

Frequently Asked Questions Stage 2 Disinfection Byproducts Rules (Stage 2)

Compliance Monitoring Plan (CMP)

- 1. If a distribution system is modified after completing an Initial Distribution System Evaluation (IDSE), is a new IDSE required?**

No new IDSE report is required, but the water system owner or operator should work with their drinking water representative to change their Stage 2 Compliance Monitoring Plan (CMP) to address any monitoring location changes.

- 2. How do I determine the maximum residence site in the distribution system?**

The maximum residence site is typically the point in the distribution system furthest from the point of disinfection ("oldest water"). In some cases the maximum residence site will be located not at the end of the distribution system, but in a reservoir located in the middle of the distribution system. A reasonable approach would be to measure chlorine residuals at various points in the distribution system and pick the point at which the chlorine residual is the lowest.

- 3. My sample results indicate that the highest HAA5 readings occur at one of the average sample points (not at what one would expect to be the maximum residence site) and the highest TTHM sample results occur at another sample point. Wouldn't I get the highest TTHM and HAA5 readings at the same site?**

Not necessarily. Disinfection Byproducts concentration curves indicate that in many cases, HAA5 formation reaches its highest concentration earlier in the distribution system (closer to the point of disinfection) than the highest TTHM formation concentrations.

- 4. Do I have to take the TTHM and HAA5 samples at the same sites and at the same time?**

It depends. Ground water systems serving 500-9,999 on annual monitoring must take dual sample sets at each location. A dual sample set is a set of two samples collected at the same time and same location, with one sample analyzed for TTHM and the other sample analyzed for HAA5.

All other systems on annual monitoring and surface water/GWUDI systems serving 500-3,300 are required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentrations, respectively.

Surface water/GWUDI systems serving 500-3,300 may collect one dual sample set per monitoring period if the highest TTHM and HAA5 concentrations occur at the same location.

For systems on annual monitoring and serving fewer than 500 people, only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location, and month.

Monitoring

1. Do I need to do anything before I begin Stage 2 compliance monitoring in year 2013?

Yes. Water systems that received a Very Small System (VSS) waiver, 40/30 certification, and non-transient non-community water systems that disinfect are required to complete a compliance monitoring plan (CMP) for Stage 2.

The CMP must identify a water system's Stage 2 compliance monitoring locations, when samples will be taken, and the compliance calculations. A CMP must be completed before you begin Stage 2 compliance monitoring. Monitoring under Stage 1 requirements must continue until Stage 2 compliance monitoring begins.

2. If my system is on Stage 1 reduced monitoring, can my system continue reduced monitoring under Stage 2?

Yes, if you meet all of the following conditions:

- The system received a VSS waiver or a 40/30 certification.
- Locational Running Annual Averages (LRAAs) at all monitoring sites are ≤ 0.040 mg/L for TTHM and ≤ 0.030 mg/L for HAA5.
- Source water Total Organic Carbon (TOC) levels are ≤ 4.0 mg/L at each treatment plant (surface water only).
- Monitoring will continue at the same locations for Stage 2 as the Stage 1. If monitoring sample site locations had to be added, subtracted or changed, the system does not meet this portion of the criteria and cannot qualify to remain on reduced monitoring.

3. If my system is on Stage 1 increased monitoring (e.g., quarterly), does my system have to stay on increased monitoring under Stage 2?

Yes, systems on an increased Stage 1 monitoring schedule must begin Stage 2 on an increased schedule until the requirements are met to return to a routine schedule.

4. How should monitoring be conducted during the interval between the end of IDSE monitoring and the beginning of Stage 2 compliance monitoring?

Owners and operators of systems should continue Stage 1 monitoring until Stage 2 compliance monitoring begins. This interval is built into Stage 2 to accommodate systems that may need to make significant changes to their distribution system to meet the requirements of Stage 2.

5. Can I start Stage 2 compliance monitoring early?

No. Compliance monitoring cannot begin early.

6. Does increased monitoring affect the entire system or only the monitoring site that exceeded the trigger value?

If a monitoring site triggers increased monitoring, every Stage 2 sample site must switch to increased monitoring.

7. Not all months have thirty (30) days and not all quarters have 90 days. How will this affect compliance tracking?

The term “every 90 days” was included to eliminate the possibility that samples would be collected at the end of one quarter and then immediately again at the beginning of next quarter. Samples are not temporally distributed as intended when collected in this manner. Using the term “every 90 days” should correct this. However, it is expected that states will use their discretion to account for various circumstances. The intent is to have samples taken approximately every 90 days.

