for Tier 1 PNs so we revised the regulations to include a 12-month compliance period for those requirements.

This means that the new direct delivery requirements will go into effect on May 10, 2010.

The sections identified below are found in the PN Handbook for Community Water Systems. The 2 new policies are also referenced.

Effective May 9, 2009:

- DEP has the ability to require a Tier 2 PN for other violations or situations determined by the DEP to require a Tier 2 PN, taking into account potential chronic health impacts and persistence of the violation. (109.409(a)(4) and Sections 3 and 6)
- Under the general update revisions published May 23, 2009, DEP has the ability to require a Tier 3 PN for reporting and record maintenance violations for systems that recycle their filter backwash water. (109.410(a)(2) and Sections 3 and 7)
- Issuing a “Problem Corrected” PN for all Tier 1 PNs as soon as possible, but no later than 24 hours after the corrective actions have been taken and the notice is approved by DEP. (109.408(b)(5) and Sections 2 and 5)

- Water suppliers are required to issue a “Problem Corrected” notice for all Tier 1 violations or situations. Until May 10, 2010, when issuing a “Problem Corrected” notice, they may use the current delivery options of broadcast media, posting, hand delivery or another delivery method approved in writing by DEP. (109.408(c)(1) – (4))
- New One-Hour Reporting Circumstances:
 - An overfeed of a drinking water treatment chemical that exceeds a published maximum use value, such as National Sanitation Foundation’s maximum use value, as applicable. (109.701(a)(3)(iii)(F) and “*Policy on Issuing and Removing Water Supply Warnings*”, 383-2129-005)
 - A situation that causes a loss of positive water pressure in any portion of the distribution system where there is evidence of contamination or a water supplier suspects a high risk of contamination. (109.701(a)(3)(iii)(G) and “*Policy for Determining When Loss of Positive Pressure Situations in the Distribution System Require One-Hour Reporting to the Department and Issuing Tier 1 Public Notification*”, 383-2129-004)
 - A lack of resources that adversely affect operations, such as staff shortages, notification by the power utility of planned lengthy power outages or imminent depletion of treatment chemical inventories. (109.701(a)(3)(iii)(H) and “*Policy on Issuing and Removing Water Supply Warnings*”, 383-2129-005)
- Water suppliers will now be required to update their O & M Plan with procedures for repairing and replacing water mains that conform to DEP and water industry standards. (109.702(a)(3) and “*Policy for Determining When Loss of Positive Pressure Situations in the Distribution System Require One-Hour Reporting to the Department and Issuing Tier 1 Public Notification*”, 383-2129-004)
- Update O & M Plan PN elements:
 - EPA contaminant fact sheets, when available. (109.702(a)(7)(ii) and Section 4)
 - Explanation of appropriate methods of delivery of PN (109.702(a)(7)(iii) and Section 4).
- Water suppliers are required to include a date of last update for their O & M Plan. (109.702(a)(14))

We rewrote the entire ERP section (109.707) to reflect the ERP template sections.

- Update ERP:
 - Include an organization table that provides a prioritized list of names and contact numbers of persons in charge of the water system during an emergency. (109.707(a)(1) and Section 4 and ERP template)
 - Include a list of appropriate contact persons and phone numbers for each probable emergency situation for the following groups of people:
 - Emergency management agencies within a water system's jurisdiction. (109.707(a)(2)(i) and Section 4 and ERP template)
 - Key public officials within a water supplier's service area. (109.707(a)(2)(ii) and Section 4 and ERP template)
 - Government agencies including; but not limited to the Department, Public Utility Commission, Department of Health, Department of Public Welfare and Pennsylvania Department of Agriculture. (109.707(a)(2)(iii) Section 4 and ERP template)
 - Facilities within a water supplier's service area, including but not limited to hospitals, schools, day-care facilities, nursing homes, social service agencies, industrial and commercial users. (109.707(a)(2)(iv) and Section 4 and ERP template)
 - Media. (109.707(a)(2)(v) and Section 4 and ERP template)
 - Equipment and Chemical suppliers. (109.707(a)(2)(vi) and Section 4 and ERP template)
 - Include a list containing the following:
 - Types of communication equipment (109.707(a)(3)(i) and ERP template)
 - Type of communication for public notification. (109.707(a)(3)(ii) and ERP template)
 - Include a list containing the following:
 - Location of pertinent operational information (109.707(a)(4)(i) and ERP template)
 - Source information (109.707(a)(4)(ii) and ERP template)
 - Treatment information (109.707(a)(4)(iii) and ERP template)

- Finished water storage. (109.707(a)(4)(iv) and ERP template)
- Include a list containing the following:
 - Mutual aid agreements. (109.707(a)(5)(i) and ERP template)
 - Emergency water supply equipment that includes procedures for providing reserve capacity or an approved alternative water supply. (109.707(a)(5)(ii) and ERP template)
 - Power supply equipment. (109.707(a)(5)(iii) and ERP template)
 - Repair equipment. (109.707(a)(5)(iv) and ERP template)
 - Vehicles and construction equipment. (109.707(a)(5)(v) and ERP template)
 - Spare equipment. (109.707(a)(5)(vi) and ERP template)
- Include a list containing the following:
 - Probable emergency situations including, but not limited to, those specified under 109.701(a)(3)(iii). (109.707(a)(6)(i) and ERP template)
 - Corrective actions for each probable emergency situation. (109.707(a)(6)(ii) and ERP template)
- Water suppliers are required to update their ERP at least annually and as necessary to reflect changes to communication procedures and contact information. (109.707(c) and ERP template)
- Water suppliers are required to record the date of update on the plan. (109.707(c) and ERP template cover page)

Effective May 10, 2010:

- Provide Tier 1 PN to each service connection using one or more of the following direct delivery methods: hand delivery, electronic mail, automatic telephone dialing systems, or another form of direct delivery approved in writing by DEP. (109.408(d)(1)(i) – (iv) and Sections 3 and 5)
- Provide Tier 1 PN to transient and nontransient service connections (if applicable) by using appropriate broadcast media. (109.408(d)(2) and Section 3 and 5)

- If automatic telephone dialing systems, TV scrollers, bullhorn announcements or radio station news flashes are used to deliver an abbreviated message, the abbreviated notice must include, at a minimum, the following elements:
 - A description of the violation or situation, including the contaminants of concern, and (as applicable) the contaminant levels. (109.411(b)(1) and Sections 3 and 5)
 - Whether alternative water supplies should be used. (109.411(b)(2) and Sections 3 and 5)
 - What actions consumers should take, including when they should seek medical help, if known. (109.411(b)(3) and Sections 3 and 5)
 - A telephone number or website address, or both, where consumers can obtain the entire message. (109.411(b)(4) and Sections 3 and 5)

- If a public water supplier delivers an abbreviated notice, the public water supplier shall also provide the entire Tier 1 PN in one of the following ways:
 - Posted on a website (109.408(d)(1)(iii)(A) and Sections 3 and 5)
 - Recorded on a dedicated phone line. (109.408(d)(1)(iii)(B) and Sections 3 and 5)
 - Another method approved in writing by DEP. (109.408(d)(1)(iii)(C) and Sections 3 and 5)

Scenario #1: Issuing a Tier 1 PN with new PN Requirements

Scenario #1 Information: The PN Revisions have been published as final in the *PA Bulletin*, the 12-month compliance period has ended and the new **direct** delivery requirements for Tier 1 PNs are in place.

You are the operator of your current water system (population based on group # above). You have been notified that a recent nitrate sample result is 12 mg/L. Your lab instructs you to take a confirmation sample and that result is 13 mg/L. The average of the original result and the confirmation sample is 12.5 mg/L.

Use the PN Handbook and your workbook to answer the following questions (ANSWERS AT END OF WORKBOOK IN APPENDIX E):

1. Is this a violation and if so, what is the tier classification for it?

2. Do you need to notify DEP? If you have to notify DEP, how much time do you have to do this?
3. Does this situation require a consultation with DEP? If you have to consult with DEP, how much time do you have to do this?
4. How much time do you have to issue the public notice?
5. Based on your system size, what Tier 1 PN direct delivery methods will you use to meet the delivery deadline?
6. Do you have transient and nontransient service connections in your system? If so, how will you issue the Tier 1 PN to these types of users?
7. If you use automatic telephone dialing services, what minimum elements must be included in the abbreviated message?
8. If you abbreviate the Tier 1 PN, how will you provide the entire Tier 1 PN to your customers?
9. Do you have any social service agencies within your service area that could assist you with delivering the Tier 1 PN notice to their clients? Who are they?
10. Have you updated your ERP with contact names and phone and FAX numbers for your social service agencies?

11. Will you need to issue a "Problem Corrected" PN? If so, can you find that template? (List location)

12. After you have issued the public notice, what final step must you take to complete the process? What form would you use? How would you get this form? When is the form due?

Final step:

Form:

Access to form:

Form due:

13. As a result of this new rule, what do you need to include in your O & M Plan?

14. As a result of this new rule, under what circumstances do you need to update your ERP?

Considerations when purchasing automatic telephone services:

- You may want to determine if your water system meets the definition of a "local public procurement unit" (LPPU) so that you can register in the COSTARS program.

The COSTARS program is a cooperative purchasing program that takes advantage of existing Commonwealth contracts.

An LPPU includes:

- Any political subdivision (local government unit), such as a municipality, school district or commission;
- Any public authority (including authorities formed under the Municipality Authorities Act of 1955 or other authorizing legislation, such as the Public Transportation Law or the Aviation Code)

- Any tax-exempt, nonprofit educational institution or organization;
- Any tax-exempt, nonprofit public health institution or organization;
- Any nonprofit fire company, rescue company, or ambulance company; and
- Any other entity that spends public funds for the procurement of supplies, services, and construction (such as council of governments or an area government, or an organization that receives public grant funds).

To find out more information about COSTARS, go to this link:

http://www.portal.state.pa.us/portal/server.pt?open=512&objID=1272&&SortOrder=40&level=3&parentid=1271&css=L3&mode=2&in_hi_userid=2&cached=true

- If you are a municipal authority, contact Pennsylvania Municipal Authorities Association (PMAA) at 717-737-7655 to learn about the contract PMAA is developing for its members for automatic telephone dialing services.
- If you are creating your own set of automatic telephone dialing specifications, it's difficult to compare prices between vendors because they don't use the same fee structures.
- The costs will vary based on your system size, how many calls you anticipate making during the year, and the service plan features that you purchase.
- Some vendors offer service plan features that allow you to target specific service areas instead of sending the call to everyone within the distribution system.
- One vendor did indicate that water systems could collaborate with other systems to get a "group cost" that may be cheaper than an individual system cost.
- It appears that there are two primary service options, "Per Call" plans and "Unlimited Calling" plans.
- Based on how many households and how many calling events (Tier 1 PN and non-emergency events) you anticipate making within a year, you will need to determine when it becomes cost effective to purchase an "Unlimited calling" plan instead of a "Per Call" plan.
- Water systems may be able to negotiate prices with vendors.

- Pages 1-15 through 1-18 provide information about estimated cost data we gathered from vendors in 2008.

Summary:



Key Points:

To summarize, the key points of this lesson are:

- DEP's PN website contains templates, forms, and a link to EPA's contaminants fact sheets.
- Use the PN Handbook, the PN delivery deadline job aid, and this workbook as reference guides when implementing the new PN revisions under Chapter 109.
- Refer to the "New PN Revisions Requirements" section of this workbook to comply with the regulations that are effective immediately and those that become effective May 10, 2010.
 - Water suppliers are required to issue a "Problem Corrected" notice for all Tier 1 violations or situations. Until May 10, 2010, when issuing a "Problem Corrected" notice, they may use the current delivery options of broadcast media, posting, hand delivery or another delivery method approved in writing by DEP.
- Use the 12 month compliance time to plan and budget for Tier 1 PN direct delivery requirements. Determine whether your system can meet the 24 hour delivery deadline with current delivery options or whether you need to employ other methods of direct delivery.
- If you are purchasing automatic telephone dialing services, see if you can join other local water suppliers in contracting for these services to reduce your cost.
- Refer to "Estimated Costs for Automatic Telephone Dialing Services" information on pages 1-15 through 1-18 for more information about comparing costs between vendors.
- DEP has the ability to issue violations relating to one-hour reporting, Tier 1 PN consultation, and meeting the PN content, delivery and certification requirements. The Chapter 109 citations include:
 - One-hour Reporting: Chapter 109.701(a)(3)
 - Tier 1 PN consultation with DEP: Chapter 109.408(b)(3)

Inadequate Tier 1 PN Content: Chapter 109.411(a)

Failing to issue a Tier 1 PN: Chapter 109.408(b)

Inadequate Tier 1 delivery: Chapter 109.408(c) until May 10, 2010
and 109.408(d) beginning on May 10, 2010

PN Certification: Chapter 109.701(a)(4)

- If a water supplier fails to issue a Tier 1 PN, Chapter 109.415 states that DEP may perform notification on behalf of the supplier and may assess costs of notification on the responsible water supplier.
- Appendix D of this workbook contains the May 9, 2009 *Pa Bulletin* in which the PN Revisions are published. Note that is not the entire Chapter 109. It only contains the sections of Chapter 109 that were revised with the PN Revisions.

Estimated Costs for Automatic Telephone Dialing Services

Compliance costs to implement the direct delivery requirements for Tier 1 notices will increase for many of the community water systems. The greatest increase in cost will be incurred by systems that contract for or purchase an automatic telephone dialing system. These costs will vary based on system size, how many calls a system anticipates making during the year, and the service plan features that a water system purchases. In 2008, the Department gathered new cost data regarding purchasing or contracting for automatic telephone dialing services from five vendors.

Estimates for Purchasing an automatic dialing system – 1 vendor quote

Only one vendor provided costs for purchasing an automatic telephone dialing system. The costs are shown on the table below.

Initial/setup includes software, installation and training	Service and Maintenance Agreements	Cost Per Call
\$9800-29,100	Standard (Service and Maintenance support between 8-5 Mon-Friday) = 20% of system cost	System cost + cost of telephone lines ÷ number of calls made
\$9800 – 29,100	Premium (Service and Maintenance support 24/7) = 25% of system cost + 2500.00	System cost + cost of telephone lines ÷ number of calls made

Estimates for contracted service with an automatic dialing system provider – 5 vendor quotes

One vendor charges an annual subscription fee that includes implementation, training, service, maintenance, updates, calling time and support. The other vendors include various fee structures for initial set-up, annual maintenance (also known as subscriptions), and different service options such as “Per call” or “Unlimited calling” plans. The other feature that may increase the cost was geo-calling which allows the water system to send a notice to a sub-group of the entire water system. One vendor did indicate that water systems could collaborate with other systems to get a “group cost” that may be cheaper than an individual system cost. In order to compare the costs between vendors, the Department will provide a scenario and associated cost tables. The scenario will relate to a water system that is required to contact 10,000 households. It reflects the cost for issuing a single Tier 1 notice and the associated “Problem Corrected” notice during the first year. Table 1 lists the “Per Call” Service Plans costs for the first year. Table 2 lists the “Unlimited Calls” Service Plans costs for the first year.

2009 PN Revisions Water Supplier Training

Scenario:

A water system is required to send one call to issue a Tier 1 notice to entire system of 10,000 households during the first year. The call contains a 30-second message. A second call is made as a “Problem Corrected” notice which is also 30 seconds in length.

TABLE 1: “Per Call” Service Plan Estimates				
Vendor	1st Year Costs (Initial Set-up, installation and training)	Annual Costs (Subscription)	Cost Per Call	Total Costs (2 calls made to 10,000 households)
A	\$0	This vendor does not offer a “Per Call” plan. Instead, the vendor offers a single annual cost that includes implementation, training, service, maintenance, updates, calling time and support. See TABLE 2.	\$0	N/A
B	\$0	\$0	\$59/250 calls \$99/500 calls \$149/1000 calls	\$2980
C	\$7800	\$6000	\$0.12/60 sec call and \$0.06/30 sec call	\$15600
D	\$2500 for less than 50,000 population \$5,000 for more than 50,000 population	Geo Call \$5000 (Silver Service) Low \$5000 Volume (includes Silver 20,000 call units that don’t roll over.)	\$480 per 500 call units Calls over 20,000 units will be charged at \$.25/call.	\$26700 (includes 40 bundles of 500 pre-paid call units) \$7500
E	\$10% of annual cost or \$100.00 whichever is greater	\$0.40 per household	\$0.10/call	\$6400

2009 PN Revisions Water Supplier Training

TABLE 2: “Unlimited Calls” Service Plan Estimates

Vendor	1st Year Costs (Initial Set-up, installation and training)	Annual Costs (Subscription)		Cost Per Call	Total Costs (10,000 households)
A	\$0	Households/Businesses	Costs	\$0	\$10,000 (single cost includes implementation, training, service, maintenance, updates, calling time and support)
		0-2000	\$5000		
		2001-6000	\$7500		
		6001-10,000	\$10000		
		10001-20000	\$15000		
		20001-30000	\$20000		
		30001-40000	\$25000		
		40001-50000	\$31250		
		50001-60000	\$37500		
		60001-70000	\$43750		
		70001-80000	\$50000		
B	\$0	\$0		Per Household Cost Up to 10000 = 0.90 10001-25000 = 0.80 25001-50000 = 0.70 50001-100000 = 0.60 100000+ = 0.50	\$9000
C	\$7800	\$6000			N/A This vendor offers a “Per Call” Plan. See TABLE 1
D	\$2500 for less than 50,000 households \$5,000 for more than 50,000 households	Households	Costs	\$0	\$7000 (Plus fees for geocoding if purchasing geocall option)
		0-50000	\$4500		
		50001 – 100000	\$9500		
		100001 – 200000	\$12500		
		200001 – 300000	\$13500		
		300001 – 400000	\$16500		
		400001 – 500000	\$17000		
		500001 – 1000000	\$24500		
E	\$10% of annual cost or \$100.00 whichever is greater	\$1.45 per household		\$0	\$15950

Based on how many households and how many calling events (Tier 1 PN and non-emergency events) a water supplier anticipates making within a year, every water supplier will need to determine when it becomes cost effective to purchase an “Unlimited calling” plan instead of a “Per call” plan. Water systems may be able to negotiate prices with vendors.

Lesson 2

Policy for Issuing and Removing Water Supply Warnings



Objectives:

The purpose of this lesson is to:

- Walk through the Policy for Issuing and Removing Water Supply Warnings (383-2129-005).
- Discuss EPA health advisory (HA) levels and actions required when HAs are exceeded.
- Complete a scenario to implement this policy.

Policy on Issuing and Removing Water Supply Warnings

Table of Contents:

- Purpose
- Background
- Tier 1 Violations and Situations
- Drinking Water Standards and Health Advisories
- Drinking Water Treatment Chemicals
- Sensitive Subpopulations
- Types of Water Supply Warnings
 - Boil Water Advisory
 - “Do Not Drink” Notice
 - “Do Not Use” Notice

All Tier 1 PNs include actions consumers should take which are known as water supply warnings.

Table 1 Drinking Water Standards and Health Advisories

- The chemicals are grouped by types: Inorganics, VOCs, SOCs, Disinfectants, and DBP byproducts.
- The last column contains acute health effects language that must be inserted into a Tier 1 PN when a HA is exceeded.

- If the last column is blank, then water suppliers must use chronic health effects language that is available under Appendix B in the PN Handbook or on our PN website unless DEP decides that alternate language is more appropriate.

Drinking Water Treatment Chemicals and Health Effects

- To find the maximum use value for each chemical, water suppliers can access the link to the “Drinking Water Treatment Chemicals” database.
- Each manufacturer establishes these values for their chemicals so water suppliers need to make sure they are searching for their manufacturer when using this information.
- Maximum use values should be posted in the plant or recorded in standard operating procedures so that operators can determine when an overfeed situation has occurred.

Sensitive Subpopulations

- All Tier 1 and Tier 2 PN templates include specific information about the health effects that could be experienced by the sensitive subpopulations.
 - This information is found under the “What should I do? Section and is *italicized*.
- Water suppliers need to determine which facilities within their service area serve sensitive subpopulations.

Sensitive Subpopulations Facilities:

- Hospitals
 - Schools
 - Nursing homes
 - Other medical facilities
 - Day care centers
 - Social Service Agencies
 - Commercial water users
- To notify these sensitive subpopulations facilities quickly, water suppliers should record complete contact information (contact person names, telephone and FAX numbers) in the PN section of their O&M manual and the communication section of their ERP.

- Water suppliers should identify social service agencies (e.g. those agencies serving the visually- or hearing-impaired) within their service area.
 - These agencies may be able and/or willing to contact their clients within a water supplier's service area who have unique communication needs.

