

**Iowa's IDSE Standard Monitoring Report: Schedule 4 Systems**

Date Submitted: \_\_\_\_\_

**1. General Information**

PWS Name: \_\_\_\_\_ PWSID: \_\_\_\_\_

PWS Mailing Address: \_\_\_\_\_

PWS City, State, Zip Code: \_\_\_\_\_

Population Served (in your system): \_\_\_\_\_ Combined Distribution System (CDS) #: \_\_\_\_\_

Source Water Type:  Surface Water  Influenced Groundwater  Groundwater

Relationship to another PWS:  Consecutive (buys from)  Wholesale (sells to)  neither

Residual Disinfectant Type:  Chlorine  Chloramines

Number of Disinfected Sources: \_\_\_\_ surface \_\_\_\_ IGW \_\_\_\_ groundwater \_\_\_\_ purchased

**Contact Person:**

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

**2. Stage 2 DBPR Compliance Monitoring Requirements**

*Use the Stage 2 tables on page 2 to determine your future sampling requirement. This is not what you did for the IDSE – Standard Monitoring Plan. It is your routine compliance monitoring under Stage 2 and what you will be doing in the future.*

A. Number of Compliance Monitoring Sites	B. Schedule	C. Compliance Monitoring Frequency
Highest TTHM: _____	<input checked="" type="checkbox"/> Schedule 4	<input type="checkbox"/> Annually during peak historical month
Highest HAA5: _____		(1 monitoring period)
<b>Total:</b> _____		<input type="checkbox"/> Every 90 days (4 monitoring periods)

## Stage 2 Compliance Monitoring Locations (this is used for Section 2 on page 1)

Source Water Type	Population served in your system	Monitoring frequency <sup>1</sup>	Total samples per monitoring period <sup>3</sup>	Distribution system monitoring location	
				Highest TTHM location	Highest HAA5 location
Surface water & Influenced groundwater (including consecutives)	<500	per year	2	1	1
	500 – 3,300	per quarter <sup>2</sup>	2	1	1
	3,301 – 9,999	per quarter <sup>2</sup>	2	1	1
Groundwater (including consecutives)	<500	per year	2	1	1
	500 – 9,999	per year	2	1	1

<sup>1</sup> All systems must monitor during the month of the highest disinfection byproduct concentrations.

<sup>2</sup> Systems on quarterly monitoring must take sample sets every 90 days.

<sup>3</sup> The rule requires that all systems on annual monitoring and SW/IGW systems serving 500-3,300 take individual TTHM and HAA5 samples at the locations with the highest TTHM and HAA5 concentrations, respectively. Only one location per monitoring period is needed if the highest TTHM and HAA5 concentrations occur at the same location and month, if monitoring annually. For this report, each system should choose two sites in Section 4. Whether a single sampling site will meet the requirement will be determined by DNR upon the review of the system's report and disinfection byproduct analytical history. The requirements will be communicated through the report approval letter and a revised operation permit prior to the sampling period.

**Table of Compliance Dates for Schedule 4 Systems (this is used for Section 5)**

Source Water Type	Submit your IDSE report by this date:	Begin Stage 2 Compliance monitoring between these two dates:
Groundwater systems, including consecutives	July 1, 2010	July 1 – September 30, 2013
Surface water and IGW systems that did not have to conduct LT2 <i>Cryptosporidium</i> monitoring, including consecutives	July 1, 2010	July 1 – September 30, 2013
Surface water systems* that must conduct LT2 <i>Cryptosporidium</i> monitoring, including consecutives	July 1, 2010	July 1 – September 30, 2014

\*Some systems are still monitoring to determine this requirement, so a consecutive system should check with its wholesale system to determine in which year the Stage 2 compliance sampling should begin.

