

Stage 2

DBPR

Handy Resource Guide

Stage 2

DBPR

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- Compliance Dates
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For more information on the EPA's Stage 2 DPBR
regulations and requirements visit:

<http://www.epa.gov/safewater/disinfection/stage2/compliance.html>

or

Washington State Department of Health's
Office of Drinking Water

visit www.doh.wa.gov click on Programs & Services,
then under Environmental Health click on Drinking Water

IS YOUR WATER SYSTEM TESTING SCHEDULE STAGE 2 DBP COMPLIANT?

Use this EASY worksheet to find out!

_____ (#) of people our Water System serves.

We are on the EPA's Schedule # _____ for Stage 2 DBPR Compliance Due Dates. (see table 1)

Our Standard Monitoring Plan or IDSE is due by: _____ (see table 1)

Our Water System must test _____ (#) Locations total for Standard Monitoring. (table 2)

We must test _____ times a year per Location for Standard Monitoring per Location. (table 2)

We are scheduled to test starting: _____ (refer to your IDSE plan)

____ (# Locations) x ____ (# frequency/year) = _____ **TOTAL TESTS NEEDED (A)**
for Standard Monitoring Compliance

Our Completed IDSE report with Standard Monitoring Results is due by: _____ . (table 1)

Our Stage 2 Compliance Monitoring must begin by: _____ . (table 1)

Our Water System must test _____ (#) Locations total for Stage 2 Compliance. (table 3)

We must test _____ times a year per Location for Stage 2 Compliance Monitoring. (table 3)

____ (# Locations) x ____ (# frequency/year) = _____ **TOTAL TESTS NEEDED (B)**
for Stage 2 DBPR Compliance Monitoring Compliance

____ (A) + ____ (B) = **Total Tests Needed for Stage 2 DBPR Testing**

Pre-schedule Stage 2 DBPR Testing with Edge Analytical Laboratories
and you rest assured YOUR monitoring will be in compliance with your IDSE.

Sample Collection Kits tailored to YOUR Water System Requirements
and automatically shipped to you by your schedule.

Stage 2 DBPR Packaged Price:

Chloroform, Bromodichloromethane, Dibromochloromethane, Bromoform

Total Trihalomethanes Method 524.2

\$ 81.00

Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid,
Bromoacetic Acid, Dibromoacetic Acid

5 Halo-Acetic Acids Method 552.2

\$140.00

Competitive pricing
backed up with OUR Guarantee.

\$221

Paying a lower price elsewhere?

Fax us a bill or promotion from another lab and we will BEAT it by 10%.

(360) 757.1402 fax

EDGE ANALYTICAL LABORATORIES

Founded in 1989, Edge Analytical is a full service, independent laboratory approved by the EPA (EPA WA00097). Nationally recognized for some of the most advanced analysis instrumentation in the industry, we strive to maintain professional and precise laboratory procedures to assure quality and accuracy. With over 14 years experience testing TTHM & HAA5, we are here to help you with the Stage 2 DBPR.

- * EPA Compliant Certified Laboratory
- * Water Sample Collection Kits delivered directly to you
- * 10-14 day turn-around time, rush is available
- * Easy to read, high quality results
- * Speak with a LIVE person, even directly with the chemist
- * Washington Drop-off Locations in Snohomish, Island, Skagit & Whatcom counties.
Courier service is also available.

If you have questions about regulations, sampling procedures, testing methods, reporting requirements, or pricing, please give us a call.

CONTACT INFORMATION

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DIRECTIONS:



From North or South I-5: Take Exit 229 George Hopper, turn East on George Hopper. Head East through Burlington Blvd about 3 blocks, turn Left on Walnut Street. Edge Analytical is the 2nd building on the Right.

STAGE 2 DBPR

Built upon the Stage 1 DBP Rule, the Stage 2 Disinfectants/Disinfection Byproduct Rule applies to all community water systems and all non-transient, non-community water systems that provide disinfected water.

The purpose of Stage 2 is to increase public health protection by reducing the potential risk of adverse health effects associated with disinfection byproducts throughout the distribution system.

A provision to Stage 2 DBPR requires all community water systems and only non-transient non-community water systems serving more than 10,000 to conduct the Initial Distribution System Evaluation (IDSE).

Your ISDE determines TTHM and HAA5 monitoring locations for Stage 2 compliance monitoring based on the highest disinfection byproduct concentrations. These locations of highest concentration will then be used as the sampling sites for the Stage 2 DBPR Compliance Monitoring.