Types of Water Supply Warnings

- Pages 20 through 25 describe each type of warning, water supplier follow-up actions, and criteria to lift the specific type of warning.

"Do Not Drink" and "Do Not Use" Notices

- When an EPA HA level has been exceeded, water suppliers and DEP staff should review the acute health effects language for the contaminant to determine which type of warning (typically "Do Not Drink" or "Do Not Use") would be appropriate.
- A "Do Not Drink" notice would be issued when a chemical contaminant exceeds an HA level as long as the acute health effects language did not indicate inhalation issues or damage as a result of skin contact.
- A "Do Not Use" notice would be issued when a chemical contaminant exceeds a HA level and the acute health effects language indicates inhalation issues or damage as a result of skin contact.
- DEP is allowing water suppliers who use our "Do Not Drink" and "Do Not Use" templates to include allowable "Drinking" or "Uses" or include information about ways consumers may obtain alternative sources of water, if applicable, under the "What Should I do?" section of the templates.
- For both "Do Not Drink" and "Do Not Use" situations, there will be consultation between the water supplier, DEP field staff, DEP Central Office staff, and EPA (if necessary) to develop the language because the impact of issuing such a notice could result in enormous public implications.

- Chapter 109.411(e) allows DEP to establish other health effects language as long as it is done by an order.
 - DEP field staff should use a field order in any situation that requires a “Do Not Drink” or “Do Not Use” warning.
 - In the field order, staff should require a water system to substitute the mandatory health effects language with the acute health effects language (either available from Table 1 or created due to the circumstance.)

Scenario #2: Using Health Advisory Levels

Scenario for Water Suppliers (ANSWERS IN APPENDIX E)

Your certified lab has called you with the following information:

Initial sample analysis for cadmium for your entry point sample was 0.06 mg/L.

1. Does this sample require a confirmation sample? In what time frame?

You took a confirmation sample two days later and the confirmation sample result was 0.05 mg/L

2. What is compliance based on? What is the final result?
3. Is this extreme MCL violation also exceed the 1-day or 10-day health advisory level for cadmium?
4. Is this a Tier 1 or Tier 2 situation?
5. Does this situation require consultation with your local DEP sanitarian?

6. Which Tier 1 PN would you use for this situation?
7. What case-specific information is inserted into the Tier 1 PN?
8. What resources would you use to revise the PN?

Summary



Key Points:

To summarize, the key points of this lesson are:

- Use the Policy for Issuing and Removing Water Supply Warnings to determine which situations have significant potential to have serious adverse effects on human health (Tier 1 situations.)
- Table 1: Drinking Water Standards and Health Advisories in this policy provides EPA HA levels and acute health effects language that must be inserted into the Tier 1 PN when an HA level is exceeded.
- For both “Do Not Drink” and “Do Not Use” situations, there will be consultation between the water supplier, DEP field staff, DEP Central Office staff, and EPA (if necessary) to develop the language because the impact of issuing such a notice could result in enormous public implications.
- When an EPA HA level has been exceeded, water suppliers and DEP staff should review the acute health effects language for the contaminant to determine which type of warning (typically “Do Not Drink” or “Do Not Use”) would be appropriate.
- Chapter 109.411(e) allows DEP to establish other health effects language as long as it is done by an order.
 - DEP field staff should use a field order in any situation that requires a “Do Not Drink” or “Do Not Use” warning.

- In the field order, staff should require a water system to substitute the mandatory health effects language with the acute health effects language (either available from Table 1 or created due to the circumstance.)
- Water suppliers should access the maximum use values from the NSF chemical database and post these values in the plant or print them in their standard operating procedures so that they can determine when a chemical overfeed has occurred.

Lesson 3

O&M and ERP Templates



Objectives:

The purpose of this lesson is to:

- Identify the elements of Section 7 of the DEP O&M Plan template
- Review the PN revisions that relate to DEP's O&M Plan template
- Review the PN revisions that relate to DEP's ERP template
- Successfully complete an exercise.

O&M Plan Section 7: Public Notification

- The PN section of your O&M plan should contain all of the information you will need to implement PN in the event of a Tier 1 situation.

Description of Section 7: Public Notification

- DEP has created 5 tables to summarize the response steps, brief Tier definitions, general delivery method and deadline information and abbreviated message minimum content elements and other requirements.
- Pages 7-3 through 7-7 provide you with the opportunity to record information about your PN delivery methods, contact names and telephone numbers and space to describe how you will issue Tier 1 notices.
- Page 7-8 lists the website address for EPA contaminant fact sheets.
- Pages 7-11 through 7-22 contain the Tier 1 PN templates.
- Pages 7-23 through 7-27 contain the Tier 2 PN templates.
- Page 7-28 contains the Tier 3 PN template.
- Page 7-29 (final page) is a place holder for the PN certification form or an indication of where it is stored electronically.

Scenario #3- Abbreviated Message:

You are operating your current water system ABC Water Company. You have been notified that a recent nitrate sample result is 12 mg/L. Your lab instructs you to take a confirmation sample and that result is 13 mg/L. The average of the original result and the confirmation sample is 12.5 mg/L.

Your system will be using an automatic telephone dialing system to deliver a Tier 1 abbreviated message. You will post the entire Tier 1 PN on your website at: <http://www.abcwater.com> Your system is not providing alternate water.

Using the Instruction excerpts and the Tier 1 PN template for a Nitrate MCL violation, complete the abbreviated message template on page 4 of your workbook with the information about this Tier 1 violation. ANSWERS IN APPENDIX E.

Excerpts from “Instructions for completing a Tier 1 abbreviated message when using an automatic telephone dialing system, TV scrollers, bullhorn announcements or radio station news flashes.”

Abbreviated Message:

Recorded messages need to be clear and concise. Keep the message short enough (50 to 60 seconds) in length so that the message doesn't get cut off on customer's answering machines.

You may want to begin with identifying that the message is coming from your water company. For example, “This is a message from ABC Water system.”

If the message pertains to a portion of the distribution system, state the area or streets impacted by this message.

Content Item #1: Description of the Violation or Situation

Provide a detailed description of the violation or situation, including the contaminant(s) of concern, the contaminant level(s) and when the violation or situation occurred.

Content Item #2: Alternative water supply information

If you are selling or providing bottled water, your message should say where it can be obtained.

Content Item #3: What Actions Consumers should take?

Provide a detailed description of actions consumers should take from the specific Tier 1 PN template that is required for this violation or situation.

Content Item #4: Telephone number or website address where consumers can obtain the entire Tier 1 PN:

Provide a telephone number where the entire Tier 1 PN notice is recorded or provide a website address where your customers can read the entire Tier 1 PN notice.

Optional Content Item:

You may want to include a sentence about issuing a message when the problem is corrected.

Abbreviated Message Template

This is a message from **[insert water system name.]** We are currently experiencing **[insert description of Tier 1 violation or situation]** which requires you to take the following actions.

[Insert Tier 1 PN template consumer actions that relate to the specific Tier 1 PN violation or situation, such as, “DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.”]

We are providing alternate water at the following locations **[insert locations of alternate water supplies, if you are providing them]**

For more information about this public notice, visit our website at **[insert web site address]** or call **[insert telephone number]** to listen to a recording of the entire public notice.

We will be sending another message when the problem is corrected and your water is OK to **[insert action such as, “drink without boiling”, “drink”, or “use.”]**

Abbreviated Message Template

This is a message from _____ . We are currently experiencing _____ which requires you to take the following actions.

For more information about this public notice, visit our website at _____.

We will be sending another message when the problem is corrected and your water is OK to _____.

- We recommend you create your own completed abbreviated messages so that you edit the message properly before the event occurs.
- You may want to add your DEP Sanitarian to your telephone calling distribution list.

Emergency Response Plan Template:

ERP Elements

- Organization Table
- Communication Procedures and Contacts
- Summary description of system
- Spare equipment list and other resources
- Corrective Actions for probable emergency situations

Template: Cover Page

- You are now required to update this plan annually or as often as your contact information changes, you should be recording a date each year at the bottom of the page.

Template: Section 2 – Communication Procedures and Contact Information

You need to have “communications procedures and contact information.” So you need to establish:

- Who should be contacted
- When they should be contacted
- Who is responsible to make the contacts and notifications from your CWS
- Specific instructions
- Alternative means of communication

Part A: Emergency Reference Table - The purpose of the **Part A** table is to give you a quick and easy way to determine the correct individuals or organizations to call during a particular emergency.

Left-Hand Rows: The type of emergency. All the probable emergencies are found in Section 6 beginning on page 6-1.

Right-Hand Columns: The person or organization to call

This is how the table works: A check should be placed in the appropriate box if the individual or organization needs to be contacted for the particular emergency. So, during a situation you can find the emergency listed on the left and quickly see who to contact.

Another option: Rather than placing checkmarks in the boxes, you could put numbers to give priority order to the contacts.

Part B: Emergency Reference Table Contacts and Phone Numbers

The tables on pages 2-2 and 2-3 provide contact information and any communication instructions for all the people you listed as contacts in the Part A table.

Sensitive Sub-Populations

- You can see that the table lists examples of facilities including the new one “social service agencies”.

The last two columns are for faxing and/or emailing the Tier 1 public notice.

DEP Sanitarian

- If you don't know your DEP sanitarian's phone number, every guidance document lists the 6 DEP regional offices, including the 24-hour emergency phone number.
- Call the regional office that serves your county to get a District Office telephone number.

County Emergency Management Coordinators

- In Appendix C we have included a current list of County Emergency Management Coordinators for your information.

Public Officials

Look at “local official”.

It's important to keep your township supervisor or your mayor's office informed of emergency situations because of the following reasons:

- They will be asked questions by the media as well.
- You may need the local government to request additional assistance from other municipalities.
- Keep key public officials abreast of any sample results, updates on the situation, public notification you are doing.
- The media may only run a story or publish a press release unless it comes from a public official.

Template: Section 3 – Means of Communication

- Provisions need to be made for an efficient and fail-safe form of communication to be available during emergencies.

Template: Section 5 – Assessment of Available Resources

- This section of the ERP lists all your equipment, tools, personnel, and materials that can be available for you during an emergency.

2. Procedures for providing reserve capacity or an approved alternate water supply.

- Notice that we have provided space for water suppliers to record the number of days of reserved capacity they have for an emergency.
- Under “B” Bottled water, suppliers can also record other “alternative” water sources such as locations of temporary taps.

Template: Section 6 – Corrective Actions for Probable Emergencies

- The 12 items found on page 6-1 are probable emergencies that DEP wants water suppliers to address in the following pages.
- Numbers 9, 10, and 11 relate to “lack of resource” situations. We separated these events because each event would require different corrective actions and different contact people.
- Pages 6-2 through 6-10 are pages for water suppliers to record the corrective actions for each probable emergency.
- Be sure to include “notifying DEP within 1 hour” as a corrective action for every one of these probable emergency situations.

Summary:



Key Points:

To summarize, the key points of this lesson are:

- Section 7 of the DEP O&M plan template was designed to help systems organize their PN elements such as: PN templates, EPA contaminant fact sheets and delivery method details.
- If you intend to use abbreviated messages, create these messages now by using the specific Tier 1 PN language so that you don't have to spend time doing this during the Tier 1 situation.
- When creating an abbreviated message, use the consumer actions found under "What should I do?" section of the Tier 1 template to fill in the blank about what your customers need to do (e.g. Do not drink, boil your water, do not give the water to infants, etc...)
- You may need to edit the abbreviated message text so that it is 50 to 60 seconds in length.
- If you intend to use automatic telephone dialing services, you may want to add your DEP Sanitarian's telephone number to your calling lists so that DEP receives the message during the PN event.
- Update Section 7 (Public Notification) of your O & M Plan with the following:
 - Explanation of procedures for issuing Tier 1 PN when new direct delivery requirements are effective (May 10, 2010).
 - EPA contaminant fact sheets
- Update your ERP with the following:
 - Record the date you update the plan each year or as often as the communication information changes.
 - Include social service agencies as another sensitive subpopulation on your emergency reference contacts.
 - Include local officials as contacts so that they relay the information about your emergency correctly.
 - Record information about reserve water capacity or obtaining alternative water supplies during an emergency.
 - Include corrective actions for new probable emergencies which are:
 - An overfeed of a drinking water treatment chemical that exceeds NSF's maximum use value, as applicable.

- A situation that causes a loss of positive water pressure in any portion of the distribution system where there is evidence of contamination or a water supplier suspects a high risk of contamination.
 - A lack of resources that adversely affect operations due to staff shortages.
 - A lack of resources that adversely affect operations due to lengthy power outages.
 - A lack of resources that adversely affect operations due to imminent depletion of treatment chemical inventories.
- To access either the O & M Plan template or the ERP template that contains form fields, use the PN website link which is:
<http://www.depweb.state.pa.us/watersupply/cwp/view.asp?a=1251&q=510149>

Lesson 4

Policy on Loss of Positive Pressure Situations



Objectives:

- Discuss why the policy was developed.
- Walk through the policy and discuss the associated AWWA Standard C-651-05 – *Disinfecting Water Mains*.
- Use the policy to make decisions about follow-up actions and compliance determinations.

In 2006, DEP was directed by the Governor and the Secretary to improve the effectiveness of PN for Tier 1 violations and situations. The directive led to several improvements in the way water suppliers plan for and issue PN.

DEP was also directed to clarify and expand the list of situations requiring one-hour reporting to DEP. The Secretary wanted to make sure water suppliers knew when to bring DEP into the decision-making process. Several situations were added to the list, including:

- An overfeed of a drinking water treatment chemical.
- A lack of resources that adversely affect operations.
- A situation that causes a loss of positive water pressure in any portion of the distribution system where there is evidence of contamination or a water supplier suspects a high risk of contamination.

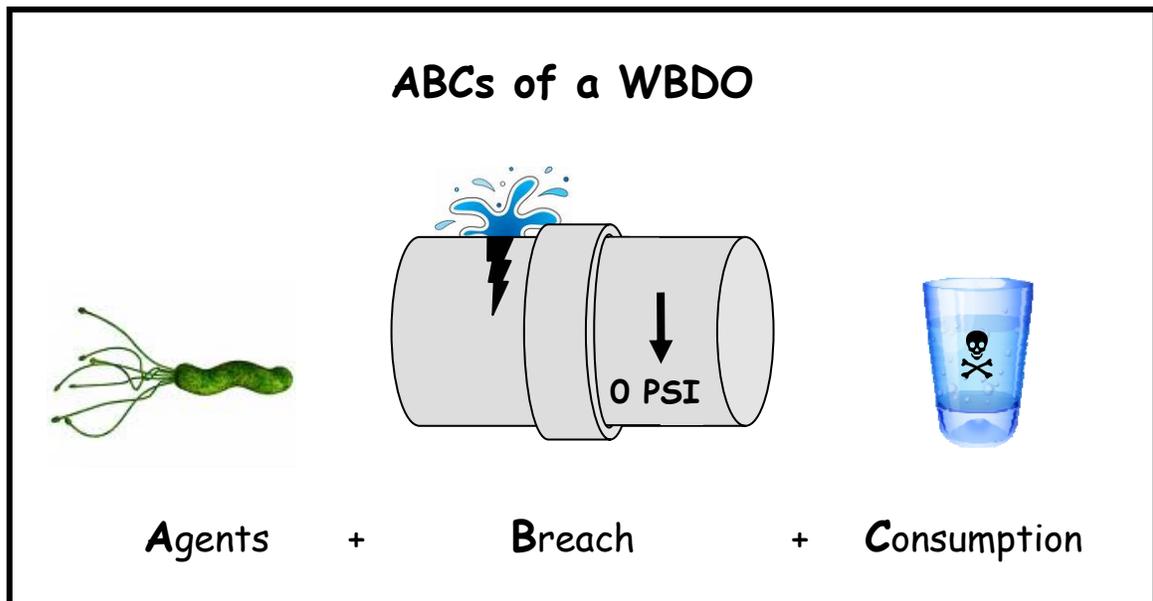
The integrity of the distribution system is considered the final barrier in the multiple barrier approach to providing safe drinking water. A breach in the distribution system represents a serious risk because it provides a direct conduit for pathogens and other contaminants to enter the water supply.

Even though water suppliers maintain a minimum detectable disinfectant residual in the distribution system, it isn't enough to inactivate newly introduced pathogenic organisms into the water supply.

ABCs of a WBDO:

The ABCs of a waterborne disease outbreak (WBDO) include:

- **A = agents** of pathogenic disease
- **B = breach** in the distribution system with a loss of positive pressure
- **C = consumption** of contaminated water



Agents of Pathogenic Disease:

The *Public Water Supply Manual* requires a separation of 10 feet horizontally between water mains and sewer lines or on-lot septic tanks/drain fields. Crossings must be separated by 18 inches.

- However, deviations are allowed under certain circumstances and many older pipe installations do not meet the separation criteria.
- Sewer lines are notorious for leaking.
- Certain areas of the state are impacted by overloaded on-lot septic systems.
- As a result, it would not be unexpected to find human enteric pathogens in the environment external to drinking water pipelines.

Various studies by EPA, National Research Council, American Water Works Association Research Foundation (AWWARF) and others provide evidence that soil and groundwater surrounding distribution pipes contains a variety of microbial pathogens.

In 2001, AWWARF published the results of a study that looked at the quality of soil and water surrounding water main repair sites in an effort to determine the potential for pathogen intrusion (*Pathogen Intrusion Into the Distribution System*, Kirmeyer et al., 2001).

Research Study:

Eight utilities in 6 states collected 65 soil and water samples from water lines that were exposed for repairs:

- Soil samples were collected from undisturbed portions of the pit immediately adjacent to the pipe.
- Water samples were collected from water within the excavation pit.
- The samples were assayed for total and fecal coliform bacteria, *Bacillus subtilis*, *Clostridium perfringens*, coliphages and enteric viruses.
 - Total coliforms: Indicator organisms.
 - Fecal coliforms: Subgroup of total coliforms, more definitive indicator of fecal contamination, some species are opportunistic pathogens and some are known human pathogens.
 - *Bacillus subtilis*: Nonpathogenic, used as a microbial surrogate.
 - *Clostridium perfringens*: Indicator organism, normal flora of intestine, opportunistic pathogen.
 - Bacteriophage: Bacterial virus, fecal indicator, nonpathogenic.
 - Enteric viruses: Pathogenic, excreted only by infected individuals, over 140 types including poliovirus, rotavirus, Norwalk agent.
- Total coliforms were detected in 58% of the water samples and 70% of the soil samples.
- Fecal coliforms were detected in 43% of the water samples and 50% of the soil samples, with levels as high as 10,000/100 grams of soil.
- *Bacillus subtilis* was detected in 80% of the water samples and 97% of the soil samples.
- Viruses were detected in 56% of the samples.
- The results confirm that waterborne pathogens are very common in the environment external to water distribution mains.

Microbial pathogens are not the only risk facing distribution systems. Other studies have found an abundance of chemicals including pesticides, petroleum products and pharmaceuticals in the water and soil surrounding water pipes.

Breach in the Distribution System:

The significance of the distribution system as a potential source of contamination can be illustrated by the magnitude and condition of the piping currently in place in the U.S.

According to the EPA, National Academy of Sciences (NAS) and National Research Council:

- An estimated 1 million miles of distribution pipe convey 34 billion gallons of water daily to nearly 225 million people.
- An estimated 237,000 water main breaks occur each year.
- There are 100's of water advisories issued annually due to main breaks.
- Most distribution pipes will reach the end of their expected lifespan in 30 years.
- An estimated \$300 billion - \$1 trillion is needed over the next 20 years to replace the aging infrastructure.
- The U.S. will experience an increased risk for contamination of drinking water in distribution systems if the infrastructure is not replaced.
- The distribution system is the remaining component of public water supplies yet to be adequately addressed in national efforts to eradicate waterborne disease.

Statistics on Distribution System Deficiencies and WBDOs:

Since 1971, the Centers for Disease Control and Prevention (CDC) has maintained the Waterborne Disease and Outbreak Surveillance System for collecting and reporting data related to waterborne disease outbreaks associated with drinking water.

- A waterborne disease outbreak is defined as two or more persons with the same illness that are linked by location and time of exposure to water.
- State health departments are responsible for the **voluntary** reporting of water-related illness to the CDC.

According to the CDC:

- From 1971 – 2006, there were 119 waterborne-disease outbreaks associated with distribution system deficiencies.
- These outbreaks were associated with more than 18,000 illnesses.
- The percent of outbreaks associated with distribution system deficiencies is on the rise.
- Currently, distribution system deficiencies account for 32% of all outbreaks, second only to treatment inadequacies at 48%.

The CDC uses several factors to classify distribution system deficiencies, including:

- Cross connections
- Backflow situations
- Contamination of storage facilities
- Contamination of water mains during construction or repair

Case Study #1:

1975, Indiana

Etiologic Agent: Acute gastroenteritis

Number of persons affected: 1,400

The illness was associated with contaminated water pipes during storage and construction due to heavy rains.

