

# Stage 2 Disinfectants and Disinfection Byproducts Rule: A Quick Reference Guide For Schedule 4 Systems

Overview of the Rule	
Title	Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) 71 FR 388, January 4, 2006, Vol. 71, No. 2
Purpose	To increase public health protection by reducing the potential risk of adverse health effects associated with disinfection byproducts (DBPs) throughout the distribution system. Builds on the Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1 DBPR) by focusing on monitoring for and reducing concentrations of two classes of DBPs - TTHM and HAA5 - in drinking water.
General Description	Stage 2 DBPR requires some systems to complete an Initial Distribution System Evaluation (IDSE) to characterize DBP levels in their distribution systems and identify locations to monitor DBPs for Stage 2 DBPR compliance. The Stage 2 DBPR bases TTHM and HAA5 compliance on a locational running annual average (LRAA) calculated at each monitoring location.
Utilities Covered *	<ul style="list-style-type: none"> <li>▶ All community water systems (CWSs) and nontransient noncommunity water systems (NTNCWSs) that either add a primary or residual disinfectant other than ultraviolet light, or deliver water that has been treated with a primary or residual disinfectant other than ultraviolet light.</li> <li>▶ Schedule 4 includes CWSs and NTNCWSs serving fewer than 10,000 people and not belonging to a combined distribution system in which any system serves less than 10,000 people.</li> </ul>

\* NTNCWSs serving < 10,000 people do not need to complete any of the IDSE options, but must conduct Stage 2 DBPR compliance monitoring.

Stage 2 DBPR Regulated Contaminants		
Regulated Contaminants	MCLG (mg/L)	MCL (mg/L)
<b>Total Trihalomethanes (TTHM)</b>		<b>0.080 LRAA</b>
Chloroform	0.07	
Bromodichloromethane	zero	
Dibromochloromethane	0.06	
Bromoform	zero	
<b>Five Haloacetic Acids (HAA5)</b>		<b>0.060 LRAA</b>
Monochloroacetic acid	0.07	
Dichloroacetic acid	zero	
Trichloroacetic acid	0.02	
Bromoacetic acid	-	
Dibromoacetic acid	-	

IDSE Requirements**	
IDSE Option	Description
Standard Monitoring	Standard monitoring is one year of increased monitoring for TTHM and HAA5 in addition to the data being collected under Stage 1 DBPR. These data will be used with Stage 1 DBPR data to select Stage 2 DBPR TTHM and HAA5 compliance monitoring locations. Any system may conduct standard monitoring to meet the IDSE requirements of the Stage 2 DBPR.
System Specific Study (SSS)	Systems that have extensive TTHM and HAA5 data (including Stage 1 DBPR compliance data) or technical expertise to prepare a hydraulic model may choose to conduct a system specific study to select Stage 2 DBPR compliance monitoring locations.
40/30 Certification <sup>†</sup>	The term "40/30" refers to a system that during a specific time period has all individual Stage 1 DBPR compliance samples less than or equal to 0.040 mg/L for TTHM and 0.030 mg/L for HAA5 and has no monitoring violations during the same time period. These systems have no IDSE monitoring requirements, but will still need to conduct Stage 2 DBPR compliance monitoring.
Very Small System (VSS) Waiver <sup>†</sup>	Systems that serve fewer than 500 people and have eligible TTHM and HAA5 data can qualify for a VSS Waiver and would not be required to conduct IDSE monitoring. These systems have no IDSE monitoring requirements, but will still need to conduct Stage 2 DBPR compliance monitoring.
EPA has developed several tools to assist systems with complying with the Stage 2 DBPR IDSE requirements. These materials can be downloaded at <a href="http://www.epa.gov/safewater/disinfection/stage2">www.epa.gov/safewater/disinfection/stage2</a> .	

\*\* NTNCWSs serving < 10,000 people do not need to complete any of the IDSE options.

<sup>†</sup> Systems that are notified by EPA or the state their VSS waiver or 40/30 certification has not been approved will need to complete Standard Monitoring or System Specific Study.

For additional information on the Stage 2 DBPR

Call the Safe Drinking Water Hotline at 1-800-426-4791; visit the EPA web site at [www.epa.gov/safewater/disinfection/stage2](http://www.epa.gov/safewater/disinfection/stage2); or contact your state drinking water representative.

