



Monitoring Violations and Public Notices

This year the Kansas Department of Health and Environment (KDHE) staff required a Kansas water supply to issue a public notice. This notice was for a monitoring violation for failure to monitor at a specified time. This notice was not for a maximum contaminant violation, or a treatment technique violation, or any violation that posed a risk to the customers of the system.

The KDHE required language in the public notice included specific adverse health effects and mention of cancer. Thus this notice possibly caused unnecessary customer questions and worry about the quality of the drinking water and the operation of the water supply system.

Publication Notification Rule Summary

The Public Notification Rule (PN) is part of the Safe Drinking Water Act. The rule ensures that consumers will know if there is a problem with their drinking water. These notices alert consumers if there is risk to public health. They also notify customers:

- ◆ if the water does not meet drinking water standards;
- ◆ if the water system fails to test its water;
- ◆ if the system has been granted a variance (use of less costly technology); or
- ◆ if the system has been granted an exemption (more time to comply with a new regulation).

In 2000, the Environmental Protection Agency (EPA) revised the existing Public Notification Rule. The revisions matched the form, manner, and timing of the notices to the relative risk to human health. The revised rule makes notification easier and more effective for both water systems and their customers.¹

¹“Public Notification Rule.” EPA, Environmental Protection Agency, 2 Nov. 2016, <https://www.epa.gov/dwreginfo/public-notification-rule>. Accessed September 21, 2019.

The Public Notification Rule

The intent of public notification as stated on the EPA website is good, and is shown in the nearby sidebar. Public notification is to inform consumers “if there is a problem with their drinking water” or a “risk to public health”.

When there are potential adverse health effects, standard language is required about the potential effects. When there is a monitoring violation, separate standard language is required that does not mention potential adverse health effects if drinking water standards are met.

A very good review of the public notice regulations was written by KRWA staff member Monica Wurtz and was published in the March 2018 *Kansas Lifeline* magazine and can be found on the KRWA website or at this URL: <https://krwa.net/portals/krwa/lifeline/1803/PublicNotification.pdf>

Tier 1, Tier 2, and Tier 3 violations

As stated in the regulations, “Public notice requirements are divided into three tiers to take into account the seriousness of the violation or situation and of any potential adverse health effects that may be involved.” The definitions of the three tiers are shown in the sidebar on the next page.

Tier 1 and Tier 2 public notices include violations and situations with significant potential or with potential to have adverse effects on human health from drinking the water.

Tier 3 is the least serious and includes monitoring violations, failure to comply with testing procedures, and exceedance of the fluoride secondary standard.

Failure to monitor is a Tier 3 violation; and clearly failure to monitor or late monitoring does not have a potential to have adverse effects on human health.

Tier Definitions

Tier 1 public notice – required for NPDWR violations and situations with significant potential to have serious adverse effects on human health as a result of short-term exposure.

Tier 2 public notice – required for all other NPDWR violations and situation with potential to have serious adverse effects on human health.

Tier 3 public notice – required for all other NPDWR violations and situation not included in Tier 1 and Tier 2. NPDWR is National Primary Drinking Water Regulations promulgated by EPA.

Content and standard language

The regulations contain many requirements on the content of a public notice. Concerning any potential adverse health effects, the regulations state that a public notice must include any “potential adverse health effect **from the violation**”.

Standard health effects language is required for Maximum Contaminant Level (MCL), Maximum Disinfectant Residual Level (MDRL), and treatment technique violations. The regulations contain specific language including adverse health effects for these violations depending on the particular violation and its potential health effect.

Separately, standard language required for monitoring violations is shown in the sidebar below and does NOT include potential adverse health effects language. Thus, it seems reasonable that a public notice standard language for a monitoring violation would not include adverse health effects language as there are no “potential adverse health effects **from that violation**”.

Standard Language for Monitoring Violations

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 (the compliance period), we “did not monitor or test” or “did not complete all monitoring or testing” for (contaminant(s)), and therefore cannot be sure of the quality of your drinking water during that time.

Inorganic Contaminants (IOC) monitoring

Federal regulations require that public water supplies (PWSs) monitor for inorganic contaminants, commonly referred to as IOC. Generally, PWSs with a groundwater source monitor every three years and PWSs with a surface water source monitor annually.

These IOC contaminants do not occur very often and, when they do occur, the contaminant levels are usually very low and are significantly below the MCLs.

When one or more of these contaminants are found above the MCL, the monitoring is increased. Nitrate and arsenic have been found in some PWSs groundwater

sources in Kansas. Also, several IOC are not even monitored because KDHE has determined that they do not occur in Kansas water to any significant level; for instance, cyanide and nitrite.

