1. Introduction

1.1 Reporting Forms

The SWTR requires that all SWTPs complete and submit a surface water monthly operating report (MOR) each month; and, if necessary, additional reports based on individual filter effluent (IFE) or combined filter effluent (CFE) results. Prior to 2022, three Microsoft Excel surface water monthly operating reports (SWMORs), with versions for plants that produce less than 10,000 gallons per day (gpd) were available:

- SWMOR (TCEQ-00102C) for conventional SWTPs that use gravity media filtration with no innovative or alternative treatment.

- SWMOR-Alt (TCEQ-00102D) for SWTPs that use unconventional filters or another type of alternative treatment technology.

- SWMOR2 (TCEQ-00103) SWTPs with only two filters that use conventional treatment with no innovative or alternative technology.

One combined SWMOR (TCEQ-00105), referred to as 'SWMOR' in this guidance, was developed to simplify the reporting process for SWTPs. The combined SWMOR is customized based on the treatment technologies, additional LT2 Rule requirements, and corrective action requirements for the SWTP. Once customization of the form is completed, all necessary worksheets will be automatically generated.

The combined SWMOR and additional reporting forms, if required, are summarized in Table 1.1. If you have questions regarding the forms, contact a SWTR Coordinator.

Table 1.1. Reporting Forms and When they Apply

Form	Form Number	Application
SWMOR	00105	SWTPs that use gravity media filtration. SWTPs that use gravity media filtration with *only* two filters. SWTPs that use unconventional filters or another type of alternative treatment technology.
Filter Profile Report (FPR)	10276	SWTPs that have one or more filters which produce filtered water with elevated turbidity levels above 1.05 NTU.
Filter Assessment Report (FAR)	10277	SWTPs that have three or more turbidity exceedance events within any consecutive three-month period.
CPE Request Form	10278	SWTPs that produce filtered water with turbidity levels above 2.0 NTU during two consecutive months.

PN forms are not listed in Table 1.1. If PN is applicable, additional forms are required (see Chapter 11).

Note: The reporting forms described in this guidance involve Microsoft® Excel 2013 spreadsheets of intermediate to high complexity. Users may need training or experience with Excel spreadsheet applications before trying to use the features described in this guide. This document does not replace the training or experience needed to successfully use the forms.

Accessing Report Forms and Version Information

The combined SWMOR discussed in this guidance along with instructions and worksheets for filling out the form are found on TCEQ's [SWMOR webpage](#)[3].

Stay up to date with the latest versions of excel to ensure compatibility with the SWMOR form.

Periodically, TCEQ adopts updated software versions. These updates can affect the functionality of forms, especially complex ones like the combined SWMOR. We will keep you informed of these changes when they occur, and what impact they have on reporting.

1.2 Organization of this Guidance

The chapters are organized by the steps to customize, complete, and submit your MOR; and comply with related requirements, including PN. The steps are listed in Table 1.2 with a cross reference to the chapter that explains each step.

Additional information for customizing, completing, and submitting the SWMOR for plants that use alternative treatment technologies or two-filter plants is contained in Chapters 5 and 6, respectively.

Table 1.2. Steps for Completing and Submitting an SWMOR

Step	Description	Chapter
1	Customizing an SWMOR workbook	2
2	Entering data in an SWMOR workbook	3
3	Compiling summary data and summary pages	4
4	Additional Information for alternate treatment technology and two-filter plants	5, 6
5	Completing FPRs, if required	7
6	Completing FARs, if required	8
7	Completing CPE Requests, if required	9
8	Printing, signing, and submitting an MOR	10
9	Issuing PN, if required	11

1.3 Electronic Form Features

The SWMOR and other report forms described in this guidance have electronic features which speed reporting, improve security, and reduce reporting errors. These features perform the following functions:

- Limit the types of values you can report
- Perform calculations automatically
- Ensure reports are filled out completely

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[3] www.tceq.texas.gov/goto/swmor-forms

The forms also contain features that prevent you from accidentally overwriting data from a previous month, helping you comply with record retention requirements. (See Section 1.4.)

Workbook and Worksheets

The SWMOR form described in this guidance is referred to as a workbook. The workbook includes numerous spreadsheets called worksheets which are used to report specific information about plant performance and operation. The tabs at the bottom of the workbook screen identify the worksheets. Tabs are visible based on the specific technology employed at your plant and how you tailor your workbook. Clicking on a tab changes it from gray to white and opens the worksheet. Figure 1.1 shows the worksheet tabs that will be present for conventional SWTPs. Figure 1.2 shows tabs that might be present based on the alternative treatment that is selected when customizing the workbook. Figure 1.3 shows the tabs that will be present if the workbook is customized for a two-filter plant.

