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ICR Water Utility Database System Users' Guide Release 1.1

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Production Release

The attached pages in the ICR Water Utility Database System Users' Guide have been revised to address changes made to Release 1.1 of the application. Please replace the pages as described below:

Chapter	Pages
Contents	i through iv
Preface	1 through 4
Chapter 2: Getting Started	11 and 12
Chapter 5: Initial Sampling Plan	79 and 80
Chapter 7: Monthly Sampling Results	131-132
Appendix C: Release 1.1	213-214
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The attached diskettes contain the Release 1.1 update to the ICR Water Utility Database System. Release 1.1 is an incremental update to the application. It enhances Release 1.0, but does not replace it. Please refer to **Installing Release 1.1** on revised page 12.



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for use with Microsoft® Windows™

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PREFACE: BEFORE YOU START

What is the Information Collection Rule (ICR) Water Utility Database System?

The ICR Water Utility Database System is a Personal Computer (PC) -based Microsoft® Access™ runtime application developed to enable large water utilities to meet the requirements of the ICR. It is distributed by the United States Environmental Protection Agency (EPA). The application will help you:

- Record and review data you are required to report under the ICR.
- Verify that the data you send to EPA are correct and complete.
- Report your data in the format specified by EPA.

The ICR Water Utility Database System is part of the overall ICR Data Management System (DMS), an information system that captures treatment process, water resource, and sample data from approximately 350 public water systems. EPA and the water industry will use this data to evaluate the quality of drinking water in the United States, identify the most effective water treatment technologies currently in use, and develop future drinking water regulations.

WARNING: You must use Release 1.1 of the ICR Water Utility Database System to report data to EPA. *You cannot use Release 1.0 or an Alpha, Beta, or other test release.* If you have assembled ICR data using a test release, print out your Initial Sampling Plan reports and use them as worksheets to enter data into Release 1.1. If you have entered data into Release 1.0, you will not have to re-enter any information. For detailed instructions on installing Release 1.1, see Appendix C.

If you have not yet installed Release 1.0 on your computer, you must do so before you install Release 1.1. Release 1.1 is an update to the ICR Water Utility Database System. It is not a standalone application.

What is the ICR Water Utility Database System Users' Guide?

The ICR Water Utility Database System Users' Guide is provided with the ICR Water Utility Database System to help you use the application. The guide describes the information to be entered into the application. It also contains detailed instructions for using the application, including how to install and start the software, how and when to enter data into the system, how to generate reports on the data in the system, and how to submit data to EPA.

Any rule language, guidance, or notifications you receive from EPA regarding the rule supersede the instructions and suggestions included in the guide.

How is the ICR Water Utility Database System Users' Guide Organized?

The ICR Water Utility Database System Users' Guide is organized in the same way that data and activities flow through the ICR information gathering process. The guide starts with an overview of ICR data collection, moves on to describe the tasks you will perform before you begin sampling, continues with the activities necessary to record treatment process and sample collection information, progresses to the tasks related to cataloging the analytical results you receive from the laboratory, and concludes with final reporting requirements. Each chapter in the body of the guide consists of a set of activities performed at a public water utility, progressing through a description of the information you will enter into the application and culminating in an explanation of how you will send the information to EPA.

- Chapter 1 introduces the ICR, the ICR DMS, and the ICR Water Utility Database System.
- Chapter 2 explains how to install the software on your computer and describes the basic mechanical features of the application.
- Chapter 3 outlines the process of entering data into the ICR Water Utility Database System and summarizes the overall ICR data and activity flows.
- Chapter 4 explains how to enter basic water system and laboratory identification information into the system.

- Chapter 5 tells how to enter water system design and other data into the application to develop an Initial Sampling Plan.
- Chapter 6 outlines how to plan for monthly sampling under the rule and record plant operating and sample collection data.
- Chapter 7 shows how to enter sample analytical results from the laboratory into the system and submit monthly data to EPA.
- Chapter 8 explains how to prepare and submit final design data.
- Chapter 9 summarizes the reports generated by the ICR Water Utility Database System.
- Chapter 10 provides general data integrity and system administration information.

Before You Begin

You will find it much easier to use the ICR Water Utility Database System if you collect the information you need *before* you begin working with the application.

You should first respond to the Notice of Applicability you received from EPA. The Agency will use your response to confirm that the ICR applies to your utility. EPA will then send you a Notice of Final ICR Applicability Determination, which lists the treatment plants in your public water system that are included in the ICR and provides a general

outline of the information you are required to report for each plant. Both notices include an ICR Treatment Plant Identification Number for each treatment plant. You cannot enter data for a treatment plant into the application until you have obtained an ICR Identification Number for the plant.

