



Initial Distribution System Evaluation (IDSE)  
Standard Monitoring Plan (SMP)  
Stage 2 Disinfectants and Disinfection Byproducts Rule

**I. GENERAL INFORMATION**

**A. System Information\***

**B. Date Submitted\***

PWS ID#: AZ04 \_\_\_\_\_

\_\_\_\_\_

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

Street Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip: \_\_\_\_\_

Population Served: \_\_\_\_\_

Source Water Type: \_\_\_Ground \_\_\_Surface/GUDI

System Type: \_\_\_CWS \_\_\_NTNCWS

Combined Distribution System: \_\_\_Wholesale \_\_\_Consecutive \_\_\_Neither

If wholesale, list system(s) you wholesale to: (Please specify PWS # and name)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If consecutive, list system(s) you are consecutive with: (Please specify PWS # and name)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**C. PWS Operations**

Residual Disinfectant Type: \_\_\_Chlorine \_\_\_Chloramines \_\_\_Other \_\_\_\_\_

Number of Disinfected Sources: \_\_\_Surface \_\_\_GUDI \_\_\_Ground \_\_\_Purchased

**D. Contact Person\***

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

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

Phone Number: \_\_\_\_\_ Fax Number (if applicable): \_\_\_\_\_

Email Address (if applicable): \_\_\_\_\_



Initial Distribution System Evaluation (IDSE)  
Standard Monitoring Plan (SMP)  
Stage 2 Disinfectants and Disinfection Byproducts Rule

**II. IDSE REQUIREMENTS\***

**A. Number of Sites:**            **Total:** \_\_\_\_\_

Near Entry Point: \_\_\_\_\_

Avg. Residence Time: \_\_\_\_\_

High TTHM: \_\_\_\_\_

High HAA5: \_\_\_\_\_

**B. IDSE Schedule (circle one):**    Schedule 1      Schedule 2      Schedule 3      Schedule 4

**C. Standard Monitoring Frequency**

\_\_\_ During peak historical month (1 monitoring period)

\_\_\_ Every 90 days (4 monitoring periods)

\_\_\_ Every 60 days (6 monitoring periods)



Initial Distribution System Evaluation (IDSE)  
 Standard Monitoring Plan (SMP)  
 Stage 2 Disinfectants and Disinfection Byproducts Rule

**III. SELECTING STANDARD MONITORING SITES**

**A. Data Evaluated.** Put a check mark in each box corresponding to the data that you used to select each type of standard monitoring site. Check all that apply.

Data Type	Type of Site			
	Near Entry Point	Avg. Residence Time	High TTHM	High HAA5
<b>System Configuration</b>				
Pipe layout, locations of storage facilities				
Locations of sources and consecutive system entry points				
Pressure zones				
Information on population density				
Locations of large customers				
<b>Water Quality and Operational Data</b>				
Disinfectant residual data				
Stage 1 DBP data				
Other DBP data				
Microbiological monitoring data (e.g., HPC)				
Tank level data, pump run times				
Customer billing records				
<b>Advanced Tools</b>				
Water distribution system model				
Tracer study				

**B. Summary of Data\*.** Provide a summary of data you relied on to justify standard monitoring site selection. (Attach additional sheets if needed)

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Initial Distribution System Evaluation (IDSE)  
 Standard Monitoring Plan (SMP)  
 Stage 2 Disinfectants and Disinfection Byproducts Rule