Case Study #2:

December 1989 - January 1990, Missouri

Etiologic Agent: *E. coli* serotype O157:H7

Number of persons affected: 240 illnesses and 4 deaths

At least 240 people became ill when contaminants entered the distribution system through two major pipe breaks and 43 service meter failures. The contaminant was most likely introduced when sewer overflows occurred at the same time as the two major breaks. The water utility did not practice disinfection following main repairs, relying instead on flushing the repaired main with finished water.

Case Study #3:

2002, New York

Etiologic Agent: *Giardia lamblia*

Number of persons affected: 6

At least 6 people became ill at a mobile home park when a power outage created a negative pressure condition in the distribution system. Contaminated water entered the distribution system through either a cross connection inside a manufactured home or a leaking water pipe that was near sewer crossings.

Case Study #4:

2002, Massachusetts

Etiologic Agent: *Legionella* species

Number of persons affected: 16

Over a 2-week period, 15 residents and an employee of a nursing facility contracted Legionnaires disease. Laboratory testing for *Legionella* was positive in samples from the water distribution system. A water main break was reported near the facility 1 month before the outbreak and might have allowed introduction of *Legionella* into the system.

Case Study #5:

2006, Indiana

Etiologic Agent: *Campylobacter*

Number of persons affected: 32

A new water main was installed without a permit. The water main was pressure tested and left under pressure with nonpotable water, resulting in a cross connection hazard.

Notes: _____

These catastrophic failures could be explained as unfortunate and rare events. However, several studies have been conducted that suggest water-related disease is more common than previously thought.

Research Study (Payment, Franco and Siemiatycki, 1993):

In 1991, researchers examined the illness patterns over a 15-month period of 300 households equipped with RO filters and 300 households that drank normal tap water.

- The rate of intestinal illness increased with the amount of tap water consumed.
- The study reported a 35% lower rate of gastrointestinal illness in the households that drank RO filtered water.
- When the rate of gastrointestinal illness was calculated by zones in the distribution system, people who lived at the end of the distribution system had rates of illnesses twice as high as people living near the treatment plant or close to a booster chlorination station.

If waterborne pathogens are very common in the environment external to water distribution mains, and we experience 237,000 main breaks each year, why don't we have more WBDOs?

According to the EPA and NAS:

- WBDOs are under-recognized and under-reported.
- The national estimate of risk from distribution system deficiencies is that as many as 800,000 to 25 million cases of acute gastrointestinal illness per year may be caused by distribution system deficiencies.

In 2002, EPA released nine white papers on distribution system issues. The white papers covered the following topics:

1. Cross connections
2. New or repaired water mains
3. Finished water storage
4. Deteriorating infrastructure
5. Intrusion
6. Nitrification
7. Biofilm
8. Affects of water age
9. Permeation and leaching

The white papers were intended to:

- Document the available data and research on potential public health risks associated with distribution system issues.
- Identify areas in which additional research is needed.
- Serve as background information for a dialog between EPA, states, technical experts and stakeholder groups.

EPA intends to develop a proposed Distribution System Rule in 2010, with a final rule by 2012.

Thirty-two (32) states (including PA) have policies or regulations regarding when water supply warnings are required for loss of pressure or negative pressure situations.

Regulatory Language:

§ 109.701(a)(3)(iii)(G) One-hour reporting requirements. A public water supplier shall report the circumstances to the Department within 1 hour of discovery when circumstances exist which may adversely affect the quantity or quality of drinking water including, but not limited to, a situation that causes a loss of positive water pressure in any portion of the distribution system where there is evidence of contamination or a water supplier suspects a high risk of contamination.

- Not all main breaks are a health concern. This new language ensures we are alerted to situations with real potential to cause adverse effects.

§ 109.702. Operation and maintenance plan. The operation and maintenance plan must generally conform to the guidelines contained in the Department's Public Water Supply Manual and contain at least the following information: ... Procedures for repairing and replacing water mains that conform to the Department and water industry standards.

- This new requirement ensures that water suppliers have written SOPs in their O&M Plan.

§ 109.711. Disinfection of facilities prior to placing them into service. After repairing a facility or performing other activities which place the facility out of service, and before returning the facility to service, the public water supplier shall disinfect the facilities in accordance with the most recent procedures established by the American Water Works Association.

Public Water Supply Manual (page 190):

All new, cleaned or repaired water mains shall be disinfected in accordance with AWWA's Standard C651 for Disinfecting Water Mains. The specifications shall include detailed procedures for the adequate flushing, disinfection and microbiological testing of all water mains. At least one satisfactory bacteriological sample must be obtained from the water main and analyzed by a certified laboratory before the main is placed into service. Where the main must be returned to service as soon as possible, the "slug" method may be used.

AWWA Standard C-651-05 – Disinfecting Water Mains:

AWWA Standard C-651-05 includes procedures for disinfecting newly constructed mains; mains that have been removed from service for planned repairs or maintenance; **mains that have undergone emergency repairs because of physical failure**; and mains that continue to show the presence of coliform bacteria.

Sec. 1.1 Scope

This standard describes essential procedures for the disinfection of new and repaired potable water mains. New water mains shall be disinfected before they are placed in service. Water mains taken out of service for inspection, repair, or other activities that might lead to contamination of water shall be disinfected before they are returned to service.

Sec. 4.2 Basic Disinfection Procedure

1. Inspecting materials to be used to ensure their integrity.
2. Preventing contaminating materials from entering the water main during storage, construction, or repair and noting potential contamination at the construction site.
3. Removing, by flushing or other means, those materials that may have entered the water main.
4. Chlorinating any residual contamination that may remain, and flushing the chlorinated water from the main.
5. Protecting the existing distribution system from backflow caused by hydrostatic pressure test and disinfection procedures.
6. Documenting that an adequate level of chlorine contacted each pipe to provide disinfection.
7. Determining the bacteriological quality by laboratory test after disinfection.
8. Final connection of the approved new water main to the active distribution system.

The Standard includes details about how each of these steps should be performed. These procedures can be used for all water main activity.

The Standard also includes another section that is specific to cutting into or repairing existing mains.

Sec. 4.7 Disinfection Procedures When Cutting Into or Repairing Existing Mains

The following procedures apply primarily when existing mains are wholly or partially dewatered...

1. **Trench treatment.** ...Liberal quantities of hypochlorite applied to open trench areas will lessen the danger from this pollution...
2. **Swabbing with hypochlorite solution.** The interior of pipe and fittings ... used in making the repair shall be swabbed or sprayed with a 1% hypochlorite solution before they are installed.
3. **Flushing.** Thorough flushing is the most practical means of removing contamination introduced during repairs...
4. **Slug chlorination.** Where practical, in addition to the procedures previously described, the section of the main in which the break is located shall be isolated, all service connections shut off, and the section flushed and chlorinated as described in Sec. 4.4.4...
5. **Bacteriological samples.** Bacteriological samples following procedures in 5.1.3 shall be taken after repairs are completed to provide a record for determining the procedure's effectiveness... Daily sampling shall be continued until two consecutive negative samples are recorded.

- After the appropriate procedures have been completed, the existing main may be returned to service prior to the completion of bacteriological testing in order to minimize the time customers are without water.
- Leaks or breaks that are repaired with clamping devices while the mains remain full of pressurized water may present little danger of contamination and therefore may not require disinfection.

Scenario: Loss of Positive Pressure Situation

*** ABC Water Authority**

- CWS serving 1,500 people
- None of the on-site distribution crew members are certified operators
- The O&M Plan contains a copy of AWWA Standard C-651-05
- The line break is located in an area served by on-lot septic systems. Water lines were recently extended to serve drinking water in this area due to known overloaded septic systems.

Timeline of Events

8:00 AM	The Water Authority receives several complaints of water outages.
8:30 AM	Distribution crew members arrive on site, observe standing water in the street and suspect a water line break.
10:00 AM	A trench is dug and crew members observe a visible rupture in the main. The trench is filled with water.
10:30 AM	The trench is dewatered and further inspection reveals water is no longer leaking from the break.
11:00 AM	Crew members begin repairs.
3:00 PM	Repairs are completed. The lines are flushed.
3:30 PM	The main is returned to service.

Questions: (ANSWERS IN APPENDIX E)

1. Should this system have notified DEP within 1 hour?

2. If yes, when did the time clock start?

3. Should this system have issued a BWA?

4. Were repairs completed as per Standard C-651-05 and DEP's policy?

5. Did this system incur any violations?

6. If yes, what follow-up actions should this system and/or DEP take?

Summary:



Key Points:

- The integrity of the distribution system is considered the final barrier in the multiple barrier approach to providing safe drinking water.
- Waterborne pathogens are very common in the environment external to water distribution mains.
- An estimated 237,000 water main breaks occur each year.
- From 1971 – 2006, there were 119 waterborne-disease outbreaks associated with distribution system deficiencies. These outbreaks were associated with more than 18,000 illnesses.
- WBDOs are under-recognized and under-reported.
- Adherence to AWWA Standard C-651-05 and the Department’s Policy is necessary to prevent pathogens from reaching consumer’s taps.

Course Summary



Objectives:

The purpose of this summary is to:

- Give you contact information
- Discuss final questions/concerns
- Tell you where to place completed evaluation forms

DEP Contacts

- Deb Rotz (717-772-2190) – PN Rule and Water Supply Warning guidance document
- Lisa Daniels (717-772-2189) – Loss of Positive Pressure guidance document

Additional Contacts:

-
-

Evaluation Forms

- Complete an evaluation form and give it to us before you leave.
- Thank you for attending this course.

Appendix A

O & M Plan template Section 7

Section 7: Public Notification

Public Notification Quick Reference Guide:

Response Steps:

1. Determine the tier of your violation or situation.
2. Report to DEP within 1 hour (Tier 1 or 2).
3. Consult with DEP within 24 hours (Tier 1).
4. Review the requirements for public notices.
5. Determine appropriate methods of delivery.
6. Develop a notice, modifying the templates to fit your situation.
7. Provide multilingual information.
8. Issue the notice to persons served as soon as practical within the allowed time frame.
9. Provide a "Problem Corrected" Notice within 24 hours of correcting the situation and receiving permission from DEP to issue the "Problem Corrected" notice (Tier 1).
10. Send a copy of each notice issued (including repeat notices) to DEP within ten days of distributing the notices, along with a statement certifying that all public notice requirements have been met (PN Certification Form).

Tier Classification	Violations or situations...
Tier 1	...with the most serious adverse health effects as a result of short-term exposure.
Tier 2	...with the potential to cause chronic health effects.
Tier 3	...that cause no known health effects.

Requirements for Issuing Public Notice

Tier	Deadline for Notice	Delivery Methods to Use*
1	24 hours**	Until May 10, 2010, use, at a minimum, one or more of the following shall be used: Broadcast media (radio or television), posting or hand delivery. Beginning on May 10, 2010: <ul style="list-style-type: none"> • provide direct delivery of public notice to each service connection using one or more of the following methods: hand delivery, electronic mail, or automatic telephone dialing systems. • provide public notice to transient and nontransient service connections (if applicable) by using appropriate broadcast media (radio or television.)
2	30 days	Mail or other direct delivery, and any other method as needed to reach others.
3	1 year***	Mail or other direct delivery, and any other method as needed to reach others.

Notes:

- * DEP may approve other methods.
- ** For Tier 1, systems must also initiate consultation with DEP within 24 hours.
- *** DEP recommends consolidating all Tier 3 violations/situations occurring within a given year into an annual notice.

Mandatory Content Elements for Public Notices	
1.	A description of the violation or situation, including the contaminant of concern, and (as applicable) the contaminant level;
2.	When the violation or situation occurred;
3.	Any potential adverse health effects from drinking the water, using mandatory health effects;
4.	The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water;
5.	Whether alternative water supplies should be used;
6.	What actions consumers should take, including when they should seek medical help, if known;
7.	What you are doing to correct the violation or situation;
8.	When you expect to return to compliance or resolve the situation;
9.	Your name, business address, and phone number or those of a designee of the public water system as a source of additional information concerning the notice; and
10.	A statement encouraging notice recipients to distribute the notice to others, where applicable, using the standard language found late in this section.

Requirements for Tier 1 Notice Abbreviated Messages* (Automatic Telephone Dialing System, TV Scrollers, and Verbal Announcements)	
Minimum Content Elements	<ol style="list-style-type: none"> 1. Description of the violation or situation 2. Alternative water supply information 3. What actions consumers should take 4. Telephone number or Web address where consumers can obtain the entire Tier 1 Public Notice.
Acceptable Methods of Providing the Full Notice	<ol style="list-style-type: none"> 1. Posted on a website. 2. Recorded on a dedicated telephone line. 3. Other method approved in writing by the Department.

*Recorded messages must be clear and concise. Keep the abbreviated message short enough (50 to 60 seconds) so that it does not get cut off in customers' answering machines.

Delivery Methods:

Water System Spokesperson:

Name: _____

Address: _____

Phone No.: _____

Announcements

Announcements through Televised Media: See Public Notification Contacts

Announcements through Radio Media: See Public Notification Contacts

Announcements through Website: [Insert website.]

Mobile Loudspeaker: [Loudspeaker available from:]

[Insert delivery personnel]

Automated Telephone Dialing Service: [Insert service company and phone number]

[Describe activation procedure]

[List persons authorized to activate autodialing service]

[Location of abbreviated message examples]

[Location of consumer telephone number data storage and date of last update]

Email: *[Email account from which the message must be sent]*

User Name: *[Email account user name]* Password: *[Email account password]*

[Location of customer e-mail distribution list date of last update]

Other: [Insert details]

Paper Delivery

<input type="checkbox"/>	Mailing:	Address List: <i>[Insert location where up-to-date address list can be found.]</i>
		# of Copies: <i>[Insert number of copies needed.]</i>
		Method of Generating Copies: <i>[Insert method of generating copies; include name, address and phone number if outside company is to be used.]</i>

<input type="checkbox"/> Hand Delivery:	Designated Delivery Person(s):	
	<i>[Insert delivery personnel]</i>	<i>[Insert delivery personnel]</i>
	<i>[Insert delivery personnel]</i>	<i>[Insert delivery personnel]</i>
	<i>[Insert delivery personnel]</i>	<i>[Insert delivery personnel]</i>

<input type="checkbox"/> Public Posting:	Predetermined Posting Locations:	
	<i>[Insert posting location]</i>	
	<i>[Insert posting location]</i>	
	<i>[Insert posting location]</i>	

Public Notification Contacts:

Pa. DEP Contact:

Name: _____
 Address: _____

 _____ Phone No.: _____

24-Hour Emergency Phone No.: _____

Automatic Telephone Dialing Service:

Company _____
 Name: _____
 Address: _____

 _____ Phone No.: _____

Sensitive Subpopulations:

Name: _____
 Address: _____

 Contact: _____ Phone No.: _____

Name: _____

Address: _____

Contact: _____ Phone No.: _____

Name: _____

Address: _____

Contact: _____ Phone No.: _____

Radio:

Name: _____

Address: _____

Contact: _____ Phone No.: _____

Name: _____

Address: _____

Contact: _____ Phone No.: _____

Television Station:

Name: _____

Address: _____

Contact: _____ Phone No.: _____

Newspaper:

Name: _____

Address: _____

Deadline: _____

Contact: _____ Phone No.: _____

Name: _____

Address: _____

Deadline: _____

Contact: _____ Phone No.: _____

Fire Department:

Name: _____

Address: _____

Contact: _____ Phone No.: _____

Local Police Department:

Name: _____

Address: _____

Contact: _____ Phone No.: _____

Explanation of Procedures for Issuing Tier 1 Public Notice:

EPA Contaminant Fact Sheets:

Insert copies of the EPA Contaminant Fact Sheets here. These fact sheets can be found at <http://www.epa.gov/safewater/hfacts.html>.

Lead Public Education Materials:

Has your 90th percentile value for lead ever exceeded the action level of 0.015 mg/L?

Yes No

If yes, insert a copy of your public education materials here.

Consumer Confidence Report:

Insert a copy of your most recent Consumer Confidence Report (CCR) here or indicate the location where it can be found.

Location of CCR: _____

Tier 1 Public Notice Templates: Fecal Coliform (*E. coli*)

DRINKING WATER WARNING

BOIL YOUR WATER BEFORE USING

HIERVAN EL AGUA ANTES DE USARLA.

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

[Insert system name] water is contaminated with [*fecal coliform/E. Coli*].

[*Fecal Coliform/E. Coli*] bacteria were found in the water supply on [insert date]. These bacteria can make you sick, and are a particular concern for people with weakened immune systems.

What should I do?

DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST. Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water.

Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly and people with severely compromised immune systems.

The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care providers.

What happened? What is being done?

Bacterial contamination can occur when increased run-off enters the drinking water source. It can also happen due to a break in the distribution system (pipes) or a failure in the water treatment process.

[Describe the corrective action taken]. We will inform you when tests show no bacteria and you no longer need to boil your water. We anticipate resolving the problem by [insert date when you expect to return to compliance].

For more information, please contact: [Insert contact name]
 [Insert business address]
 [Insert business address]
 at [Insert telephone number]

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [insert water system name].

PWS ID#: [insert PWSID#]

Date distributed: [insert date distributed]

Tier 1 Public Notice Templates: Turbidity

DRINKING WATER WARNING

BOIL YOUR WATER BEFORE USING

HIERVAN EL AGUA ANTES DE USARLA.

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

[Insert system name] has high turbidity levels.

We routinely monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. A water sample taken on [insert date] had turbidity levels of [insert level and units]. This is above the standard of [insert appropriate standard and units for your system's treatment technology]. Because of these high levels of turbidity, there is an increased chance that the water may contain disease-causing organisms.

What should I do?

DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST. Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers.

The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What happened? What is being done?

[Describe the corrective action taken]. We anticipate resolving the problem by [insert date when you expect to return to compliance].

We will inform you when tests show no bacteria and you no longer need to boil your water.

For more information, please contact: [Insert contact name]
[Insert business address]
[Insert business address]
at [Insert telephone number]

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [insert water system name].

PWS ID#: [insert PWSID#]

Date distributed: [insert date distributed]

Tier 1 Public Notice Templates: Waterborne Disease Outbreak (Acute)

DRINKING WATER WARNING

BOIL YOUR WATER BEFORE USING

HIERVAN EL AGUA ANTES DE USARLA.

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

Disease-causing organisms have entered [insert water system name] water supply.

These organisms are causing illness in people served by [insert water system name]. We learned of a waterborne disease outbreak from [insert DEP/Health Department] on [insert date].

What should I do?

DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST. Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water.

[Describe symptoms of the waterborne disease] If you experience any of these symptoms and they persist, contact your doctor. People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers.

What happened? What is being done?

[Describe the outbreak and the corrective actions taken]. We anticipate resolving the problem by [insert date when you expect to return to compliance].

We will inform you when you no longer need to boil your water.

For more information, please contact: [Insert contact name]
[Insert business address]
[Insert business address]
at [Insert telephone number]

General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1-(800)-426-4791.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [insert water system name].

PWS ID#: [insert PWSID#]

Date distributed: [insert date distributed]

Tier 1 Public Notice Templates: Chlorine Dioxide MRDL (Acute)

DRINKING WATER WARNING

PREGNANT WOMEN AND YOUNG CHILDREN SHOULD NOT DRINK THE WATER

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

[Insert system name] has high chlorine dioxide levels.

Sample results received [insert date] showed chlorine dioxide levels of [insert level and units]. This is above the standard or maximum residual disinfectant level (MRDL) of 0.8 mg/L. Chlorine dioxide is used for disinfection, but too much of it over a short period of time may harm the development of children, infants and fetuses.

What should I do?

DO NOT USE THIS WATER IF YOU ARE PREGNANT OR GIVE IT TO YOUNG CHILDREN. Bottled water should be used until further notice.

Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.

The chlorine dioxide violations reported today include exceedances of the EPA standard within the distribution system which delivers water to consumers. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short-term exposure. Certain groups, including fetuses, infants and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure. There are no obvious symptoms, but chlorine dioxide can affect development of the nervous system.

- Water, juice and formula for young children and for pregnant women should not be prepared with tap water.
- Adults who are not pregnant and older children can drink the tap water because their nervous systems are already developed. However, if you have specific health concerns, you may wish to consult your doctor.

What happened? What is being done?

We will inform you when chlorine dioxide levels return to appropriate levels and when you no longer need to seek an alternative source of drinking water.

For more information, please contact: [Insert contact name]
[Insert business address]
[Insert business address]
at [Insert telephone number]

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [insert water system name].