Once you have confirmed that you are subject to the rule, review and make any necessary changes to the water system and treatment plant schematics provided by American Water Works Association's (AWWA) Assistance Team (A-Team). The schematics are intended to illustrate conditions in your water system and interpret your specific ICR sampling requirements.

After you have reviewed the schematics, you should begin collecting your treatment process data. Appendix B, Data Entry Worksheets, includes blank forms you can use to help gather the data. Photocopy a set of blank forms for your water system according to the following instructions:

- One copy of *Worksheet 1: Public Water System*.
- One copy of *Worksheet 2: Treatment Plant* for each plant at your utility that is subject to ICR monitoring.
- One copy of *Worksheet 3: Water Resources and Intakes* for each intake that feeds a monitored treatment plant.
- One copy of *Worksheet 4: Process Train* for each process train in a treatment plant that is subject to ICR monitoring.

- One Unit Process Worksheet (4.1 through 4.22) for each unit process included in a process train in a treatment plant that is subject to ICR monitoring.

For the purposes of the ICR, your unit processes include any disinfectants or additional water you add in the process train.

- One copy of *Worksheet 5: Distribution System Entry Point/Simulated Distribution System (SDS) Sample Locations* for each plant subject to ICR monitoring.
- If you sell finished water to other public water systems, one copy of *Worksheet 6: Wholesale Information*.

You may want to make extra copies of Worksheet 6, depending upon how many wholesale customers you have.

- One copy of the Distribution System worksheets (7 and 7.1).

You may want to make extra copies of Worksheet 7.1, depending upon how many sample locations you are required to establish in the distribution system under the ICR.

Complete the left-hand (Initial Sampling Plan) side of the forms before you sit down at the computer to use the ICR Water Utility Database System. If you have a question about any item listed on the forms, start the application and use the Search function in the ICR Water Utility Database On-Line Help System to obtain a definition and source of the information.



CHAPTER 2: GETTING STARTED

Introduction

The Information Collection Rule (ICR) Water Utility Database System is a tool for public water systems to report ICR data. *You must enter all the ICR data for your water system into a single copy of the application and report all your data on one set of diskettes for each reporting period.* If you are recording data from multiple treatment plants, enter the data from all the plants into one copy of your ICR database.

If you would like to have multiple users or users at different facilities enter ICR data, you may consider the options listed below.

WARNING: These options have not been tested under operating conditions at a utility. If you employ any of these options, you may run a risk of corrupting your data.

WARNING: If you use options 2, 3, or 4, be very careful to keep track of the active copy of your ICR database. *You cannot copy parts of a database from one copy of the application to another.*

1. Load the application on to a laptop computer and move the computer from location to location.
2. Use a commercial bulk file transfer application (such as LapLink™), to transfer files from one machine to another.

3. Install the application and data files on a mass storage device, such as a Zip Drive™, and move the device from one machine to another.

If you use this option, you must copy the application and data files on to a drive specified as the C:/ drive in order to generate a data transfer diskette.

4. Install the application on multiple computers. Back up the data from one computer, and restore it to the second. Instructions for backing up and restoring are on pages 151 through 153.

The system settings on the two machines must be identical in order for this process to work. See the ICR Help Topic "System Information Window" for a list of system settings.

Installing the Application

The installation instructions on the following page assume you have a basic knowledge of Windows. If you need assistance, refer to the Microsoft® Windows™ users' guide that came with your copy of Windows™.

Installing the Application on a Standalone Personal Computer (PC)

1. Start Windows™.
2. Check your hard disk to ensure that you have enough space to run the application. The ICR Water Utility Database System requires at least 40 megabytes (MB) of free space on your hard drive for the application and data files.
3. Insert the diskette labeled "ICR Water Utility Database System Disk 1" into a floppy disk drive on your PC.
4. Choose Run from the File menu in Program Manager. To do this, use your mouse to point to the word "File" at the top of the Program Manager window. Click and hold down the mouse button. A menu will appear immediately below your mouse pointer. Move the pointer until the word "Run" is highlighted. Release the mouse button. Windows will display the Run dialog box.
5. Type `a:setup` in the Run dialog box. (Type `b:setup` if your diskette is in the B:\ drive.)
6. Press Enter or choose OK on the dialog box with your mouse.
7. Follow the setup instructions that appear on the screen.

The setup instructions will give you the option of installing the application in any directory on your computer. If you are recording information for one public water system, use the default (C:\ICRPROD) directory.

Installing the Application on a Local Area Network (LAN)

The ICR Water Utility Database System was not designed to run on a LAN. If your water utility has a LAN, install the application directly on your hard drive according to the directions above. *Do not install it on your file server.*

Installing Release 1.1

Once you have installed Release 1.0 (the six diskettes included with your original Users' Guide, *you must install the Release 1.1 update*. For detailed instructions on installing the update, see Appendix C.