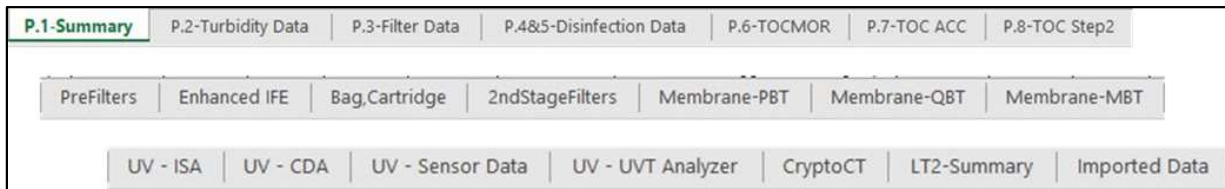**Figure 1.1. Worksheet Tabs for Conventional SWTPs**

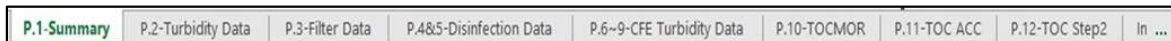**Figure 1.2. Worksheet Tabs for Plants with Alternative Treatment Technologies**

Figure 1.3. Worksheet Tabs for 2-Filter Plants

Worksheet Contents

Table 1.3 summarizes the worksheets for the SWMOR workbook. Becoming familiar with the names and contents of each worksheet will help you customize and enter data.

Table 1.3. Worksheet Titles and Contents

Worksheet Title(s)	Worksheet Contents	Conventional Plants	2-Filter Plants	Plants with Alternative Treatment
P.1-Summary	Compilation of monthly data summaries. Includes a Summary Page Addendum informing the user of triggered violations and PN requirements	√	√	√
P.2-Turbidity Data	Raw and settled water turbidity data, 4-hr CFE turbidity data, and minimum disinfectant residual data entering the distribution system	√	√	√
P.3-Filter Data	IFE turbidity data for conventional filters such as pressure filters or gravity filters that use a filter media like sand, anthracite, or garnet	√	√	√
P.4&5-Disinfection Data	CT calculation data for reporting virus and *Giardia* inactivation ratios	√	√	√
P.6-TOCMOR	TOCMOR Page 1 TOC Removal	√	√	√
P.7-TOC ACC	TOCMOR Page 2 alternative compliance criteria	√	√	√
P.8-TOC Step 2	TOCMOR Page 3Step 2 Jar Test Report Form	√	√	√
P. 6-9 CFE Turbidity Data	CFE turbidity data		√	
Imported data	SCADA data to import into the MOR workbook, if applicable	√	√	√
PreFilters	Data for plants that use prefilters to receive *Cryptosporidium* removal credit			√
Enhanced IFE	Data for plants that use enhanced IFE reporting			√
Bag, Cartridge	Data for plants that use bag or cartridge filter			√
2ndStageFilters	Data for plants that use two-stage filtration with conventional filters			√
Membrane-PBT	Data for membrane filter plants that measure the pressure decay rate during a DIT			√
Membrane-QBT	Data for membrane filter plants that measure the air flow rate during a DIT			√
Membrane-MBT	Data for membrane filter plants that use marker or tracer tracking for direct integrity testing			√
UV - ISA	Data for plants that use UV disinfection with the ISA reactor			√
UV - CDA	Data for plants that use UV disinfection with the CDA reactor			√
UV - Sensor Data	Sensor calibration data for plants with UV disinfection that use either the ISA or CDA			√
UV - UVT Analyzer	Benchtop analyzer calibration data for plants that use calculated dose reactors to provide UV disinfection			√
CryptoCT	*Cryptosporidium* inactivation calculations using chemical disinfectants, related to P.4&5, which contain similar information for *Giardia* and virus inactivation			√
LT2- Summary	Identifies the treatment technologies used for *Cryptosporidium* inactivation data for compliance with LT2 requirements			√