**IV. JUSTIFICATION OF STANDARD MONITORING SITES\***

<b>Standard Monitoring Site ID (from map)<sup>1</sup></b>	<b>Site Type</b>	<b>Justification</b>
	<input type="checkbox"/> Near Entry Point <input type="checkbox"/> Avg. Residence Time <input type="checkbox"/> High TTHM <input type="checkbox"/> High HAA5	
	<input type="checkbox"/> Near Entry Point <input type="checkbox"/> Avg. Residence Time <input type="checkbox"/> High TTHM <input type="checkbox"/> High HAA5	
	<input type="checkbox"/> Near Entry Point <input type="checkbox"/> Avg. Residence Time <input type="checkbox"/> High TTHM <input type="checkbox"/> High HAA5	
	<input type="checkbox"/> Near Entry Point <input type="checkbox"/> Avg. Residence Time <input type="checkbox"/> High TTHM <input type="checkbox"/> High HAA5	
	<input type="checkbox"/> Near Entry Point <input type="checkbox"/> Avg. Residence Time <input type="checkbox"/> High TTHM <input type="checkbox"/> High HAA5	
	<input type="checkbox"/> Near Entry Point <input type="checkbox"/> Avg. Residence Time <input type="checkbox"/> High TTHM <input type="checkbox"/> High HAA5	
	<input type="checkbox"/> Near Entry Point <input type="checkbox"/> Avg. Residence Time <input type="checkbox"/> High TTHM <input type="checkbox"/> High HAA5	
	<input type="checkbox"/> Near Entry Point <input type="checkbox"/> Avg. Residence Time <input type="checkbox"/> High TTHM <input type="checkbox"/> High HAA5	
	<input type="checkbox"/> Near Entry Point <input type="checkbox"/> Avg. Residence Time <input type="checkbox"/> High TTHM <input type="checkbox"/> High HAA5	

<sup>1</sup>Verify that site IDs match IDs in Section IV and on your distribution system schematic (See Section VII of this form). Attach additional copies if you are required to select more than 8 standard monitoring locations or need more room.



Initial Distribution System Evaluation (IDSE)  
 Standard Monitoring Plan (SMP)  
 Stage 2 Disinfectants and Disinfection Byproducts Rule

**V. PEAK HISTORICAL MONTH AND PROPOSED STANDARD MONITORING SCHEDULE**

**A. Peak Historical Month\*** \_\_\_\_\_

**B. If Multiple Sources, Source Used to Determine Peak Historical Month**  
 (write "N/A" if only one source in your system)

\_\_\_\_\_

**C. Peak Historical Month Based On\* (Check all that apply)**

High TTHM       High HAA5       Warmest water temperature

**If you used other information to select your peak historical month, explain here:**  
 (attach additional sheets if needed)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**D. Proposed Standard Monitoring Schedule\***

Standard Monitoring Site ID (from map) <sup>1</sup>	Projected Sampling Data (date or week) <sup>2</sup>					
	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6

<sup>1</sup> Verify that site IDs match IDs in Section IV and on your distribution system schematic (See Section VII of this form). Attach additional copies if you are required to select more than 8 standard monitoring locations.

<sup>2</sup> period = monitoring period. Complete for the number of periods from Section II.C. Can list exact date or week (e.g., week of 7/9/07)



Initial Distribution System Evaluation (IDSE)  
 Standard Monitoring Plan (SMP)  
 Stage 2 Disinfectants and Disinfection Byproducts Rule

**VI. PLANNED STAGE 1 DBPR COMPLIANCE MONITORING SCHEDULE\***

Stage 1 DBPR Monitoring Site ID (from map) <sup>1</sup>	Projected Sampling Date (date or week) <sup>2</sup>			
	Period 1	Period 2	Period 3	Period 4

<sup>1</sup> Verify that site IDs match IDs on your distribution system schematic (See Section VII of this form). Attach additional copies if you are required to monitor at more than 8 Stage 1 DBPR sites.

<sup>2</sup> period = monitoring period. Complete for the number of periods in which you must conduct Stage 1 DBPR monitoring during IDSE monitoring. Can list exact date or week (e.g., week of 7/9/07)

**VII. DISTRIBUTION SYSTEM SCHEMATIC\***

**Attach a schematic of your distribution system.**

Distribution system schematics are not confidential and should not contain information that poses a *security risk* to your system. ADEQ recommends that you use one of two options:

- **Option 1: Distribution system schematic with no landmarks or addresses indicated.** Show locations of sources, entry points, storage facilities, standard monitoring locations, and Stage 1 compliance monitoring locations (required). Also include pressure zone boundaries and locations of pump stations. Provide map scale.
- **Option 2: City map without locations of pipes indicated.** Show locations of sources, entry points, storage facilities, standard monitoring locations, and Stage 1 compliance monitoring locations (required). Also include boundaries of the distribution system, pressure zone boundaries and locations of pump stations. Provide map scale.