Recording Data for More than One Public Water System

The ICR Water Utility Database System was designed to capture data for only one utility. However, you may install multiple copies of the application (one for each public water system for which you are entering data) on one PC if you follow these guidelines:

- Create a separate subdirectory for each copy of the application according to the instructions in your Windows™ Manual. Do not use the name C:\ICRPROD for *any* of the separate subdirectories.
- Install the application separately into each subdirectory. When you install, set the defaults so that the database files in the correct subdirectory will open when you start the application from the designated program group. Instructions for setting defaults are included in the installation prompts. You should also give each program group a new name.

You cannot make changes to the data from a report preview. You must go back in to the data entry windows to modify the information.

When you have finished printing reports, return to the Initial Sampling Plan menu by clicking the Prev button.

Sending Your Initial Sampling Plan to EPA

WARNING: *You must use Release 1.0 of the ICR Water Utility Database System to report data to EPA. If you have assembled your ICR data using an Alpha, Beta, Gamma or other test release, print out your Initial Sampling Plan reports and use them to enter data into Release 1.0.*

Your Initial Sampling Plan includes the following elements:

- A transmittal letter identifying any deviations from rule requirements that are included in your Initial Sampling Plan.
- A schematic diagram of your water system that includes all your treatment plants and your distribution system.
- A detailed schematic diagram of each treatment plant.
- A diskette containing your Initial Sampling Plan data.
- An Initial Sampling Plan Summary Report to help EPA verify that the data you sent the Agency are the data it received. This report will be printed out automatically as part of the data transfer process.

The summary report identifies your water system and serves as formal notice that you have sent your Initial Sampling Plan to EPA. For more information on the transmittal letter and schematics, see the *ICR Sampling Manual*.

You will need the following items to complete a data transfer package for EPA:

- Several blank, formatted 3.5" diskettes.

NOTE: Do not use 5.25" diskettes to send ICR data to EPA.

- Diskette labels (printed or typed) listing:
 - The PWS ID and name of your Public Water System.
 - The sampling period for which the data were collected (the sampling period for the Initial Sampling Plan is Design).
 - The date you generated the diskette.
 - The name and telephone number of the ICR Technical Contact for your water system.
- A diskette mailer addressed to:

USEPA (ICR4600)
ICR Data Center
Room 1111 East Tower
401 M Street, S.W.
Washington, DC 20460

Generating a Data Transfer Diskette and Report

To generate your diskette and report:

1. Turn on or connect to your printer.
2. Click the Transfer button on the Initial Sampling Plan menu to open the Data Transfer Menu.

NOTE: If you would like to check your data without making a transfer diskette, select the Preliminary Data Completeness Check button from the Transfer Initial Sampling Plan menu. The preliminary checks are identical to the Data Transfer Completeness Checks described below.

3. Check to make sure you have not already generated a transfer diskette for the Initial Sampling Plan by clicking the Data Transfer History button. *If you need to resubmit your Initial Sampling Plan, contact the ICR Data Management System (DMS) Hotline at (703) 908-2155 before you generate the second transfer diskette.*
4. Select the Data Transfer button from the Data Transfer Menu to open the Data Transfer window. The application will first check your data to determine whether they meet the minimum requirements for completeness. For a list of completeness checks, see the sidebar on page 82 or the ICR Help topic "Know My Initial Sampling Plan is Complete."

5. If your data are incomplete, the application will print out an Initial Sampling Plan Data Transfer Completeness Check Report. Use the report to go back into your data and complete the missing information, then repeat Steps 1, 2, and 4 of the data transfer process.

WARNING: *The Data Transfer Completeness Checks do not ensure that you have entered all the data necessary for the utility to comply with ICR requirements. For example, if you neglect to identify a required sample, the checks will not catch the error. They will, however, help you identify some gaps in your data.*

6. Once your data has passed the transfer checks, the Initial Sampling Plan Data Transfer window will open. Insert the first blank diskette in a floppy drive, select the letter of the drive, and click OK to begin data transfer.

You must use 3.5" diskettes to send ICR data to EPA. *Do not use 5.25" diskettes.*

The Data Transfer in Progress dialog box will open. Unless you are otherwise prompted by the application, do not click the mouse or use the keyboard while the box is open.

A status line will appear at the bottom of the window, telling you what part of the transfer is in process. During data transfer, the application extracts the data from your database, compresses the data, copies it on to the floppy disk, and generates a printed report. The process normally takes several minutes.

- F.4 Precursors - Monthly Analyte Results Matrix—Validate the results of DBP precursor samples taken for a single sampling period.
- F.5 Microbials - Monthly Analyte Results Matrix—Validate the results of microbiological samples taken for a single sampling period.
- F.6 Hypochlorite Stock - Monthly Analyte Results Matrix—Validate the results of samples taken from hypochlorite stock for a single sampling period.

