

State of Ohio Class A Drinking Water Operator Certification Program

Session Four:
Monitoring Requirements; Sample Labeling; Sample Submission Reports; Microbiological Contaminant Reports; Positive Total Coliform Results; Nitrate and Nitrite Testing; Chemical Monitoring Entry Point Schedule; Lead and Copper Testing; Consumer Confidence Reports & License to Operate

This course includes content developed by the Ohio Environmental Protection Agency, the Pennsylvania Department of Environmental Protection, the Indiana Department of Environmental Management, California State University at Sacramento and 360water, Inc.

Project funded by the USEPA.

What If I Only Operate Part of the Year?

- Seasonal public water systems must notify their Ohio EPA district office of the operating season of the facility
- All public water systems are required to monitor according to the schedule issued by the Ohio EPA for every monitoring period, or partial monitoring period, that the system is “open”. This includes the “off” season if the water system is still providing water to a caretaker.
- The only time monitoring is not required in a monitoring period is if the system is completely closed down during the *entire* monitoring period

How Do I Arrange to Have My Water Tested?

Laboratory Requirements:

- Contact a laboratory that is certified by the Ohio EPA for the required test.
- Contact the Ohio EPA at 614-644-2752 if you want a list of laboratories certified for drinking water mailed or faxed to you
- This information can also be found on the Ohio EPA's website at <http://www.epa.state.oh.us/ddagw>
- If you do not use an Ohio EPA certified laboratory, ***the results will not be accepted***

How Do I Arrange to Have My Water Tested?

Required Information on the Sample Submission Report:

- Public Water System (PWS) name
- Address
- PWS identification number (PWSID)
- Sample collection date and time
- Sample collector
- Sample class (usually routine)
- Sample monitoring point (usually DS000)
- Tap address
- Sample tap ID
- A phone number is optional, but recommended

Monitoring Requirements

- Public water systems are required to perform water quality monitoring on a regular basis. The monitoring results must meet minimum Ohio water quality standards.
- It is the water system's responsibility to make sure that all monitoring requirements are met within the required time frame

Monitoring Requirements, *continued...*

The following table describes the minimum monitoring requirements for transient water systems serving a population of less than 1,000 people:

Contaminant	Ground Water System	Sample Tap	Sample Monitoring Point (SMP) Code
Total Coliform Bacteria	1 sample each calender quarter	Collect from the distribution system according to your sample siting plan	DS000
Nitrate	1 sample per year	Collect from the entry point to the distribution system (first tap after treatment)	EP00# listed on your schedule (usually EP001)
Nitrite	One time		

Three Important Definitions

Maximum Contaminant Level Goal (MCLG):

Level of a contaminant known to occur in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals. Also referred to as the Primary MCLG or PMCLG.

Three Important Definitions, *continued...*

Maximum Contaminant Level (MCL):

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible, using the Best Available Treatment technology (BAT), and taking cost into consideration. MCLs are enforceable standards. Also referred to as the Primary MCL or PMCL.

Three Important Definitions, *continued...*

Maximum Disinfectant Residual Level (MDRL):

The highest level of a disinfectant allowed in drinking water.

Where Do I Collect My Sample?

- Total Coliform bacteria samples should be taken from the distribution system according to your sample site plan
- The appropriate Sample Monitoring Point (SMP) to use when filling out the paperwork is DS000

How to Avoid Contaminating My Sample

The following procedure must be followed for a valid laboratory analysis:

1. Select the sampling tap. A tap, such as faucet, petcock, or small valve, is preferable. Do not sample from hoses, drinking water fountains, or kitchen swivel taps.

How to Avoid Contaminating My Sample, *continued...*

2. Avoid taps with a leak at the stem or taps with a swivel joint
3. Aerated or screened nozzles may harbor bacteria. The aerator or screen must be removed before collection of the sample
4. Place all point-of-use carbon filters, sediment filters, and water softeners on bypass unless operated by a public water system.

How to Avoid Contaminating My Sample, *continued...*

5. Sanitize the nozzle of the tap with a chlorine solution
 - a. Use a 5.25% sodium hypochlorite solution, such as liquid unscented bleach. To prepare a sanitizing solution that will contain about 400mg/L of available chlorine (as hypochlorite) from the 5.25% sodium hypochlorite, add 1 ounce of bleach to one gallon of water (or 1 tablespoon per half-gallon).

How to Avoid Contaminating My Sample, *continued...*

- a. Store the mixed solution in a tightly closed screw-capped container. The solution should be discarded and remade 6 months after preparation. Stronger solutions can be used, but some faucet discoloration may result.

