

DRINKING WATER PROGRAM POLICY Colorado Department Of Public Health & Environment Water Quality Control Division	No: DW - 1	
	EFFECTIVE: September 30, 2005	
TITLE: RESPONSE TO ACUTE HEALTH THREATS FROM PUBLIC WATER SYSTEMS	APPROVED BY	DATE
	Division Director: <i>[Signature]</i>	9/30/05
	DW Program Manager: <i>[Signature]</i>	9/30/05

1.0 Purpose

To protect consumers from acute health risks in the event a public water system fails to deliver safe drinking water or where evidence indicates the potential for such failure. This may include incidents that involve: presence of excessive levels of chemical, radiological, or microbiological contaminants; failures in proper treatment, storage or distribution practices; actual or suspected tampering with the water system; or a waterborne disease incident confirmed by CDPHE or local health agency.

2.0 Background

The Division is authorized by the Colorado Primary Drinking Water Regulations (CPDWR*) to respond to acute health threats posed by public water systems by using the public notice provisions and/or by using the enforcement authority of the CPDWR.

Specific situations where authority is provided to require tier 1 public notice are addressed in section 9.2.2 CPDWR. It requires that a tier 1 public notice be provided for the violations and situations specified in table 9-4 (1) through (8). Once it is established that a tier 1 public notice is required, Section 9.2.5 CPDWR establishes the required content of the public notice including whether an alternative water supply should be used and accordingly, whether or not such requirement must be included in the tier 1 public notice.

Additionally, Section 1.6.7 CPDWR provides authority for the Division in an enforcement order to require actions beyond public notice: when the system has violated any provisions of the CPDWR (1.6.7 (a)); where there is significant deviation from approved plans and specifications (1.6.7(b)); where the system is identified to be the source of a disease outbreak (1.6.7 (c)); where contaminants are present that pose an unreasonable risk to health (1.6.7 (d)); or where a physical condition or practice poses an unreasonable risk to health (1.6.7 (e)).

* All references in this policy to the CPDWR is to the version effective March 30, 2005
 Acute Response Policy: September 24, 2005

While the Division has the authority to use its enforcement powers, formal enforcement may not always be the most effective method to protect consumer's health and to efficiently utilize the Division's limited resources. Accordingly, the acute team's responsibilities include evaluating each acute situation for the need to use formal enforcement actions and to make a recommendation for such action to the enforcement staff.

3.0 Authority

Authority for this policy is granted by the Colorado Primary Drinking Water Regulations in Article 1.6.7(d); Article 9.2.2(b)(3); Article 9.2.5(a)(6); and Table 9-4, Sections 7-8.

4.0 Policy

- 4.1 Upon becoming aware of any situation that may pose an acute risk to health associated with a public water system, the Drinking Water Program will immediately and appropriately respond. For the purposes of this policy, appropriate response includes:
 - 4.1.1 Convening the "Acute Team" constituted as defined below;
 - 4.1.2 Investigating the situation sufficiently to make informed decisions;
 - 4.1.3 Defining the appropriate tier and requirements of public notice (where the regulation provides such flexibility) to be issued;
 - 4.1.4 Specifying and conveying any other actions the public water system must take to eliminate the acute health situation;
 - 4.1.5 Recommending whether the situation warrants formal enforcement.
 - 4.1.6 Specifying any internal actions necessary to properly track and resolve the acute situation in a timely manner;
 - 4.1.7 Immediately rescinding any alternative water requirement when evidence is provided that the acute situation has been resolved;
 - 4.1.8 Ensuring proper internal and external notification and coordination;
 - 4.1.9 Ensuring that the incident is tracked and formally closed out.

- 4.2 The core members of the acute team are:
 - 4.2.1 Enforcement Workgroup Manager,
 - 4.2.2 Compliance Workgroup Manager, who will involve the appropriate Program or Unit managers, rule manager or compliance technician as necessary,
 - 4.2.3 Drinking Water Technical Expert, who will involve the appropriate District Engineer, Drinking Water Engineer or Drinking Water Program Manager as necessary,
 - 4.2.4 Drinking Water Security Program Leader for tampering cases,
 - 4.2.5 Oral Health Unit representatives for fluoride overfeed situations resulting in drinking water concentrations of 16mg/L or more.
 - 4.2.6 Consumer Protection Division non-community inspection liaison (if available) for situations involving noncommunity ground water systems.

- 4.3 The acute team will be convened if any member of the team becomes aware of:

* All references in this policy to the CPDWR is to the version effective March 30, 2005
Acute Response Policy: September 24, 2005

- 4.3.1 Violations of the *Colorado Primary Drinking Water Regulations* requiring consultation with the Department, including:
 - (a) Violation of the MCL for total coliforms when fecal coliform or *E. coli* are present in the water distribution system, or when the water system fails to test for fecal coliforms or *E. coli* when any repeat sample test positive for coliform;
 - (b) Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite, or when the water system fails to take a confirmation sample within 24 hours of the system's receipt of the first sample showing the nitrate or nitrite MCL is exceeded and the system fails to issue immediate public notification in compliance with Article 9 of the Regulations;
 - (c) Violation of the MRDL for chlorine dioxide, when one or more samples taken in the distribution system the day following an exceeded MRDL at the entrance of the distribution system exceed the MRDL, or when the water system does not take the required samples in the distribution system;
 - (d) Violation of the Surface Water Treatment Rule, Enhanced Surface Water Treatment Rule, or Long Term 1 Enhanced Surface Water Treatment Rule treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit.
 - 4.3.2 Presence of any regulated contaminant above the 10-Day Health Advisory level specified by the Environmental Protection Agency (EPA) ([EPA Document 822-R-04-005](#) including the levels augmented by [EPA Region 8](#));
 - 4.3.3 Presence of any unregulated contaminant above the 10-Day Health Advisory level specified by the EPA ([EPA Document 822-R-04-005](#) including the levels augmented by [EPA Region 8](#));
 - 4.3.4 Threat made to or evidence of tampering with any public water system;
 - 4.3.5 When there is a disaster (flood, earthquake, spill of biological material, etc.) that disrupts the water supply or distribution system to the extent that there is a high likelihood that the water contains pathogenic organisms;
 - 4.3.6 Other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure;
 - 4.3.7 Occurrence of a waterborne disease outbreak attributed to a public water system by a public health agency with jurisdiction or other waterborne emergency;
 - 4.3.8 When a Public Water System (PWS) unilaterally issues an acute health advisory such as a bottled or boil water advisory.
- 4.4 Any acute situation response requirements that are conveyed to a public water system via spoken word must be provided to the public water system in writing as soon as possible thereafter.
- 4.5 When evaluating whether to recommend the use of formal enforcement, the acute team should consider the following:

* All references in this policy to the CPDWR is to the version effective March 30, 2005
Acute Response Policy: September 24, 2005

- 4.5.1 The regulatory self-monitoring compliance history of the system for monitoring and reporting requirements as well as MCL and treatment technique requirements,
 - 4.5.2 The field-determined compliance history including sanitary deficiencies, and their resolution,
 - 4.5.3 The complexity and likely time that will be required to resolve the immediate acute situation considering the underlying technical, managerial and financial capacity of the system.
 - 4.5.4 The quality (including timeliness) of the system’s investigation and response to the acute situation,
 - 4.5.5 The availability of and/or involvement of a properly certified operator in responsible charge.
- 4.6 Formal enforcement must be recommended when:
- 4.6.1 Repeat violations of an MCL or treatment technique cause a water system to be in Significant Non-Compliance (SNC) as defined by EPA,
 - 4.6.2 When the team determines that the immediate acute situation is not likely to be resolved within 30 days, or
 - 4.6.3 If the underlying capacity issues that caused or significantly contributed to the acute situation are not likely to be resolved within 6 months.
- 4.7 Any alternative water requirement (e.g. bottled water advisory, boil order) is to be withdrawn immediately upon receiving evidence that substantiates the acute situation has been adequately resolved. The team may delegate this function to one or more team members. Prior to the Division withdrawing the alternative water advisory, a public water system must provide the following:
- 4.7.1 Evidence that the source of the acute contamination situation has been removed or safe alternative has been provided;
 - 4.7.2 Evidence that the storage and distribution system has been properly flushed and if appropriate, disinfected to eliminate any residual contaminated water;
 - 4.7.3 The results of any department required analyses to demonstrate that the risk is no longer present;
 - 4.7.4 Evidence that all Division-required actions have been completed by the public water system.
- 4.8 Additional system actions and demonstrations that may be appropriate under various situations are provided in the following table:

SYSTEM ACTIONS AND DEMONSTRATIONS	SITUATIONS			
	TC or FC MCL Violation	Giardia or Crypto Present	Turbidity Violation	Bottled Water Required
Investigation report completed and submitted to	X	X	X	X

* All references in this policy to the CPDWR is to the version effective March 30, 2005
 Acute Response Policy: September 24, 2005

SYSTEM ACTIONS AND DEMONSTRATIONS	SITUATIONS			
	TC or FC MCL Violation	Giardia or Crypto Present	Turbidity Violation	Bottled Water Required
Division				
Microbiological sampling plan submitted and adequate	X			X
Microbiological sampling results provided indicate absence and include disinfectant residual	X	X	X	X
Evidence submitted that proper flushing procedure followed	X	X	X	X
Effective Cross connection control plan submitted to Division	X	X		X
Public notices issued and conveyed to Division	X	X	X	X
Treatment system evaluation submitted showing units properly operating	X	X	X	X
Disinfectant residual and contact time prior to first customer measured and adequate	X	X	X	X
Five microbiological sample results show absence of TC	X	X	X	X

- 4.9 Once an alternative water requirement is issued, the following entities must be notified using telephone message:
- WQCD DW Program Unit Managers
 - WQCD Section Managers
 - WQCD Division Managers
 - CDPHE Environmental Director
 - CDPHE Public Relations Liaison
 - CDPHE Epidemiologist
 - CHPHE Consumer Protection Division
 - County Health Agency in county where water system located
 - WQCD District Engineer responsible for geographic area where water system located
 - WQCD Drinking Water Engineer responsible for geographic area where water system located

- 4.10 Once an acute advisory or enforcement order is issued, a permanent record keeping/data base entry into SDWIS or interim tracking systems, if applicable, must be made which records that an advisory or order has been issued and/or concluded. It tracks: The type of action taken by the division, and the date the action was taken. The status of the action and the date the violation was resolved.

* All references in this policy to the CPDWR is to the version effective March 30, 2005
 Acute Response Policy: September 24, 2005

- 4.11 The acute team is required to schedule timely follow-up meetings and continue their involvement until each acute situation is fully resolved, whether formal enforcement is recommended or not.
- 4.12 In situations where it is not possible to convene an acute team, Drinking Water Engineers, District Engineers, Drinking Water Managers and Rule Managers have the authority to act independently to implement this policy to protect public health. These personnel will:
 - 4.12.1 Make every effort to convene a team and use prudent judgment to determine when/if it is not possible,
 - 4.12.2 Maintain careful documentation of the reasons for the decision to act independently, and
 - 4.12.3 Adhere to all procedures related to this policy.

* All references in this policy to the CPDWR is to the version effective March 30, 2005
Acute Response Policy: September 24, 2005