

Environmental Protection Agency Region 8  
Office of Partnerships & Regulatory Assistance  
Water Program  
Attn: Drinking Water Unit (Mail Code: 8P-W-DW)  
1595 Wynkoop Street  
Denver, CO 80202-1129  
Business Hours Contact: 1- 800-227-8917  
Emergency After-Hours Leave Message at: 303-312-6327  
FAX Number: 303-312-6131

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# **Monitoring Plan Template**

## **For**

## **Stage 1**

# **Disinfectants and Disinfection Byproducts Rule**



**For Small GW PWSs**

**September 2008**

*This Template is provided by the Environmental Protection Agency in Region 8 for Public Water Systems to use to prepare their Monitoring Plans for the Stage 1 D/DBPR. This document provides guidance to public water systems. The document is not, however, the actual Environmental Protection Agency regulation, nor is it a regulation itself. The actual regulation can be found in 40 CFR (Code of Federal Regulations) Part 141.*

*PWSID#*

*System Name*

*Date of Plan*

For the Stage 1 Disinfectants and Disinfection Byproducts Rule (D/DBPR), each water system must develop a monitoring plan to show how a system intends to comply with the monitoring requirements of the Rule. The monitoring plan serves as a uniquely tailored roadmap for each specific system to demonstrate that the water quality self-monitoring performed by the system is representative of the water distributed to consumers and is consistent with regulatory requirements.

The purpose of this fill able form (template) is to facilitate small water system operators. This form is also available in electronic format. If you like to have this form in electronic format, please email us to forward a copy of the electronic format for your use. This form is available online at:

<http://www.epa.gov/region8/waterops/>

Please call EPA Region 8 if you need further assistance in filling out the form:

Harry Jong at 800-227-8917, Ext. 312-7077, or email him at [jong.harry@epa.gov](mailto:jong.harry@epa.gov); or  
Mary Wu at Ext. 312-6789, or email her at [wu.mary@epa.gov](mailto:wu.mary@epa.gov).

Please submit your completed Standard Monitoring Plan to:

**Environmental Protection Agency Region 8  
Office of Partnerships & Regulatory Assistance  
Stage 1 DBPR Rule Manager  
Mail Code: 8P-W-DW  
1595 Wynkoop Street  
Denver, CO 80202-1129**

*PWSID#*  
*System Name*  
*Date of Plan*

# **Drinking Water Monitoring Plan**

**System Name:**

**PWSID #**

## MONITORING PLAN SUMMARY SHEET

### **A. Summary of System Information**

1. PWSID Number: \_\_\_\_\_
2. System Legal Name: \_\_\_\_\_
3. Legal Address: \_\_\_\_\_
4. E-mail Address: \_\_\_\_\_
5. Legal Contact Name: \_\_\_\_\_
6. Legal Contact's Phone Number: \_\_\_\_\_
7. Fax Number: \_\_\_\_\_
8. System Type: Community  Non-Transient Non-Community
9. Total Population Served: \_\_\_\_\_

### **B. Summary of Water Sources** Provide a sketch of all source locations in Part II

1. Number of Surface Water Sources: \_\_\_\_\_
2. Number of Ground Water Under the Direct Influence of Surface Water Sources: \_\_\_\_\_
3. Number of Ground Water Sources: \_\_\_\_\_
4. Number of Sources from which your system Purchases Water: \_\_\_\_\_

### **C. Summary of Treatment Plants** Provide a block process schematic for each plant in Part III

1. Number of Treatment Plants: \_\_\_\_\_
2. Number of Treatment Plants Using one or more of the following at any point in the treatment process or for residual maintenance:
  - a. Free Chlorine: \_\_\_\_\_
  - b. Chloramines: \_\_\_\_\_
  - c. Chlorine Dioxide: \_\_\_\_\_
  - d. Ozone: \_\_\_\_\_
  - e. Other disinfectant: \_\_\_\_\_
3. Do you provide additional treatment to any water purchased from another Public Water System?  
Yes  No

### **D. Summary of Distribution System** See schematic map supplied by EPA in Part IV

1. Does your system supply treated water to other systems? No  Yes , provide details in Part IV  
If Yes, enter the total population served by these systems: \_\_\_\_\_
2. Number of Entry Points to your Distribution System: \_\_\_\_\_
3. Number of Routine Microbiological Samples Submitted to EPA per Month: \_\_\_\_\_
4. Number of Chlorine Booster Stations in your Distribution System: \_\_\_\_\_