How to Avoid Contaminating My Sample, *continued...*

- b. Flush the sample tap to waste for one minute and close the valve.
- c. Apply the sanitizing solution, prepared in step a above, to the nozzle. This can be accomplished by either using a spray bottle or a plastic bag.

How to Avoid Contaminating My Sample, *continued...*

- d. Using a spray bottle, saturate the tap opening with sanitizing solution and wait at least two minutes before proceeding,

Or

Place the bag over the nozzle and hold the top of the bag tightly on the tap. Alternatively, squeeze and release the bag to flush the solution in and out of the tap. Do this for two minutes. A fresh solution and bag must be used to sanitize each tap.

How to Avoid Contaminating My Sample, *continued...*

6. Flush the tap. The sample to be collected is intended to be representative of the water in the main. The tap must be opened fully and the water run to waste for at least 3-5 minutes to allow for adequate flushing of the piping between the tap and water main.
7. Reduce the flow from the tap. This will allow the sample bottle to be filled without splashing. Then run the Free and Total Chlorine test and record the results.

How to Avoid Contaminating My Sample, *continued...*

8. Remove the cap from the sample bottle
 - a. Grasp the bottom of the sample bottle.
 - b. Remove the cap and hold the exterior of the cap between your fingers while filling the sample bottle. Take care not to touch the mouth of the bottle or the inside of the cap with your fingers, or the sample could become contaminated.
 - c. The bottle must only be open during the collection of the sample

How to Avoid Contaminating My Sample, *continued...*

9. Fill the sample bottles

- a. Do not rinse out the bottle before collecting the sample and do not remove any “pills” from the bottle. The bottle contains a small amount of Sodium Thiosulfate to neutralize the chlorine in the water.
- b. Do not touch the rim or mouth of the bottle during collection of the sample
- c. Do not overfill. Fill the bottle to within $\frac{1}{4}$ ” – 1” of the top.

How to Avoid Contaminating My Sample, *continued...*

10. Immediately recap the sample bottle tightly.
11. If there is any question as to whether a sample or bottle has become contaminated during the collection of the sample, the sample must be discarded and a new sample collected in a new sample bottle.

How to Avoid Contaminating My Sample, *continued...*

12. Deliver the sample to the laboratory as soon as possible. The laboratory must receive the sample so that analysis can be completed (incubation initiated) within 30 hours after collection. Allow the laboratory adequate time to analyze the sample. Certified laboratories will not test samples more than 30 hours old because the results will be invalid and the laboratory could risk loss of certification.

How to Avoid Contaminating My Sample, *continued...*

13. Additional information

- a. A sample identification slip (you may use the microbiological SSR form) is supplied with each sample bottle. The collection portion of the form is to be filled out in a legible manner using indelible pen, rubber stamp, or a typewriter. Do not use a fountain pen or any other pen that uses water-soluble ink.

How to Avoid Contaminating My Sample, *continued...*

- b. Samples must be collected in bottles supplied by the certified laboratory performing the analyses. Bottles may be used from other certified laboratories provided the sample bottle-supplying laboratory furnishes records of sample bottle sterility tests.

How to Avoid Contaminating My Sample, *continued...*

- c. Samples must be accompanied by a properly completed sample identification slip. Sample identification slips that have not been properly completed as to the name of the water supply, address, date, time of collection (military time), and name of collector are not to be accepted for bacteriological examination.

How to Avoid Contaminating My Sample, *continued...*

REMEMBER

Labs will not analyze samples for the following reasons:

1. Time elapsed since sample collection: > 30 hours
2. Leaking or breakage of sample bottles in transit
3. Free Chlorine residual in de-chlorinated sample

How to Avoid Contaminating My Sample, *continued...*

4. Incomplete information for the completion of the SSR
5. Samples frozen
6. Less than 100 mL of sample available
7. Any other reason that may affect test results

See www.epa.state.oh.us/ddagw/labcert.html (collection procedure for bacteria from the Laboratory Manual for the Microbiological Analyses of Public Drinking Water 2001).

Sample Submission Reports

Correctly filling out Sample Submission Reports is essential because if they are not filled out properly, the lab will send it back. If a sample is not tested by the required date, a violation may occur. Let's take a look at a typical SSR and then we will practice filling one out.




