

## FMT

Financial, Managerial, and Technical (FMT) Assistance is a program of the TCEQ Water Supply Division that works to provide free on-site assistance to Texas public water systems. Among other training tools, FMT Assistance uses Directed Assistance Modules (DAMs), which are 6-8 hour workshop training events covering a variety of technical topics for public water system operators. The Texas Optimization Program (TOP) is tasked with developing instructional materials for DAMs and FMT Assistance contractors receive training from TOP staff prior to delivering new DAMs to operators.

FMT Assistance staff receive requests to deliver DAMs from TCEQ staff, other state agency staff, and the regulated community. To request a DAM or other FMT Assistance, please call (512) 239-4916 and ask for FMT Assistance or email [FMT@tceq.texas.gov](mailto:FMT@tceq.texas.gov) with a description of the assistance being sought. After receiving a request for delivery of a DAM, program staff will assign the case to an FMT Assistance contractor who then will contact staff at the public water system to schedule the on-site training.

## Directed Assistance Modules for Public Water Systems

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Directed Assistance Modules (DAMs) provide hands-on training to public water system (PWS) staff. Some DAMs are for surface water treatment plants (SWTPs), others are for distribution systems.

### **DAM 1: Performance Goals and a Monitoring Strategy at a SWTP**

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.

### **DAM 2A: Establishing Appropriate Chemical Feed Rates at a SWTP**

After receiving this training, the staff of the SWTP should be able to measure chemical feed rates; calculate chemical dose; prepare stock solutions for jar tests.

### **DAM 2B: Jar Testing for a SWTP**

This DAM helps SWTPs develop and optimize the jar testing processes used to ensure effective settling.

### **DAM 3A: Completing the Surface Water Monthly Operational Report (SWMOR) For a Conventional SWTP**

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 3B: Completing the SWMOR-Alt for SWTPs with Alternative Treatment**

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: Disinfection Byproduct (DBP) Control for SWTPs**

Sometimes, DBP issues start in the 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 sample analysis.)

#### **DAM 5: Process Control for PWSs 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 6: Filter Assessment for a Conventional SWTP**

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: Method 334—Approval of Non-DPD Online Chlorine Analyzers for Regulatory Use**

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.

#### **DAM 8: Nitrification Action Plan for PWSs using Chloramines**

Every PWS that uses chloramines must have a Nitrification Action Plan (NAP) to control or respond to potential nitrification, which is a biological process that can reduce the disinfectant residual and form nitrite and nitrate, which have public health concerns. This DAM will help determine goals, baselines, triggers, and actions for the NAP.

#### **DAM 9: Special Studies in the Water Treatment Plant**

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 SWTP**

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: Level 1 Assessments under the Revised Total Coliform Rule (RTCR)**

The federal RTCR took effect April 1, 2016. Under the RTCR, systems with non-acute violations are no longer required to do public notice; instead they must perform a Level 1 Assessment to find and fix any sanitary defects that may have contributed to the total coliform presence. This DAM will assist with that process.

## **DAM recently developed**

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In FY 2017, one additional DAM has been developed:

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

Directed Assistance Module (DAM) number 12 is a comprehensive training for water system personnel on developing and managing an effective cross-connection control program. It covers in detail all the elements of a program including:

1. What a cross-connection is and how backflow can contaminate the potable water supply;
2. Types of cross-connection control programs, for example a rural water system will have a different program than would a large municipality;
3. An authority which allows the implementation of the program;
4. Customer Service Inspections which tell the water system whether a site has a cross-connection or lead in the plumbing;
5. Types of backflow preventers and why it is important that they be tested;
6. Who should participate in the Cross-Connection Control Program and why good communication is so important;
7. Record keeping requirements; and
8. An incident response plan.

This DAM is presented by TCEQ technical assistance programs on location at the water system site and is free of charge. It has been very well received and early reviews are very favorable. We expect the demand for this DAM to be high.