\_\_\_\_\_  
Signature of Owner or Authorized Representative and Title

\_\_\_\_\_  
Date

PWSID#  
 System Name  
 Date of Plan

## PART II – Water Sources Details

### A. Inventory of Water Sources

1. Untreated Groundwater Sources (Include Purchased Untreated Water Sources)

a. Source Name	Source ID# (se_id)	Aquifer Name	Type: Permanent (P) Seasonal (S) Emergency (E)		
			P <input type="checkbox"/>	S <input type="checkbox"/>	E <input type="checkbox"/>
			P <input type="checkbox"/>	S <input type="checkbox"/>	E <input type="checkbox"/>
			P <input type="checkbox"/>	S <input type="checkbox"/>	E <input type="checkbox"/>
			P <input type="checkbox"/>	S <input type="checkbox"/>	E <input type="checkbox"/>

## PART III – Water Treatment Details

### A. Treatment Plant Information

Treatment Plant Name	Treatment Plant ID #	Contributing Sources ID #	Rated Capacity (MGD, or GPM)	Treatment Process Codes List all that Apply*				

\* For complete process codes see Safe Drinking Water Information System (SDWIS)

- 401 Gaseous Chlorination, Post
- 403 Gaseous Chlorination, Pre
- 421 Hypochlorination, Post
- 423 Hypochlorination, Pre
- 720 Ultraviolet Radiation

### B. List all chemicals that are added in each treatment plant

- Chlorine Gas
- Sodium Hypochlorite
- Chloramines
- UV

## PART IV – Distribution System Details

### A. Residence Times Determination

1. Provide an explanation of the method(s) used to determine Maximum Distribution System Residence Time
2. Provide an explanation of the method(s) used to determine Average Distribution System Residence Time
3. Provide an explanation of how the distribution system first customer was determined (if applicable).

### B. Entry Points to the Distribution System

1. Entry Point Designation Description

Entry Point	Entry Point	Name of the Contributing:		
Location Name	Location Identifier	Treatment Plants	Purchased Sources	Untreated Sources

2. Evaluation and description of the extent to which Zones of Influence from each source overlap, if applicable.

*PWSID#*  
*System Name*  
*Date of Plan*

**Sketch of Distribution System:**

PWSID#  
 System Name  
 Date of Plan

## I. D/DBPR Monitoring Plan Summary

### i. Table of Treatment Processes

Treatment Plant Name	Treatment Plant ID #	Associated Entry Point Location Identifier	Treatment Processes	Primary Disinfectant For microbial inactivation	Secondary Disinfectant-For maintaining disinfectant residual	Other Oxidants
		<input type="checkbox"/> TP01		<input type="checkbox"/> Free Chlorine <input type="checkbox"/> Chloramines <input type="checkbox"/> UV <input type="checkbox"/> Other	<input type="checkbox"/> Free Chlorine <input type="checkbox"/> Chloramines	
				<input type="checkbox"/> Free Chlorine <input type="checkbox"/> Chloramines <input type="checkbox"/> UV <input type="checkbox"/> Other	<input type="checkbox"/> Free Chlorine <input type="checkbox"/> Chloramines	

### ii. Summary of Monitoring Records Location and Maintenance

#### Disinfection Byproducts

Parameter	Records Location	Responsible Party Name or Position	Phone Number	E-mail Address
TTHM/HAA5				

#### Maximum Residual Disinfectant Level

Parameter	Records Location	Responsible Party Name or Position	Phone Number	E-mail Address
Total Chlorine				
Free Chlorine				
Combined Chlorine				



## II. Disinfection Byproducts Monitoring

### i. Paired TTHM/HAA5 Distribution System Monitoring

- Complete for each paired TTHM/HAA5 distribution system (DS) sampling site:

Sample Site Location Identifier	Site Name	Site Address	Indicate whether this site represents DS maximum or average residence time
<input type="checkbox"/> DS01			<input type="checkbox"/> Maximum <input type="checkbox"/> Average
			<input type="checkbox"/> Maximum <input type="checkbox"/> Average

- Show the location of each sampling point (by location identifier) on the distribution system sketch in Part IV of your system's monitoring plan.
- Explain how any monitoring, including that in excess of minimum requirements, will be scheduled so as to be representative of system conditions and how this data will be used to calculate compliance. This explanation should include information about the use of seasonal sources and/or treatment plants and how they will affect the systems TTHM and HAA5 sampling.