Custom Toolbar

The SWMOR workbook has a customized toolbar. This toolbar appears when you open the workbook and remains active until you close it. This toolbar, shown in Figure 1.4, includes two special command buttons; Save As Excel 2016 and Paste Values.
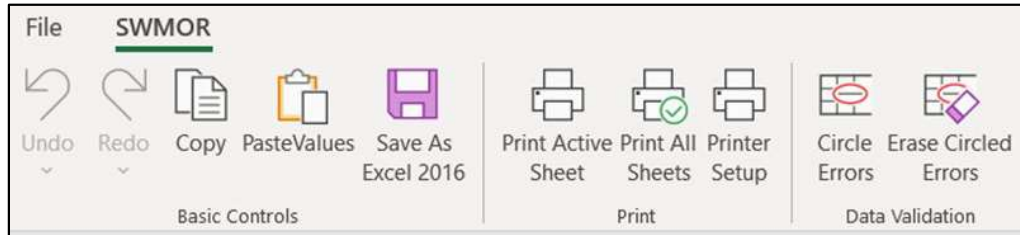

Figure 1.4. Custom Toolbar

Select [Save As Excel 2016] to avoid accidentally overwriting data from a previous month by requiring you to confirm the proposed filename each time you save a file. It also helps establish a standardized file structure based on the year, month, and treatment facility where the data was collected.

Select [Paste Values] to avoid accidentally damaging the worksheets by only pasting values, and not formulas, when you cut and paste data.

Data Validation

The tool bar has a feature that automatically draws a red circle around empty cells that cannot be left blank, or data that does not meet the validation requirements. Figure 1.4 shows these data validation options on the right side of the Toolbar.

The first button puts red circles around all cells that either need data entered or have errors. It does not circle cells you have already filled in correctly. The second button erases the circles, so it is easier for you to enter the required information.

Electronic Comments and Instructions

Since the workbook is an electronic file, we have been able to add comments and instructions directly in the associated cells. Once you learn how to use the workbook, these data entry prompts will reduce or eliminate your need for this guidance.

Each cell with a comment or instruction has a little red triangle in the upper right corner. To see the comment, move the cursor over the cell, and it will appear, as shown in Figure 1.6.

Figure 1.5. Example of a Data Entry Prompt

Drop-down Lists

Some cells have a drop-down list that provides the options for that cell. The cells with drop-down lists appear when you move your cursor over them. A small downward-pointing arrow appears when you click in the cell. Click on the arrow to view the list.

For example, the drop-down list associated with the **Month** cell of the **P.2 Turbidity Data** worksheet is shown in Figure 1.7.

In this example you would move your cursor over the month you want to select and click your left mouse button. The month you selected will appear in the cell.

Figure 1.6. Example of Drop-down List

Special Fonts and Symbols

The special fonts and symbols, shown and described in Table 1.4, are used throughout this guidance to focus your attention on certain instructions.

Table 1.4. Special Fonts and Symbols Used in this Document

Symbol	Meaning
CALC	Denotes a cell where you cannot enter data, because there is a formula that automatically reports a value.
[ ]	Denotes an area in either a message box, a dialog box, or a drop-down list where you need to select a preset option.
{ } and ( )	Regular brackets denote where you need to enter information or data, rather than select from a list of preset options. The parentheses, as used in this case, denote the unit in which the data must be reported. Example: Enter the {Flow (in MGD)} of raw water pumped.
Name or Area of a worksheet	Words typed in Arial font and bolded denote the name of a worksheet or an area on a worksheet, like a dialog box, table, cell, area, or section. Example: **Plant Parameters** dialog box.
Text Box	Contains important information critical to the successful implementation of this guidance. This includes information directly related to compliance violations if the instructions contained in the guidance are not properly executed.
Note	Contains ancillary information which as important but not as critical to the successful completion of the forms as the information contained in text boxes.

Protected Cells

Some worksheet cells are protected so they can't be altered. You cannot type in a protected cell. For example, if you only have two filters, and you try to enter data for Filter 3, the worksheet won't let you because the cell is protected. Another example of a protected cell is one containing a formula for automatic calculations. When you click on a protected cell, the warning screen, shown in Figure 1.8 will appear. When you select OK, the box disappears.
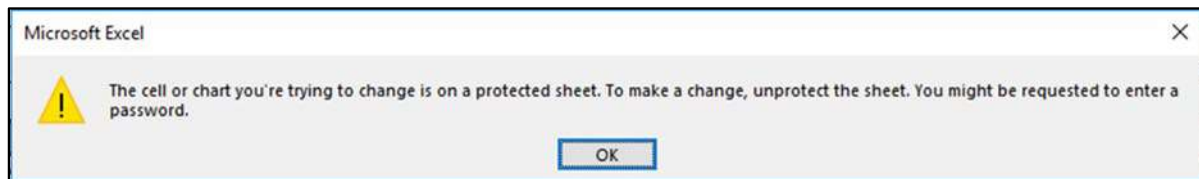

Figure 1.7. Protected Cell Warning

Macros

Macros are programs that automatically perform specific tasks when you open a file. There are multiple macros in the worksheet that do things like circle empty cells that should contain data. Macros can take time to run. Be patient and do not click buttons or type while you are waiting for a macro to run.