PWS ID#: [insert PWSID#]

Date distributed: [insert date distributed]

Tier 1 Public Notice Templates: Nitrate, Nitrite, or Total Nitrite and Nitrate MCL (Acute)

DRINKING WATER WARNING

**DO NOT GIVE THE WATER TO INFANTS UNDER 6 MONTHS OLD OR
USE IT TO MAKE FORMULA**

**PADRES DE FAMILIA CON BEBES DE SEIS MESES DE EDAD Y MENORES, NO USEN EL
AGUA PARA PREPARAR ALIMENTOS PARA BEBES.**

**ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA
POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN
QUE LO ENTIENDA.**

[Insert system name] water has high levels of nitrate.

Sample results received [insert date] showed nitrate levels of [insert level and units]. This is above the nitrate standard, or maximum contaminant level (MCL) of 10 mg/L. Nitrate in drinking water is a serious health concern for infants less than six months old.

What should I do?

DO NOT GIVE THE WATER TO INFANTS. *Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.* Blue- baby syndrome is indicated by blueness of the skin. Symptoms in infants can develop rapidly, with health deteriorating over a period of days. If symptoms occur, seek medical attention immediately.

Water, juice, and formula for children under six months of age should not be prepared with tap water. Bottled water or other water low in nitrates should be used for infants until further notice.

DO NOT BOIL THE WATER. Boiling, freezing, filtering, or letting water stand does not reduce the nitrate level. Excessive boiling can make the nitrates more concentrated, because nitrates remain behind when the water evaporates.

Adults and children older than six months can drink the tap water. Nitrate is a concern for infants because they can't process nitrates in the same way adults can. However, if you are pregnant or have specific health concerns, you may wish to consult your doctor.

What happened? What is being done?

Nitrate in drinking water can come from natural, industrial, or agricultural sources (including septic systems and run-off). Levels of nitrate in drinking water can vary throughout the year. We'll let you know when the amount of nitrate is again below the limit.

[Describe the corrective actions taken, seasonal fluctuations] We anticipate resolving the problem by [insert date when you expect to return to compliance].

For more information, please contact: [Insert contact name]
[Insert business address]
[Insert business address]
at [Insert telephone number]

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [insert water system name].

PWS ID#: [insert PWSID#]

Date distributed: [insert date distributed]

Tier 1 Public Notice Templates: Loss of Positive Water Pressure

**DRINKING WATER WARNING
BOIL YOUR WATER BEFORE USING**

HIERVAN EL AGUA ANTES DE USARLA.

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

[Insert system name] **May Be At Increased Risk From Microbial Contamination.**

We routinely monitor the conditions in the distribution system. On [insert date], we experienced a loss of positive water pressure due to Insert description of event. A loss of positive water pressure is a signal of the existence of conditions that could allow contamination to enter the distribution system through back-flow by back-pressure or back-siphonage. As a result, there is an increased chance that the water may contain disease-causing organisms.

What should I do?

DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST. Bring all water to a rolling boil, let it boil for one minute, and let it cool before using; or use bottled water. You should use boiled or bottled water for drinking, making ice, washing dishes, brushing teeth, and food preparation until further notice.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

These symptoms, however, are not caused only by organisms in drinking water, but also by other factors. If you experience any of these symptoms and they persist, you may want to seek medical advice.

People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

What happened? What is being done?

We will inform you when all corrective actions have been completed and when you no longer need to boil your water.

For more information, please contact: [Insert contact name]
[Insert business address]
[Insert business address]
at [Insert telephone number]

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [insert water system name].

PWS ID#: [insert PWSID#]

Date distributed: [insert date distributed]

Tier 1 Public Notice Templates: Exceeding HA Level (Do Not Drink)

**DRINKING WATER WARNING
DO NOT DRINK THE WATER**

NO BEBA EL AGUA

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

[insert water system name] has high levels of [insert contaminant name].

Sample results received on [Insert date(s)] showed [Insert contaminant name] levels of [Insert level and units]. This level is above the [Insert either 1-day or 10-day] EPA health advisory level of [Insert either 1-day or 10-day HA level] mg/L. According to EPA, consuming water that contains a contaminant above this health advisory level may be a serious health concern.

What should I do?

DO NOT DRINK THE WATER. Use bottled water or alternative sources for drinking, cooking, or food preparation **until further notice**. Throw away ice cubes if made with tap water. [Insert ways to obtain alternative sources, if available or insert more details about "drinking" restrictions if you want to provide more details]

DO NOT BOIL THE WATER. BOILING, FREEZING, FILTERING, OR LETTING WATER STAND DOES NOT REDUCE THE [INSERT CONTAMINANT NAME] LEVEL. EXCESSIVE BOILING CAN MAKE THE [INSERT CONTAMINANT NAME] MORE CONCENTRATED, BECAUSE [INSERT CONTAMINANT NAME] REMAINS BEHIND WHEN THE WATER EVAPORATES.

[insert acute health effects language if available from Table 1 of the Department's "Policy for Issuing and Removing Water Supply Warnings" or from EPA's technical fact sheets at: <http://www.epa.gov/safewater/hfacts.html>]

IF YOU HAVE SPECIFIC HEALTH CONCERNS, YOU MAY WISH TO CONSULT YOUR DOCTOR.

What happened? What is being done?

[insert source(s) of contamination if known. If unknown, use information found in EPA technical fact sheets]. We'll let you know when the amount of [insert contaminant name] is again below the limit.

[insert corrective actions]

We anticipate resolving the problem by [insert when you expect to return to compliance].

For more information, please contact: [Insert contact name]
[Insert business address]
[Insert business address]
at [Insert telephone number]

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [insert water system name].

PWS ID#: [insert PWSID#]

Date distributed: [insert date distributed]

Tier 1 Public Notice Templates: Exceeding HA Level (Do Not Use)

DRINKING WATER WARNING

DO NOT USE THE WATER

NO USE EL AGUA

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

[insert water system name] has high levels of [insert contaminant name].

Sample results received on [Insert date(s)] showed [Insert contaminant name] levels of [Insert level and units]. This level is above the [Insert either 1-day or 10-day] EPA health advisory level of [Insert either 1-day or 10-day HA level] mg/L. According to EPA, consuming water that contains a contaminant above this health advisory level may be a serious health concern.

What should I do?

DO NOT USE THE WATER. Use bottled water or alternative sources for drinking, bathing, hand washing, making ice, brushing teeth, washing dishes, cooking, or food preparation **until further notice**.

[Insert ways to obtain alternative sources, if available or insert more details about "use" restrictions if you want to provide more details]

DO NOT BOIL THE WATER. Boiling, freezing, filtering, or letting water stand does not reduce the [insert contaminant name] level. [Insert either Excessive boiling can make the contaminants more concentrated. OR Boiling can increase the risk of inhaling harmful vapors].

[insert acute health effects language if available from Table 1 of the Department's "Policy for Issuing and Removing Water Supply Warnings" or from EPA's technical fact sheets at: <http://www.epa.gov/safewater/hfacts.html>]

IF YOU HAVE SPECIFIC HEALTH CONCERNS, YOU MAY WISH TO CONSULT YOUR DOCTOR.

What happened? What is being done?

[insert source(s) of contamination if known. If unknown, use information found in EPA technical fact sheets]. We'll let you know when the amount of [insert contaminant name] is again below the limit.

[insert corrective actions]

We anticipate resolving the problem by [insert when you expect to return to compliance].

For more information, please contact: [Insert contact name]
[Insert business address]
[Insert business address]
at [Insert telephone number]

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [insert water system name].

PWS ID#: [insert PWSID#]

Date distributed: [insert date distributed]

Tier 1 Public Notice Templates: Do Not Drink (No EPA Health Advisory Levels)

DRINKING WATER WARNING

DO NOT DRINK THE WATER

NO BEBA EL AGUA

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

[insert water system name] has high levels of [insert contaminant name].

Sample results received on [insert date(s)] showed [insert contaminant name] levels of [insert level and units]. This level [insert either far exceeds the MCL OR has been determined to be a health risk.] of [insert MCL and units if using the "far exceeds MCL" phrase] mg/L. [insert contaminant name] in drinking water at this level may be a serious health concern

What should I do?

DO NOT DRINK THE WATER. Use bottled water or alternative sources for drinking, cooking, or food preparation **until further notice**. Throw away ice cubes if made with tap water. [Insert ways to obtain alternative sources, if available or insert more details about "drinking" restrictions if you want to provide more details]

DO NOT BOIL THE WATER. BOILING, FREEZING, FILTERING, OR LETTING WATER STAND DOES NOT REDUCE THE [INSERT CONTAMINANT NAME] LEVEL. EXCESSIVE BOILING CAN MAKE THE [INSERT CONTAMINANT NAME] MORE CONCENTRATED, BECAUSE [INSERT CONTAMINANT NAME] REMAINS BEHIND WHEN THE WATER EVAPORATES.

[insert acute health effects language if available from Table 1 of the Department's "Policy for Issuing and Removing Water Supply Warnings" or from EPA's technical fact sheets at: <http://www.epa.gov/safewater/hfacts.html>]

IF YOU HAVE SPECIFIC HEALTH CONCERNS, YOU MAY WISH TO CONSULT YOUR DOCTOR.

What happened? What is being done?

[insert source(s) of contamination if known. If unknown, use information found in EPA technical fact sheets]. We'll let you know when the amount of [insert contaminant name] is again below the limit.

[insert corrective actions]

We anticipate resolving the problem by [insert when you expect to return to compliance].

For more information, please contact:

[Insert contact name]
[Insert business address]
[Insert business address]
at [Insert telephone number]

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [insert water system name].

PWS ID#: [insert PWSID#]

Date distributed: [insert date distributed]

Tier 1 Public Notice Templates: Do Not Use (No EPA Health Advisory Levels)

DRINKING WATER WARNING

DO NOT USE THE WATER

NO USE EL AGUA

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

[insert water system name] has high levels of [insert contaminant name].

Sample results received on [insert date(s)] showed [insert contaminant name] levels of [insert level and units]. This level [insert either far exceeds the MCL OR has been determined to be a health risk.] of [insert MCL and units if using the "far exceeds MCL" phrase] mg/L. [insert contaminant name] in drinking water at this level may be a serious health concern.

What should I do?

DO NOT USE THE WATER. Use bottled water or alternative sources for drinking, bathing, hand washing, making ice, brushing teeth, washing dishes, cooking, or food preparation **until further notice**.

[insert ways to obtain alternate sources, if available or insert more details about "use" restrictions if you want to provide more details]

DO NOT BOIL THE WATER. Boiling, freezing, filtering, or letting water stand does not reduce the [insert contaminant name] level. [Insert either Excessive boiling can make the contaminants more concentrated. OR Boiling can increase the risk of inhaling harmful vapors].

[insert acute health effects language if available from Table 1 of the Department's "Policy for Issuing and Removing Water Supply Warnings" or from EPA's technical fact sheets at: <http://www.epa.gov/safewater/hfacts.html>]

IF YOU HAVE SPECIFIC HEALTH CONCERNS, YOU MAY WISH TO CONSULT YOUR DOCTOR.

What happened? What is being done?

[insert source(s) of contamination if known. If unknown, use information found in EPA technical fact sheets]. We'll let you know when the amount of [insert contaminant name] is again below the limit.

[insert corrective actions]

We anticipate resolving the problem by [insert when you expect to return to compliance].

For more information, please contact:

[Insert contact name]
[Insert business address]
[Insert business address]
at [Insert telephone number]

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [insert water system name].

PWS ID#: [insert PWSID#]

Date distributed: [insert date distributed]

Tier 1 Public Notice Templates: Abbreviated Message

Abbreviated Message Template

This is a message from **[insert water system name.]** We are currently experiencing **[insert description of Tier 1 violation or situation]** which requires you to take the following actions.

[Insert Tier 1 PN template consumer actions that relate to the specific Tier 1 PN violation or situation, such as, “DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.”]

We are providing alternate water at the following locations **[insert locations of alternate water supplies, if you are providing them]**

For more information about this public notice, visit our website at **[insert web site address]** or call **[insert telephone number]** to listen to a recording of the entire public notice.

We will be sending another message when the problem is corrected and your water is OK to **[insert action such as, “drink without boiling”, “drink”, or “use.”]**

Tier 1 Public Notice Templates: Drinking Water Problem Corrected

DRINKING WATER PROBLEM CORRECTED

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

As a customer of [insert water system name], you were notified on [insert date] of a problem with our drinking water and were advised to [describe recommended action]. We are pleased to report that the problem has been corrected and that it is no longer necessary to [describe recommended action]. We apologize for any inconvenience and thank you for your patience.

[Add further details here when appropriate].

As always, you may contact [insert name and business address of contact] at [insert phone number].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by [insert water system name].

PWS ID#: [insert PWSID#] Date distributed: [insert date distributed]

Tier 2 Public Notice Templates: Chemical or Radiological MCL

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

_____ **Has Levels of** _____
Above Drinking Water Standards

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did to correct this situation.

We routinely monitor for drinking water contaminants. Testing results we received on _____ show that our system exceeds the standard, or maximum contaminant level (MCL), for _____. The standard for _____ is _____. _____ was found at _____.

What should I do?

You do not need to use an alternative (e.g., bottled) water supply. However, if you have specific health concerns, consult your doctor.

What does this mean?

This is not an immediate risk. If it had been, you would have been notified immediately. However, _____.

What happened? What was done?

_____. We anticipate resolving the problem within _____.

For more information, please contact _____ at _____.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by _____.

PWS ID#: _____

Date distributed: _____

Tier 2 Public Notice Templates: Turbidity

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

_____ Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this was not an emergency, as our customers, you have a right to know what happened, what you should do, and what we did to correct this situation.

We routinely monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. _____.

What should I do?

You do not need to boil water or take actions. We do not know of any contamination, and none of our testing has shown disease-causing organisms in the drinking water.

People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791.

What does this mean?

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What happened? What is being done?

A problem occurred with the treatment system at the water plant. _____.
We anticipate resolving the problem by _____.

For more information, please contact _____ at _____.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by _____.

PWS ID#: _____

Date distributed: _____

Tier 2 Public Notice Templates: Total Coliform MCL

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

Tests Showed Coliform Bacteria in _____ Water

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did to correct this situation.

We routinely monitor for drinking water contaminants. We took _____ samples to test for the presence of coliform bacteria during _____ of our samples showed the presence of total coliform bacteria. The standard is that no more than _____ may do so.

What should I do?

You do not need to boil your water or take other corrective actions. However, if you have specific health concerns, consult your doctor.

People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1 (800) 426-4791.

What does this mean?

This is not an emergency. If it had been, you would have been notified immediately. Coliform bacteria are generally not harmful themselves. *Coliforms are bacteria, which are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.*

Usually, coliforms are a sign that there could be a problem with the system's treatment or distribution system (pipes). Whenever we detect coliform bacteria in any sample, we do follow-up testing to see if other bacteria of greater concern, such as fecal coliform or *E. coli*, are present. **We did not find any of these bacteria in our subsequent testing, and further testing shows that this problem has been resolved.**

What happened? What was done?

For more information, please contact _____ at _____.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by _____.

PWS ID#: _____

Date distributed: _____

Tier 2 Public Notice Templates: Fluoride MCL

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

_____ Has Levels of Fluoride Above Drinking Water Standards

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did to correct this situation.

We routinely monitor for drinking water contaminants. Testing results we received on _____ show that our system exceeds the standard, or maximum contaminant level (MCL), for fluoride. The average level of fluoride in samples taken during the last year was _____. The standard for fluoride is determined by the average of samples taken over the last year. This average may not exceed the MCL of 2.0 mg/L.

What should I do?

This is not an emergency. If it had been, you would have been notified immediately. *This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). Dental fluorosis, in its moderate or severe forms, may result in a brown staining and or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease.*

Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

What happened? What was done?

_____. We anticipate resolving the problem within _____.

For more information, please contact _____ at _____.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by _____.

PWS ID#: _____

Date distributed: _____

Tier 2 Public Notice Templates: Lead and Copper MCL

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

_____ **Has Violated a Treatment Technique**

Our water system recently violated a drinking water standard. Although this was not an emergency, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

We routinely monitor your water for the presence of drinking water contaminants. Testing results we received on _____ show that our system exceeds the standard for _____. The standard for _____ is _____. _____ was found at _____.

What should I do?

- You do not need to use an alternative (i.e., bottled water) water supply. However, if you have specific health concerns, consult your doctor.

What does this mean?

- This is not an immediate risk. If it had been, you would have been notified immediately. However, _____.

What happened? What was done?

_____. We anticipate resolving the problem within _____.

For more information, please contact _____ at _____.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by _____.

PWS ID#: _____

Date distributed: _____

Tier 3 Public Notice Template: Monitoring Violation

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

ESTE INFORME CONTIENE INFORMACION IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.

Monitoring Requirements Not Met for _____

Our water system violated several drinking water standards over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During _____ we _____ and therefore cannot be sure of the quality of our drinking water during that time.

What should I do?

There is nothing you need to do at this time.

The table below lists the contaminant(s) we did not properly test for during the last year, how often we are supposed to sample for _____ and how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

Contaminant	Required sampling frequency	Number of samples taken	When all samples should have been taken	When samples were or will be taken

What happened? What was done?

For more information, please contact _____ at _____.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you _____.

PWS ID#: _____

Date distributed: _____

Public Notification (PN) Certification Form 3800-FM-WSWM0076:

Insert a copy of the Public Notification (PN) Certification Form here or indicate the location where it can be found.

Location of the PN Certification Form: _____

Appendix B

Excerpts from ERP Template



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

EMERGENCY RESPONSE PLAN FOR

Public Water System Name: _____

Public Water System I.D. No.:

--	--	--	--	--	--	--

Address: _____

Telephone No.: _____

Municipality: _____

County: _____

System Type: Community Nontransient Noncommunity
(Please Check)

Population Served: _____

O&M Plan Location: _____

Plan Prepared by: _____		
Plan Reviewers:		
Name	Title	Date
Name	Title	Date
Name	Title	Date

Date Completed: _____ Date Updated: _____

Section 2 – Communication Procedures and Contact Information

Communication Procedure: Depending on the emergency, contact the groups listed below in the order provided. The contact information and specific procedures are located in the tables on the following pages. Section 3 contains primary and alternative means of communication.

Part A: Emergency Reference Table																	
Emergency Situation	Contacts																
	System Supervisor	Sensitive Customers	DEP*	Local Emergency Mgmt.	Media	Power Co.	Equipment Mfr.	Chemical Supplier	Fire Dept.	Other Gov't Agencies **							
Violation of MCL, MRDL, or Treatment Technique requiring Tier 1 Public Notification																	
Waterborne disease outbreak																	
Failure or Significant Interruption in key treatment processes																	
Natural disaster that disrupts the supply of water																	
Chemical spill																	
Unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination																	
Overfeed of a drinking water treatment chemical that exceeds a published maximum use value, such as National Sanitation Foundation's "Maximum Use Value," as applicable																	
Situation that causes a loss of positive water pressure in any portion of the distribution system where there is evidence of contamination or a water supplier suspects a high risk of contamination																	
Lack of resources that adversely affect operations due to staff shortages																	
Lack of resources that adversely affect operations due to notification by the power utility of planned lengthy power outages																	
Lack of resources that adversely affect operations due to the imminent depletion of treatment chemical inventories																	
Loss of One or More Sources of Supply																	

* If an MCL, MRDL, or treatment technique is exceeded, a sample result requires the collection of check samples under §109.301, or if circumstances exist that may adversely affect the quality or quantity of the drinking water, a water supplier must report the situation to DEP within **1 hour**.

** These may include the Public Utility Commission, Department of Health, Department of Public Welfare, and Department of Agriculture.

Part B: Emergency Reference Table Contacts and Phone Numbers

Water System Spokesperson: _____

Tier 1 templates location: _____

Additional media announcement templates: _____

Customers: Prioritized Sensitive Sub-Populations to Notify (Tier 1 Public Notification)					
Procedure:	In the event of an emergency requiring Tier 1 public notice, call the individuals below to alert them of the situation and then follow-up with notification using the Tier 1 PN templates via fax or email.				
Contact	Contact Individual	Phone and alternate phone	Pager Number	Fax to send Tier 1 Public Notice	Email to send Tier 1 Public Notice
Hospital:					
Day Care Facility:					
School:					
School:					
Other Medical Facility:					
Social Services Agency:					

2-2

Note: Tier 1 public notification is required for violations or situations that can have serious adverse health effects as a result of short-term exposure. Tier 1 public notification must be issued to your customers as soon as possible but no later than 24 hours after learning of the violation or situation.