The following table shows the Standard Monitoring Compliance Dates. For systems opting for the Standard Monitoring, this your schedule is defined by the largest system in your combined distribution system.

For example: a water system serving 25,000 people must have

- * IDSE/Standard Monitoring (PLAN) turned into the government by October 1, 2007.
- * Standard Monitoring (TESTING) completed by September 30, 2009.
- * The IDSE (REPORT & RESULTS) turned into the government by January 1, 2010.
- * Start Stage 2 DBPR Compliance (TESTING) by October 1, 2013

**Pre-schedule your Stage 2 DBPR Standard Monitoring
with Edge Analytical Laboratories
and be assured your monitoring will be in compliance with your IDSE.**

**Sample Collection Kits tailored to your Water System Requirements
will automatically be shipped to you per your schedule.**

- * EPA Compliant Certified Laboratory
- * 10-14 business day turn-around time, rush available
- * User friendly results.
- * Speak with a LIVE person, even directly with the chemist!
- * Drop-off Locations in Snohomish, Island, Skagit & Whatcom counties.
- * Courier service is also available.



table 1

COMPLIANCE DUE DATES

Your system serves:	Schedule:*	Standard Monitoring Plan by:	Complete Standard Monitoring by:	Submit IDSE Report by:	Begin Stage 2 Compliance Monitoring by:
At least 100,000 people or part of a combined system serving 100,000 people	Schedule 1	October 1, 2006	September 30, 2008	January 1, 2009	April 1, 2012
50,000–99,999 people or part of a combined system serving 50,000–99,999 people.	Schedule 2	April 1, 2007	March 31, 2009	July 1, 2009	October 1, 2012
10,000–49,999 people or part of a combined system serving 10,000–49,999 people.	Schedule 3	October 1, 2007	September 30, 2009	January 1, 2010	October 1, 2013
Community Water Systems with Less than 10,000 people or part of a combined system serving less than 10,000 people.	Schedule 4	April 1, 2008	March 31, 2010	July 1, 2010	October 1, 2013
Non-Transient/Non-Community Water Systems Less than 10,000 people	NA	NA	NA	NA	October 1, 2013

Source: <http://www.epa.gov/safewater/disinfection/stage2/compliance.html>

STANDARD MONITORING

The purpose of the Standard Monitoring is to find your Peak Historical month of testing. The EPA defines the Peak Historical month as that with the highest TTHM or the highest HAA5 levels or the warmest water temperature. This is meant to represent the “worst case” scenario for DBP formation.

The results from this 1 year Standard Monitoring time will be used to define your Stage 2 DBPR Compliance Monitoring Plan.

According to the EPA, the Standard Monitoring collection sites may not be the same collection sites used in Stage 1 monitoring. Also, samples must be taken from distribution, not at the source or the treatment plant.

To find your monitoring frequency and number of sites required to collect from, first find your source water type, then your population size.

For example, a Subpart H Water Source Distribution system serving 55,000 people would need to collect samples from 16 specific locations every 60 days.

table 2 STANDARD MONITORING REQUIREMENTS

Subpart H Water Source Systems Population Size	Monitoring Periods & Frequency of Sampling	TOTAL Locations per Monitoring Period	Near Entry Point Locations*:	Average Residence Time	High TTHM Locations	High HAA5 Locations
Less than 500 consecutive	1 during peak historical month	2	1	-	1	-
Less than 500 non-consecutive	1 during peak historical month	2	-	-	1	1
500–3,300 consecutive	4/every 90 days	2	1	-	1	-
500-3,300 non-consecutive	4/ every 90 days	2	-	-	1	1
3,301–9,999	4/every 90 days	4	-	1	2	1
10,000 - 49,000	6/every 60 days	8	1	2	3	2
50,000-249,999	6/every 60 days	16	3	4	5	4
250,000-999,999	6/every 60 days	24	4	6	8	6
1,000,000-4,999,999	6/every 60 days	32	6	8	10	8
More than 5,000,000	6/every 60 days	40	8	10	12	10