Generating a Monthly Sampling Results Report

Generate the Monthly Sampling Results reports just as you did the Initial Sampling Plan and Monthly Sampling reports you used earlier. To generate the report:

1. Choose Reports from the Monthly Sampling Reports Menu to open the Report Selection List.
2. Turn on your printer, select the report, and click the Print button.

When you have finished printing reports, return to the Monthly Sampling Results menu by clicking the Prev button.

Sending Your Monthly Reporting Package to EPA

You will send the Agency a diskette containing your Monthly Data, which includes treatment process, sample collection, and sample analytical result information, and a summary report to help EPA verify that the data you sent the Agency are the data it received. The summary report identifies your water system and serves as formal notice that you have sent your Monthly Reporting Package to EPA.

You will need the following items to complete a data transfer package for EPA:

- Several blank, formatted 3.5" diskettes.

NOTE: Do not use 5.25" diskettes to send ICR data to EPA.

- Diskette labels (printed or typed) listing:
 - The PWS ID and name of your Public Water System.
 - The Monthly Sampling Period for which the data were collected.
 - The date you generated the diskette.
 - The name and telephone number of the ICR Technical Contact for your water system.

- A diskette mailer addressed to:

USEPA (ICR4600)
ICR Data Center
Room 1111 East Tower
401 M Street, SW.
Washington, DC 20460

Generating a Data Transfer Diskette and Report

To generate your diskette and report:

1. Turn on or connect to your printer.
2. Click the Transfer button on the Monthly Sampling Results menu to open the Data Transfer Menu.

NOTE: If you would like to check your data without generating a data transfer diskette, select the Preliminary Data Completeness Check button from the Transfer Monthly Sampling Results Menu. The preliminary checks are identical to the Data Transfer Completeness Checks described below.

3. Check to make sure you have not already generated a transfer diskette for the Monthly Sampling Period by clicking the Data Transfer History button. *If you need to resubmit your Monthly Reporting Package, contact the ICR Data Management System (DMS) Hotline at (703) 908-2155 before you generate the second transfer diskette.*

4. Select the Data Transfer button from the Data Transfer Menu to open the Data Transfer window. The application will first check your data to determine whether they meet the minimum requirements for completeness. For a list of completeness checks, see the sidebar on page 134 or the ICR Help topic "Know My Monthly Sampling Results are Complete."

5. If your data are incomplete, the application will print out a data transfer completeness check report for the appropriate reporting event. Using the report, go back in to your data, complete the missing information, and repeat Steps 1, 2, and 4 of the data transfer process.

WARNING: The Data Transfer Completeness Checks do not ensure that you have entered all the data necessary for the utility to comply with ICR requirements. For example, if you neglect to identify a required sample, the checks will not catch the error. They will, however, help you identify some gaps in your data.

6. Once your data has passed the transfer checks, the Initial Sampling Plan Data Transfer window will open. Insert the first blank diskette in a floppy drive, select the letter of the drive, and click OK to begin data transfer.

APPENDIX C:

RELEASE 1.1

Release 1.1 of the ICR Water Utility Database System is an update to Release 1.0 of the application. *It is not a standalone database application.* Release 1.1 includes modifications to Minimum Reporting Levels (MRL) for optional haloacetic acids, additions to the list of the ICR-approved analytical methods for some water quality parameters, and corrections to the reports and on-line Help text.

NOTE: Any information you entered into the database using Release 1.0 will not be affected by Release 1.1. You will not need to re-enter any data after you install the update.

You must use Release 1.1 of the application to report data to EPA. To install the release:

1. Install Release 1.0 of the Water Utility Database System according to the instructions on page 12 of the Users' Guide.

WARNING: If you have already installed Release 1.0 on your computer, do not do so again. *If you reinstall Release 1.0 and do not have a current backup, you will lose all the data you have entered into the application.*

2. Insert the diskette labeled "ICR Water Utility Database System Release 1.1 Disk 1" into a floppy disk drive on your PC.
3. Choose Run from the File menu in Program Manager.

4. Type **a:setup** in the Run dialog box. (Type **b:setup** if your diskette is in the B:\ drive.)
5. Press Enter or choose OK on the dialog box with your mouse.
6. Follow the setup instructions that appear on the screen.

The setup instructions will give you the option of installing the application in any directory on your computer. *You must install Release 1.1 in the same subdirectory in which you installed Release 1.0.*

If you have installed multiple copies of Release 1.0 on your computer, you must repeat this process for each copy of the original application.

Once you have installed Release 1.1, please insert the installation instructions and diskettes in the back of the *ICR Water Utility Database System Users' Guide*.



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