**MICROBIOLOGICAL
SAMPLE SUBMISSION REPORT (SSR)**

MAIL COMPLETED REPORT TO: Appropriate District Office

Central District Office 3232 Alum Creek Drive Columbus, Ohio 43207-3417 (614) 728-3778 FAX (614) 728-0160	Northwest District Office 347 North Dunbridge Road Bowling Green, Ohio 43402 (419) 352-8461 FAX (419) 352-8468	Southwest District Office 401 East Fifth Street Dayton, Ohio 45402-2911 (937) 285-6357 FAX (937) 285-6249
Northeast District Office 2110 East Aurora Road Twinsburg, Ohio 44087 (330) 963-1200 FAX (330) 963-4760	Southeast District Office 2195 Front Street Logan, Ohio 43138 (740) 385-8301 FAX (740) 385-6490	

PUBLIC WATER SYSTEM INFORMATION: District Office: _____ PWS Name: _____ PWS ID Number: _____ Address: _____ City/State/Zip: _____ County: _____ Contact's Name: _____ Contact's Phone: _____	LABORATORY INFORMATION: Reporting Lab Name: _____ Reporting Lab Certification #: _____ Analytical Lab Name: _____ Analytical Lab Certification #: _____ Sample Number: _____
ANALYTICAL INFORMATION: Method Used: ☐ Membrane Filter ☐ MMO-MUG Analyst Number: _____ Analysis Date: _____ Analysis Time: _____	SAMPLE INFORMATION: Sample Collection Date: _____ Time: _____ Sample Collected by: _____ Collector's Phone: _____ Sample Class: ☐ Routine ☐ Repeat ☐ Special ☐ Raw Sample Monitoring Point: _____ Repeat for Sample #: _____ Tap Address: _____ Sample Tap ID: _____

Total Coliform Results: ☐ Positive ☐ Negative ☐ Positive/CG ☐ Positive/HBC Fecal Coliform Results: ☐ Positive ☐ Negative ☐ No Value E Coli Results: ☐ Positive ☐ Negative ☐ No Value LTB 24: ☐ Positive ☐ Negative ☐ No Value LTB 48: ☐ Positive ☐ Negative ☐ No Value BGB 24: ☐ Positive ☐ Negative ☐ No Value BGB 48: ☐ Positive ☐ Negative ☐ No Value	OTHER RESULTS: ☐ Not Analyzed ☐ Sample too Old ☐ Leaked in Transit ☐ Broken in Transit ☐ Residual Chlorine	☐ Insufficient Sample ☐ Incomplete Information ☐ Lab Accident ☐ TC Negative/CG-INVALID ☐ TC Negative/HBC-INVALID
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COMMENTS (For Use Only When Other Results Are Obtained):

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PUBLIC WATER SYSTEM INFORMATION:
 District Office: _____
 PWS Name: _____
 PWS ID Number: _____
 Address: _____

 City/State/Zip: _____
 County: _____
 Contact's Name: _____
 Contact's Phone: _____

SAMPLE INFORMATION:
 Sample Collection Date: _____ Time: _____
 Sample Collected by: _____
 Collector's Phone: _____
 Sample Class: ☐ Routine ☐ Repeat ☐ Special ☐ Raw
 Sample Monitoring Point: _____
 Repeat for Sample #: _____
 Tap Address: _____
 Sample Tap ID: _____

OhioEPA
 Division of Drinking and Ground Waters

**MICROBIOLOGICAL
 SAMPLE SUBMISSION REPORT (SSR)**

MAIL COMPLETED REPORT TO: Appropriate District Office

Central District Office
 3232 Alum Creek Drive
 Columbus, Ohio 43207-3417
 (614) 728-3778 FAX (614) 728-0160

Northwest District Office
 347 North Dunbridge Road
 Bowling Green, Ohio 43402
 (419) 352-8461 FAX (419) 352-8468

Northeast District Office
 2110 East Aurora Road
 Twinsburg, Ohio 44087
 (330) 963-1200 FAX (330) 963-4760

Southwest District Office
 401 East Fifth Street
 Dayton, Ohio 45402-2911
 (937) 285-6357 FAX (937) 285-6249

Southeast District Office
 2195 Front Street
 Logan, Ohio 43138
 (740) 385-8501 FAX (740) 385-6490

PUBLIC WATER SYSTEM INFORMATION:
 District Office: _____
 PWS Name: _____
 PWS ID Number: _____
 Address: _____

 City/State/Zip: _____
 County: _____
 Contact's Name: _____
 Contact's Phone: _____