Ground Water Source Systems Population Size	Monitoring Periods & Frequency of Sampling	TOTAL Locations per Monitoring Period	Near Entry Point Locations*	Average Residence Time	High TTHM Locations	High HAA5 Locations
Less than 500 consecutive	1 during peak historical month	2	1	-	1	-
Less than 500 non-consecutive	1 during peak historical month	2	-	-	1	1
500-9,999	4/every 90 days	2	-	-	1	1
10,000-99,999	4/every 90 days	6	1	1	2	2
100,000-499,999	4/every 90 days	8	1	1	3	3
More than 500,000	4/every 90 days	12	2	2	4	4

The EPA says:

When choosing sites consider: TTHM & HAA5 Levels, Residence Time, Water Age, Disinfectant Residual, Geographic Coverage of Distribution System, and Hydraulic Representation

***Near Entry Points:** If you have more sites than required choose entry points with the highest flows. If you have fewer sites than required replace additional sites with TTHM & HAA5 sites.

Stage 1 DBPR Monitoring Location sites may NOT be used as Standard Monitoring sites.

STAGE 2 DBPR COMPLIANCE MONITORING

Your results from the Standard Monitoring and the Stage 1 DBPR Compliance Monitoring will determine your Stage 2 DBPR Compliance Monitoring Sites and Dates.

The EPA Stage 2 DBPR provides a specific protocol for selecting the sites for the Compliance Monitoring shown below.

Ranking is based on the TTHM and HAA5 locational running annual average (LRAA) for each Standard Monitoring and Stage 1 DBPR compliance monitoring site.

PROTOCOL TO SELECT STAGE 2 DBPR COMPLIANCE MONITORING LOCATIONS

Select the Location with:

1	Highest TTHM LRAA
2	Highest HAA5 LRAA
3	Highest HAA5 LRAA—from Stage 1 DBPR sites (average residence time if surface water, maximum residence time if ground water system)
4	Next Highest TTHM LRAA
5	Next Highest TTHM LRAA
6	Next Highest HAA5 LRAA
7	Highest TTHM LRAA from Stage 1 DBPR sites (average residence time if surface water, maximum residence time if ground water system) *SKIP THIS STEP IF YOU HAVE NO MORE STAGE 1 DBPR SITES
8	Next Highest HAA5 LRAA

For more information on the EPA's Stage 2 DPBR
regulations and requirements visit:

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or

Washington State Department of Health's
Office of Drinking Water

visit www.doh.wa.gov click on Programs & Services,
then under Environmental Health click on Drinking Water

table 3

STAGE 2 DBPR COMPLIANCE MONITORING REQUIREMENTS

Subpart H Water Source Systems	Monitoring Frequency	TOTAL Locations per Monitoring Period*	High TTHM Locations	High HAA5 Locations	Existing Stage 1 DBPR Compliance Locations
Population Size					
Less than 500	per year	2	1	1	-
500–3,300	per quarter	2	1	1	-
3,301–9,999	per quarter	2	1	1	-
10,000 - 49,000	per quarter	4	2	1	1
50,000-249,999	per quarter	8	3	3	2
250,000-999,999	per quarter	12	5	4	3
1,000,000-4,999,999	per quarter	16	6	6	4
More than 5,000,000	per quarter	20	8	7	5

Ground Water Source Systems	Monitoring Frequency	TOTAL Locations per Monitoring Period*	High TTHM Locations	High HAA5 Locations	Existing Stage 1 DBPR Compliance Locations
Population Size					
Less than 500	per year	2	1	1	-
500–9,999	per year	2	1	1	-
10,000 - 99,000	per quarter	4	2	1	1
100,000-499,999	per quarter	6	3	2	1
More than 5,000,000	per quarter	8	3	3	2

The EPA says:

All systems must monitor during the month of highest DBP concentrations..

***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 yearly monitoring and Subpart H systems serving 500-3,300 are required to** take individual TTHM and HAA5 samples instead of dual sample set at the locations with the highest TTHM & HAA5 concentrations, respectively. Only one location with a dual sample set per monitoring period is needed if highest TTHM & HAA5 concentrations occur at the same location and month.