### 3. Standard Monitoring and Stage 1 Monitoring Results

#### Where were your TTHM & HAA5 samples analyzed?

TTHM certified laboratory name: \_\_\_\_\_

HAA5 certified laboratory name: \_\_\_\_\_

What analytical methods were used to analyze your TTHM and HAA5 samples? (Look at your lab report)

- | <u>TTHM</u>                        |                                    |  | <u>HAA5</u>                        |   |
|------------------------------------|------------------------------------|--|------------------------------------|---|
| <input type="checkbox"/> EPA 502.2 | <input type="checkbox"/> EPA 551.1 |  | <input type="checkbox"/> EPA 552.1 | <input type="checkbox"/> EPA 552.3              |
| <input type="checkbox"/> EPA 524.2 |                                    |  | <input type="checkbox"/> EPA 552.2 | <input type="checkbox"/> Standard Methods 6251B |

Did you deviate from your approved Standard Monitoring Plan?  Yes  No

If yes, explain:

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#### Note for Section 3A-D:

In Section 3A-D, there are two pages: one for recording your TTHM results and one for recording your HAA5 results. Fill in your analytical data in the appropriate tables and calculate the locational running annual averages (LRAA). The time period for all results is the one-year period during which your IDSE sampling occurred. For most systems, that period is April 2009 through March 2010.

- 3A: IDSE Standard Monitoring TTHM results
- 3B: Stage 1 TTHM results
- 3C: IDSE Standard Monitoring HAA5 results
- 3D: Stage 1 HAA5 results

# TTHM Results

## 3A. IDSE Standard Monitoring Results

Site ID	Data Type	TTHM, in mg/L or ug/L (circle one)				LRAA
		Period 1	Period 2	Period 3	Period 4	
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					

## 3B. Stage 1 Monitoring Results (routine monitoring in your operation permit)

Site ID	Sample Point Code	Data Type	TTHM, in mg/L or ug/L (circle one)				LRAA
			Quarter 1	Quarter 2	Quarter 3	Quarter 4	
	MRT	Sample Date					
		Sample Result					
	ART	Sample Date					
		Sample Result					
	ART	Sample Date					
		Sample Result					
	ART	Sample Date					
		Sample Result					

LRAA = locational running annual average. Add the results in a row and divide by the number of sampling events in the year. Use a "0" for non-detected results when calculating the average. Use additional sheets if necessary.

## HAA5 Results

### 3C. IDSE Standard Monitoring Results

Site ID	Data Type	HAA5, in mg/L or ug/L (circle one)				LRAA
		Period 1	Period 2	Period 3	Period 4	
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					

### 3D. Stage 1 Monitoring Results (routine monitoring in your operation permit)

Site ID	Sample Point Code	Data Type	HAA5, in mg/L or ug/L (circle one)				LRAA
			Quarter 1	Quarter 2	Quarter 3	Quarter 4	
	MRT	Sample Date					
		Sample Result					
	ART	Sample Date					
		Sample Result					
	ART	Sample Date					
		Sample Result					
	ART	Sample Date					
		Sample Result					

LRAA = locational running annual average. Add the results in a row and divide by the number of sampling events in the year. Use a "0" for non-detected results when calculating the average. Use additional sheets if necessary.

#### 4. Selection of Stage 2 DBPR Compliance Monitoring Sites

In this section, you will select the Stage 2 Compliance Monitoring Sites. You will rank the sites using the LRAA values you calculated in Section 3 (right-most column on each page). Select two locations. Each site can only be used one time.

(Note: There are some systems that may ultimately only have to collect one sample, depending upon their system size, source type, and study results. Whether a single sampling site will meet the requirement will be determined by DNR upon the review of the system's report and disinfection byproduct analytical history. The requirements will be communicated through the report approval letter and a revised operation permit prior to the sampling period.)

Sample Rank	Stage 2 Compliance Monitoring Site ID	Site Type	Justification <i>Include other information if needed.</i>
1		<input type="checkbox"/> Overall highest TTHM <i>Look at LRAA on Sections 3A &amp; 3B</i>	
2		<input type="checkbox"/> Overall highest HAA5 <i>Look at LRAA on Sections 3C &amp; 3D</i>	

#### 5. Peak Historical Month & Proposed Stage 2 Compliance Monitoring Schedule

**Peak Historical Month:** \_\_\_\_\_ (month with: warmest water temperature, or highest TTHM or HAA5 results)

Is your peak historical month the same as in your IDSE Standard Monitoring Plan?  Yes  No

If No, explain how you selected your new peak historical month: \_\_\_\_\_

#### Proposed Stage 2 DBPR Compliance Monitoring Schedule

Complete for the number of monitoring periods you listed on Section 2C on page 1.