**VIII. ATTACHMENTS**

\_\_\_ Distribution System Schematic\* (Section VII).

\_\_\_ Additional sheets for the summary of data or site justifications (Sections III and IV).



Initial Distribution System Evaluation (IDSE)  
Standard Monitoring Plan (SMP)  
Stage 2 Disinfectants and Disinfection Byproducts Rule

- \_\_\_ Additional copies of Page 3 for justification of Standard Monitoring Sites (Section IV).
- \_\_\_ Additional sheets for explaining how you used data other than TTHM, HAA5, and temperature data to select your peak historical month (Section V).
- \_\_\_ Additional copies of Page 4 for proposed monitoring schedule (Section V).
- \_\_\_ Additional sheets for planned Stage 1 DBPR compliance monitoring schedule (Section VI).

Total number of pages in your Standard Monitoring Plan: \_\_\_\_\_

Note: Fields with an asterisk (\*) are required by the Stage 2 DBPR.

**Please submit Standard Monitoring Plan to:**

Arizona Department of Environmental Quality  
Attn: Starr Abounader  
Drinking Water Monitoring and Protection Unit, Mail Code 5415B-2  
1110 West Washington Street  
Phoenix, AZ 85007

**If your public water system is in Maricopa County, you must also submit your  
Standard Monitoring Plan to:**

Maricopa County Environmental Services Department  
Attn: John Kolman  
Drinking Water Program  
1001 North Central Avenue, Suite 250  
Phoenix, AZ 85004



Initial Distribution System Evaluation (IDSE)  
Standard Monitoring Plan (SMP)  
Stage 2 Disinfectants and Disinfection Byproducts Rule

INSTRUCTIONS FOR COMPLETING THE FORM

**I. General Information**

I.A. PWS ID – Enter your public water system identification number here.

PWS name – Enter the name of your system here.

PWS Address – Enter the primary mailing address for you water system here.

Population served – Enter the number of people served by your PWS. This is your retail population served, not including the population served by consecutive systems that purchase water from you.

Source Water Type – Put a check mark to identify whether your system is a subpart H (surface water/GUDI) system or a groundwater system. If you use any surface water or GUDI as a source, put a check mark next to surface/GUDI.

System Type – Put a check mark to identify whether your system is a community water system (CWS) or nontransient noncommunity water system (NTNCWS).

Buying/Selling Relationships – Put a check mark to identify whether your system is a wholesale system, consecutive system, or neither. If you are both a consecutive and wholesale system (e.g., you buy and sell water), check both. If you are a wholesale system, list the system(s) you wholesale to in the space provided. If you are a consecutive system, list the system(s) you are consecutive with in the space provided.

I.B. Date Submitted – Enter either the date that you are submitting the form electronically, putting it in the mailbox, or dropping it off with the express delivery service. Be sure to submit your SSS plan before the deadline.

I.C. Residual Disinfectant Type – Put a check mark to identify the type of disinfectant you most often use **to maintain a residual in your distribution system** (not necessarily the same disinfectant used for primary disinfection at the treatment plant). If you use chloramines but switch to free chlorine for a short time, you should still check chloramines only. If you use chloramines and chlorine regularly in your system (e.g., 4 months of free chlorine and 8 months of chloramines), check both chlorine and chloramines. If you maintain your residual with a disinfectant other than chlorine or chloramines (e.g., chlorine dioxide), you should place a check next to “Other” and enter the type of disinfectant you use in the blank next to “Other”.