See the table that is printed with this article that shows the monitoring results for the Inorganic Contaminants when monitoring was completed three months late.

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This table shows the monitoring results for Inorganic Contaminants (IOCs), their MCLs and what levels were detected in the water system in Kansas that monitored three months late.

Contaminant	MCL	11/15/2018	3/4/2019
Antimony	0.006	ND	ND
Arsenic	0.010	0.004	0.004
Barium	2.000	0.280	0.220
Beryllium	0.004	ND	ND
Cadmium	0.005	ND	ND
Chromium (total)	0.100	0.001	0.002
Cyanide	0.200	not tested	not tested
Fluoride	4.000	0.210	0.210
Mercury	0.002	ND	ND
Nitrate	10.000	6.400	7.200
Nitrite	1.000	not tested	not tested
Total Nitrate & Nitrite	10.000	not tested	not tested
Selenium	0.050	0.004	0.004
Thallium	0.002	ND	ND

MCL = maximum contaminant level set by US EPA

ND = not detected in analysis

not tested = not tested by KDHE laboratory

Monitoring violation and required standard language

The Kansas PWS monitored in 2015 for IOC. Thus, it was required to monitor again in 2018. The KDHE laboratory sent the PWS the bottles for the IOC monitoring in November 2018, near the end of the required monitoring period. The PWS inadvertently set the bottles aside and forgot to monitor by the end of 2018.

KDHE notified the PWS in February that the IOC monitoring did not occur and the PWS immediately completed the monitoring and sent the bottles to KDHE in early March. The violation was for not monitoring for IOC in 2018.

This was a Tier 3 monitoring violation and was a monitoring violation that does not have any potential adverse health effects on the customers. Yet, KDHE staff required the PWS to put standard language in the public notice that addressed adverse health effects. The nearby sidebar shows the KDHE “required” standard language and what the PWS placed in the public notice regarding the health effects.

Law, Common Sense, and KDHE Language

The regulations state that public notice must include the element of “any potential adverse health effects **from the violation...**”. In this case, there was a monitoring violation for IOC and clearly no customer had any potential adverse health effect because of the three-month delay in monitoring which resulted in the violation. Yet KDHE staff required language on adverse health effects.

KDHE Required Language for Monitoring Violation

This is not an immediate risk. If it had been, you would have been notified immediately. However, some people who drink water containing inorganic contaminants in excess of the MCL over many years could experience kidney damage, skin damage, circulatory problems, and may have an increased risk of getting cancer.

PWSs Public Notice Language

This is not an immediate risk. If it had been, you would have been notified immediately. However, some people who drink water containing inorganic contaminants in excess of the MCL over many years could experience kidney damage, skin damage, circulatory problems, and may have an increased risk of getting cancer. ***Again, there have been no inorganic contaminants above required MCL in any city water samples. The city drinking water is safe to drink according to all KDHE and EPA drinking water standards.***

The text added by the PWS is in bold italics.



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This has occurred before. In the March 2018 *Kansas Lifeline* an article <https://krwa.net/portals/krwa/lifeline/1803/TellTheStory.pdf> discusses a 21-day late yearly monitoring violation for disinfection byproducts (DBPs) that required health effects language in the public notice. And in that case the DBPs were extremely low, and well below the levels in any large city in Kansas.

KDHE staff required that adverse health effects language be placed in the public notice; but yet none of the large cities in Kansas with much higher DBPs were required to issue public notices with adverse effects language (and the cities should not have been required to do so). This may seem arbitrary and capricious to some.

Changes needed

There needs to be change in the decisions on when to issue adverse health effects language in public notices. Placing adverse health effect language in public notices for monitoring violations that do not have any potential for adverse health effects give the customers the wrong information on water quality and the safety of the drinking water.

Such language may lessen the customers' confidence in the drinking water and encourage the "necessary" use of bottle water for health purposes. It also might reduce the customers' confidence in the people responsible for safe drinking water; and that includes operational staff, elected officials, and government regulatory staff.

In both the instances discussed in this article, the water quality monitoring would

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have resulted in the same, high quality analyses whether or not the monitoring was conducted during the required time or later (monitoring violation). Thus, the quality of the drinking water in those instances is not questionable to those persons knowledgeable in water supply matters or those using common sense. There were and are no potential adverse health effects from these monitoring violations.

Should any public water system be required to issue a public notice for a monitoring violation and if KDHE staff require adverse health effects language, the system should add additional information to better explain what the real issue is. That

information should help the customers understand that the drinking water is high quality, meets water quality standards, and is safe to drink.

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