(Note: There are some systems that may ultimately only have to collect one sample, depending upon their system size, source type, and study results. Whether a single sampling site will meet the requirement will be determined by DNR upon the review of the system's report and disinfection byproduct analytical history. The requirements will be communicated through the report approval letter and a revised operation permit prior to the sampling period.)

Stage 2 Compliance Monitoring Site ID <i>(from Section 4)</i>	Projected Sampling Date (date or week/month/year) <i>(See the table on page 2 to determine your start date for this compliance monitoring.)</i>			
	Period 1	Period 2	Period 3	Period 4

Note: You must conduct Stage 2 DBPR compliance monitoring during the peak historical month. If you also are required to collect quarterly samples, the collection dates are at the 90-day interval before and after the peak month. (Example: Peak month sample is collected the second week in July; quarterly sampling schedule would include second week in January, April, and October).

## 6. Compliance Calculation for Disinfection Byproducts: Locational Running Annual Average. *Check the appropriate box for your system*

### **Systems collecting one or two samples each year:**

For systems collecting one or two samples each year, the locational running annual average (LRAA) is the value of the single sample collected at each location. If the MCL for either TTHM or HAA5 is exceeded in a single sample, it is not a violation but it does trigger more sampling. Beginning in the following quarter, the system must increase the sampling frequency to quarterly for both TTHM and HAA5.

### **Systems collecting one sample each quarter:**

For systems collecting one sample each quarter, the locational running annual average (LRAA) is calculated by adding the results of each of the four most recent quarters and dividing the sum by four. This value is the LRAA. For each new quarter, the oldest quarterly value is dropped and the most recent quarterly value is included in the sum. If a sample was not collected in one quarter, the data for the most recent three quarters is used and the sum divided by 3.

For example: add each quarterly result and divide by 4.

$$\frac{(Q1 + Q2 + Q3 + Q4)}{4} = \text{LRAA}$$

Next quarter:

$$\frac{(Q2 + Q3 + Q4 + Q1)}{4} = \text{LRAA}$$

The RAA will be compared to the MCL value and compliance determined.

### **Systems collecting two or more samples each quarter:**

For systems collecting more than one sample each quarter, the locational running annual average (LRAA) is calculated by adding the results of each of the four most recent quarters at each specific site and dividing the sum by four. This value is the LRAA for that site. For each new quarter, the oldest quarterly value is dropped and the most recent quarterly value is included in the sum. If a sample was not collected in one quarter, the data for the most recent three quarters is used and the sum divided by 3.

For example: add each quarterly result and divide by 4.

$$\frac{(Q1 + Q2 + Q3 + Q4)}{4} = \text{LRAA}$$

Next quarter:

$$\frac{(Q2 + Q3 + Q4 + Q1)}{4} = \text{LRAA}$$

The LRAA will be compared to the MCL value and compliance determined for each site.

**This calculation must be done each quarter for each sampling site.**

## 7. Distribution System Schematic

Attach a schematic of your distribution system ONLY if it has changed from your approved Standard Monitoring Plan.

## 8. Attachments

- Additional page for how and why you deviated from the approved SMP (Section 3)
- Additional pages for monitoring results (Section 3).
- Additional page for Stage 2 DBPR compliance monitoring sites (Section 4)
- Additional page for explaining how you selected the peak historical month (Section 5)
- Additional sheets for proposed Stage 2 DBPR peak historical month and compliance monitoring schedule (Section 5)
- Distribution system schematic (Section 7). This is only required if it changed from your approved Standard Monitoring Plan.

Total number of pages in your report: \_\_\_\_\_

### Submit your completed report to:

IDNR-Water Supply Sections  
401 SW 7<sup>th</sup> Street, Suite M  
Des Moines, IA 50309-4611

Or Fax your report to: 515/725-0348

**Remember to keep a copy of the report for your records, since this will be your DBP sampling plan for Stage 2.**