

## Disinfection Byproducts Rule

**Compliance with the Disinfection Byproduct (DBP) Rule**, Stage 1 converting to Stage 2, is required by **Community (C) and Non-Transient Non-Community (NTNC) Public Water Systems that chlorinate**. This rule complies with the Administrative Rules of Montana ([ARM 17.38.217](#)), which adopts the Code of Federal Regulations (40 CFR 141.130 for Stage\_1 Subpart L) and ([40 CFR 141.620 for Stage\\_2 Subpart V](#)). Stage 1 was implemented in 2004 and Stage 2 was adopted by MDEQ from EPA on January 1, 2010 and will be in full effect by October 1, 2013 with sampling quarterly, yearly or every three years.

All (C) and (NTNC) systems that chlorinate and have Disinfection Byproduct sample schedules have been reviewed to see if additional testing was necessary to find the best test sites before the implementation of Stage-2. High sample reading location and month will decide schedule.

**Stage\_2 compliance** will commence on October 1, 2012 for schedule 2 systems, population (50,000 to 100,000) and on October 1, 2013 for schedule 3, population (10,000 to 50,000) and schedule 4, population (less than 10,000). Additional testing to identify new sample sites was required by 16% of the Montana systems that presently test for DBPs. Their testing was either specific to each system or set up to follow a Standard Monitoring Plan for the IDSE (Initial Distribution System Evaluation) schedule, as created by EPA.

Approximately 60% of the Montana systems were given a VSS (Very Small System) waiver since their DBP readings are very low and their Stage-1 sites will be identified as their Stage 2 sample sites. About 24% of the systems, currently on reduced DBP monitoring schedules, received a 40/30 waiver from the IDSE testing since their TTHM (Trihalomethanes) and HAA5 (Haloacetic Acid) running annual averages have been less than half the maximum contamination levels of 80 and 60 micrograms/liter respectively for TTHMs and HAA5s.

In most cases their present site(s) will remain the same for Stage-2 monitoring.

IDSE data and previous DBP data will allow systems to identify the site locations with highest TTHMs and HAA5s. All systems will continue with Stage-1 schedules and test site locations until Stage-2 compliance takes full effect in 2012 and 2013 as mentioned above.

Stage-2 addresses other possible DBP formations, such as Bromates from Ozone disinfection.

## Forms and Links

[Inventory Update Report](#)

[Stage 1 Quick Reference Guide](#)

EPA Groundwater & Drinking Water.

(Stage one sampling schedules and sites will remain in effect until October 1, 2012 for Schedule 2 systems and October 1, 2013 for Schedules 3 and 4 systems).

[Quarterly DBP Reporting Form](#)

[Stage 2 Quick Reference Guides for Schedule 2, 3 and 4 systems](#)

EPA Groundwater & Drinking Water

Stage 2, 3, and 4 DBPR:

[A Quick Reference Guide for Schedule 2 Systems](#)

[A Quick Reference Guide for Schedule 3 Systems](#)

[A Quick Reference Guide for Schedule 4 Systems](#)

MRDL Explanation: (Maximum Residual Disinfection Level) readings taken once per month in the distribution system at the same time, location and number as the required monthly TCR (Bacteria) sample(s). The 3-month readings are averaged and the form is sent at the end of each quarter. (March, June, September & December).

[MRDL Form](#)

[Compliance Guidance Manual for STAGE 2 DBP Rule and Surface Water LT2 Rule](#)

\*EPA's Public Notification Rule Quick Reference

\*[Public Notice](#)

\*Sample Collection

Microbials and Disinfection Byproducts (MDBP)

[MDBP Rules: Implementation Activities](#)

## Public Notice

Public Water Supplies must comply with the Public Notice Rule and notify their customers whenever they violate federal or state regulations; this includes exceeding contaminant levels and failure to monitor and report test results.

EPA has developed the PNiWriter to help operators generate and distribute a public notice that meets all federal requirements. The PNiWriter is a great tool and we encourage operators to use it whenever public notice is required. (PNiWriter Flyer).

### Frequently Asked Questions?

Q1: When taking the MRDL chlorine sample is it an average of all the daily residuals?

A1: NO, it has nothing to do with the minimum daily residuals at point of entry or distribution system. It is a snapshot, once per month, at the same time and location as the TCR sample.

Q2: Dual DBP samples are confusing. How many do I take?

A2: The dual sample means that both TTHM and HAA5 readings are taken from the same sample of water. The lab sends several bottles to be filled along with a trip-blank to accompany the shipment.

Q3: If our system is fed by a ground water source, how can we get reduced DBP monitoring?

A3: Ground water systems with a population less than 10,000 can be reduced from yearly to once per every three years, if their running annual average (RAA) for TTHMs for 2 years is less than 40 ug/liter and their RAA for HAA5s for 2 years is less than 30 ug/liter or less than 20 and 15 respectively for one year. The number of samples taken depends on number of treatment plants.

Surface water (Subpart H) systems with a population less than 500 cannot be reduced from once per year. However, SW systems with populations 500 to 9,999 can be reduced from quarterly to yearly if their RAA is less than 40 & 30 ug/liter for TTHMs and HAA5s respectively.

Q: If my system is on reduced monitoring of DBPs under Stage\_1, is it automatically on reduced monitoring when Stage-2 compliance takes affect in 2013.

A: No, since compliance is based on RAA of all sites under Stage\_1 DBP Rule and Stage\_2 compliance is be based on Locational Running Annual Average (LRAA)

of each site, new data will have to be reviewed for at least the first year after Stage\_2 compliance takes affect.

Stage2 Compliance Monitoring Schedules for Ground Water Systems:

<h2 style="text-align: center;">Stage-2 Compliance Monitoring for Ground Water Systems</h2>					
Population	Frequency during peak month	Total Sites	Existing Site: Stage 1	High TTHM Site	High HAA5 Site
<500	Annual	2 or 1		1 Single + 1 Dual or	1 Single → 1 Dual
500-9,999	Annual	2		1 dual	1 dual
10,000-99,999	Quarterly	4	1 dual	2 dual	1 dual
100,000-499,999	Quarterly	6	1 dual	3 dual	2 dual

Stage2 Compliance Monitoring Schedules for Surface Water Systems:

<p style="text-align: center;"><b>“Stage-2” Compliance</b></p> <p style="text-align: center;"><b>Monitoring for Surface Water</b></p>					
Population	Frequency during Peak Month	Total Sites	Existing Site: Stage 1	High TTHM Site	High HAA5 Site
<500	Annual	2 or 1		1 Single + 1 Dual or	1 Single 1 Dual
500-3300	Quarterly	2 or 1		1 Single + 1 Dual or	1 Single 1 Dual
3,301-9,999	Quarterly	2		1 dual	1 dual
10,000-49,999	Quarterly	4	1 dual	2 dual	1 dual
50,000-250,000	Quarterly	8	2 dual	3 dual	3 dual

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