Number of Disinfected Sources – Enter the total number of sources that deliver disinfected water to your distribution system. If you connect to a single wholesale system at a number of locations in your distribution system, consider this one purchased source. Multiple wells that are disinfected at a common



Initial Distribution System Evaluation (IDSE)  
Standard Monitoring Plan (SMP)  
Stage 2 Disinfectants and Disinfection Byproducts Rule

treatment plant should also be considered one source. Do not count wells that are not disinfected or are disinfected by UV only.

I.D. Contact Person – Enter the contact information of the person who is submitting the form. This should be the person who will be available to answer questions from state reviewers.

## II. IDSE Requirements

II.A. Number of Sites – Refer to the *Standard Monitoring Requirements – Attachment* sheet in Chapter 2 of the IDSE guidance manual. Copy the numbers from the “IDSE Standard Monitoring Requirements” table that correspond to your source water type and the population served by your system.

Note that you may need to adjust the number of each site type if you have fewer entry points than required near entry point sites (see Step 1 in Section 7.1.1). This adjustment should be reflected in your site selection and justification in Section IV. Your total should always be the same.

II.B. IDSE Schedule – Circle the schedule number your system is placed on under the Stage 2 DBPR – Schedule 1, 2, 3, or 4. Your schedule is based on your system’s population size if you are a standalone system (not connected to another system), or if you are part of a combined distribution system (CDS), then your schedule is based on the system with the largest population served in the CDS. If you are not sure what your schedule is, you can refer to Exhibit 2.1 of the IDSE Guidance Manual (page 2-2) to determine your IDSE schedule number.

II.C. Standard Monitoring Frequency – Refer to the *Standard Monitoring Requirements Attachment* sheet in Chapter 2 of the IDSE guidance manual. Locate the monitoring frequency from the “IDSE Standard Monitoring Requirements” table that corresponds to your source type and the population served by your system. Put a check mark to identify the monitoring frequency.

## III. Selecting Standard Monitoring Sites

III.A. Data Evaluated – Put a check mark in each box corresponding to the data that you used to select each type of standard monitoring site. Water quality data may be compliance data or operational data.

III.B. Summary of Data\* – In the space provided (or in an attached writeup), provide a summary of the data you used to justify your site selection. See Step 8b in Section 7.1.1 of the IDSE guidance manual for guidance.

## IV. Justification of Standard Monitoring Sites\*

Enter the site ID from the distribution schematic, site type (whether id is near an entry point, average residence time, high TTHM, or high HAA5), and justification. Justification for each standard monitoring site should include the system characteristics that led you to choose it as a standard monitoring site. See Step 8a in Section



Initial Distribution System Evaluation (IDSE)  
Standard Monitoring Plan (SMP)  
Stage 2 Disinfectants and Disinfection Byproducts Rule

7.1.1 of the IDSE guidance manual for guidance. If you have fewer near entry points than required near entry point monitoring locations, be sure to replace the extra near entry point sites with high TTHM or high HAA5 sites.

Note that there is only space for 8 monitoring sites on this sheet. If you are a groundwater system serving more than 499,999 people or a subpart H system serving more than 49,999 people you are required to monitor at more than 8 sites. Therefore, you will need to attach additional sheets.

**V. Peak Historical Month and Proposed Standard Monitoring Schedule**

- V.A. Peak Historical Month\* – Enter the month that you determined to be your peak historical month. See Section 7.1.2 and Worksheet 7.1 of the IDSE guidance manual for guidelines on selecting your peak historical month.
  
- V.B. If Multiple Sources, Source Used to Determine Peak Historical Month – If your system has only one source, write “N/A” here. If you have more than one source, write the name of the source you used as the basis for determining peak historical month. For example, if a system has one surface water, one groundwater, and one purchased groundwater source, it is likely that they relied heavily on data from the surface water source to select their peak historical month. This system would write “surface water source” in the space provided.
  