LABORATORY INFORMATION:
 Reporting Lab Name: _____
 Reporting Lab Certification #: _____
 Analytical Lab Name: _____
 Analytical Lab Certification #: _____
 Sample Number: _____

SAMPLE INFORMATION:
 Sample Collection Date: _____ Time: _____
 Sample Collected by: _____
 Collector's Phone: _____
 Sample Class: ☐ Routine ☐ Repeat ☐ Special ☐ Raw
 Sample Monitoring Point: _____
 Repeat for Sample #: _____
 Tap Address: _____
 Sample Tap ID: _____

ANALYTICAL INFORMATION:
 Method Used: ☐ Membrane Filter ☐ MMO-MUG
 Analyst Number: _____
 Analysis Date: _____
 Analysis Time: _____

Total Coliform Results	☐ Positive	☐ Negative	☐ Positive/CG	☐ Positive
Fecal Coliform Results	☐ Positive	☐ Negative	☐ No Value	☐ Positive
E Coli Results	☐ Positive	☐ Negative	☐ No Value	☐ Positive
LTB 24	☐ Positive	☐ Negative	☐ No Value	☐ Positive
LTB 48	☐ Positive	☐ Negative	☐ No Value	☐ Positive
BGB 48	☐ Positive	☐ Negative	☐ No Value	☐ Positive

OTHER RESULTS:
☐ Not Analyzed
☐ Sample too Old
☐ Leaked in Transit
☐ Broken in Transit
☐ Residual Chlorine

☐ Insufficient Sample
☐ Incomplete Information
☐ Lab Accident
☐ TC Negative/CG-INVALID
☐ TC Negative/HBC-INVALID

COMMENTS (For Use Only When Other Results Are Obtained):

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- Information to be filled out by the operator. Everything else is filled out by the lab during testing.

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Example

PUBLIC WATER SYSTEM INFORMATION:

SAMPLE INFORMATION:

Sample Collection Date: May 20, 2006 Time: 13:30
Sample Collected by: John Smith
Collector's Phone: 888-888-8888
Sample Class: ☒ Routine ☐ Repeat ☐ Special ☐ Raw
Sample Monitoring Point: DS000
Repeat for Sample #: N/A
Tap Address: 25 W. Main Street
Sample Tap ID: Kitchen Faucet

OhioEPA  **MICROBIOLOGICAL SAMPLE SUBMISSION REPORT (SSR)**

MAIL COMPLETED REPORT TO: Appropriate District Office

Central District Office
3222 Allen Creek Drive
Columbus, Ohio 43221-3417
(614) 387-1718 FAX (614) 387-1719

Northwest District Office
347 North Dunbridge Road
Reading, Ohio 43083
(614) 382-8401 FAX (614) 382-8402

Southwest District Office
481 East Fifth Street
Dayton, Ohio 45402-2911
(937) 383-4377 FAX (937) 383-4378

Southwest District Office
2195 Front Street
Lugan, Ohio 43118
(614) 383-4301 FAX (614) 383-4302

PUBLIC WATER SYSTEM INFORMATION:
District Office _____
Reporting Lab Name _____
Reporting Lab Certification # _____
Analytical Lab Name _____
Analytical Lab Certification # _____
Sample Number _____

LABORATORY INFORMATION:
Sample Collection Date _____ Time _____
Sample Collection Point _____
Collector's Phone _____
Sample Monitoring Point _____
Repeat for Sample # _____
Tap Address _____
Sample Tap ID _____

ANALYTICAL INFORMATION:
Analysis Number _____
Analysis Date _____
Analysis Time _____

Total Coliforms Results: ☐ Positive ☐ Negative ☐ Positive/NC

Fecal Coliforms Results: ☐ Positive ☐ Negative ☐ No Value

E. Coli Results: ☐ Positive ☐ Negative ☐ No Value

L. TB 24: ☐ Positive ☐ Negative ☐ No Value

L. TB 48: ☐ Positive ☐ Negative ☐ No Value

RCB 24: ☐ Positive ☐ Negative ☐ No Value

RCB 48: ☐ Positive ☐ Negative ☐ No Value

OTHER RESULTS:
☐ Insufficient Sample
☐ Sample too Old
☐ Incomplete Information
☐ Lab Accident
☐ TC Negative/COINVALED
☐ TC Negative/NC-DIVALD

COMMENTS (For Use Only When Other Results Are Observed):

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Example

Finally, we must put several items in the box at the bottom of the report that is later filled in by the tester:

COMMENTS (For Use Only When Other Results Are Obtained):