Surface Water System Sampling

1. I have a conventional surface water treatment plant; however, the plant is not rated at 2.5 log Giardia removal. Do I have to sample for TOC and Alkalinity?

No, only conventional treatment plants that are rated at least 2.5 log Giardia removal must sample monthly for raw water TOC, raw water Alkalinity, and post-filtration TOC (may be reduced to quarterly). If you are seeking a reduction for TTHM/HAA5 monitoring you are required to sample for raw water TOC only (no finished water TOC or alkalinity) once per month per treatment plant (may be reduced to quarterly). In general, water systems are eligible for reduced monitoring frequency when both TTHM and HAA5 levels are $\leq 50\%$ of the Maximum Contaminant Level (MCL) and source water TOC running annual average is ≤ 4.0 mg/l.

2. My water system does not have a conventional treatment plant; however, I am seeking a reduction in Disinfection Byproducts monitoring requirements. Am I required to sample for TOC?

Yes, you are required to sample for raw water TOC only (no finished water TOC or alkalinity) once per month per treatment plant (may be reduced to quarterly). In general, water systems are eligible for reduced monitoring frequency when both TTHM and HAA5 levels are $\leq 50\%$ of the MCL and source water TOC running annual average is ≤ 4.0 mg/l.

3. Do I have to take the raw water TOC samples at the same time as the filtered water TOC samples?

Yes. Raw water TOC and raw water alkalinity and the filtered water TOC samples should be considered paired samples and should be taken at the same time. The raw water TOC and the raw water alkalinity

should be taken at the same time and at the same site (at the raw water inlet to the first treatment process). The finished water TOC should be taken just after the filters at the combined filter effluent.

4. How would a system that is served by both surface water and ground water sources comply with Stage 2?

A system must follow the monitoring schedule for surface water systems if any portion of its water comes from a surface water source, including purchased water.

Consumer Confidence Reports

1. Is there language in the Consumer Confidence Report (CCR) Rule that explains that Initial Distribution System Evaluation (IDSE) monitoring is not for compliance purposes?

There is no specific language in the CCR Rule that addresses this. However, an explanation of IDSE sampling may be included in the CCRs.

2. Should the results from the IDSE standard monitoring be included in the CCR?

Results from IDSE standard monitoring must be included in the range of levels a public water system reports in its CCR.

3. Are consecutive systems owners responsible for providing public notifications of violations or CCRs?

Yes. The wholesale system owner must provide violation information to its consecutive systems so that they can appropriately notify their users.

Consecutive Systems

1. What are Stage 2 monitoring requirements for consecutive systems?

The TTHM and HAA5 sampling requirements for consecutive systems are determined in the same manner as for all other systems. The number of sites and monitoring frequency is based on the system's population served and source type (based on wholesale system's source water type). Thus, large consecutive systems will take more samples than a smaller wholesale system.

2. What are the Chlorine and Chloramines requirements for consecutive systems?

Consecutive systems that do not add a disinfectant but deliver water that was treated with a disinfectant other than UV must now comply with the Stage 1 Disinfection Byproducts Rules for analytical and monitoring requirements for chlorine and chloramines and associated compliance and reporting requirements. These requirements include:

- Analytical methods [§141.131(c)],
- Monitoring of residual at the same sites as total coliform sampling [§141.132(c)(1)],
- Compliance with the Maximum Residual Disinfectant Level (MRDL) [§141.133(c)(1)], and
- Reporting of results [§141.134(c)].

Systems with new or intermittent disinfection

1. What are the requirements for new water systems that add a disinfectant (other than ultraviolet light) and existing systems that begin adding a disinfectant?

Existing and new water systems that begin adding disinfectant are required to contact their drinking water representative with the Department of Environmental Quality or their local Public Health District in order to determine appropriate steps.

2. How would a system that intermittently disinfects comply with the Stage 2?

The system owner or operator would monitor only during the quarter in which disinfection was provided. If the system is on yearly monitoring, monitoring would be required during the month of highest disinfection byproducts formation. The state will work with each system's owner to further customize a monitoring schedule if needed.

*For answers to additional implementation questions, visit EPA's **Stage 2 DBPR Frequent Questions** page*

<http://safewater.supportportal.com/link/portal/23002/23015/ArticleFolder/884/LT2-Stage-2-Rule>