

Water & Wastewater Digest

Fall 2016

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Your Expertise is Needed!!

Subject Matter Experts play a critical role in assisting the Missouri Department of Natural Resources in developing operator certification exams. Certification exams assess an operator's knowledge, skills and abilities for competency. With hands-on working knowledge as operators, subject matter experts review and write exam questions and determine to what level of exam individual questions apply.

If you'd like to be involved in shaping Missouri's certification exams, please complete the appropriate online survey for consideration. Volunteers will be selected to represent a variety of experiences with technologies and classification levels of systems. Workshops generally consist of evaluating exam questions as a group and establishing the importance of each question based on how frequently an operator performs the task being evaluated, its seriousness, and criticality. Workshops will be held in Jefferson City.



Participants must maintain confidentiality of exam materials and will not be able to take any certification exam for a period of 60 days following attendance at a workshop.

Subject matter experts should be willing and able to attend two workshops per year, generally one in the spring and one in the fall – dates to be determined.

Please visit the links on the next page for each workgroup you would like to be considered for.

Operator Certification Drinking Water Treatment
Subject Matter Expert Volunteer Application
Survey: <https://www.surveymonkey.com/r/DWTREATMENT>

Operator Certification Drinking Water
Distribution Subject Matter Expert Volunteer
Application Survey: <https://www.surveymonkey.com/r/DWDISTRIBUTION>

Operator Certification Wastewater Treatment
Subject Matter Expert Volunteer Application
Survey: <https://www.surveymonkey.com/r/WWASTEWATER>

Helpful Tools from the State Public Health Lab

The Missouri State Public Health Laboratory would like to remind public water supply customers of some tools available to assist you:

Web portal

The new Laboratory Information Management System (OpenELIS LIMS) offers a web portal to provide users with the ability to check sample status, print test result reports, and export summary sample data to their own spreadsheets for analysis. This portal also allows clients to receive emails when their samples are received in the laboratory, and when their sample results are available on-line. For more information on how to request access to the web portal for your public supply, contact Shondra Johnson of the Missouri Department of Health at Shondra.Johnson@health.mo.gov, or by phone at 573-751-3334.

Online sample kit orders / recurring orders

You may order public drinking water sample kits directly from the laboratory at <http://health.mo.gov/lab/pdf/requisition-for-public-drinking-water-test-kits.pdf> or from the Department of Natural Resources at <http://dnr.mo.gov/env/wpp/labs/water-analysis.htm>.

Public drinking water sampling kits are available ONLY through the Missouri State Public Health Laboratory. Do not use a kit provided by a local health agency. Those kits are for private drinking water supplies only.

Orders are usually processed same day of receipt. You should receive your sample kits in one to two business days. Routine kit orders may also be scheduled in our database so that you automatically receive the proper number of sample kits on a monthly, quarterly or annual schedule. To request this service, call the laboratory's Central Services Unit at 573-751-4830.

New sample information forms

The public health laboratory would also like to remind public water supplies to use the new (as of December 2015) Public Water Environmental Sample Information Form. These forms are printed specifically for each public supply and contain your supply name, address and public water supply ID number. You may request new forms by calling the laboratory's Central Services Unit at 573-751-4830.

Please do not use the old multi-part sample card. In addition, please do not use any sample information form that is labeled "private drinking water." Private water test results are not reported to the Department of Natural Resources, so this could lead to a reporting violation for your public water supply.

Please refer to the sample collection instructions enclosed with your sample kit for details on how to collect

a sample, how to complete the Public Drinking Water Environmental Sample Information Form, and how to transport the



sample to the laboratory using the free overnight courier service. For more information on public water testing, please contact the laboratory's Environmental Bacteriology Unit at 573-751-3334. For more information on regulatory compliance, please contact the Department of Natural Resources' Public Drinking Water Branch at 573-751-1077.

Save Time and Money! – Learn How To Submit Your Discharge Monitoring Reports Electronically

Last December, the U.S. Environmental Protection Agency published a new rule called the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule. This rule requires any facility that has an NPDES permit with monitoring requirements to begin submitting their discharge monitoring reports (DMRs) electronically by Dec. 21, 2016. Exceptions to the electronic reporting mandate can be made by seeking a waiver.

Right now you might be asking “How do I submit my DMRs electronically?” The answer to that is the easy, quick, and free Electronic Discharge Monitoring Reports System (eDMR), released by the Missouri Department of Natural Resources in 2013.

With eDMR, gone are the days of spending money on paper and postage to continually mail your DMRs. With nothing more than a computer, internet access, and an email account, you can easily keep track of all of your reports whether they have already been submitted or are due in the future! Also, every time a report is submitted you will receive email confirmation; so, you will never have to worry about whether or not the department received your report.

To register for eDMR, you must complete a Permit Holder Participation Package. This can be found at <http://dnr.mo.gov/pubs/pub2474.pdf>.