## Compliance with Stage 2 DBPR MCLs (Routine Monitoring)

Source Water Type	Population Size Category	Monitoring Frequency <sup>1</sup>	Total Distribution System Monitoring Locations Per Monitoring Period <sup>2</sup>
Subpart H	<500	per year	2
	500-3,300	per quarter	2
	3,301-9,999	per quarter	2
	10,000-49,999		4
	50,000-249,999		8
	250,000-999,999		12
	1,000,000-4,999,999		16
	≥5,000,000		20
Ground Water	<500	per year	2
	500-9,999	per year	2
	10,000-99,999	per quarter	4
	100,000-499,999		6
	≥500,000		8

### Operational Evaluation

Systems must begin complying with the operational evaluation provision of the Stage 2 DBPR.

<sup>1</sup> All systems must monitor during month of highest DBP concentrations.

<sup>2</sup> Systems on quarterly monitoring must take dual sample sets every 90 days at each monitoring location, except for subpart H systems serving 500-3,300. Systems on annual monitoring and subpart H 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. If monitoring annually, 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.

## Critical Deadlines and Requirements

### For Drinking Water Systems (Schedule 4)

January 4, 2006	Systems serving fewer than 500 people that have TTHM and HAA5 compliance data qualify for a VSS Waiver from conducting an IDSE, unless informed otherwise by U.S. EPA or state primacy agency.
April 1, 2008	Systems that do not receive a VSS Waiver must submit to the U.S. EPA or state primacy agency either a: <ul style="list-style-type: none"> <li>▶ Standard monitoring plan,</li> <li>▶ System specific study plan, or</li> <li>▶ 40/30 certification.</li> </ul>
April 1, 2009	Systems conducting standard monitoring or SSS begin collecting samples in accordance with their approved plan.
April 1, 2009	Consecutive systems must begin monitoring for chlorine or chloramines as specified under the Stage 1 DBPR.
March 31, 2010	No later than this date, systems conducting standard monitoring or a SSS complete their monitoring or study.
July 1, 2010	No later than this date, systems conducting standard monitoring or a SSS must submit their IDSE report.
October 1, 2013	No later than this date, systems must: <ul style="list-style-type: none"> <li>▶ Complete their Stage 2 DBPR Compliance Monitoring Plan (Systems serving more than 3,300 people must submit their Monitoring Plan to the state.)*</li> <li>▶ Begin complying with monitoring requirements of the Stage 2 DBPR.†</li> </ul>
July 2014††	Systems must begin complying with rule requirements to determine compliance with the operational evaluation levels for TTHMs and HAA5s.

### For States

July - December 2006	States are encouraged to inform systems serving fewer than 500 people and do not qualify for a VSS Waiver from the IDSE requirements should begin complying with standard monitoring requirements.
March 31, 2009	States must approve the system's standard monitoring plan, 40/30 certification, or system specific study plan or notify the system that the state has not completed its review.
October 4, 2007	States are encouraged to submit final primacy applications or extension requests to EPA.
January 4, 2008	Final primacy applications must be submitted to EPA, unless granted an extension.
September 30, 2010	States must approve the system's IDSE report or notify the system that the state has not completed its review of the IDSE report.
January 4, 2010	Final primacy revision applications from states with approved 2-year extensions agreements must be submitted to EPA.

\* A compliance monitoring plan is not required if the IDSE report includes all information required in a Stage 2 DBPR compliance monitoring plan.

† States may allow up to an additional 24 months for compliance with MCLs for systems requiring capital improvements. System not conducting *Cryptosporidium* monitoring under 141.701(a)(4) must begin Stage 2 DBPR Monitoring by this date. Systems conducting *Cryptosporidium* monitoring under 141.701(a)(4) or 141.701(a)(6) must begin Stage 2 DBPR Monitoring by October 1, 2014.

†† System not conducting *Cryptosporidium* monitoring under 141.701(a)(4) must comply by this date. Systems conducting *Cryptosporidium* monitoring under 141.701(a)(4) or 141.701(a)(6) must begin complying by July 2015.