Customers: Industrial and Commercial Users				
Contact	Contact Individual	Phone	Alt. Phone	

Government Agencies				
Contact	Contact Individual	Phone and alternate phone	Pager Number	Specific Procedures/Instructions
DEP Sanitarian				
Local Emergency Management				<ul style="list-style-type: none"> • Keep EMA updated throughout the situation. • If phone is down, communicate with EMA using:
County EMA				
Local Official				

2-3

Media				
Contact	Contact Individual	Phone and alternate phone	Pager Number	Specific Procedures/Instructions
Radio Station:				
Radio Station:				
Television Station:				
Television Station:				
National Weather Service				

System Equipment Contact Information					
Item	Manufacturer	Contact Individual	Phone and alternate phone	Pager Number	
Pumps:					
Chlorinator:					

System Chemical Contact Information					
Chemical	Supplier	Contact Individual	Phone and alternate phone	Pager Number	

Other Contacts					
Contact	Organization	Phone	Alt Phone	Pager Number	

2-4

Section 3 – Means of Communication

Note: This section establishes emergency lines of communication. All phone numbers are in Sections 1 and 2 of this plan.

1. Lines of Communication

A. The types of communication available at this system during an emergency include:

- Landline Telephone
- Cellular Phone
- Radio System (Primary Frequency or Channel: _____ Alternate: _____)
- E-mail or chat
- Facsimile Machine
- Pager
- Automatic Telephone Dialing Service
- Other:

B. Specific Communication Instructions:

C. Communication for Public Notification:

Communication information for Public notification is located in the Operation and Maintenance (O&M) Manual in Section 7.

2. Emergency Communications Equipment

A. Landline Telephones:

Number of Telephones:	
Location(s) of Telephones:	

B. Cellular Phones:

Number of Cell Phones:	
Location(s) of Cell Phones:	
Location(s) of Batteries for Cell Phones:	

C. CB Radios:

Number of Radios:	
Location(s) of Radios:	
Location(s) of Batteries for Radios:	

D. Facsimile Machines:

Number of Fax Machines:	
Location(s) of Fax Machines:	

E. Pagers:

Number of Pagers:	
Location(s) of Pagers:	

F. Other Communication Equipment Available:

--

Section 5 – Assessment of Available Resources

Note: Communication equipment is listed in Section 3.

1. Mutual Aid Agreement(s)

None Available

A. Agreement 1

Agreement with: _____

Agreement includes: Personnel Equipment Materials Other: _____

Note: Contacts for equipment and materials are listed in the subsequent sections.

Location of documented agreement: _____

B. Agreement 2

Agreement with: _____

Agreement includes: Personnel Equipment Materials Other _____

Note: Contacts for equipment and materials are listed in the subsequent sections.

Location of documented agreement: _____

2. Procedures for Providing Reserve Capacity or an Approved Alternative Water Supply

Number of days of reserved capacity based on average usage: _____

General description of procedure for providing reserve capacity or alternate water supply:

A. Bulk Water Supply Truck

None Available

Contact(s) for truck: _____

Location(s) that truck(s) will be setup during an emergency:

B. Bottled Water:

None Available

Contact(s) for bottled water: _____

Location(s) that bottled water will be setup during an emergency:

C. Emergency Interconnections

Location	Contact Information	Agreement on File?
		<input type="checkbox"/>

3. Power Supply Equipment

A. Power Sources

Primary Power Source:	
Alternate Power Sources:	
Location of Fuel:	

B. Generators

None Available

Make/Model	Phase/ Voltage/ Amps	Contact Individual	Phone No.	Location of Storage	Location of Use

5. Vehicles and Construction Equipment

A. Pickup Trucks, Vans, and other Vehicles

None Available

Make and Model	4x4?		Owner	Phone Number	Location of Vehicle and Keys
	Yes	No			
	<input type="checkbox"/>	<input type="checkbox"/>			
	<input type="checkbox"/>	<input type="checkbox"/>			
	<input type="checkbox"/>	<input type="checkbox"/>			
	<input type="checkbox"/>	<input type="checkbox"/>			
	<input type="checkbox"/>	<input type="checkbox"/>			
	<input type="checkbox"/>	<input type="checkbox"/>			

B. Dump Trucks

None Available

Make and Model	Capacity (tons)	Owner	Phone Number	Location of Vehicle and Keys

C. Construction Equipment

None Available

Item (include make/model)	Owner	Phone Number	Location of Item

6. Spare Equipment for the Water Source

A. Spare Pump(s)

None Available

Pump Type	Manufacturer	H.P.	Capacity (gpm)	Phase, Voltage

B. Location of Inventory of Spare Parts for Pump(s) and Well(s)

None Available

If an inventory is not available, fill in the table under (C.) on the next page.

--

C. List of Spare Parts for Pump(s) and Well(s)

Part	Location

7. Spare Parts for the Distribution System

A. Location of Inventory of Spare Parts and Valves for Distribution

None Available

--

8. Spare Parts for Treatment

A. Spare Chemical Feed Pump(s) None Available

Manufacturer	Model	Location of Spare

List Spare Parts for Feed Pump	Location

B. Reserve Chemicals

Location of reserve supply of chemicals

9. Miscellaneous Equipment for the System

A. Additional Equipment Not Listed Above None Available

Equipment	Location

Section 6 – Corrective Actions for Probable Emergencies

1. List of Probable Emergencies –

1. Violation of MCL, MRDL, or Treatment Technique requiring Tier 1 Public Notification

2. Waterborne disease outbreak

3. Failure or Significant Interruption in key treatment processes

4. A natural disaster that disrupts the supply of water

5. Chemical spill

6. Unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination

7. Overfeed of a drinking water treatment chemical that exceeds a published maximum use value, such as National Sanitation Foundation's "Maximum Use Value," as applicable

8. Situation that causes a loss of positive water pressure in any portion of the distribution system where there is evidence of contamination or a water supplier suspects a high risk of contamination

9. Lack of resources that adversely affect operations due to staff shortages

10. Lack of resources that adversely affect operations due to notification by the power utility of planned lengthy power outages

11. Lack of resources that adversely affect operations due to the imminent depletion of treatment chemical inventories

12. Loss of One or More Sources of Supply

- 13.

- 14.

- 15.

- 16.

- 17.

- 18.

- 19.

- 20.

2. Description of Corrective Actions

Emergency: Violation of MCL, MRDL, or Treatment Technique requiring Tier 1 Public Notification

Corrective Action:

Report any information to DEP within 1 hour of discovery

Issue Tier 1 Public Notification no later than 24 hours after discovery.

Tier 1 templates and delivery instructions can be found in

Notify the sensitive subpopulations (as listed in Section 2) as quickly as possible

Emergency: Waterborne disease outbreak

Corrective Action:

Report any information to DEP within 1 hour of discovery

Issue Tier 1 Public Notification no later than 24 hours after discovery.

Tier 1 templates and delivery instructions can be found in

Notify the sensitive subpopulations (as listed in Section 2) as quickly as possible

Emergency: Failure or Significant Interruption in key treatment processes

Corrective Action:

Emergency: A natural disaster that disrupts the supply of water

Corrective Action:

Emergency: Chemical Spill

Corrective Action:

Emergency: Unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination

Corrective Action:

Emergency: Overfeed of a drinking water treatment chemical that exceeds a published maximum use value, such as National Sanitation Foundation's "Maximum Use Value," as applicable

Corrective Action:

Emergency: Situation that causes a loss of positive water pressure in any portion of the distribution system where there is evidence of contamination or a water supplier suspects a high risk of contamination

Corrective Action:

Emergency: Lack of resources that adversely affect operations due to staff shortages

Corrective Action:

Emergency: Lack of resources that adversely affect operations due to notification by the power utility of planned lengthy power outages

Corrective Action:

Emergency: Lack of resources that adversely affect operations due to the imminent depletion of treatment chemical inventories

Corrective Action:

Emergency: Loss of One or More Sources of Supply

Corrective Action:

Emergency: _____

Corrective Action:

Appendix C

County EMA List

County EMA List (downloaded June 2009)

Updates: www.pema.state.pa.us/portal/server.pt/community/county_ema_coordinators/4629

Adams County

Coordinator John Eline
230 Greenamyer Lane
Gettysburg, 17325-2313

Office: 717-334-8603

Fax: 717-334-1822 / 6826

Email: jeline@adamscounty.us

Allegheny County

Coordinator Robert A Full
400 North Lexington St Suite 200
Pittsburgh, 15208

Office: 412-473-2550

Fax: 412-473-2623

Email: rfull@county.allegheny.pa.us

Armstrong County

Coordinator Randall J Brozenick
450 East Market Street
Kittanning, 16201-1409

Office: 724-548-3431

Fax: 724-548-3243

Email: rjbrozenick@co.armstrong.pa.us

Beaver County

Acting Coordinator Wesley Hill
250 East End Ave
Beaver, 15009

Office: 724-775-1700

Fax: 724-775-1163

Email: whill@co.beaver.pa.us

Bedford County

Coordinator Dave E Cubbison
200 South Juliana Street
Bedford, 15522

Office: 814-623-9117

Fax: 814-623-0799

Email: Dcubbison@Bedfordcountypa.org

Berks County

Acting Coordinator Brian A Gottschall
2561 Bernville Road
Reading, 19605

Office: 610-374-4800 ext-8202

Fax: 610-374-8865

Email: bgottschall@countyofberks.com

Blair County

Acting Coordinator Daniel Boyles
615 4th Street
Altoona, 16602

Office: 814-940-5900

Fax:

Email: dboyles@winbeam.com

Bradford County

Coordinator James Vajda, Jr.
R.R.#1, Box 179-C
Towanda, 18848

Office: 570-265-5022

Fax: 570-265-4774

Email: vajdaj@bradfordco.org

Bucks County

Coordinator John D Dougherty, Jr.
911 Freedom Way
Ivyland, 18974

Office: 215-340-8700

Fax: 215-957-0765

Email: jddougherty@co.bucks.pa.us

Butler County

Coordinator Frank P Matis
120 McCune Drive
Butler, 16001

Office: 724-284-5211

Fax: 724-285-6388

Email: fmatis@co.butler.pa.us

County EMA List (downloaded June 2009)

Updates: www.pema.state.pa.us/portal/server.pt/community/county_ema_coordinators/4629

Cambria County

Coordinator Ronald Springer
110 Franklin Street Suite 200
Johnstown, 15901

Office: 814-534-4342

Fax: 814-536-2610

Email: rspringer@co.cambria.pa.us

Cameron County

Coordinator Kevin T Johnson
County Courthouse 20 East 5th Street
Emporium, 15834

Office: 814-486-9352

Fax: 814-486-9393

Email: camoes@cameroncountypa.com

Carbon County

Coordinator Mark S Nalesnik
1264 Emergency Lane
Nesquehoning, 18240-8948

Office: 570-325-3097

Fax: 570-325-9132

Email: ccema@ptd.net

Centre County

Coordinator Randy K Rockey
420 Holmes Street, Room 134
Bellefonte, 16823

Office: 814-355-6745

Fax: 814-355-6589

Email: rkrockey@co.centre.pa.us

Chester County

Coordinator Edward J Atkins
601 Westtown Road, Suite 12 Box 2747
West Chester, 19380-0990

Office: 610-344-5000

Fax: 610-344-5050

Email: eatkins@chesco.org

Clarion County

Coordinator Michael T Rearick
Court House 421 Madison Road
Clarion, 16214

Office: 814-226-6631

Fax: 814-226-4294

Email: mrearick@oes.clarion.pa.us

Clearfield County

Coordinator Josh Quigley
911 Leonard Street
Clearfield, 16830-3245

Office: 814-765-5357

Fax: 814-768-9920

Email: jquigley@clearfield911.com

Clinton County

Coordinator William Frantz
22 Cree Drive
Lock Haven, 17745

Office: 570-893-4090 x 209

Fax: 570-893-4048

Email: bfrantz@ClintonCountyPA.com

Columbia County

Coordinator Lawrence Lahiff
Court House P.O. Box 380
Bloomsburg, 17815

Office: 570-389-5720

Fax: 570-784-2975

Email: llahiff@columbiapa.org

Crawford County

EMA Director Allen W Clark
903 Diamond Park
Meadville, 16335

Office: 814-724-2552

Fax: 814-724-4605

Email: aclark@co.crawford.pa.us

County EMA List (downloaded June 2009)

Updates: www.pema.state.pa.us/portal/server.pt/community/county_ema_coordinators/4629

Cumberland County

Coordinator J. Theodore Wise
1101 Claremont Road
Carlisle, 17013

Office: 717-240-6400

Fax: 717-729-1536

Email: twise@ccpa.net

Dauphin County

Coordinator Stephen J Shaver
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Appendix D

PN Regulations in Pa Bulletin

Subchapter D. PUBLIC NOTIFICATION

Sec.

- 109.401. [\[Reserved\].](#)
- 109.402. [\[Reserved\].](#)
- 109.403. [\[Reserved\].](#)
- 109.404. [\[Reserved\].](#)
- 109.405. [\[Reserved\].](#)
- 109.406. [\[Reserved\].](#)
- 109.407. [General public notification requirements.](#)
- 109.408. [Tier 1 public notice—categories, timing and delivery of notice.](#)
- 109.409. [Tier 2 public notice—categories, timing and delivery of notice.](#)
- 109.410. [Tier 3 public notice—categories, timing and delivery of notice.](#)
- 109.411. [Content of a public notice.](#)
- 109.412. [Special notice of the availability of unregulated contaminant monitoring results.](#)
- 109.413. [Special notice for nitrate exceedances above MCL by noncommunity water systems, when granted permission by the Department.](#)
- 109.414. [Notice to new billing units or new customers.](#)
- 109.415. [Notice by the Department on behalf of the public water system.](#)
- 109.416. [CCR requirements.](#)

Cross References

This subchapter cited in 25 Pa. Code § 109.5 (relating to organization of chapter); 25 Pa. Code § 109.701 (relating to reporting and recordkeeping); and 25 Pa. Code § 109.1004 (relating to public notification).

§ 109.401. [Reserved].

Source

The provisions of this § 109.401 adopted December 7, 1984, effective December 8, 1984, 14 Pa.B. 4479; amended May 15, 1992, effective May 16, 1992, 22 Pa.B. 2621; amended October 7, 1994, effective October 8, 1994, 24 Pa.B. 5175; amended July 20, 2001, effective July 21, 2001, 31 Pa.B. 3895; reserved August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894. Immediately preceding text appears at serial pages (281877) to (281880).

§ 109.402. [Reserved].

Source

The provisions of this § 109.402 adopted December 7, 1984, effective December 8, 1984, 14 Pa.B. 4479; amended May 15, 1992, effective May 16, 1992, 22 Pa.B. 2621; amended October 7, 1994, effective October 8, 1994, 24 Pa.B. 5175; amended July 20, 2001, effective July 21, 2001, 31 Pa.B. 3895; reserved August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894. Immediately preceding text appears at serial pages (281880) to (281881).

§ 109.403. [Reserved].

Source

The provisions of this § 109.403 adopted December 7, 1984, effective December 8, 1984, 14 Pa.B. 4479; amended May 15, 1992, effective May 16, 1992, 22 Pa.B. 2621; amended July 20, 2001, effective July 21, 2001, 31 Pa.B. 3895; reserved August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894. Immediately preceding text appears at serial pages (281881) to (281882).

§ 109.404. [Reserved].

Source

The provisions of this § 109.404 adopted December 7, 1984, effective December 8, 1984, 14 Pa.B. 4479; amended May 15, 1992, effective May 16, 1992, 22 Pa.B. 2621; reserved August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894. Immediately preceding text appears at serial page (281882).

§ 109.405. [Reserved].

Source

The provisions of this § 109.405 adopted May 15, 1992, effective May 16, 1992, 22 Pa.B. 2621; reserved August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894. Immediately preceding text appears at serial pages (281882) to (281883).

§ 109.406. [Reserved].

Source

The provisions of this § 109.406 adopted May 15, 1992, effective May 16, 1992, 22 Pa.B. 2621; reserved August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894. Immediately preceding text appears at serial page (281883).

§ 109.407. General public notification requirements.

(a) *Violation categories and other situations requiring a public notice.* A public water supplier shall give public notice for the following circumstances:

(1) Failure to comply with an applicable State primary MCL or MRDL in Subchapter B (relating to MCLs, MRDLs or treatment technique requirements).

(2) Failure to comply with a prescribed treatment technique requirement in Subchapter B, G or K (relating to MCLs, MRDLs or treatment technique requirements; system management responsibilities; and lead and copper).

(3) Failure to perform water quality monitoring, as required by Subchapter C (relating to monitoring requirements) or Subchapter K.

(4) Operation under a variance or an exemption under Subchapter I (relating to variances and exemptions issued by the Department).

(5) Failure to comply with the requirements of any schedule that has been set under a variance or exemption.

(6) Occurrence of a waterborne disease outbreak, as defined in § 109.1 (relating to definitions), or other emergency situation as defined in § 109.701(a)(3)(iii) (relating to reporting and recordkeeping) that adversely affects the quality or quantity of finished water and has a significant potential to have serious adverse effects on human health as a result of short-term exposure.

(7) Availability of unregulated contaminant monitoring data.

(8) Exceedance of the nitrate MCL by noncommunity water systems, when permitted by the Department in writing to exceed the MCL in accordance with 40 CFR 141.11(d) (relating to MCLs for inorganic contaminants).

(9) Other violations or situations determined by the Department to require a public notice under this subchapter.

(b) *Definition of public notice tiers.* Public notice requirements are divided into three tiers, to take into account the seriousness of the violation or situation and any potential adverse health effects that may be involved. The public notice requirements for each violation or situation identified in subsection (a) is determined by the tier to which it is assigned. This subchapter incorporates by reference the tier assignment for each specific violation or situation in the National Primary Drinking Water Regulations, 40 CFR Part 141, Subpart Q, Appendix A (relating to the tier assignment for each specific NPDWR violation and other situations requiring public notice), unless other tier assignments are established by regulation or order of the Department.

(1) *Tier 1 public notice.* Required for violations and situations specified in subsection (a) with significant potential to have serious adverse effects on human health as a result of short-term

exposure. General violation categories and other situations requiring a Tier 1 public notice are specified in § 109.408(a) (relating to Tier 1 public notice—categories, timing and delivery).

(2) *Tier 2 public notice.* Required for all other violations and situations in subsection (a) with potential to have serious adverse effects on human health. General violation categories and other situations requiring a Tier 2 public notice are specified in § 109.409(a) (relating to Tier 2 public notice—categories, timing and delivery).

(3) *Tier 3 public notice.* Required for all other violations and situations in subsection (a) not included in Tier 1 and Tier 2. General violation categories and other situations requiring a Tier 3 public notice are specified in § 109.410(a) (relating to Tier 3 public notice—categories, timing and delivery).

(c) *Public notice recipients.*

(1) A public water supplier shall provide public notice to persons served by the public water system, in accordance with this subchapter. A public water system that sells or otherwise provides drinking water to another public water system, such as to a consecutive water, bulk water hauling or vended water system, shall give public notice to the owner or operator of the other water system. The other water system is responsible for ensuring that public notice is provided to the persons it serves.

(2) If a public water system has a violation in a portion of the distribution system that is physically or hydraulically isolated from other parts of the distribution system, the Department may allow the water supplier to limit distribution of the public notice to only persons served by that portion of the system which is out of compliance. Permission for limiting distribution of the notice will be granted in writing by the Department.

(3) If a public water system has a violation involving a point-of-entry (POE) device, the Department may allow the water supplier to limit distribution of the public notice to only persons served by that POE device. Permission for limiting distribution of the notice shall be granted in writing by the Department.

(4) If a community water system has a Tier 1 violation, the water supplier shall also notify additional recipients as designated in the community water system's emergency response plan under § 109.707(a)(2) (relating to emergency response plan).

(5) If a noncommunity water system in which persons 17 years of age or under are cared for or educated, such as a school or day care center, has a Tier 1 violation, the water supplier shall also provide public notice directly to the parent or guardian of those persons.

(6) A water supplier shall provide a copy of the notice to the Department in accordance with § 109.701(a)(4) (relating to reporting and recordkeeping).

(d) *Additional requirements.* Community water systems shall comply with the planning requirements specified under § 109.702(a)(7) (relating to operation and maintenance plan) and § 109.707.

Authority

The provisions of this § 109.407 amended under section 4 of the Pennsylvania Safe Drinking Water Act (35 P. S. § 721.4) and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P. S. § § 510-7 and 510-20).

Source

The provisions of this § 109.407 adopted August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894; amended June 18, 2004, effective June 19, 2004, 34 Pa.B. 3130; amended May 8, 2009, effective May 9, 2009, 39 Pa.B. 2334. Immediately preceding text appears at serial pages (304272) and (324485) to (324486).

Cross References

This section cited in 25 Pa. Code § 109.401 (relating to tier 1 public notice—categories, timing and delivery of notice); and 52 Pa. Code § 69.1601 (relating to general).

