



## TCEQ Financial, Managerial, and Technical (FMT) Assistance Contract

### *Directed Assistance Modules and Descriptions*

Click on a task (topic) to view the description and relevant sub-topics.

Please contact us at 512-239-4691 or [FMT@tceq.texas.gov](mailto:FMT@tceq.texas.gov) if you have any questions or want to request FMT Assistance.

## List of Directed Assistance Modules

- DAM 1: [Developing Performance Goals and a Monitoring Strategy at a Surface Water Treatment Plant](#)
- DAM 2A: [Establishing Appropriate Chemical Feed Rates at a Surface Water Treatment Plant](#)
- DAM 2B: [Establishing Appropriate Chemical Feed Rates Using Representative Jar Testing at a Surface Water Treatment Plant](#)
- DAM 3: [Completing the Surface Water Monthly Operating Report Using the Automated Reporting Form](#)
- DAM 3-Alt: [Completing the SWMOR-Alt for Surface Water Treatment Plants with Alternative Technologies](#)
- DAM 4: [Chloramine Disinfection and Disinfection Byproduct Control for Surface Water Treatment Plants](#)
- DAM 5: [Process Control for Systems Using Chloramines](#)
- DAM 6: [Filter Assessment for a Conventional Surface Water Treatment Plant](#) <sup>TOP</sup>
- DAM 7: [Initial Demonstration of Capability Utilizing EPA Method 334 – Determining Residual Chlorine in Drinking Water Using On-Line Analysis](#) <sup>TOP</sup>
- DAM 8: [Creating a Nitrification Action Plan for Systems Using Chloramines](#)
- DAM 9: [Special Studies in a Surface Water Treatment Plant](#) <sup>TOP</sup>
- DAM 10: [Turbidimeter Data Integrity](#) <sup>TOP</sup>
- DAM 11: [How to Perform a Revised Total Coliform Rule L1A](#)
- DAM 12: [How to Develop and Manage an Effective Cross-Connection Control Program](#)

Note: <sup>TOP</sup> indicates the task is provided by the TCEQ Texas Optimization Program (TOP).

# DAM Descriptions

## **DAM 1: Developing Performance Goals and a Monitoring Strategy at a Surface Water Treatment Plant**

This DAM helps a SWTP to develop process monitoring strategies and goals to improve water treatment. It helps identify the specific monitoring locations, parameters, frequencies, methods, and goals.

## **Under Revision DAM 2A: Establishing Appropriate Chemical Feed Rates at a Surface Water Treatment Plant**

After receiving this training, operators who need to dose chlorine, chloramines, fluoride, or other chemicals should be able to measure chemical feed rates; calculate chemical dose; and perform monitoring accurately. For a SWTP, DAM 2 is a prerequisite for DAM 2A.

## **DAM 2B: Establishing Appropriate Chemical Feed Rates Using Representative Jar Testing at a Surface Water Treatment Plant**

This DAM helps SWTPs develop and optimize the jar testing processes used to ensure effective settling. When DAM 2B is scheduled, DAM 2A should be scheduled first.

## **DAM 3: Completing the Surface Water Monthly Operating Report Using the Automated Reporting Form**

The SWMOR is the primary reporting tool for SWTPs. Conventional plants are those that use media filtration. After receiving this training, the staff of the SWTP should be able to establish an effective electronic file management system; customize the SWMOR for the specific surface water treatment plant; save the customized SWMOR; create monthly files; enter daily data; print and submit the completed SWMOR; determine if the treatment plant is in compliance.

## **DAM 3-Alt: Completing the SWMOR-Alt for Surface Water Treatment Plants with Alternative Technologies**

All SWTPs with innovative treatment—such as membranes—must complete the SWMOR-Alt. This DAM covers the same material as DAM 3A, but for SWTPs that must complete the SWMOR-Alt.

## **DAM 4: Chloramine Disinfection and Disinfection Byproduct Control for Surface Water Treatment Plants**

This DAM trains operators on the basic science of DBPs, how they form, and how to control them. It helps operators figure out what specific issues are causing their issues with DBPs, whether additional data is needed to figure that out, and to identify what control strategies may be appropriate for their distribution system or SWTP. Participating in this DAM will help SWTP staff determine whether DBP formation occurs in the plant, and, if so, how to control it. This DAM involves two visits: samples are collected on the first visit, they are analyzed, and on the second visit the results are interpreted and discussed. (NOTE: The SWTP must pay for samples)

## **DAM 5: Process Control for Systems Using Chloramines**

This training explains chloramine chemistry and how to successfully dose and maintain a chloramine residual. After receiving this training, a water system's staff should be able to explain how chloramines form and how to control operating conditions to minimize competing reactions. DAM 5 is a prerequisite for DAM 8.

## **DAM 6: Filter Assessment for a Conventional Surface Water Treatment Plant <sup>TOP</sup>**

A SWTP may be required to do a filter assessment because of turbidity trigger levels, or may wish to do one in order to optimize the plant. In either case, this DAM will train operators on how to successfully perform filter assessments and analyze their results.

## **DAM 7: Initial Demonstration of Capability Utilizing EPA Method 334 – Determining Residual Chlorine in Drinking Water Using On-Line Analysis <sup>TOP</sup>**

In order to be allowed to use a non-DPD (N,N-diethyl-p-phenylenediamine) on-line chlorine analyzer for reporting regulatory chlorine residuals, the instrument's accuracy must be established using EPA Method 334. This DAM helps systems use that method.

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### **DAM 8: Creating a Nitrification Action Plan for Systems Using Chloramines**

Every PWS that uses chloramines must have a Nitrification Action Plan (NAP) to control or respond to potential nitrification—a biological process that can reduce the disinfectant residual. This DAM will help determine goals, baselines, triggers, and actions for the NAP. DAM 5 is a prerequisite for DAM 8.

### **DAM 9: Special Studies in a Surface Water Treatment Plant <sup>TOP</sup>**

Water treatment plant operators collect a lot of routine monitoring data and take routine actions to adjust treatment processes on a continuous basis. What should the operator do when the routine adjustments don't seem to be working, when there might be a better way to treat the water, or something just doesn't make sense? This DAM presents methods for conducting special studies in the plant using principles of trouble-shooting and the scientific method that result in rational action plans to address the issues that fall outside routine plant operations.

### **DAM 10: Filter Data Integrity for a Surface Water Treatment Plant <sup>TOP</sup>**

The data collected by turbidimeters is an important part of a SWTP's compliance record and is used to indicate the effectiveness of pathogen removal through the plant. This data can pass through a number of electronic processes before it is ultimately reported on the SWMOR. This DAM helps operators make sure that the data they collect and report is of the best and most accurate quality.

### **DAM 11: How to Perform a Revised Total Coliform Rule L1A**

The federal RTCR took effect April 1, 2016. Under RTCR, systems must perform a Level 1 Assessment to find and fix any sanitary defects if they exceed trigger levels for total coliform presence. This DAM assists with that process. (For ALL PWSs)

### **Under Revision DAM 12: How to Develop and Manage an Effective Cross-Connection Control Program**

This DAM helps systems without an existing cross-connection control program create one, or help systems with existing cross-connection control programs evaluate, modify, and improve their program. (For ALL PWSs)