Want to familiarize yourself with eDMR a



little before you register and begin submitting reports? Come to one of the free training classes the Missouri Department of Natural Resources is currently offering. They are held once a month at the MOTEC Training Center, 1738 E. Elm St. in Jefferson City. For more information, visit <http://dnr.mo.gov/env/wpp/edmr.htm>, or call the department's Water Protection Program at 573-522-4502.

Sample Siting Plans

Scenario: Imagine you are a new operator for a water district and need a list of sample locations. The only copies found in the files are people's names but no addresses. The 911 addresses have not yet been updated. Additionally, the water system never sent the Department of Natural Resources a copy of its site map or list of addresses. The previous operator had never used an address when submitting the sample cards, therefore the department's regional office had no helpful information to provide you.

This situation unfortunately is not that rare.

Background: The 1990 Total Coliform Rule required water systems to develop a site sampling plan complete with maps and addresses. Instead, many operators in small towns and rural districts continued to use homeowners or business names to identify the site locations. Site plans were never updated.

New operators frequently found themselves without a list or map, so they collected samples at locations they chose; again using names instead of addresses. As an example, one small town with a population of 1,100 now has 34 “active” sample sites, and more than half the sites have names but no addresses.



April 1, 2016: The Revised Total Coliform Rule restated the Total Coliform Rule requirement that all public water systems must have a site sampling plan approved by the state. The Revised Total Coliform Rule also made some changes.

The upstream and downstream repeat sites no longer have to be within five service connections of the original routine sample site. Water systems can now select up and down repeat sites that are farther from the original site if they believe the new location is more representative of the water in that part of the distribution system.

In selecting new sample sites, or updating an existing site sample plan, remember these key requirements:

- Each sample site should be identified by a sample location id, which can be up to ten spaces long. The sample location ID will identify a specific address and can be used only for that location. If you have to move a sample location across or down the street, you will need a new sample location ID.
- Unused or discontinued sample locations cannot be deleted. Instead, these sites can be

inactivated. On your site sampling plan, mark this location “inactive,” and notify the department’s Public Drinking Water Branch or your local regional office of the updated site sampling plan.

- The site plan must include a map and a list of at least five sampling points. Exceptions may be granted for very small water systems, for example one building systems such as convenience stores or restaurants. Large systems (those collecting more than 10 samples per month) will need a minimum number of sampling points equal to the number of samples collected each sampling period (or day).
- Each routine sample point must have at least one sample location available downstream and one sample location available upstream for repeat sample locations. Therefore, the last house at the end of the line cannot be used.
- The sample location point must have an address, People move and businesses change; addresses remain the same. One exception would be for small noncommunity systems such as restaurants, convenience stores, campgrounds and schools, which would have site names. These systems need to consult with their local regional office when developing or updating sampling plans.
- All routine bacteriological samples must come from the distribution system, not the well or water treatment plant. Sites must be evenly spread across the distribution system so samples are representative of the water throughout the system. One exception: groundwater systems may also be required to collect triggered source water samples from the well before any treatment in addition to the normal three repeat samples.
- Water towers or storage tanks in the distribution system should be sampled. This can be as part of the routine sample plan, an additional routine sample above the minimum number required, or as a special sample.

For more information or assistance on developing or updating a site sampling plan, contact your local Department of Natural Resources regional office. The regional offices can provide you with a list of the current sampling sites, forms and guidance documents. A list associated with each water system, and if they are active or inactive is available on Drinking Water Watch at: www.dnr.mo.gov/DWW/. Please remember it is very important that the routine and repeat sample locations be selected with care to ensure the samples reflect the true quality of the water throughout the system.

Approved Standard Sewer Specifications and Details

Standard sewer specifications and details provide minimum requirements for planning, design, and construction of gravity sewers and pumping stations and is essential for effective wastewater treatment systems. The Department of Natural Resources offers a free review and approval process for municipalities with standardized sewer specifications and details. Once a municipality's standard sewer specification and details have been approved, a construction permit application for a sewer extension does not need to include the preapproved specifications if the project is within the boundaries of the approved municipality. This preapproval reduces the review time of the construction permit.

The benefit of standardized sewer specification and details is consistent design and construction. Additionally, the quality of construction materials and methods can ensure the criteria of the municipality while also meeting the minimum requirements of the department.

The department has a list of approved municipalities and information about municipalities currently under review available

online at dnr.mo.gov/env/wpp/permits/sewer-specs.htm. If your municipality is interested in having its standard sewer specifications and details reviewed, contact the department's Water Protection Program at 573-751-1300.