- V.C. Peak Historical Month Based On\* – Put a check mark to identify the basis for determining your peak historical month. If you peak historical month is supported by more than one parameter (e.g., peak historical month is month of highest TTHM and maximum temperature), check each that apply. If you used data other than TTHM, HAA5, and temperature data to select your peak historical month (e.g., you used TOC data and/or water age data), describe how you used additional data here.
  
- V.D. Proposed Standard Monitoring Schedule\* – Enter the ID for each standard monitoring site in the table (verify that these match the IDs you enter in Section IV and on your schematic). Enter your proposed sampling schedule for the number of monitoring periods identified in Section II.C. The entry can be a specific date or week and can be in a number of different formats. For example:
  - 7/9/07
  - 2<sup>nd</sup> week in Nov ‘07
  - Week of 7/9/07

Remember that at least one monitoring period must be during the peak historical month identified in Section V.A. Note that there is only space for 8 monitoring sites on this sheet. If you are a groundwater system serving more than 499,999 people or a subpart H system serving more than 49,999 people you are required to monitor at more than 8 sites. Therefore, you will need to attach additional sheets.



Initial Distribution System Evaluation (IDSE)  
Standard Monitoring Plan (SMP)  
Stage 2 Disinfectants and Disinfection Byproducts Rule

## VI. Planned Stage 1 DBPR Compliance Monitoring Schedule\*

Enter the projected sampling schedule for the number of Stage 1 DBPR monitoring periods in which you will conduct Stage 1 DBPR monitoring during your IDSE standard monitoring. Verify that site IDs in this table match the IDs on your distribution system schematic. If you are required to monitor at more than 8 Stage 1 DBPR locations you will need to attach additional sheets. You may also want to attach your Stage 1 DBPR monitoring plan.

## VII. Distribution System Schematic\*

Attach a distribution system schematic to your monitoring plan. Your schematic must include the locations of entry points, sources, storage facilities, standard monitoring sites, and Stage 1 compliance monitoring sites.

IDSE standard monitoring plans will not be considered confidential business information (CBI) and are subject to the Freedom of Information Act (FOIA). *Therefore, your distribution system schematic should not contain information that poses a security risk to your system.* ADEQ suggests that you consider one of the following options for submitting distribution system schematics:

- **Option 1: Distribution system schematic with no landmarks or addresses indicated.** Show locations of sources, entry points, storage facilities, standard monitoring locations, and Stage 1 compliance monitoring locations (required). Also include pressure zone boundaries and locations of pump stations. Provide map scale.
- **Option 2: City map without locations of pipes indicated.** Show locations of sources, entry points, storage facilities, standard monitoring locations, and Stage 1 compliance monitoring locations (required). Also include boundaries of the distribution system, pressure zone boundaries and locations of pump stations. Provide map scale.

Schematics should be as clear and easy to read as possible. They should typically be submitted on a scale of between 1:4,000 and 1:8,000; however, larger-scale drawings are acceptable as long as systems components can still be clearly shown. All sizes from 8 ½ inches x 11 inches to larger, plan-sized sheets are acceptable. If electronic versions are submitted, use one of the following file types:

- Adobe PDF file (\*.pdf)
- Microsoft Word (\*.doc)
- Image file (\*.gif, \*.bmp, \*.jpg, \*.jpeg)

## VIII. Attachments

Put a check mark to identify any attachments that you have included in your report.

A distribution system schematic is required. Refer to Section VII for details.



Initial Distribution System Evaluation (IDSE)  
Standard Monitoring Plan (SMP)  
Stage 2 Disinfectants and Disinfection Byproducts Rule

Note that there is only space for 8 monitoring sites in Section IV and Section VI. If you are a groundwater system serving more than 499,999 people or a subpart H system serving more than 49,999 people, you will need to attach additional sheets for Section IV and Section VI.

Enter the total number of pages in your monitoring plan (including attachments) in the space provided. This will allow ADEQ to ensure that all pages were received.