

**STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH
DRINKING WATER SECTION**

Interim Measures Standard Operating Procedure

Effective Date: January 3, 2011

Purpose: This document is intended to establish standard procedures to be followed by a Public Water System (PWS) and the Drinking Water Section (DWS) when an incident or condition that poses an imminent, substantial or immediate risk to public health is reported to DWS. The procedures shall be applied to a violation or situation requiring a Tier 1 Notice, security and emergency incidents, GWR 4-log treatment technique violations or significant deficiencies identified via the sanitary survey process that pose an imminent, substantial or immediate risk to public health. This standard operating procedure provides interim measures to be implemented to maintain public health protection until the PWS implements necessary corrective actions and the risk associated with consumption of the water is reduced to the satisfaction of the DWS. These interim measures are to be implemented by a PWS as soon as possible per DWS guidance documents, technical assistance, or consultation. The implementation of these interim measures may be required by DWS in writing or formal enforcement action if necessary or where documentation within DWS guidance documents is not sufficient. Implementation of all DWS required interim measures are the responsibility of the PWS.

Authority: Section 19-13-B102(a)(86) of the Regulations of Connecticut State Agencies (RCSA) establishes the water quality violations of Section 19-13-B102 of the RCSA or other public health situations which require a "Tier 1 Notice" to all consumers served by a PWS. A Tier 1 Notice is required to be completed within 24 hours for all situations that may have serious adverse effects on human health as a result of short term, acute exposure. The following regulatory violations and public health situations are included in the Tier 1 Notice category and therefore, are subject to this standard operating procedure for the purpose of protecting public health while a Tier 1 Notice is in effect:

- Violation of the Maximum Contaminant Level (MCL) for total coliforms when fecal coliforms or E.coli are present;
- Confirmed fecal positive Triggered or Assessment Monitoring source water sample per the Groundwater Rule (GWR);
- Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite;
- Violation of the Maximum Residual Disinfectant Level (MRDL) for chlorine dioxide;
- Violation of the MCL for turbidity for PWSs utilizing surface water or groundwater under the influence of surface water;
- Occurrence of a waterborne disease outbreak;
- Any chemical within Section 19-13-B102 of the RCSA found at a level that is determined to have serious adverse effects on human health as a result of short term exposure.

This standard operating procedure is also applicable to PWSs with significant deficiencies that have been determined by the DWS and referenced in the DWS Significant Deficiencies Guidance Document to pose an immediate risk to public health. In addition, this procedure may also be applied to treatment technique violations under the GWR for the failure to maintain 4-log treatment of viruses where there is evidence, current or historical, that pathogens from a source of supply may have entered the distribution system.

Further, Section 19-13-B102(m) of the RCSA establishes emergency powers for the Commissioner of the Department such that upon receipt of information that the security or the treatment and/or supply operations of a PWS is threatened or impaired that constitutes an imminent or substantial danger to health, the Commissioner may take such actions and issue such orders as necessary in order to protect the health of any persons that may be affected. As such, the activation of an inactive or unapproved source of supply that does not meet the regulatory requirements for source protection, treatment and water quality within the RCSA Section 19-13-B51, Section 19-13-B102 and Section 19-13-B32 would require the implementation of Interim Measures as necessary and outlined in this procedure and in the Guidance on the Activation of an Inactive Source of Supply. In cases where a source is not approved for use by the Department, the Commissioner may

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act under the Connecticut General Statutes (CGS) Section 25-32b where he/she may declare a public drinking water supply emergency authorizing or ordering the sale, supply or taking of any waters or the temporary interconnection of water mains for the sale or transfer of water among water companies.

When an incident or condition that poses an imminent, substantial or immediate risk to public health occurs, this standard operating procedure shall be applied wherever applicable for the protection of public health for as long as the incident or condition exists.

Applicable Regulations: RCSA Section 19-13-B102; Code of Federal Regulations (CFR) 40 Section 141.400; CGS Section 25-32b

Guidelines: When a confirmed violation or situation requiring a Tier 1 Notice is reported to the DWS, a security or emergency incident is reported, a GWR treatment technique violation or a significant deficiency is identified by the DWS via the sanitary survey process that poses an imminent, substantial or immediate risk to public health, the following items will be reviewed, as applicable, by the DWS in response to the violation, situation or deficiency and prior to implementing any interim measures:

- Inform the PWS of the public notification requirements for the violation or situation. Provide any public notification templates that may be available. The notice, dependent on the severity of the violation or situation and the current operational status of the PWS, will advise consumers on any precautionary, interim measures that should be taken to protect public health;
- Review the notification and reporting requirements that must be completed by the PWS related to the water quality violation or situation – i.e. notification of the local Director of Health (DOH)
- Review the water quality history of the PWS as it might relate to the violation, situation or significant deficiency;
- Evaluate the severity of the significant deficiency to determine the potential impact to public health. Attention should be directed to the potential risk of the significant deficiency itself and how other deficiencies or infrastructure violations might culminate in an immediate risk to public health;
- Review of the PWS's compliance status with the most recent sanitary survey. Related outstanding violations, deficiencies or areas of non-conformance should be highlighted as potential sources of the contamination causing the violation or situation. The severity of the outstanding deficiencies must also be considered. During consultation with the PWS, new conditions or recent events relevant to the violation or situation should be reviewed. The DWS may conduct a sanitary survey of the PWS; if a survey is to be completed it should be given the utmost priority;
- The status of the PWS's cross connection control program should be reviewed with the PWS to identify any outstanding violations that may relate to the violation or situation;
- The staffing level at the PWS of all certified operator personnel and their current availability must be reviewed relative to the minimum certified operator requirements for the PWS;
- The DWS shall review the PWS's Water Supply Contingency Plan within their Water Supply Plan and other emergency response plans on file. A PWS should be asked to provide a status update on their Water Supply Contingency Plan. The DWS and PWS should review the situation and determine whether the Water Supply Contingency Plan, and other emergency response plans are being implemented appropriately and as the incident necessitates;
- Distribute a DWS Security or Emergency Incident Report summarizing the situation, outlining the impact to public health and the response actions to be taken. The Incident Report must be distributed to all stakeholders as indicated on the incident report form and other DPH specialty programs such as, Health Care Systems and Facilities for PWSs serving nursing homes, Day Care Licensing for day care centers, Food Protection Program for food service establishments (FSEs), etc.;

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- A site visit should be completed by DWS to review the current operational status of the PWS and provide direct technical assistance. Water quality sampling may also be completed by DWS in addition to any of the PWS monitoring and sampling activities.

Considering all of the aforementioned items, the need for any number of the following interim measures will be assessed and determined by DWS to be implemented by the PWS as soon as practical unless otherwise indicated by DWS:

- Shock chlorination of the entire water system, where technically feasible, per the [DWS Disinfection of a Well Water Supply](#) guidance document. Shock chlorination should only proceed after all monitoring requirements, especially with the GWR, are satisfied. Larger PWSs and PWSs with existing disinfection treatment systems may not be required to implement this interim measure, however, such PWSs may be asked to increase chlorine residuals in the distribution system;
- Isolation of all sources of supply contributing to the water quality violation or situation. This interim measure shall only be implemented if the remaining active or available PWS sources are sufficient to meet system demands;
- Utilization of alternate sources of water supply. Bulk or bottled water may be distributed for consumption purposes or to supplement sources of supply in operation. The PWS would be expected to ensure that all necessary provisions be made to make alternate water available to all consumers. Bulk water operations should conform to the [DWS Bulk Water Hauling Guidelines](#);
- Boil water advisory and the recommendation for consumers to utilize alternative sources of water for domestic purposes (including drinking, cooking, bathing, dishwashing and oral hygiene) based on the Tier 1 public notice requirements;
- Implement the provisions of the [Presence of Total Coliform/Fecal Coliform/E.coli Bacteria in the Water Supply at Food Service Establishments Guidance Document](#). The guidance outlines how provisions are to be implemented based on the water supply scenario (i.e. a small Transient Non-Community PWS or a large Community PWS which serves multiple FSEs). The local health department will take the lead in the enforcement of these provisions at all licensed FSEs within the effected service area.
- More frequent or intensive public notification procedures;
- Installation or implementation of temporary treatment meeting all treatment requirements identified by DWS – i.e. 4-log inactivation/removal of viruses, 3-log inactivation/removal of giardia, 2-log removal of cryptosporidium, increased disinfectant residual requirements, lower Combined Filter Effluent turbidity requirements, etc. **PWSs not required to shock chlorinate their entire water system will be required to implement this interim measure;**
- Increase monitoring and/or reporting requirements for parameters of concern;
- Any other interim measures determined by DWS, in consultation with the PWS, to protect public health.

Once identified and required by DWS, interim measures shall remain in effect until water quality to all consumers is verified to be of sufficient quality as to not pose an immediate risk to public health and all necessary corrective actions have been completed. Interim measures must be in place until lifted by DWS in writing.

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