§ 109.408. Tier 1 public notice—categories, timing and delivery of notice.

(a) *General violation categories and other situations requiring a Tier 1 public notice.* A public water supplier shall provide Tier 1 public notice for the following circumstances:

(1) Violation of the MCL for total coliforms when fecal coliforms or E. coli are present in the water distribution system, as specified in § 109.202(a)(2) (relating to MCLs, MRDLs or treatment technique requirements), or when the water supplier fails to test for fecal coliforms or E. coli when any check sample tests positive for coliforms, as specified in § 109.301(3) (relating to general monitoring requirements).

(2) Violation of the MCL for nitrate, nitrite or total nitrate and nitrite, as defined in § 109.202(a)(2), or when the water supplier fails to take a confirmation sample within 24 hours of the system's receipt of the first sample showing an exceedance of the nitrate or nitrite MCL, as specified in § 109.301(7)(ii)(C)(V).

(3) Exceedance of the nitrate MCL by noncommunity water systems, when permitted by the Department in writing to exceed the MCL in accordance with 40 CFR 141.11(d) (relating to maximum contaminant levels for inorganic chemicals).

(4) Violation of the MRDL for chlorine dioxide, as defined in § 109.202(f)(2), when one or more samples taken in the distribution system the day following an exceedance of the MRDL at the entrance of the distribution system exceed the MRDL, or when the water supplier does not take the required samples in the distribution system, as specified in § 109.301.

(5) Violation of the turbidity MCL of 5 NTU based on an average for 2 consecutive days by a public water system using an unfiltered surface water source, as specified in § 109.202(a)(2).

(6) Violation of a treatment technique requirement for pathogenic bacteria, viruses and protozoan cysts as defined in § 109.202(c), resulting from a single exceedance of the maximum allowable turbidity limit.

(7) Occurrence of a waterborne disease outbreak, as defined in § 109.1 (relating to definitions), or other emergency situation as defined in § 109.701(a)(3)(iii) (relating to reporting and recordkeeping) that adversely affects the quality or quantity of the finished water and has a significant potential to have serious adverse effects on human health as a result of short-term exposure.

(8) Other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the Department on a case-by-case basis.

(b) *Timing for a Tier 1 public notice.* A public water supplier shall do the following:

(1) Provide a public notice as soon as possible, but no later than 24 hours after the water supplier learns of the violation or situation under subsection (a).

(2) Report the circumstances to the Department within 1 hour of discovery of the violation or situation in accordance with § 109.701(a)(3).

(3) Initiate consultation with the Department as soon as possible, but no later than 24 hours after the water supplier learns of the violation or situation, to determine initial and any additional public notice requirements.

(4) Comply with initial and any additional public notification requirements that are established as a result of the consultation with the Department. These requirements may include the timing, form, manner, duration, frequency, and content of the initial and any repeat notices, and other actions reasonably designed to reach all persons served. The repeat notice frequency, if applicable, for a Tier 1 public notice shall be established as a result of the consultation, but may be no less often than once every 30 days as long as the violation or situation persists.

(5) Provide a public notice that the Tier 1 violation or situation has been corrected, as soon as possible, but no later than 24 hours after the corrective actions have been completed and the notice is approved by the Department.

(c) *Form and manner of a Tier 1 public notice prior to May 10, 2010.* The form and manner used by a public water supplier shall fit the specific situation and shall be reasonably designed to reach residential, transient and nontransient users of the water system. To reach all persons served, a water supplier shall use, at a minimum, one or more of the following forms of delivery:

(1) Appropriate broadcast media, such as radio or television.

(2) Posting of the notice in conspicuous locations throughout the area served by the water system.

(3) Hand delivery of the notice to persons served by the water system.

(4) Another delivery method approved in writing by the Department.

(d) *Delivery of a Tier 1 public notice beginning on May 10, 2010.* The delivery methods used by a public water supplier shall fit the specific situation and shall be reasonably designed to reach residential, transient and nontransient users of the water system. To reach all persons served in accordance with § 109.407(c) (relating to general public notification requirements), a water supplier shall use, as appropriate to the type of the water system, the following forms of delivery identified under paragraphs (1)—(3).

(1) Community water systems shall provide public notice to each service connection using one or more of the following forms of direct delivery:

(i) Hand delivery.

(ii) Electronic mail.

(iii) Automatic telephone dialing systems or other best available technology. If a public water supplier delivers an abbreviated notice in accordance with § 109.411(b) (relating to content of a public notice), the public water supplier shall also provide the entire public notice under this section in one of the following ways:

(A) Posted on a web site.

(B) Recorded on a dedicated phone line.

(C) Another method approved in writing by the Department.

(iv) Another form of direct delivery approved in writing by the Department.

(2) In addition to providing public notice to each service connection under paragraph (1), community water systems that also serve transient and nontransient service connections shall provide notice using appropriate broadcast media, such as radio and television.

(3) Noncommunity water systems shall provide public notice to transient and nontransient consumers using one or more of the following forms of delivery:

(i) Hand delivery.

(ii) Electronic mail.

(iii) Posting the notice in conspicuous locations throughout the area served by the water system.

(iv) Another form of delivery approved in writing by the Department.

Authority

The provisions of this § 109.408 amended under section 4 of the Pennsylvania Safe Drinking Water Act (35 P. S. § 721.4) and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P. S. § § 510-7 and 510-20).

Source

The provisions of this § 109.408 adopted August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894; amended May 8, 2009, effective May 9, 2009, 39 Pa.B. 2334. Immediately preceding text appears at serial pages (324486) to (324488).

Cross References

This section cited in 25 Pa. Code § 69.1601 (relating to general); 25 Pa. Code § 109.202 (relating to State MCLs, MRDLs and treatment technique requirements); 25 Pa. Code § 109.301 (relating to general monitoring requirements); 25 Pa. Code § 109.407 (relating to general public notification requirements); 25 Pa. Code § 109.409 (relating to tier 2 public notice—categories, timing and delivery of notice); 25 Pa. Code § 109.410 (relating to tier 3 public notice—categories, timing and delivery of notice); 25 Pa. Code § 109.411 (relating to content of public notice); 25 Pa. Code § 109.413 (relating to special notice for nitrate exceedances above MCL by noncommunity water systems, where granted permission by the Department).

§ 109.409. Tier 2 public notice—categories, timing and delivery of notice.

(a) *General violation categories and other situations requiring a Tier 2 public notice.* A public water supplier shall provide Tier 2 public notice for the following circumstances:

(1) All violations of the primary MCL, MRDL and treatment technique requirements in Subchapter B, G or K (relating to MCLs, MRDLs or treatment technique requirements; system management responsibilities; and lead and copper), except when a Tier 1 notice is required under § 109.408 (relating to Tier 1 public notice—categories, timing and delivery of notice) or when the Department determines that a Tier 1 notice is required. The tier assignment for fluoride is not incorporated by reference. Under § 109.202(d) (relating to MCLs, MRDLs or treatment technique requirements), a public water system shall comply with the primary MCL for fluoride of 2 mg/L. As such, a public water supplier shall provide Tier 2 public notice for violation of the primary MCL for fluoride.

(2) Violations of the monitoring requirements in Subchapter C (relating to monitoring requirements) or Subchapter K, when the Department determines that a Tier 2 rather than a Tier

3 public notice is required, taking into account potential health impacts and persistence of the violation.

(3) Failure to comply with the terms and conditions of any variance or exemption in place under Subchapter I (relating to variances and exemptions issued by the Department).

(4) Other violations or situations determined by the Department to require a Tier 2 public notice, taking into account potential chronic health impacts and persistence of the violation.

(b) *Timing for a Tier 2 public notice.* A public water supplier shall do the following:

(1) Report the circumstances to the Department within 1 hour of discovery of a violation under subsection (a)(1), in accordance with § 109.701(a)(3) (relating to reporting and recordkeeping).

(2) Provide the public notice as soon as possible, but no later than 30 days after the system learns of the violation. If the public notice is posted, the notice shall remain in place for as long as the violation or situation persists, but in no case for less than 7 days, even if the violation or situation is resolved. The Department may, in appropriate circumstances, allow additional time for the initial notice of up to 3 months from the date the system learns of the violation. The Department will not grant an extension across the board or for an unresolved violation. Extensions granted by the Department will be in writing.

(3) Repeat the notice every 3 months as long as the violation or situation persists, unless the Department determines that appropriate circumstances warrant a different repeat notice frequency. In no circumstances may the repeat notice be given less frequently than once per year. The Department will not allow less frequent repeat notices across the board; or for an MCL violation for total coliforms established under § 109.202(a)(2); or for a violation of a treatment technique requirement for pathogenic bacteria, viruses and protozoan cysts as defined in § 109.202(c); or for other ongoing violations. Determinations granted by the Department for less frequent repeat notices will be in writing.

(c) *Form and manner of a Tier 2 public notice.* A public water supplier shall provide the initial public notice and any repeat notices in a form and manner that is reasonably designed to reach all persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but the public water supplier shall at a minimum meet the following requirements:

(1) Unless directed otherwise by the Department in writing, community water systems shall provide notice using the following forms of delivery:

(i) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the public water system.

(ii) Any other method reasonably designed to reach other persons regularly served by the system, if they would not normally be reached by the notice required in subparagraph (i). Those persons may include those who do not pay water bills or do not have service connection

addresses such as house renters, apartment dwellers, university students, nursing home patients or prison inmates. Other methods may include publication in a local newspaper, delivery of multiple copies for distribution by customers that provide their drinking water to others (such as apartment building owners or large private employers), posting in public places served by the system or on the Internet or delivery to community organizations.

(2) Unless directed otherwise by the Department in writing, noncommunity water systems shall provide notice using the following forms of delivery:

(i) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the system, or by mail or direct delivery to each customer and service connection, when known.

(ii) Any other method reasonably designed to reach other persons served by the system if they would not normally be reached by the notice required in subparagraph (i). Those persons may include those served who may not see a posted notice because the posted notice is not in a location they routinely pass by. Other methods may include publication in a local newspaper or newsletter distributed to customers, use of e-mail to notify employees or students or delivery of multiple copies in central locations such as community centers.

Authority

The provisions of this § 109.409 amended under section 4 of the Pennsylvania Safe Drinking Water Act (35 P. S. § 721.4) and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P. S. § § 510-7 and 510-20).

Source

The provisions of this § 109.409 adopted August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894; amended June 18, 2004, effective June 19, 2004, 34 Pa.B. 3130; amended May 8, 2009, effective May 9, 2009, 39 Pa.B. 2334. Immediately preceding text appears at serial pages (324488) to (324490).

Cross References

This section cited in 25 Pa. Code § 69.1601 (relating to general); and 25 Pa. Code § 109.407 (relating to general public notification requirements).

§ 109.410. Tier 3 public notice—categories, timing and delivery of notice.

(a) *General violation categories and other situations requiring a Tier 3 public notice.* A public water supplier shall provide Tier 3 public notice for the following circumstances:

(1) Monitoring violations under Subchapter C or K (relating to monitoring requirements; and lead and copper), except when a Tier 1 notice is required under § 109.408 (relating to Tier 1

public notice—categories, timing and delivery of notice) or where the Department determines that a Tier 2 notice is required.

(2) Operation under a variance or an exemption granted under Subchapter I (relating to variances and exemptions issued by the Department).

(3) Availability of unregulated contaminant monitoring results, as required under 40 CFR 141.40 (relating to monitoring requirements for unregulated contaminants).

(b) *Timing for a Tier 3 public notice.*

(1) A public water supplier shall provide the public notice no later than 1 year after the public water system learns of the violation or situation or begins operating under a variance or exemption. Following the initial notice, the water supplier shall repeat the notice annually for as long as the violation, variance, exemption or other situation persists. If the public notice is posted, the notice shall remain in place for as long as the violation, variance, exemption or other situation persists, but in no case may the initial and annual repeat notice be posted for less than 7 days (even if the violation or situation is resolved).

(2) Instead of individual Tier 3 public notices, a public water supplier may use an annual report detailing all violations and situations that occurred during the previous 12 months, as long as the timing requirements of paragraph (1) are met.

(c) *Delivery of a Tier 3 public notice.* A public water supplier shall provide the initial notice and any repeat notices in a form and manner that is reasonably designed to reach all persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but the public water supplier shall, at a minimum, meet the following requirements:

(1) Unless directed otherwise by the Department in writing, community water systems shall provide notice using the following forms of delivery:

(i) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the public water system.

(ii) Any other method reasonably designed to reach other persons regularly served by the system, if they would not normally be reached by the notice required in subparagraph (i). Those persons may include those who do not pay water bills or do not have service connection addresses such as house renters, apartment dwellers, university students, nursing home patients or prison inmates. Other methods may include publication in a local newspaper, delivery of multiple copies for distribution by customers that provide their drinking water to others (such as apartment building owners or large private employers), posting in public places or on the Internet or delivery to community organizations.

(2) Unless directed otherwise by the Department in writing, noncommunity water systems shall provide notice using the following forms of delivery:

(i) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the system, or by mail or direct delivery to each customer and service connection, if known.

(ii) Any other method reasonably designed to reach other persons served by the system, if they would not normally be reached by the notice required in subparagraph (i). Those persons may include those who may not see a posted notice because the notice is not in a location they routinely pass by. Other methods may include publication in a local newspaper or newsletter distributed to customers, use of e-mail to notify employees or students or delivery of multiple copies in central locations such as community centers.

(d) *Use of a CCR to meet the Tier 3 public notice requirements.* For community water systems, the CCR required under § 109.416 (relating to CCR requirements) may be used as a vehicle for the initial Tier 3 public notice and all required repeat notices, as long as the following conditions are met:

(1) The CCR is provided to persons served no later than 12 months after the system learns of the violation or situation as required under subsection (b).

(2) The Tier 3 notice contained in the CCR follows the content requirements under § 109.411 (relating to content of a public notice).

(3) The CCR is distributed following the delivery requirements under subsection (c).

Authority

The provisions of this § 109.410 amended under section 4 of the Pennsylvania Safe Drinking Water Act (35 P. S. § 721.4) and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P. S. § § 510-7 and 510-20).

Source

The provisions of this § 109.410 adopted August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894; amended May 8, 2009, effective May 9, 2009, 39 Pa.B. 2334. Immediately preceding text appears at serial pages (324490) to (324492).

Cross References

This section cited in 25 Pa. Code § 109.407 (relating to general public notification requirements); 25 Pa. Code § 109.412 (relating to special notice of the availability of unregulated contaminant monitoring results); and 52 Pa. Code § 69.1601 (relating to general).

§ 109.411. Content of a public notice.

(a) *Elements of a public notice.* When a public water system is required to give public notice under this subchapter, each public notice must include the following elements:

(1) A description of the violation or situation, including the contaminants of concern, and (as applicable) the contaminant levels.

(2) When the violation or situation occurred.

(3) Any potential adverse health effects from the violation or situation, including the standard language under subsection (e)(1) or (2), whichever is applicable.

(4) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water.

(5) Whether alternative water supplies should be used.

(6) What actions consumers should take, including when they should seek medical help, if known.

(7) What the system is doing to correct the violation or situation.

(8) When the water system expects to return to compliance or resolve the situation.

(9) The name, business address and telephone number of the water system owner, operator or designee of the public water system as a source of additional information concerning the notice.

(10) A statement to encourage the notice recipient to distribute the public notice to other persons served, using the standard language under subsection (e)(3), when applicable.

(b) *Abbreviated notice.* If automatic telephone dialing systems, TV scrollers, bullhorn announcements or radio station news flashes are used to deliver an abbreviated notice in accordance with § 109.408(d)(1)(iii) (relating to Tier 1 public notice—categories, timing and delivery of notice), the abbreviated notice must include, at a minimum, the following elements:

(1) A description of the violation or situation, including the contaminants of concern, and (as applicable) the contaminant levels.

(2) Whether alternative water supplies should be used.

(3) What actions consumers should take, including when they should seek medical help, if known.

(4) A telephone number or web site address, or both, where consumers can obtain the entire notice.

(c) *Elements of a public notice for public water systems operating under a variance or exemption.*

(1) If a public water system has been granted a variance or an exemption under Subchapter I (relating to variances and exemptions issued by the Department), the public notice must contain the following elements:

(i) An explanation of the reason for the variance or exemption.

(ii) The date on which the variance or exemption was issued.

(iii) A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption.

(iv) A notice of any opportunity for public input in the review of the variance or exemption.

(2) If a public water system violates the conditions of a variance or exemption, the public notice must contain the ten elements listed in subsection (a).

(d) *Presentation of a public notice.*

(1) Each public notice required by this section must:

(i) Be displayed in a conspicuous way when printed or posted.

(ii) Not contain overly technical language or print that is smaller than a font size of 10 points.

(iii) Not be formatted in a way that defeats the purpose of the notice.

(iv) Not contain language that nullifies the purpose of the notice.

(2) Each public notice required by this section must comply with multilingual requirements, as follows:

(i) The public notice must contain information in Spanish regarding the importance of the notice or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the notice or to request assistance.

(ii) For each non-English-speaking group other than Spanish-speaking that exceeds 10% of the consumers for systems serving at least 1,000 people or 100 consumers for systems serving less than 1,000 people, and speaks the same language other than English, the public notice must contain information in the appropriate languages regarding the importance of the notice or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the notice or to request assistance in the appropriate language. The Department will make the final determination of which systems need to include this information.

(e) *Standard language for a public notice.* Public water systems shall include the following standard language in their public notice:

(1) *Standard health effects language for primary MCL or MRDL violations, treatment technique violations, and violations of the condition of a variance or exemption.* Public water systems shall include in each public notice appropriate health effects language. This subchapter incorporates by reference the health effects language specified in 40 CFR Part 141, Subpart Q, Appendix B (relating to standard health effects language for public notification), corresponding to each primary MCL, MRDL and treatment technique violation listed in 40 CFR Part 141, Subpart Q, Appendix A (relating to NPDWR violations and other situations requiring public notice), and for each violation of a condition of a variance or exemption, unless other health effects language is established by regulations or order of the Department. The health effects language for fluoride is not incorporated by reference. Public water systems shall include the following health effects language in each Tier 2 public notice for violation of the primary MCL of 2 mg/L for fluoride:

“This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). Dental fluorosis, in its moderate or severe forms, may result in a brown staining and or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency’s drinking water standard) can increase your risk of developing bone disease.”

(2) *Standard language for violations of monitoring requirements.* Public water systems shall include the following language in their notice, including the language necessary to fill in the blanks, for all violations of monitoring requirements listed in 40 CFR Part 141, Subpart Q, Appendix A:

“We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [insert compliance period], we “did not monitor or test” or “did not complete all monitoring or testing” for [insert contaminant(s)] and therefore cannot be sure of the quality of your drinking water during that time.”

(3) *Standard language to encourage the distribution of the public notice to all persons served.* Public water systems shall include in their notice the following language, if applicable:

“Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.”

Authority

The provisions of this § 109.411 amended under section 4 of the Pennsylvania Safe Drinking Water Act (35 P. S. § 721.4) and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P. S. § § 510-7 and 510-20).

Source

The provisions of this § 109.411 adopted August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894; amended May 8, 2009, effective May 9, 2009, 39 Pa.B. 2334. Immediately preceding text appears at serial pages (324492) to (324495).

Cross References

This section cited in 25 Pa. Code § 109.408 (relating to tier 1 public notice—categories, timing and delivery of notice); 25 Pa. Code § 109.410 (relating to tier 3 public notice—categories, timing and delivery of notice); 25 Pa. Code § 109.413 (relating to special notice for nitrate exceedances above MCL by noncommunity water systems, where granted permission by the Department); 25 Pa. Code § 109.416 (relating to CCR requirements); 25 Pa. Code § 109.1004 (relating to public notification); and 52 Pa. Code § 69.1601 (relating to general).

§ 109.412. Special notice of the availability of unregulated contaminant monitoring results.

(a) *Timing for a special notice.* A community water system or nontransient, noncommunity water system required to monitor for an unregulated contaminant under 40 CFR 141.40 (relating to monitoring requirements for unregulated contaminants) shall notify persons served by the system of the availability of the results of the sampling no later than 12 months after the monitoring results are known.

(b) *Delivery of a special notice.* The delivery of the public notice shall follow the requirements for a Tier 3 public notice prescribed in § 109.410 (relating to Tier 3 public notice—categories, timing and delivery of notice). A public water system may use an annual report or CCR to notify persons served by the system of the availability of the results of the sampling as long as the requirements under § 109.410(d) are met. The notice must also identify a person and provide the telephone number to contact for information on the monitoring results.

Authority

The provisions of this § 109.412 amended under section 4 of the Pennsylvania Safe Drinking Water Act (35 P. S. § 721.4) and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P. S. § § 510-7 and 510-20).