Chlorine:

Free _____ mg/L

Combined _____ mg/L

OhioEPA
Division of Drinking and Ground Waters

**MICROBIOLOGICAL
SAMPLE SUBMISSION REPORT (SSR)**

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Northwest District Office
347 North Dunbridge Road
Bowling Green, Ohio 43402
(419) 352-4461 FAX (419) 352-4468

Southeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087
(330) 963-1209 FAX (330) 963-4790

Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911
(937) 285-6337 FAX (937) 285-6249

Public Water System Information:
District Office: _____
PWS Name: _____
PWS ID Number: _____
Address: _____
City/State/Zip: _____
County: _____
Contact's Name: _____
Contact's Phone: _____

LABORATORY INFORMATION:
Reporting Lab Name: _____
Reporting Lab Certification #: _____
Analytical Lab Name: _____
Analytical Lab Certification #: _____
Sample Number: _____

SAMPLE INFORMATION:
Sample Collection Date: _____ Time: _____
Sample Collected by: _____
Collector's Phone: _____
Sample Class: ☐ Routine ☐ Repeat ☐ Special ☐ Raw
Sample Monitoring Point: _____
Repeat for Sample #: _____
Tap Address: _____
Sample Tap ID: _____

ANALYTICAL INFORMATION:
Method Used: ☐ Membrane Filter ☐ MMO-MUG
Analysis Number: _____
Analysis Date: _____
Analysis Time: _____

Total Coliform Results: ☐ Positive ☐ Negative ☐ Positive/CC ☐ Positive/HBC
Fecal Coliform Results: ☐ Positive ☐ Negative ☐ No Value
E Coli Results: ☐ Positive ☐ Negative ☐ No Value
LTB 24: ☐ Positive ☐ Negative ☐ No Value
LTB 48: ☐ Positive ☐ Negative ☐ No Value
BGB 24: ☐ Positive ☐ Negative ☐ No Value
BGB 48: ☐ Positive ☐ Negative ☐ No Value

OTHER RESULTS:
☐ Not Analyzed ☐ Insufficient Sample
☐ Sample too Old ☐ Incomplete Information
☐ Leaked in Transit ☐ Lab Accident
☐ Broken in Transit ☐ TC Negative/CG-INVALID
☐ Residual Chlorine ☐ TC Negative/HBC-INVALID

COMMENTS (For Use Only When Other Results Are Obtained):

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360water

OhioEPA

Sample Submission Reports

After you have completed the Sample Report, the Chlorine test can be run. The results of the Chlorine test are recorded on the SSR form.

Microbiological Contaminant Reports

[illegible]

Yellow MOR

Microbiological Contaminant Reports

[illegible]

Yellow MOR

What Happens If I Have a Positive Total Coliform Result?

