# STANDARD MONITORING PLAN FOR GROUND WATER SYSTEMS SERVING 10,000 – 49,999 PEOPLE



## SECTION I: GENERAL INFORMATION

| A. Public Water System Information | B. Date Submitted: |
|---|---|

**Public Water System ID Number (PWSID):**

**System Name:**

**System Address:**

**City, State, Zip Code:**

**Population served by your system** (Not the number of taps or service connections, or the population of the largest system in your Combined Distribution System)**:**

| System Type (Check One) | Source Water Type (Check One) | Buying/Selling Relationships (Check all that apply) |
|---|---|---|
| ☒ Community Water System (CWS)<br>☐ Non-Transient Non-Community Water System (NTNCWS) | ☐ Surface Water or Ground Water Under the Direct Influence of Surface Water<br>☒ Ground Water | ☐ Purchase Water (Consecutive System)<br>☐ Sell Water to other systems (Wholesale System)<br>☐ Neither Buy nor Sell |

### C. PWS Operations

**Residual Disinfectant Type** ☐ Chlorine ☐ Chloramines ☐ Other:

**Number of Disinfected Sources**

Surface Water: ____

Ground Water Under the Direct Influence of Surface Water: ____

Ground Water: ____

Purchased Surface Water: ____

Purchased Ground Water: ____

### D. Contact Person

**Name:** _____

**Title:** _____

**E-mail Address:** _____

**Phone No:** **Cell No:** **Fax No:**

## SECTION II: IDSE STANDARD MONITORING REQUIREMENTS

| A. Number of Sampling Sites | B. Schedule | C. Standard Monitoring Frequency |
|---|---|---|
| **Total:** ____<br>Near Entry Point: ____<br>Average Residence Time: ____<br>High TTHM: ____<br>High HAA5: ____ | ☐ Schedule 1<br>☐ Schedule 2<br>☒ Schedule 3<br>☐ Schedule 4 | ☐ During Peak Historical Month (1 monitoring period)<br>☒ Every 90 days (4 monitoring periods)<br>☐ Every 60 days (6 monitoring periods) |

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## III. SELECTING STANDARD MONITORING SITES

**A. Data Evaluated: Check all boxes corresponding to the data or information you used to select each type of Standard Monitoring site (Check all boxes that apply)**

| Data or Information Used to Pick Your Sites | TYPE OF SITE | | | |
|---|---|---|---|---|
| | Near Entry Point Site | Average Residence Time Site | High TTHM Site | High HAA5 Site |
| **System Configuration** | | | | |
| Pipe layout, locations of storage facilities | ☐ | ☐ | ☐ | ☐ |
| Locations of sources and consecutive system entry points | ☐ | ☐ | ☐ | ☐ |
| Pressure zones | ☐ | ☐ | ☐ | ☐ |
| Information on population densities | ☐ | ☐ | ☐ | ☐ |
| Locations of large customers | ☐ | ☐ | ☐ | ☐ |
| **Water Quality and Operational Data and Information** | | | | |
| Disinfectant residual data | ☐ | ☐ | ☐ | ☐ |
| Stage 1 TTHM and HAA5 data | ☐ | ☐ | ☐ | ☐ |
| Other TTHM and HAA5 data | ☐ | ☐ | ☐ | ☐ |
| Coliform monitoring, Heterotrophic Plate Count (HPC) | ☐ | ☐ | ☐ | ☐ |
| Tank level data, pump run times | ☐ | ☐ | ☐ | ☐ |
| Customer billing records | ☐ | ☐ | ☐ | ☐ |
| **Advanced Tools** | | | | |
| Water distribution system model | ☐ | ☐ | ☐ | ☐ |
| Tracer study | ☐ | ☐ | ☐ | ☐ |

**B. Summary of Data: Provide a summary description of the data and information that you used to pick your Standard Monitoring sites (or attach a separate sheet with your summary):**

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## IV. JUSTIFICATION OF STANDARD MONITORING SITES

**DESCRIBE HOW AND WHY YOU PICKED EACH SITE. YOUR SAMPLING SITE JUSTIFICATIONS ARE THE MOST IMPORTANT INFORMATION IN YOUR STANDARD MONITORING PLAN – BE AS SPECIFIC AS POSSIBLE (ATTACH ADDITIONAL SHEETS IF NECESSARY).**

High TTHM Example: This site is in the southeastern portion of this system on a 6 inch line, before the last group of connections, near the end of the distribution system, and receives water from the Hometown Storage Tank. We believe this area has high water age, because of the relatively large pipe and low demand. Chlorine residuals during the summer months are low or non-detectable. (Additional examples are included in the Standard Monitoring Plan Attachment).