Source

The provisions of this § 109.412 adopted August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894; amended May 8, 2009, effective May 9, 2009, 39 Pa.B. 2334. Immediately preceding text appears at serial page (324495).

Cross References

This section cited in 52 Pa. Code § 69.1601 (relating to general).

§ 109.413. Special notice for nitrate exceedances above MCL by noncommunity water systems, when granted permission by the Department.

(a) *Timing for a special notice.* A noncommunity water system granted permission by the Department in writing in accordance with 40 CFR 141.11(d) (relating to maximum contaminant levels for inorganic chemicals) to exceed the nitrate MCL shall provide notice to persons served according to the requirements for a Tier 1 notice under § 109.408(a) and (b) (relating to Tier 1 public notice—categories, timing and delivery of notice).

(b) *Delivery of a special notice.* Noncommunity water systems granted permission by the Department in writing to exceed the nitrate MCL in accordance with 40 CFR 141.11(d) shall provide continuous posting of the fact that nitrate levels exceed 10 mg/L and include the potential health effects of exposure, according to the requirements for a Tier 1 notice delivery under § 109.408(c)(2) and (d)(3) and the content requirements under § 109.411 (relating to content of a public notice).

Authority

The provisions of this § 109.413 amended under section 4 of the Pennsylvania Safe Drinking Water Act (35 P. S. § 721.4) and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P. S. § § 510-7 and 510-20).

Source

The provisions of this § 109.413 adopted August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894; amended May 8, 2009, effective May 9, 2009, 39 Pa.B. 2334. Immediately preceding text appears at serial pages (324495) to (324496).

Cross References

This section cited in 52 Pa. Code § 69.1601 (relating to general).

§ 109.414. Notice to new billing units or new customers.

(a) *Requirements for community water systems.* Community water systems shall give a copy of the most recent public notice for any continuing violation, the existence of a variance or exemption, or other ongoing situations requiring a public notice to all new billing units or new customers prior to or at the time service begins.

(b) *Requirements for noncommunity water systems.* Noncommunity water systems shall continuously post the public notice in conspicuous locations to inform new consumers of any

continuing violation, variance or exemption, or other situation requiring a public notice for as long as the violation, variance, exemption or other situation persists.

Source

The provisions of this § 109.414 adopted August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894.

Cross References

This section cited in 52 Pa. Code § 69.1601 (relating to general).

§ 109.415. Notice by the Department on behalf of the public water system.

(a) *Failure to give public notice.* If a public water supplier fails to give notice to the public as required by this subchapter, the Department may perform this notification on behalf of the supplier of water and may assess costs of notification on the responsible water supplier.

(b) *System responsibilities when public notice is given by the Department.* If the Department gives public notice, the public water supplier remains responsible for ensuring that the requirements of this subchapter are met.

Authority

The provisions of this § 109.415 amended under section 4 of the Pennsylvania Safe Drinking Water Act (35 P. S. § 721.4) and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P. S. § § 510-7 and 510-20).

Source

The provisions of this § 109.415 adopted August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894; amended May 8, 2009, effective May 9, 2009, 39 Pa.B. 2334. Immediately preceding text appears at serial page (324496).

Cross References

This section cited in 52 Pa. Code § 69.1601 (relating to general).

§ 109.416. CCR requirements.

This section applies only to community water systems and establishes the minimum requirements for the content of the annual CCR that each system must deliver to its customers. This report shall contain information on the quality of the water delivered by the system and characterize the risks, if any, from exposure to contaminants detected in the drinking water in an accurate and understandable manner.

(1) For the purposes of this section, the definitions of “customer” and “detected” established by the EPA under 40 CFR 141.151(c) and (d) (relating to definitions), respectively, are incorporated by reference.

(2) Each community water system shall deliver to its customers an annual CCR on the dates established by the EPA under 40 CFR 141.152 (relating to effective dates), which is incorporated by reference.

(3) Except as noted in subparagraphs (i)—(v), the annual report that a community water system provides to its customers shall contain all of the information, mandatory language and optional text specified by the EPA under 40 CFR 141.153 and 141.154 (relating to content of the reports; and required additional health information), which are incorporated by reference, and under 40 CFR 141, Subpart O, Appendix A (relating to regulated contaminants), which is incorporated by reference, unless other information, mandatory language or optional text is established by regulations or order of the Department. The health effects language for fluoride is not incorporated by reference. Public water systems shall include the health effects language specified in § 109.411(d)(1) (relating to content of a public notice) for violation of the primary MCL of 2 mg/L fluoride.

(i) If a water system wants to use wording of its own choice in place of optional text, the water supplier shall submit the proposed wording to the Department for review and written approval prior to including it in its annual CCR. Once approved, the water supplier’s wording may be used in future CCRs without further approval from the Department as long as it is not changed and is still applicable.

(ii) The CCR shall contain information in Spanish regarding the importance of the report or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the report or to request assistance.

(iii) For each non-English-speaking group other than Spanish-speaking that exceeds 10% of the residents for systems serving at least 1,000 people or 100 residents for systems serving less than 1,000 people, and speaks the same language other than English, the report shall contain information in the appropriate languages regarding the importance of the report or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the report or to request assistance in the appropriate language. The Department will make the final determination of which systems need to include this information.

(iv) For the purpose of defining how certain portions of a CCR shall appear, the term “prominently display” as used in 40 CFR 141.154(a) means that the information shall be printed either in a larger size typeface or bolded or enclosed within a border or all these so as to make the information conspicuous in comparison to the rest of the text appearing before and after the prominently displayed text. Prominently displayed text placed away from other text (such as, in a highlighted or boxed area) shall be printed no smaller than the text used elsewhere in the body of the report, excluding main or section titles.

(v) Information contained in a CCR shall appear in an easy-to-read format. Font sizes below 10 points or color combinations, or both, that make it difficult for persons to read and understand the information contained in the CCR may not be used.

(4) *Report delivery and recordkeeping.* Each community water system shall do the following:

(i) Mail or otherwise directly deliver to each customer and to the Department one copy of the annual CCR no later than the date the water system is required to distribute the CCR to its customers.

(ii) Make a good faith effort to reach consumers who do not get water bills. The Department will determine “good faith” based on those methods identified in 40 CFR 141.155(b) (relating to delivery requirements), which are incorporated by reference.

(iii) Submit in writing to the Department no later than 3 months after the delivery of the annual CCR:

(A) A certification that the annual CCR has been distributed to customers and that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the Department.

(B) A description of what was done to meet the good faith effort requirement described in subparagraph (ii).

(iv) If another State agency or commission also regulates the community water system, submit a copy of the system’s annual CCR to the other agency or commission upon the specific request of that agency or commission no later than the date the water system is required to distribute the CCR to its customers. Each State agency or commission shall determine the way it requests a copy of the system’s CCR. Those agencies or commissions may include, but are not limited to, the following:

(A) The Pennsylvania Public Utility Commission and the Office of Consumer Advocate in the Office of the Attorney General, for water systems that are public utilities regulated under 66 Pa.C.S. (relating to Public Utility Code).

(B) The Department of Public Welfare for self-contained community water systems serving personal care or other group housing facilities.

(C) The Department of Health, for self-contained community water systems serving skilled healthcare facilities.

(v) Make copies of its annual CCR available to the public on request.

(vi) If a community water system serves 100,000 or more people, post its current year’s report to a publicly accessible site on the Internet.

(vii) Retain copies of each annual CCR and the related information required in paragraph (3) on the premises of the system or at a convenient location near the premises for no less than 3 years after the date of its delivery to customers.

Source

The provisions of the § 109.416 adopted August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894.

Cross References

This section cited in 25 Pa. Code § 109.1 (relating to definitions); 25 Pa. Code § 109.410 (relating to tier 3 public notice—categories, timing and delivery of notice); 25 Pa. Code § 109.1004 (relating to public notification); and 52 Pa. Code § 69.1601 (relating to general).

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Subchapter G. SYSTEM MANAGEMENT RESPONSIBILITIES

Sec.

- 109.701. [Reporting and recordkeeping.](#)
- 109.702. [Operation and maintenance plan.](#)
- 109.707. [Emergency response plan.](#)

Cross References

This subchapter cited in 25 Pa. Code § 109.5 (relating to organization of chapter); 25 Pa. Code § 109.407 (relating to general public notification requirements); and 25 Pa. Code § 109.505 (relating to requirements for noncommunity water systems).

§ 109.701. Reporting and recordkeeping.

(a) *Reporting requirements for public water systems.* Public water systems shall comply with the following requirements:

(1) *General reporting requirements.* Unless a different reporting period is specified in this chapter, the water supplier shall assure that the results of test measurements or analyses required by this chapter are reported to the Department within either the first 10 days following the month in which the result is received or the first 10 days following the end of the required monitoring period as stipulated by the Department, whichever is shorter. The test results shall include the following at a minimum:

(i) The name, address and public water system identification number (PWSID) of the public water system from which the sample was taken.

(ii) The name, address and identification number of the laboratory performing the analysis unless the analysis is not required to be performed by a certified laboratory.

(iii) The results of analytical methods, including negative results.

(iv) Contaminants.

(v) Analytical methods used.

(vi) The date of sample.

(vii) The date of analysis.

(viii) Sample location.

(2) *Monthly reporting requirements for performance monitoring.*

(i) The test results of performance monitoring required under § 109.301(1) (relating to general monitoring requirements) for public water suppliers providing filtration and disinfection of surface water or GUDI sources shall include the following at a minimum:

(A) For turbidity performance monitoring:

(I) The number of days of filtration operation.

(II) The number of filtered water turbidity measurements taken each month.

(III) The number of filtered water turbidity measurements that are less than or equal to .5 NTU for conventional, direct or other filtration technologies, or 1.0 NTU for slow sand or diatomaceous earth filtration technologies.

(IV) The date, time and values of any filtered water turbidity measurements exceeding 2.0 NTU.

(V) Instead of subclauses (III) and (IV), beginning January 1, 2002, for public water systems that serve 10,000 or more people and use conventional or direct filtration:

(-a-) The number of filtered water turbidity measurements that are less than or equal to 0.3 NTU.

(-b-) The date, time and values of any filtered water turbidity measurements exceeding 1 NTU.

(VI) Instead of clause (A)(III) and (IV), beginning January 1, 2005, for public water systems that serve fewer than 10,000 persons and use conventional or direct filtration:

(-a-) The number of filtered water turbidity measurements that are less than or equal to 0.3 NTU.

(-b-) The date, time and values of any filtered water turbidity measurements exceeding 1 NTU.

(VII) Instead of subclauses (III) and (IV), beginning January 1, 2002, for public water systems that serve 10,000 or more people and use other filtration technologies:

(-a-) The number of filtered water turbidity measurements that are less than or equal to 0.3 NTU or a more stringent turbidity performance level requirement that is based upon onsite studies and is specified by the Department.

(-b-) The date, time and values of any filtered water turbidity measurements exceeding 1 NTU or a more stringent turbidity performance level requirement that is based upon onsite studies and is specified by the Department.

(B) For performance monitoring of the residual disinfectant concentration of the water being supplied to the distribution system:

(I) The date, time and lowest value each day.

(II) The date, duration and number of periods each day when the concentration is less than .2 mg/L for more than 4 hours.

(C) For performance monitoring of the residual disinfectant concentration at representative points in the distribution system report the following:

(I) The number of monthly routine samples required.

(II) The number of monthly routine samples collected and analyzed.

(III) The number of samples in which the residual disinfectant concentration was less than 0.02 mg/L.

(IV) For samples in which the residual disinfectant concentration was less than 0.02 mg/L: the date, time and value of each sample.

(ii) The test results of performance monitoring required under § 109.301(2) for public water suppliers using unfiltered surface water or GUDI sources shall include the following, at a minimum:

(A) For turbidity performance monitoring:

(I) The date, time and value of each sample that exceeds 1.0 NTU.

(II) The date, time and highest turbidity value, if the turbidity does not exceed 1.0 NTU in a sample.

(B) For performance monitoring of the residual disinfectant concentration of the water being supplied to the distribution system:

(I) The date, time and lowest value each day the concentration is less than the residual disinfectant concentration required under § 109.202(c)(1)(iii).

(II) If the concentration does not fall below that required under § 109.202(c)(1)(iii) during the month, report the date, time and lowest value measured that month.

(C) For performance monitoring of the residual disinfectant concentration at representative points in the distribution system, report the following:

(I) The number of monthly routine samples required.

(II) The number of monthly routine samples collected and analyzed.

(III) The number of samples in which the residual disinfectant concentration was less than 0.02 mg/L.

(IV) For samples in which the residual disinfectant concentration was less than 0.02 mg/L: the date, time and value of each sample.

(D) For performance monitoring of the fecal coliform or total coliform density determinations on samples of the source water immediately prior to disinfection: the date, time and value of each sample.

(iii) The test results from performance monitoring required under § 109.301(8)(v) of the residual disinfectant concentration of the water in the distribution system shall include the date, time and value of each sample.

(iv) The test results of heterotrophic plate count measurements taken under § 109.710(b) (relating to disinfectant residual in the distribution system) shall include the date, time and value of each sample.

(3) *One-hour reporting requirements.* A public water supplier shall report the circumstances to the Department within 1 hour of discovery for the following violations or situations:

(i) A primary MCL or an MRDL has been exceeded or a treatment technique requirement has been violated under Subchapter B or K (relating to MCLs, MRDLs or treatment technique requirements; and lead and copper).

(ii) A sample result requires the collection of check samples under § 109.301.

(iii) Circumstances exist which may adversely affect the quality or quantity of drinking water including, but not limited to:

(A) The occurrence of a waterborne disease outbreak.

(B) A failure or significant interruption in key water treatment processes.

(C) A natural disaster that disrupts the water supply or distribution system.

(D) A chemical spill.

(E) An unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination.

(F) An overfeed of a drinking water treatment chemical that exceeds a published maximum use value, such as National Sanitation Foundation's "Maximum Use Value," as applicable.

(G) A situation that causes a loss of positive water pressure in any portion of the distribution system where there is evidence of contamination or a water supplier suspects a high risk of contamination.

(H) A lack of resources that adversely affect operations, such as staff shortages, notification by the power utility of planned lengthy power outages or imminent depletion of treatment chemical inventories.

(4) *Notice.* The water supplier shall, within 10 days of completion of each public notification required under Subchapter D (relating to public notification) with the exception of a CCR, submit to the Department a certification that it has fully complied with the public notification requirements. The water supplier shall include with this certification a representative copy of each type of notice distributed, published, posted and made available to persons served by the system and to the media and a description of the means undertaken to make the notice available.

(5) *Siting plan.* The water supplier shall submit to the Department a written sample siting plan for routine coliform sampling as required by § 109.303(a)(2) (relating to sampling requirements) within 30 days of receipt of the Department's request for this information.

(i) A sample siting plan shall include at a minimum the following:

(A) A list of available sample site locations in the distribution system to be used for routine monitoring purposes, including the first service connection (or Department approved equivalent) and dead ends.

(B) The name of the company or individual collecting the samples.

(C) A time period by which available sites representative of the distribution system are to be sampled during each monitoring period.

(ii) The Department's approval of a sample siting plan will be based upon the following:

(A) The population served by the system.

(B) The accessibility of sample sites.

(C) The past monitoring history for the system.

(D) The completeness of the sample siting plan which includes the information specified in subparagraph (i) and other information relating to the criteria in this subparagraph necessary for evaluation of the sample siting plan.

(iii) A water supplier shall revise and resubmit its sample siting plan within 30 days of notification by the Department of a sample siting plan which fails to meet the criteria in subparagraphs (i) and (ii).

(iv) The water supplier shall notify the Department of subsequent revisions to an approved coliform sample siting plan for approval as they occur. Revisions to an approved coliform sample siting plan shall be submitted in written form to the Department within 30 days of notifying the Department of the revisions.

(6) *Records.* Upon request by the Department, the water supplier shall submit copies of records required to be maintained under this subchapter.

(7) *Form.* Reports required by this chapter shall be submitted in a manner or form acceptable to the Department.

(8) *Reporting requirements for disinfectant residuals.* Public water systems shall report MRDL monitoring data as follows:

(i) For systems monitoring for chlorine dioxide under § 109.301(13):

(A) The dates, results and locations of the samples that were taken during the previous month.

(B) Whether the MRDL was exceeded.

(C) Whether the MRDL was exceeded in any 2-consecutive daily samples and whether the resulting violation was acute or nonacute.

(ii) For systems monitoring for either chlorine or chloramines under § 109.301(13):

(A) The number of samples taken during each month of the previous quarter.

(B) The monthly arithmetic average of all samples taken in each month for the last 12 months.

(C) The arithmetic average of all monthly averages for the last 12 months.

(D) Whether the MRDL was exceeded.

(9) *Reporting requirements for disinfection byproducts.*

(i) Systems monitoring for TTHMs and HAA5 under § 109.301(12) shall report the following:

(A) Systems monitoring on a quarterly or more frequent basis shall report the following:

(I) The number of samples taken during the last quarter.

(II) The date, location and result of each sample taken during the last quarter.

(III) The arithmetic average of all samples taken in the last quarter.

(IV) The annual arithmetic average of the quarterly arithmetic averages for the last 4 quarters.

(V) Whether the annual arithmetic average exceeds the MCL for either TTHMs or HAA5.

(B) Systems monitoring less than quarterly but no less than annually shall report the following:

(I) The number of samples taken during the last year.

(II) The date, location and result of each sample taken during the last monitoring period.

(III) The arithmetic average of all samples taken in the last year.

(IV) Whether the annual arithmetic average exceeds the MCL for either TTHMs or HAA5.

(C) Systems monitoring less than annually shall report the following:

(I) The date, location and result of the last sample taken.

(II) Whether the sample exceeds the MCL for either TTHMs or HAA5.

(ii) Systems monitoring for chlorite under § 109.301(12) shall report the following:

(A) The number of samples taken during the last month.

(B) The date, location and result of each entry point and distribution sample taken during the last month.

(C) The arithmetic average of each three-sample set of distribution samples taken during the last month.

(D) Whether the monthly arithmetic average exceeds the MCL.

(iii) Systems monitoring for bromate under § 109.301(12) shall report the following:

(A) The number of samples taken during the last quarter.

(B) The date, location and result of each sample taken during the last quarter.

(C) The arithmetic average of the monthly arithmetic averages of all samples taken in the last year.

(D) Whether the annual arithmetic average exceeds the MCL.

(10) *Reporting requirements for disinfection byproduct precursors.* Systems monitoring for TOC under § 109.301(12) shall report in accordance with 40 CFR 141.134(d) (relating to reporting and recordkeeping requirements for disinfection byproduct precursors and enhanced coagulation or enhanced softening).

(b) *Reporting requirements for community water systems.* In addition to the reporting requirements for a public water system, a community water supplier shall comply with the following requirements:

(1) The water supplier shall prepare a monthly operational report on forms provided by the Department or in a form acceptable to the Department. The report shall be maintained on file by the operator for at least 2 years and submitted upon request of the Department. The report must include at least the following:

(i) The water produced daily.

(ii) The chemical added daily.

(iii) The physical and chemical determinations taken daily.

(iv) Water-level monitoring data for supply and any associated monitoring wells.

(v) The maintenance performed.

(vi) Operational problems.

(2) The water supplier shall comply with the applicable requirements of registration, reporting, recordkeeping and monitoring in Chapter 110, Subchapters B—E, regarding registration, reporting, recordkeeping and monitoring.

(3) The water supplier shall keep a record of complaints received from consumers related to the act or this chapter on forms provided by the Department or in a form acceptable to the Department. Water suppliers complying with the Pennsylvania Public Utility Commission (PUC) complaint recordkeeping requirements under 52 Pa. Code § 65.3 (relating to complaints) shall be in compliance with this subsection if the complaints related to the act or this chapter are cross

referenced within the PUC required records in a manner to make them readily available. The records shall be maintained on file by the operator for at least 3 years and submitted upon request of the Department.

(c) *Reporting requirements for nontransient noncommunity water systems.* In addition to complying with the reporting requirements for public water systems under subsection (a), a nontransient noncommunity water system shall comply with subsection (b)(1) except that records of water produced daily are not required.

(d) *Record maintenance.* The public water supplier shall retain on the premises of the public water system or at a convenient location near the premises the following:

(1) Records of bacteriological analyses which shall be kept for at least 5 years, and records of chemical analyses which shall be kept for at least 12 years. Actual laboratory reports may be kept, or data may be transferred to tabular summaries, if the following information is included:

(i) The date, place and time of sampling, and the name of the person who collected the sample.

(ii) Identification of the sample as to whether it was a routine distribution system sample, check sample, raw or finished water sample or other special purpose sample.