“TC positive” means Coliform bacteria is present

“TC negative” means Coliform bacteria is absent

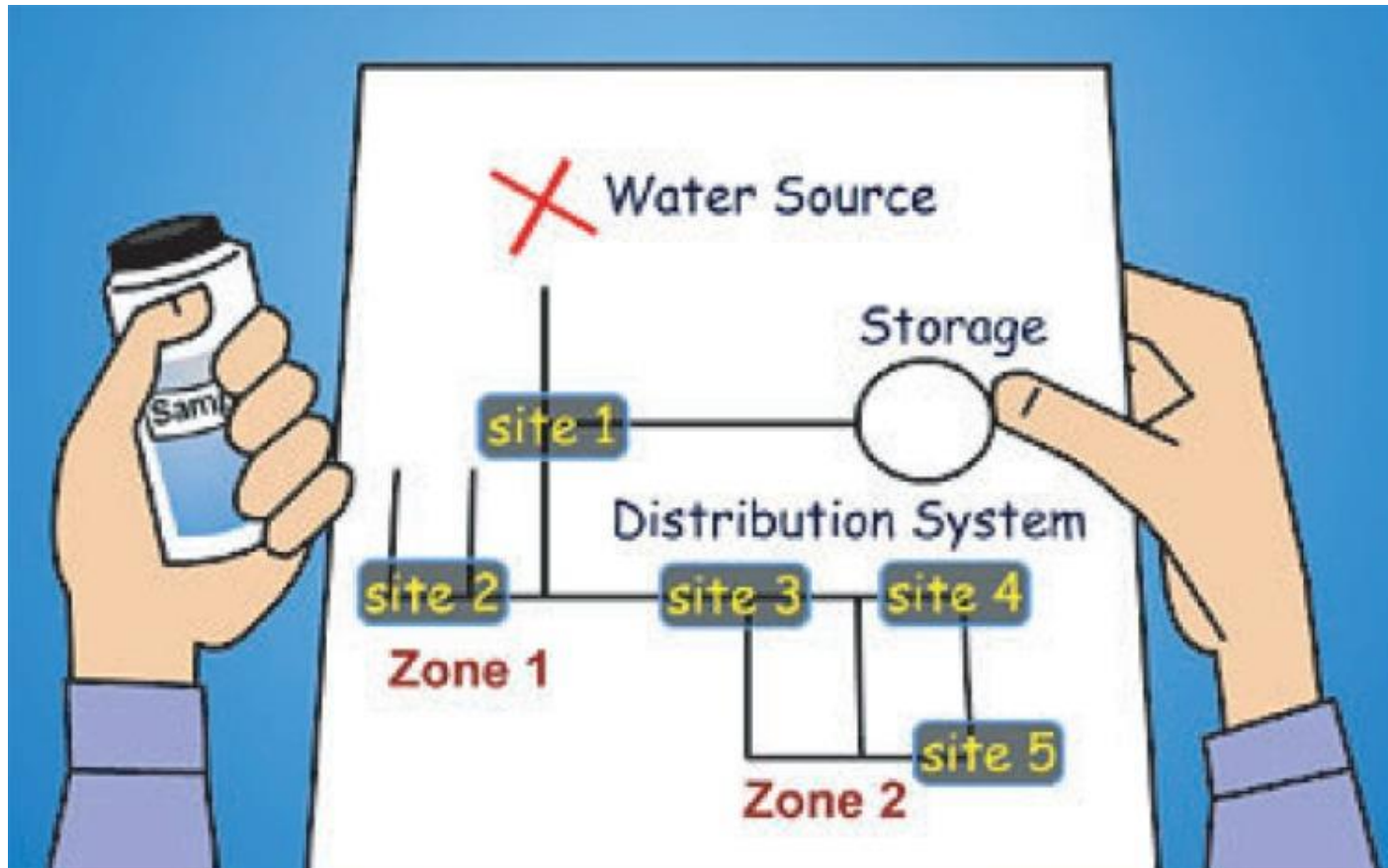
If a routine sample result is *TC positive*:

1. Contact your Ohio EPA district office immediately
2. Collect 4 repeat samples within 24 hours of being notified of a TC positive result (consult your sample site plan for where to take the samples)
3. Contact the Ohio EPA if you need more time due to a weekend or holiday
4. Repeat samples must be labeled as ***Repeat***, or you may not receive credit for collecting the samples

What Happens If I Have a Positive Total Coliform Result?...*continued*...

- Results of all repeat samples must be reported to the Ohio EPA by the end of the next business day following analysis
- The lab will test the routine and any positive repeat samples for fecal Coliform and/or *E. coli* bacteria
- Results of the routine and repeat samples will determine if public notification or a water use advisory is necessary
- Collect 5 samples in the month following the Total Coliform positive sample

Sample Collection



What Happens If I Have a Positive Total Coliform Result?...*continued...*

- An acute MCL violation occurs when Total Coliform is found in a routine sample and at least one repeat sample *and* fecal Coliform or *E. coli* is also found in any routine or repeat sample.
- An acute MCL can also occur when Total Coliform is present in a routine sample and no repeat samples are collected.
- A water use advisory must be issued as soon as possible, but no later than 24 hours after the violation, and continue until a set of 4 repeat samples are Total Coliform negative.

What Happens If I Have a Positive Total Coliform Result?...*continued...*

- A monthly MCL violation occurs when Total Coliform is present in 2 or more samples during any month, and fecal Coliform or *E. coli* were not detected
- In this case, a water use advisory is not necessary, but a public notice must be issued no later than 30 days after notification of the violation

Summary of Violations

Tier 1: Acute Violation

Tier 2: Monthly Violation

Tier 3: Monitoring Violation

What are Nitrate and Nitrite?

- Nitrate and nitrite contamination of drinking water usually results from runoff of agricultural fertilizers, or from human or animal wastes, such as feedlots or faulty septic systems
- Since agriculture is a common industry in Ohio, monitoring for nitrate contamination is a priority for the Ohio EPA
- Infants below the age of six months who drink water containing nitrate or nitrite in excess of the MCL could develop Blue Baby Syndrome (methaemoglobinaemia), a life threatening disease

What are Nitrate and Nitrite?...*continued...*

Where Should I Collect the Sample?