### ii. Disinfection Byproduct Sample Analysis

- Complete for each analyte tested (EP = entry point, DS = Distribution System):

Analyte	Frequency (W/M/Q/A)	Analytical Method	Indicate whether analyst is a Certified Laboratory or EPA Approved Party
TTHM			<input type="checkbox"/> Certified Laboratory
HAA5			<input type="checkbox"/> Certified Laboratory

- Additional Information. (If appropriate to explain system characteristics)

### III. Maximum Residual Disinfectant Level (MRDL) Monitoring

#### i. For Chlorine or Chloramine Monitoring

1. Complete for each chlorine residual/total coliform sampling site:

Site Location Identifier	Site Name	Site Address

2. Show each sampling site (by location number) on the distribution system map.
3. Additional Information (If appropriate to explain system conditions)

#### a. Disinfectant Residual Sample Analysis

- i. Complete for each analyte tested (EP = Entry Point, DS = Distribution System):

Analyte	Frequency (W/M/Q/A)	Analytical Method	Analysis Performed By: Indicate whether Certified Laboratory or EPA Approved Party
Total Chlorine			<input type="checkbox"/> Certified Laboratory <input type="checkbox"/> EPA Approved Party
Free Chlorine			<input type="checkbox"/> Certified Laboratory <input type="checkbox"/> EPA Approved Party
Combined Chlorine			<input type="checkbox"/> Certified Laboratory <input type="checkbox"/> EPA Approved Party

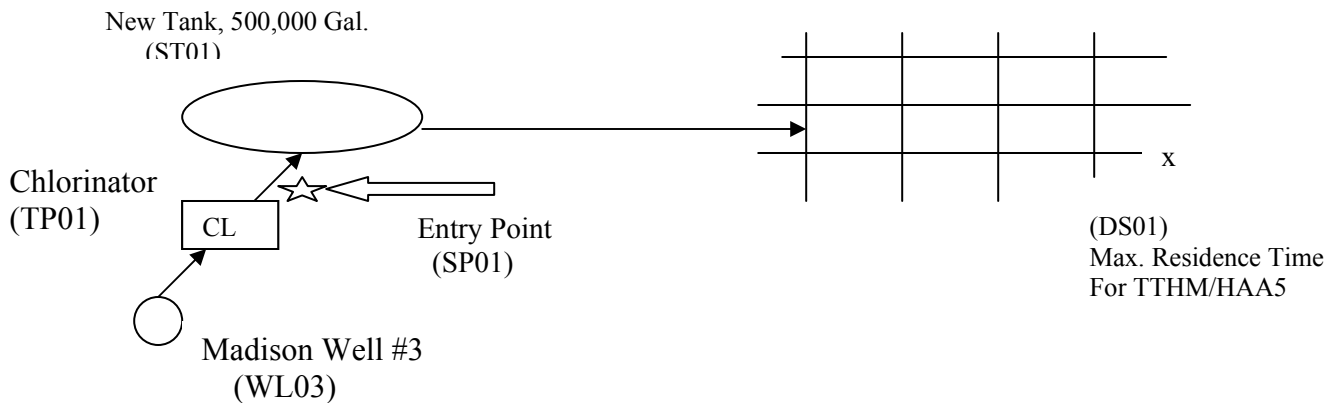
- ii. Quality Assurance/Quality Control (QA/QC) – For each analytical test to be performed by a party approved by EPA, other than a certified laboratory, explain the exact QA/QC procedures to be followed to ensure that the analytical result will be accurate and representative of the water being sampled.

#### b. Disinfectant Residual Reporting

Please record your chlorine residuals, measured at the same time and same location when you take Coliform (BacT) samples, onto your BacT sampling sheet and ask your laboratory to forward that information to EPA. If your laboratory cannot provide this service to you, use MRDL Form 2 to report quarterly to EPA.

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**EXAMPLE 1: Schematic of PWS:**



**EXAMPLE 2: Sketch of Distribution**