(iii) The date of analysis.

(iv) The laboratory, certification number and person responsible for performing the analysis.

(v) The analytical technique and methods used.

(vi) The results of the analysis.

(2) Records of performance monitoring required under § 109.301 which shall be kept for at least 3 years. At a minimum, these records shall contain the reporting requirements under subsection (a).

(3) Records of action taken by the public water supplier to correct violations of MCLs, MRDLs or treatment technique requirements, which shall be kept for at least 3 years after the last action taken with respect to the particular violation involved.

(4) Copies of written reports or communications relating to sanitary surveys conducted by a water supplier or his agent, which shall be kept for at least 12 years.

(5) Records concerning a variance or exemption granted to the system which shall be kept at least 5 years following the expiration of the variance or exemption.

(6) Plans, specifications and permits for water system facilities which shall be kept for the life of the facility.

(7) Records concerning the use of acrylamide and epichlorohydrin shall be kept for at least 12 years. These records shall include verification that the chemicals used were certified for conformance with ANSI/NSF Standard 60 in accordance with § 109.606 (relating to chemicals, materials and equipment) and that the combination—or product—of dose and monomer level did not exceed the following:

- (i) Acrylamide = 0.05% dosed at 1 ppm (or equivalent).
- (ii) Epichlorohydrin = 0.01% dosed at 20 ppm (or equivalent).

(8) Copies of public notifications issued under Subchapter D and certifications made to the Department under subsection (a)(4) shall be kept for 3 years after issuance.

(e) Reporting requirements for public water systems required to perform individual filter monitoring under § 109.301(1)(iv).

(1) Public water systems required to perform individual filter monitoring shall report that they have conducted individual filter monitoring within 10 days following the end of each month that the system serves water to the public.

(2) Public water systems required to perform individual monitoring shall report individual filter turbidity results if individual filter turbidity measurements demonstrate that one or more of the following conditions exist:

(i) An individual filter has a measured turbidity level greater than 1.0 NTU in two consecutive measurements taken 15 minutes apart.

(ii) An individual filter has a measured turbidity level of greater than 0.5 NTU in two consecutive measurements taken 15 minutes apart at the end of the first 4 hours of continuous filter operation after the filter has been backwashed or otherwise taken offline.

(iii) An individual filter has a measured turbidity level greater than 1.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of 3-consecutive months.

(iv) An individual filter has a measured turbidity level greater than 2.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of 2-consecutive months.

(3) Individual filter turbidity monitoring reported as required under paragraph (2) shall include the following at a minimum:

- (i) Filter number.
- (ii) Turbidity measurements.
- (iii) The dates on which the exceedance occurred.

(iv) If an individual filter demonstrates a condition under paragraph (2)(i) or (ii), the date on which a filter profile was produced or the date on which the reason for a turbidity exceedance was determined.

(v) If an individual filter demonstrates a condition under paragraph (2)(iii), the date on which a filter self-assessment was conducted.

(vi) If an individual filter demonstrates a condition under paragraph (2)(iv), the date on which a comprehensive performance evaluation was conducted.

(f) *Alternative individual filter turbidity exceedance levels.* Public water systems using lime softening may apply to the Department for alternative individual filter turbidity exceedance levels if they demonstrate that the higher individual filter turbidity levels are due to lime carryover and not to degraded filter performance.

(g) *Monitoring plans for disinfectants, disinfection byproducts and disinfection byproduct precursors.* Systems required to monitor for disinfection byproducts or disinfection byproduct precursors under § 109.301(12) or disinfectant residuals under § 109.301(13) shall develop and implement a monitoring plan. The system shall maintain the plan and make it available for inspection by the Department and the general public no later than 30 days following the applicable compliance dates. All systems that use either surface water or GUDI sources shall submit a copy of the monitoring plan to the Department no later than 30 days prior to the date of the first report required under this subchapter. The Department may also require the plan to be submitted by any other system, regardless of size or source water type. After review, the Department may require changes in any of the plan components.

(1) The plan shall include the following components:

(i) Specific locations and schedules for collecting samples for any parameters included in § 109.301(12) or (13).

(ii) How the system will calculate compliance with the MCLs, MRDLs and treatment techniques.

(iii) If approved for monitoring as a consecutive system, or if providing water to a consecutive system, the sampling plan shall reflect the entire distribution system.

(iv) Systems may consider multiple wells drawing water from a single aquifer as one treatment plant for determining the minimum number of TTHM and HAA5 samples required under § 109.301(12)(i).

(2) The system shall notify the Department of subsequent revisions to a monitoring plan as they occur. Revisions to a monitoring plan shall be submitted in written form to the Department within 30 days of notifying the Department of the revisions.

(h) *Reporting and record maintenance requirements for systems recycling their waste streams.*

(1) Public water systems using surface water or GUDI sources and providing conventional filtration or direct filtration treatment and that recycle spent filter backwash water, thickener supernatant, or liquids from dewatering processes shall notify the Department in writing by December 8, 2003. This notification shall include the following information:

(i) A plant schematic showing the origin of all flows that are recycled (including, but not limited to, spent filter backwash water, thickener supernatant and liquids from dewatering processes), the hydraulic conveyance used to transport them and the location where they are reintroduced back into the treatment plant.

(ii) Typical recycle flow in gallons per minute (gpm), the highest observed plant flow experienced in the previous year (gpm), design flow for the treatment plant (gpm) and Department-approved operating capacity for the plant.

(2) *Record maintenance.* Beginning June 8, 2004, public water systems using surface water or GUDI sources and providing conventional filtration or direct filtration and recycling spent filter backwash water, thickener supernatant, or liquids from dewatering processes shall collect and retain on file recycle flow information specified in this paragraph. This information is for the previous year of recycling and shall be available to the Department for review and evaluation at the Department's request:

(i) A copy of the recycle notification and information submitted to the Department under subsection (h).

(ii) A list of all recycle flows and the frequency with which they are returned.

(iii) Average and maximum backwash flow rate through the filters and the average and maximum duration of the filter backwash process in minutes.

(iv) Typical filter run length and a written summary of how filter run length is determined.

(v) The type of treatment provided for the recycle flow.

(vi) Data on the physical dimensions of the equalization or treatment units, or both, typical and maximum hydraulic loading rates, type of treatment chemicals used and average dose and frequency of use, and frequency at which solids are removed, if applicable.

Authority

The provisions of this § 109.701 amended under sections 4 and 3118 of the Pennsylvania Safe Drinking Water Act (35 P. S. § 721.4); section 3118 of the Water Resources Planning Act, 27 Pa.C.S. § 3118; and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P. S. §§ 510-7 and 510-20).

Source

The provisions of this § 109.701 adopted December 7, 1984, effective December 8, 1984, 14 Pa.B. 4479; amended June 16, 1989, effective June 17, 1989, 19 Pa.B. 2543; amended May 15, 1992, effective May 16, 1992, 22 Pa.B. 2621; amended October 7, 1994, effective October 8, 1994, 24 Pa.B. 5175; amended December 23, 1994, effective December 24, 1994, 24 Pa.B. 6404; amended April 23, 1999, effective April 24, 1999, 29 Pa.B. 2231; amended July 20, 2001, effective July 21, 2001, 31 Pa.B. 3895 and 3938; amended August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894; amended April 2, 2004, effective April 3, 2004, 34 Pa.B. 1758; amended June 18, 2004, effective June 19, 2004, 34 Pa.B. 3130; amended August 13, 2004, effective August 14, 2004, 34 Pa.B. 4435; amended November 14, 2008, effective November 15, 2008, 38 Pa.B. 6266; amended May 8, 2009, effective May 9, 2009, 39 Pa.B. 2334. Immediately preceding text appears at serial pages (339272) to (339282).

Cross References

This section cited in 25 Pa. Code § 109.202 (relating to State MCLs, MRDLs and treatment technique requirements); 25 Pa. Code § 109.301 (relating to general monitoring requirements); 25 Pa. Code § 109.303 (relating to sampling requirements); 25 Pa. Code § 109.407 (relating to general public notification requirements); 25 Pa. Code § 109.408 (relating to tier 1 public notice—categories, timing and delivery of notice); 25 Pa. Code § 109.409 (relating to tier 2 public notice—categories, timing and delivery of notice); 25 Pa. Code § 109.707 (relating to emergency response plan); 25 Pa. Code § 109.714 (relating to filter profile, filter self-assessment and comprehensive performance evaluations); 25 Pa. Code § 109.1008 (relating to system management responsibilities); and 25 Pa. Code § 109.1107 (relating to system management responsibilities).

§ 109.702. Operation and maintenance plan.

(a) A community water supplier shall develop an operation and maintenance plan for the community water system. The operation and maintenance plan must generally conform to the guidelines contained in the Department's *Public Water Supply Manual* and contain at least the following information:

- (1) A description of the facilities.
- (2) An explanation of startup and normal operation procedures.
- (3) Procedures for repairing and replacing water mains that conform to the Department and water industry standards.
- (4) A routine maintenance program.
- (5) Records and reporting system.
- (6) Sampling and analyses program.

(7) Public notification elements in accordance with Subchapter D (relating to public notification) that include:

(i) Public notice templates.

(ii) EPA contaminant fact sheets, when available.

(iii) An explanation of appropriate methods of delivery of public notice in accordance with Subchapter D.

(8) Staffing and training.

(9) Sanitary survey program including the wellhead protection program for any water system that develops one under § 109.713 (relating to wellhead protection programs).

(10) Safety program.

(11) Emergency plan and operating procedures.

(12) Manufacturer's manuals.

(13) An interconnect, valve and blowoff exercise and testing program.

(14) Date of last update.

(b) The community water supplier shall implement the operation and maintenance plan in accordance with accepted practices of the water supply industry.

(c) The community water supplier shall review and update the operation and maintenance plan as necessary to reflect changes in the operation or maintenance of the water system. The plan must be:

(1) Placed in secure locations which are readily accessible to the water system's personnel.

(2) Presented upon request to the Department.

(d) Noncommunity water suppliers may be directed by the Department to develop and implement an operation and maintenance plan as provided for in this section when the public health is threatened by inadequate operation and maintenance of the facilities.

Authority

The provisions of this § 109.702 amended under section 4 of the Pennsylvania Safe Drinking Water Act (35 P. S. § 721.4) and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P. S. § § 510-7 and 510-20).

Source

The provisions of this § 109.702 adopted December 7, 1984, effective December 8, 1984, 14 Pa.B. 4479; amended May 15, 1992, effective May 16, 1992, 22 Pa.B. 2621; amended October 7, 1994, effective October 8, 1994, 24 Pa.B. 5175; amended August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894; amended May 8, 2009, effective May 9, 2009, 39 Pa.B. 2334. Immediately preceding text appears at serial pages (339283) and (290563).

Cross References

This section cited in 25 Pa. Code § 109.407 (relating to general public notification requirements); 25 Pa. Code § 109.503 (relating to public water system construction permits); and 25 Pa. Code § 109.1107 (relating to system management responsibilities).

§ 109.707. Emergency response plan.

(a) A community water supplier shall develop a plan for the provision of safe and adequate drinking water under emergency circumstances. The emergency response plan must generally conform to the guidelines contained in the Department's *Public Water Supply Manual*, as applicable, and contain at least the following:

(1) *Organization table*. An organization table that includes a prioritized list of names and contact numbers of persons in charge of the water system during an emergency.

(2) *Communication procedures and contact information*. For each probable emergency situation, including, but not limited to, those specified in § 109.701(a)(3)(iii) (relating to reporting and recordkeeping), a list of appropriate contact persons and phone numbers for the following groups of people:

(i) Emergency management agencies within a water system's jurisdiction.

(ii) Key public officials within a water supplier's service area.

(iii) Government agencies including, but not limited to, the Department, Public Utility Commission, Department of Health, Department of Public Welfare and Pennsylvania Department of Agriculture.

(iv) Facilities within a water supplier's service area, including, but not limited to, hospitals, schools, day-care facilities, nursing homes, social service agencies, industrial and commercial users.

(v) Media.

(vi) Equipment and chemical suppliers.

(3) *Means of communication*. A list containing the following:

- (i) Types of communication equipment.
 - (ii) Types of communication for public notification.
- (4) *Summary description of the system.* A list containing the following:
- (i) Location of pertinent operational information.
 - (ii) Source information.
 - (iii) Treatment information.
 - (iv) Finished water storage.
- (5) *Assessment of available resources.* A list containing the following:
- (i) Mutual aid agreements.
 - (ii) Emergency water supply equipment that includes procedures for providing reserve capacity according to § 109.609 (relating to reserved capacity and finished water storage) or an approved alternative water supply.
 - (iii) Power supply equipment.
 - (iv) Repair equipment.
 - (v) Vehicles and construction equipment.
 - (vi) Spare equipment.
- (6) *Corrective actions for probable emergency situations.* A list containing the following:
- (i) Probable emergency situations including, but not limited to, those specified in § 109.701(a)(3)(iii).
 - (ii) Corrective actions for each probable emergency situation.
- (b) The community water supplier shall implement the emergency response plan when necessary.
- (c) The community water supplier shall review and update the plan at least annually and as necessary to reflect changes to communication procedures and contact information under subsection (a)(2). The community water supplier shall record the date of update on the plan. The plan must be:
- (1) Placed in secure locations which are readily accessible to the water system's personnel.

(2) Presented upon request to the Department.

Authority

The provisions of this § 109.707 amended under section 4 of the Pennsylvania Safe Drinking Water Act (35 P. S. § 721.4) and sections 1917-A and 1920-A of The Administrative Code of 1929 (71 P. S. § § 510-7 and 510-20).

Source

The provisions of this § 109.707 adopted December 7, 1984, effective December 8, 1984, 14 Pa.B. 4479; amended May 15, 1992, effective May 16, 1992, 22 Pa.B. 2621; amended December 23, 1994, effective December 24, 1994, 24 Pa.B. 6404; amended August 9, 2002, effective August 10, 2002, 32 Pa.B. 3894; amended May 8, 2009, effective May 9, 2009, 39 Pa.B. 2334. Immediately preceding text appears at serial page (290567).

Appendix E

Scenario Answers

Scenario #1: Issuing a Tier 1 PN with new PN Requirements Answer Key

Scenario #3 Information: The PN Revisions have been published as final in the *PA Bulletin*, the 12-month compliance period has ended and the new **direct** delivery requirements for Tier 1 PNs are in place.

You are operating your current water system. You have been notified that a recent nitrate sample result is 12 mg/L. Your lab instructs you to take a confirmation sample and that result is 13 mg/L. The average of the original result and the confirmation sample is 12.5 mg/L.

1. Is this a violation and if so, what is the tier classification for it?

Yes, Tier 1

2. Do you need to notify DEP? If you have to notify DEP, how much time do you have to do this?

Yes, within 1 hour

3. Does this situation require a consultation with DEP? If you have to consult with DEP, how much time do you have to do this?

Yes, within 24 hours

4. How much time do you have to issue the public notice?

24 hrs

5. Based on your system size, what Tier 1 PN direct delivery methods will you use to meet the delivery deadline?

Options include: hand delivery, electronic mail, or automatic telephone dialing systems.

6. Do you have transient and nontransient service connections in your system? If so, how will you issue the Tier 1 PN to these types of users?

Yes, create an abbreviated message for broadcast (Radio and TV)

7. If you use automatic telephone dialing services, what minimum elements must be included in the abbreviated message?

Minimum elements include:

1. A description of the violation or situation, including the contaminant of concern, and (as applicable) the contaminant level;
2. Whether alternative water supplies should be used;
3. What actions consumers should take, including when they should seek medical help, if known;
4. A telephone number or website address, or both, where consumers can obtain the entire notice.

8. If you abbreviate the Tier 1 PN, how will you provide the entire Tier 1 PN to your customers?

Provide entire PN on website or recorded message on a dedicated telephone line

9. Do you have any social service agencies within your service area that could assist you with delivering the Tier 1 PN notice to their clients? Who are they?

Agencies that support the visually or hearing-impaired individuals
See O & M Plan for these agencies

10. Have you updated your ERP with contact names and phone and FAX numbers for your social service agencies?

Required under Section 2 of your ERP

11. Will you need to issue a "Problem Corrected" PN? If so, can you find that template? (List location)

Yes, when problem is corrected. "Problem Corrected" Template is a Tier 1 PN template found on PN website or under Section 6 of O & M Plan.

12. After you have issued the public notice, what final step must you take to complete the process? What form would you use? How would you get this form? When is the form due?

Final step: Issue PN Certification form to DEP

Form: PN Certification form

Access to form: PN Website and O & M Plan

Form due: Within 10 days of issuing the Tier 1 PN

13. As a result of this new rule, what do you need to include in your O & M Plan?

EPA Contaminant fact sheets, an explanation of appropriate methods of delivery of Tier 1, 2, and Tier 3 PNs.

14. As a result of this new rule, under what circumstances do you need to update your ERP?

Review it annually or whenever there are changes to communication procedures and contact information.

Scenario #2: Using Health Advisory Levels Answer Key

1. Does this sample require a confirmation sample? In what time frame?

Yes, within 2 weeks.

The supplier took a confirmation sample two days later and the confirmation sample result was 0.05 mg/L

2. What is compliance based on? What is the final result?

The average of the original sample + the confirmation sample.
The final result = 0.055 mg/L

3. Is this extreme MCL violation also exceed the 1-day or 10-day health advisory level for cadmium?

Yes, 0.055 mg/L exceeds the 1-day and 10-day health advisory level of 0.04 mg/L

4. Is this a Tier 1 or Tier 2 situation?

It is now elevated to a Tier 1 situation.

5. Which Tier 1 PN would you use for this situation?

“Do Not Drink” PN when an EPA health advisory has been exceeded

6. Does this require consultation with Central Office and EPA?

Yes with Central Office and probably not with EPA.

7. What case-specific information is inserted into the Tier 1 PN?

Level of contaminant, acute health effects language from Table 1, sources of contaminants, corrective actions, date when problem is resolved.

8. What resources would you use to revise the PN?

“Do Not Drink” PN template, Cadmium fact sheet, Policy for Issuing and Removing Water Supply Warnings (especially Table 1)

Scenario #3: Abbreviated Message about Acute Nitrate Violation Answer Key

This is a message from ABC Water Company. We are currently experiencing a nitrate MCL violation.

DO NOT GIVE THE WATER TO INFANTS below the age of six months or pregnant women because infants drinking this water could become seriously ill and, if untreated, could die of blue-baby syndrome.

Water, juice, and formula for infants should not be prepared with tap water. Bottled water or other water low in nitrates should be used for infants until further notice.

DO NOT BOIL THE WATER because that can make the nitrates more concentrated.

For more information about this public notice, visit our website at: www.abcwater.com

We will be sending another message when the problem is corrected and your water is OK to serve to infants and pregnant women.

Scenario: Loss of Positive Pressure Situation

*** ABC Water Authority**

- CWS serving 1,500 people
- None of the on-site distribution crew members are certified operators
- The O&M Plan contains a copy of AWWA Standard C-651-05
- The line break is located in an area served by on-lot septic systems. Water lines were recently extended to serve drinking water in this area due to known overloaded septic systems.

Timeline of Events

8:00 AM	The Water Authority receives several complaints of water outages.
8:30 AM	Distribution crew members arrive on site, observe standing water in the street and suspect a water line break.
10:00 AM	A trench is dug and crew members observe a visible rupture in the main. The trench is filled with water.
10:30 AM	The trench is dewatered and further inspection reveals water is no longer leaking from the break.
11:00 AM	Crew members begin repairs.
3:00 PM	Repairs are completed. The lines are flushed.
3:30 PM	The main is returned to service.

Answer Key

Questions & Answers:

1. Should this system have notified DEP within 1 hour?

Yes. The system experienced a loss of positive pressure. The on-lot septic systems and flooded trench represent a high risk of contamination.

2. If yes, when did the time clock start?

10:30 AM

3. Should this system have issued a BWA?

Yes. There was a loss of positive pressure and a high risk of contamination.

4. Were repairs completed as per Standard C-651-05 and DEP's policy?

No. Disinfection procedures were not followed. Bacteriological samples were not taken and the system did not meet the criteria to avoid sampling.

5. Did this system incur any violations?

Yes.

109.4(3) Failure to effectively operate and maintain PWS facilities.

109.4(4) Failure to take investigative or corrective actions necessary to assure safe and potable water is continuously supplied.

109.408(a) & (b) Failure to consult with DEP and issue Tier 1 PN.

109.701(a)(3) Failure to notify DEP within 1 hour.

6. If yes, what follow-up actions should this system and/or DEP take?

DEP should issue a Field Order, requiring: PN in the form of a BWA within 24 hours, flushing, increased Cl_2 residuals, and the collection of check samples until 2 consecutive days are negative.
The system should comply with the Field Order.