| **Standard Monitoring Site ID (Use same ID to identify these sites on your schematic)** | **Standard Monitoring Site Type and Site Justification (Check the box for site type and provide your justification for selecting the site)**<br><br>Near Entry Point Site: The point at which water enters the distribution system (typically somewhere between the plant or entry point and the first customer)<br><br>Avg Res Time: Site which is representative of the average water age in the system<br><br>High TTHM: Site where you would expect to find the highest TTHM levels<br><br>High HAA5: Site where you would expect to find the highest HAA5 levels | | | |
|---|---|---|---|---|
| **SM-1** | ☒ Near Entry Point | ☐ Avg Res Time | ☐ High TTHM | ☐ High HAA5 |
| SM-1 JUSTIFICATION: | | | | |
| **SM-2** | ☐ Near Entry Point | ☒ Avg Res Time | ☐ High TTHM | ☐ High HAA5 |
| SM-2 JUSTIFICATION: | | | | |
| **SM-3** | ☐ Near Entry Point | ☐ Avg Res Time | ☒ High TTHM | ☐ High HAA5 |
| SM-3 JUSTIFICATION: | | | | |
| **SM-4** | ☐ Near Entry Point | ☐ Avg Res Time | ☒ High TTHM | ☐ High HAA5 |
| SM-4 JUSTIFICATION: | | | | |

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**IV. JUSTIFICATION OF STANDARD MONITORING SITES (CONTINUED)**

**DESCRIBE HOW AND WHY YOU PICKED EACH SITE. YOUR SAMPLING SITE JUSTIFICATIONS ARE THE MOST IMPORTANT INFORMATION IN YOUR STANDARD MONITORING PLAN – BE AS SPECIFIC AS POSSIBLE (ATTACH ADDITIONAL SHEETS IF NECESSARY).**

High TTHM Example: This site is in the southeastern portion of this system on a 6 inch line, before the last group of connections, near the end of the distribution system, and receives water from the Hometown Storage Tank. We believe this area has high water age, because of the relatively large pipe and low demand. Chlorine residuals during the summer months are low or non-detectable. (Additional examples are included in the Standard Monitoring Plan Attachment).

| **Standard Monitoring Site ID (Use same ID to identify these sites on your schematic)** | **Standard Monitoring Site Type and Site Justification (Check the box for site type and provide your justification for selecting the site)**<br><br>Near Entry Point Site: The point at which water enters the distribution system (typically somewhere between the plant or entry point and the first customer)<br><br>Avg Res Time: Site which is representative of the average water age in the system<br><br>High TTHM: Site where you would expect to find the highest TTHM levels<br><br>High HAA5: Site where you would expect to find the highest HAA5 levels | | | |
|---|---|---|---|---|
| **SM-5** | ☐ Near Entry Point | ☐ Avg Res Time | ☐ High TTHM | ☒ High HAA5 |
| SM-5 JUSTIFICATION: | | | | |
| **SM-6** | ☐ Near Entry Point | ☐ Avg Res Time | ☐ High TTHM | ☒ High HAA5 |
| SM-6 JUSTIFICATION: | | | | |

**NOTE: Make sure to use your Standard Monitoring Site IDs to label these monitoring locations on your distribution system schematic.**

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## SECTION V: PEAK HISTORICAL MONTH AND PROPOSED STANDARD MONITORING SCHEDULE

**A. Peak Historical Month:** _____

Your peak historical month will usually be the month during which you consistently have the highest TTHM & HAA5 levels during normal operating conditions. If you do not have any TTHM/HAA5 data, your peak historical month would be the month of warmest water temperature.

**B. Source Used to Determine Peak Historical Month:** _____

If you have more than one source, indicate the source that you used in determining your peak historical month. For example, if you have a surface source and a ground water source, and your highest TTHM values were associated with the surface source, you would indicate 'surface source'. If you only have one source, write N/A:

**C. What did you determine your peak historical month based on:**

☐ High TTHM ☐ High HAA5 ☐ Month of Warmest Water Temperature

If you used other information other than TTHM/HAA5 or water temperature to select your peak historical month, attach a sheet with an explanation of how and why you selected your Peak Historical Month.

**D. Proposed Standard Monitoring Schedule**

**Note: You MUST include monitoring during your Peak Historical Month**

| STANDARD MONITORING DATES | |
|---|---|
| **If your Peak Historical Month is:** | **You must monitor during:** |
| July | Oct 2008, Jan 2009, Apr 2009, July 2009 |
| August | Nov 2008, Feb 2009, May 2009, Aug 2009 |
| September | Dec 2008, Mar 2009, Jun 2009, Sept 2009 |

| **Standard Monitoring Site ID** | **Projected Sampling Dates** | | | |
|---|---|---|---|---|
| | **Period 1** | **Period 2** | **Period 3** | **Period 4** |
| **SM-1** | | | | |
| **SM-2** | | | | |
| **SM-3** | | | | |
| **SM-4** | | | | |
| **SM-4** | | | | |
| **SM-5** | | | | |
| **SM-6** | | | | |

**If your Peak Historical Month is July, Aug or Sept, use the STANDARD MONITORING DATES table above to select your Projected Sampling dates.** You must either specify dates which fall within the months indicated in the table above and which are 90 days apart, or enter the same week during each month in which you must monitor. Example: A system with a Peak Historical Month of July could enter "1st wk, Oct 2008", "1st wk Jan 2009", "1st wk Apr 2009", and "1st wk Jul 2009" for the projected sampling periods above.