- Nitrate and nitrite samples should be taken from the entry point to the distribution (the first available tap after treatment)
- The appropriate SMP is the EP00# listed on your schedule (usually EP001)

What Happens if I Have a High Nitrate Result?

The MCL for nitrate is 10 mg/L

If a sample result is *greater than 10 mg/L*:

- Contact the Ohio EPA central office immediately
- Collect another nitrate sample within 24 hours after you are notified of the high nitrate result. If the confirmation sample cannot be taken within 24 hours, you must issue a public notice and collect a sample as soon as possible, but no later than two weeks after notification.

What Happens if I Have a High Nitrate Result?...continued...

- Results of the initial sample and the confirmation sample are used to determine if an MCL has been exceeded. If the confirmation sample is not collected, the MCL violation is confirmed.
- If the MCL violation is confirmed, a public notice must be issued within 24 hours and continue as long as the violation exists. Also, the frequency of nitrate monitoring may be increased.

Public Notification

- A public water system must issue a public notice if an MCL is exceeded, if a sample is not taken during the required monitoring period, or if the results are not reported to the Ohio EPA.
- Public notices for acute Total Coliform and nitrate/nitrite MCL violations must be issued as soon as possible, but in no case later than 24 hours after being notified of the violation. Public notices for other violations must be issued as soon as practical, but no later than 30 days after being notified of the violation.

Public Notification, *continued...*

Public notices should be issued using one or more of the following methods in order to reach all persons served:

- Continuous posting in conspicuous places throughout the area served by the water system for as long as the violation exists.
- Hand delivery to all consumers, repeated as directed by the Ohio EPA

Public Notification, *continued...*

- Additional requirements for public notification of MCL violations may be established during consultation with the Ohio EPA
- If you are required to issue a public notice for a violation, the Ohio EPA will send a sample public notice and verification form
- Following issuance of the public notice, the verification form should be completed and signed and sent to the Ohio EPA along with a copy of the public notice

Chemical Monitoring Entry Point Schedule

Key points and abbreviations:

Public Water System

What chemical is to be tested

Chemicals/Reports	Chemical Name (Code)	Monitoring Requirements	Sample Date
2006 CHEMICAL MONITORING ENTRY POINT SCHEDULE PWS NAME: Any Village PWS PWS TYPE: Community Ground Water PWS ID: 12345 Sample Monitoring Point: EP001 STU NAME: Leading Creek Conserv Dist STU ID: 9856387 Effective Date: 1/1/06			
THIS SCHEDULE DOES NOT INCLUDE ALL MONITORING REQUIREMENTS FOR YOUR SYSTEM. Contact Southeast District Office at (740) 385-8501 to review additional monitoring for coliform, monthly operating parameters, and/or other monitoring requirements not included on this schedule. For water emergencies that occur after hours, please call 800-282-9378			
CONSUMER CONFIDENCE REPORT (CCR)		CCR due by July 1, 2006	
INORGANICS	Antimony, total (1074) Barium, total (1010) Beryllium, total (1075) Cadmium, total (1015) Chromium, total (1020) Cyanide, total (1024) Fluoride, total (1025) Mercury, total (1035) Nickel, total (1036) Selenium, total (1045) Thallium, total (1085)	1 Sample between Jun 1 and Oct 31	
ARSENIC	Arsenic, total (1005)	1 Sample between Jun 1 and Oct 31	
NITRATE	Nitrate (1040)	1 Sample between Jun 1 and Oct 31	
NITRITE	Nitrite (1041)	Not Required	
RADIOLOGICALS	Alpha, total (4000) Radium-228 (4030)	Not Required	
BROMATE	Bromate (1011)	Not Required	
CHLORINE DIOXIDE	Chlorine dioxide (1008)	Not Required	
CHLORITE	Chlorite (1009)	Not Required	
VOLATILE ORGANIC CHEMICALS (VOCs)	VOCs	1 Sample between Jun 1 and Oct 31	
SYNTHETIC ORGANIC CHEMICALS (SOCs)	Diquat (2032) Glyphosate (2034) Lindane (2010) Methoxychlor (2015) Polychlorinated biphenyls (2383)	1 Sample between Apr 1 and Jun 30	

ATTENTION:
Some monitoring periods have been reduced from 6 months to 5 months. Please review the monitoring requirements carefully.

* A paired sample set refers to one source water and one treated water sample. A source water alkalinity is also required at the same time the TOC sample is taken.