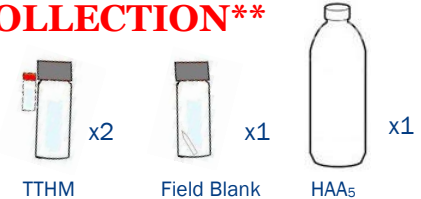
Source: <http://www.epa.gov/safewater/disinfection/stage2/compliance.html>

Sample Collection Procedure for
**Haloacetic Acids (HAA₅) &
 Total Trihalomethane (TTHM)**
 (IRC Approved Method EPA 552.2/524.2)

****READ ALL INSTRUCTIONS BEFORE COLLECTION****

COLLECTION POINT:

- *Samples should be collected in accordance with 40 CFR 141.132 (b) (1)
- *Samples need to be taken from distribution, not at the source or the treatment plant

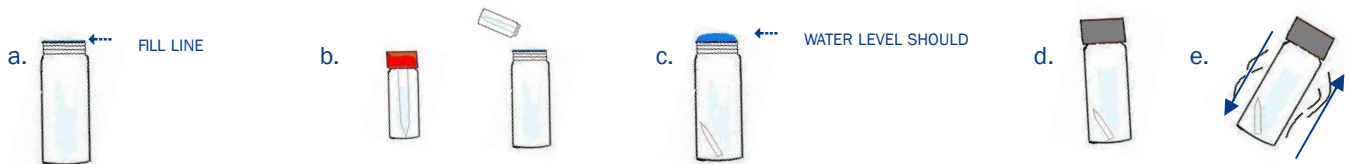


HAA₅/TTHM SAMPLE KIT CONTENTS:

- * 1 - 40mL vial labeled: 'Field Blank' and dated. The Field Blank serves as an indicator of contamination, which may occur during sample transport or storage. Therefore, this vial **must not be opened** and must always travel with the samples.
- * 2 - 40mL vials for each source to be sampled. These vials each contain 25 mg of ascorbic acid that **must not** be rinsed out during sample collection.
- * 2 - 2mL Red Capped vials containing inserts filled with 2 drops of 1:1 HCl (**CAUTION: HCl is Corrosive.**)
- * 1- 250ml bottle
- * Water Sample Information Form for each collection point.

SAMPLE COLLECTION: (TTHM)

1. Remove any potentially contaminating devices such as filters, screens, aerators, hoses, etc. from sampling points.
2. Open the tap and allow water to run, at least 3 minutes, until it reaches a constant temperature.
3. Reduce flow to a thin steady stream about the thickness of a pencil.
- * DO NOT LET THE VIALS TOUCH THE FAUCET OR SPIGOT AS THE SAMPLE MAY BECOME CONTAMINATED***
4. Fill the 2 - 40mL vials from each collection point at the same time under the same conditions. Avoid agitation of the sample while filling.
5. Allow the stream of water to gently flow into the vial just to overflowing, do not rinse out the ascorbic acid. (a.)
6. After filling, transfer complete contents, including insert, of one red-capped 2mL vial into each 40 mL vial. (b.)
- * DO NOT put red capped vial into the TTHM vial. Your sample should look like the field blank.**
7. If necessary gently add more water so that sample vial looks like illustration (c.)
- * DO NOT TOUCH or otherwise contaminate the inside lid or the lip of the vials/bottles during sampling.**
8. Carefully place the cap onto the 40mL vial. The shiny side of the Teflon cap liner should be face down in contact with the water sample. Tighten down the cap securely. (d.)
- * IMPORTANT: Check for trapped air by inverting the vial and looking to see if any air bubbles are present. If air bubbles are present, gently add more water and repeat step 8. The lab will REJECT TTHM samples if there are air bubbles in the TTHM Container. This will result in resampling.**
9. When you are sure vial is properly filled, shake vigorously. (e)
10. Label each 40mL vial with DOH source number and your name for that collection point.



SAMPLE COLLECTION: (HAA₅)

1. Fill 250 ml bottle from same collection point at same time. (f.)
2. Tighten lid securely.
3. Label the bottle with DOH source number and your name for that collection point.



IMPORTANT: SAMPLES MUST BE KEPT COLD. If the samples are to be held for a day or longer prior to shipment, place the bottles in a refrigerator. **Once samples are ready to be shipped add a bag of ice to the cooler. Samples must be received at EDGE within 4 days of sampling.**

ALL SAMPLES MUST BE RECEIVED AT THE LABORATORY PRIOR TO 4PM ON FRIDAY OF THE WEEK IN WHICH YOU SAMPLED.

Place the completed Water Sample Information (WSI) form into a plastic bag and place in the cooler with the samples. Additional copies of the WSI are available online at www.EdgeAnalytical.com under forms. Please call Cindy O'Toole at (360) 757-1400 or 800-755-9295 if you have any questions.



CORPORATE OFFICE:
1620 South Walnut Street
Burlington WA 98233

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Important Information Enclosed