1.4 Reports and Records

You are required to keep copies of your MORs, as well as other records and reports according to specified time periods defined in 30 TAC Chapter 290.46(f). Copies of PWS records and reports must be maintained in an organized manner and be available upon request. Records and reports can be stored electronically or as hard copy depending on your system's operating practices.

SWTPS must retain copies of reports and records for the following time periods, at a minimum:

Two years:

- Amounts of chemical used.
- Volume of water treated and distributed each day.
- Maintenance records for water system equipment and facilities. Systems using reverse osmosis or nanofiltration must maintain records of each CIP process including the date, duration, and procedure used for each event.

Three years:

- Notices of violation and any resulting corrective actions beginning after the last action taken.
- PNs issued.
- Disinfectant residual monitoring results from the distribution system.

- Calibration records for laboratory equipment, flow meters, rate-of-flow controllers, online turbidimeters, and online disinfectant residual analyzers.
- Raw surface water monitoring results and source water monitoring plans.
- Free and total chlorine, monochloramine, ammonia, nitrite and nitrate monitoring results if chloramines are used.
- Records of treatment effectiveness monitoring for systems using reverse osmosis or nanofiltration membranes. Treatment effectiveness monitoring includes the parameters for determining when maintenance is required.

Five years after they are no longer in effect:

- Records concerning a variance or exemption granted to the system.
- CT studies for SWTPs.
- Recycling Practices Report and other records pertaining to site-specific recycle practices, if applicable.
- Turbidity monitoring results and exception reports for individual filters.

Five years:

- Inspection results for all water storage, pressure maintenance facilities and pressure filters.

Ten years:

- MORs and supporting documentation including CFE turbidity monitoring results.
- Results of chemical analysis.

For a complete list of retention requirements, refer to the rules to ensure your retention and maintenance practices comply. If you have questions, contact a SWTR Coordinator.

1.5 Monitoring and Analysis

To ensure the water you produce is safe for drinking, you must be able to accurately monitor and analyze the operational and performance parameters described in this guidance. These parameters include all the following:

- Flow rate of raw and treated water.
- Flow rate through each disinfection zone.
- Turbidity of raw water, settled water, IFE, and CFE.
- TOC concentrations of raw water and treated water.
- Temperature, pH, and disinfectant residual in each disinfectant zone.
- Disinfectant residuals leaving the plant and in the distribution system.
- Additional parameters if you are using alternative treatment like membranes or UV disinfection.

To comply with monitoring and reporting requirements, all analyses including those taken in the field must be performed by an approved facility or laboratory. To get this approval, your testing facility or laboratory must do the following:

- Use approved test methods.
- Document and report all methods used to TCEQ on the Laboratory Approval Form.
- Properly calibrate and maintain testing instruments and equipment. (See Appendix G.)
- Maintain acceptable records.

Because accurate monitoring and analysis is so important to public health, we require a monitoring plan for your plant and distribution system. The plan must include specific information on your testing facility or laboratory, the testing methods you employ.

Because every SWTP is required to develop and submit a monitoring plan for review and approval, we have published a separate document entitled, How to Develop a Monitoring Plan for a Public Water System[4] (RG-384).

For questions about monitoring and analysis, contact TCEQ's Laboratory Approval Coordinator at 512-239-4691. For more information on developing a monitoring plan visit TCEQ's website[5].

2. Customizing an SWMOR Workbook

The first time you use the SWMOR form, you will customize it by entering the data and information specific to your plant. In this chapter, we explain how to customize an SWMOR form to create your own workbook to use as a masterfile for reporting month after month. You only customize the SWMOR workbook once unless there is a change in plant operation or design.

You will need the following records to customize the SWMOR workbook:

- Plant design information, or letters approving your plant design.
- CT Study approval letter. (See Appendix A.)
- Exception approval letters, if applicable.

> This chapter explains how to customize an SWMOR form using the example CT Study approval letter in Appendix A. Additional guidance for completing the SWMOR for plants that use alternative treatment technologies or 2-filter plants can be found in chapters 5 and 6, respectively.

2.1 Opening Screen Security Warning

To begin customizing a SWMOR form, locate and open a blank form from our website. When you open a SWMOR form the first time, and any time thereafter, a security

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[4] www.tceq.texas.gov/goto/monitoringplan
[5] www.tceq.texas.gov/drinkingwater/monitoring_plans