Entry Point

001 and 002 are the different collection points

Source Treatment Unit

Check the dates for each contaminant (they may differ)

Lead and Copper Testing

- Why do we test for Lead and Copper?

To Protect Public Health

- All Ohio community and non-transient non-community water systems are required to monitor for Lead and Copper
- Class A water systems will typically collect either 5 or 10 samples. The number of samples depends on the population served by the water system.

Lead and Copper Testing, *continued...*

- The action level for Lead is 0.0155 mg/L (15.5 µg/L)
- The action level for Copper is 1.35 mg/L (1,350 µg/L)
- Your sample concentrations are placed on the appropriate Ohio EPA form in order from the lowest to the highest concentration

Lead and Copper Testing, *continued...*

- If the 90th percentile Lead or Copper concentration exceeds the action level, additional testing is required. You would be required to contact your Ohio EPA representative.

Example of the 90th percentile:

- You are required to collect 10 samples. The 90th percentile concentration would be the value of the 9th sample of the 10 samples that are collected.

Lead and Copper Testing, *continued...*

- Samples must be collected at select locations within the distribution system, for instance, in individual homes or at a school's individual faucets
- All samples must be collected after the water has not been used for a period of 6 hours, and it must be a first-draw sample (the first amount of water withdrawn)
- Additional information can be obtained from the Blue reference manual provided with this training course.

Consumer Confidence Reports

- The U.S. EPA has developed regulations requiring community public water systems to prepare and distribute an annual Consumer Confidence Report (CCR) by July 1st of each year.
- The reports are an opportunity for positive communication with consumers and as a means to convince them of the value of good, quality water.

Consumer Confidence Reports, *continued...*

Items that should be covered in Consumer Confidence Reports include:

- Information on source of drinking water supply
- Brief definition of terms
- List of contaminants detected and their levels
- Maximum Contaminant Level (MCL)
- Maximum Contaminant Level Goal (MCLG)
- Information on health effects if there were any MCLs violated
- Information on any unregulated contaminants

Consumer Confidence Reports, *continued...*

- CCRs should be a short, concise letter report of 1 or 2 pages that can be mailed directly to consumers, hand delivered, or posted.
- Water utilities should emphasize the good job they are doing as guardians of health in these Consumer Confidence Reports.

License to Operate

All public water systems (except churches, church-owned campgrounds, schools) must obtain a license to operate a public water system on an annual basis from the Ohio EPA. Updated applications and payments are due to the Ohio EPA by January 1st each year. The cost of a license to operate a public water system is based on the number and designation of the sources of water.

Fee Schedules

Transient Non-Community Water System

(effective July 1, 2003)

Number of Wells Supplying System	Fee Amount
1	\$112
2	\$112
3	\$176
4	\$278
5	\$568
System designated as using a surface water source	\$792

Fee Schedules, *continued...*

Non-Transient Non-Community Water System

(effective July 1, 2003)

Population Served	Fee Amount
Fewer than 150	\$112
150 – 299	\$176
300 - 749	\$384
750-1,499	\$628

Fee Schedules, *continued...*

Community Water System

(effective July 1, 2003)

Number of Service Connections	Fee Amount
Not more than 49	\$112
50 - 99	\$176

SESSION FOUR

SESSION FOUR SAMPLE QUESTIONS BEGIN NOW

SESSION FOUR SAMPLE QUESTION

1. To ensure that the water supplied by a public water system meets federal and state requirements, the water system operator must regularly collect samples and . . .
 - a. Test the water at the nearest water testing laboratory
 - b. Determine a sampling schedule based on the lab's recommendations
 - c. Periodically send all analysis results to the state
 - d. Count the number of active wells in the system

c. Periodically send all analysis results to the state

SESSION FOUR SAMPLE QUESTION

2. The major source of error when obtaining water quality information is improper . . .
- a. Sampling
 - b. Preservation
 - c. Tests of samples
 - d. Reporting of data

a. Sampling

SESSION FOUR SAMPLE QUESTION

3. When should water quality samples for chlorine residual be analyzed?
- a. Immediately
 - b. Within 1 hour
 - c. Within 8 hours
 - d. Within 24 hours

a. Immediately

SESSION FOUR SAMPLE QUESTION

4. What is the most common method used in labs to test for Total Coliform and *E. coli*?
- a. DMA
 - b. Green
 - c. MMO-MUG
 - d. Lamp

c. MMO-MUG

Questions?

END OF SESSION FOUR