**If your Peak Historical Month is not July, Aug or Sept, call/email U.S. EPA.**

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## SECTION VI: PLANNED STAGE 1 TTHM/HAA5 COMPLIANCE MONITORING SCHEDULE

| Stage 1 DBPR TTHM/HAA5 Monitoring Site ID | **Projected Stage 1 DBPR TTHM/HAA5 Compliance Sampling Dates:** This is the compliance monitoring you have been doing in accordance with State requirements. Enter the dates that you will be collecting your Stage 1 TTHM/HAA5 compliance samples for the State between October 1, 2008 and September 30, 2009. If you are not currently required to monitor for TTHM/HAA5 by the State, write 'N/A' in the table below. | | | |
|---|---|---|---|---|
| | **Period 1** | **Period 2** | **Period 3** | **Period 4** |
| **ST1-1** | | | | |
| **ST1-2** | | | | |
| **ST1-3** | | | | |
| **ST1-4** | | | | |
| **ST1-5** | | | | |
| **ST1-6** | | | | |
| **ST1-7** | | | | |
| **ST1-8** | | | | |

Make sure that your Stage 1 TTHM/HAA5 Compliance Monitoring Sites are marked on your distribution system schematic, using the IDs listed above.

IMPORTANT NOTE: IF YOU ARE CURRENTLY REQUIRED TO COLLECT TTHM/HAA5 COMPLIANCE SAMPLES, YOU MUST CONTINUE TO COLLECT THESE SAMPLES, IN ADDITION TO COLLECTING YOUR STANDARD MONITORING SAMPLES DURING THE TIMEFRAME SPECIFIED ABOVE OR YOU WILL INCUR COMPLIANCE MONITORING VIOLATIONS.

## SECTION VII: DISTRIBUTION SYSTEM SCHEMATIC

DISTRIBUTION SYSTEM SCHEMATICS ARE SUBJECT TO FREEDOM OF INFORMATION ACT REQUESTS, AND SHOULD NOT CONTAIN ANY INFORMATION THAT POSES A SECURITY RISK TO YOUR SYSTEM. A SKELETON OF THE DISTRIBUTION SYSTEM, INCLUDING THE INFORMATION BELOW, WITHOUT STREET NAMES, OR OTHER LOCATIONAL IDENTIFIERS IS SUFFICIENT:

1. All entry points to the distribution system
2. Locations of all Sources
3. Locations and capacity of all storage facilities
4. Locations of pumping stations
5. Locations of disinfectant booster stations
6. Pressure zone boundaries
7. Proposed Standard Monitoring Sites (labeled SM-1, SM-2, etc.)
8. Stage 1 TTHM/HAA5 Compliance Monitoring Sites (labeled ST1-1, ST1-2, etc.)

To avoid significant delays in processing your submittal, submit your distribution system schematic in electronic (PDF) format, if possible. If you submit a hardcopy of your schematic, use symbols and shapes (such as triangles, squares, and circles), instead of color coded dots, to mark locations on your map. Hardcopy schematics that are in color will be scanned into our system in black and white, so we will lose your color code designations.

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## SECTION VIII: ATTACHMENTS

Check all of the boxes that apply. Please note that the distribution system schematic is a mandatory element of your Standard Monitoring Plan.

| | |
|---|---|
| ☐ | Distribution system schematic |
| ☐ | Additional sheets for the summary of data and/or information used for selecting the Standard Monitoring sites (See Section III.B.) |
| ☐ | Additional sheets for Standard Monitoring Site Justifications (See Section IV.) |
| ☐ | Additional sheets for explaining how you used data other than TTHM, HAA5, and temperature to select your Peak Historical Month (See Section V.C.) |
| ☐ | Additional sheets for planned Stage 1 TTHM/HAA5 Compliance Monitoring (See Section VI.) |
| ☐ | Any other attachments - Please describe here: |
| ☐ | If you are submitting this Standard Monitoring Plan electronically, and are mailing some hardcopies separately, check this box, and please note what you are sending in hardcopy: |
| Total Number of Pages you are submitting in your Standard Monitoring Plan (including attachments and schematic): _____ | |