Stage 2 DBP and the Operational Evaluation Level (OEL) Report

For community and nontransient noncommunity water systems using chlorine or chloramines to treat drinking water, the Stage 2 Disinfectants and Disinfection By-Products Rule (DBP) has established operational evaluation requirements that are initiated by the TTHM and HAA5 levels found during Stage 2 DBP compliance monitoring pursuant to 10 CSR 60-4.094(7). If any of the following occurs at any monitoring location, an operational evaluation report must be completed. A system exceeds the operational evaluation level if:

- TTHM compliance monitoring results for the two previous quarters plus two times the TTHM result for the current quarter, divided by 4, exceeds 0.080 milligrams per liter (mg/L); or
- HAA5 compliance monitoring results for the two previous quarters plus two times the HAA5 result for the current quarter, divided by 4, exceeds 0.060 mg/L.

The below formula is used to determine an OEL exceedance:

$$(A + B + (2 * C)) / 4 = D$$

Where:

A = TTHM or HAA5 result for the quarter before the previous quarter (mg/L)

B = TTHM or HAA5 result for the previous quarter (mg/L)

C = TTHM or HAA5 result for the current quarter (mg/L)

D = your Operational Evaluation Level (OEL) (mg/L)

If a system has an operational evaluation level exceedance, the department will provide an Operational Evaluation Level Reporting Form to evaluate the possible causes of exceedance and reduce the DBP levels in a system. The system should consult the operator or engineer to fill the form out and return it within 30 days. The department will review the form and make recommendations on the next steps that should be taken.

The Operational Evaluation Level Form will serve as the written report that must be made available to the public, upon request, within 90 days of the analyses that led to the exceedance.

For more information, please contact Megan Torrence at 573-522-1801 or megan.torrence@dnr.mo.gov or Maher Jaafari at 573-751-1127 or maher.jaafari@dnr.mo.gov.

Does Your Water System Provide Fluoride Treatment?

On June 28, 2016, the Governor signed House Bill 1717 requiring that 90 days before a water system votes to modify (add or remove) fluoridation, they are required to notify the Missouri Department of Health and Senior Services, the Missouri Department of Natural Resources and the customers of the public water system. The entire bill can be viewed at <http://www.house.mo.gov/billtracking/bills161/billpdf/truly/HB1717T.PDF>. To comply with this new law and notification requirements, a

certification form has been developed and is available online at <http://dnr.mo.gov/forms/780-2685-f.pdf>

As with any modification or alteration of a public water system, approval by the department's Public Drinking Water Branch will be required. Inquires can be directed to Maher Jaafari of the branch at 573-751-1127.

While there may be trace amounts naturally occurring in all public water systems in Missouri, there are more than 90 water systems that adjust fluoride levels. To promote dental health, the Federal Department of Health and Human Services recommends water systems adjust fluoride levels to a level of 0.7 parts per million (ppm). Previously, it was based on a range of 0.7ppm to 1.2ppm depending on where the water system was geographically located. The majority of Missourians consume water that has had fluoride levels adjusted. There are areas of the state where wells have naturally occurring fluoride levels at the optimum level and some exceeding the secondary and Maximum Contaminant Level. For more information regarding fluoride, visit the Center for Disease Control at <https://www.cdc.gov/fluoridation/>

Note: By state statute (RSMo640.135), the Missouri Department of Natural Resources shall not promulgate any rule or regulation to require or prohibit the addition of fluoride to drinking water. In effect, this statute requires the department to remain neutral on a water system's decision to add or remove fluoridation.

We're on the Web!

**Visit us at www.dnr.mo.gov/env/wpp/opcert
to view a current list of approved training courses.**

By the time this newsletter reaches you, there may be new courses available in your area. The list of approved training changes frequently as new courses are reviewed and approved by department staff or trainers adjust schedules.

Operator Certification Exam Schedule

<u>EXAM DATE</u>	<u>LOCATION</u>	<u>FILING DEADLINE</u>
November 1	Northeast Regional Office, Macon Kansas City Regional Office, Lee's Summit Lewis & Clark State Office Bldg, Jefferson City	October 2
December 6	Powder Valley Nature Center, Kirkwood Lewis & Clark State Office Bldg, Jefferson City	November 6
January 3	Southeast Regional Office, Poplar Bluff Southwest Regional Office, Springfield Lewis & Clark State Office Bldg, Jefferson City	December 3
February 7	Northeast Regional Office, Macon Kansas City Regional Office, Lee's Summit Lewis & Clark State Office Bldg, Jefferson City	January 7

Need Your Password to Login?

Certified operators are encouraged to access training reports by visiting the department's website at dnr.mo.gov/operator. To login, the password is the last four digits of your social security number.

In addition to checking training hours and renewing certificates online, this site provides a convenient place to view and update important contact information for public drinking water systems including the chief operator, sample collector and administrative contact.

For more information, contact the department's Operator Certification Section at 800-361-4827 or 573-751-1600.

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- Cancelling Subscription: Complete section

Fax to: 573-751-0678

Mail to: Missouri Department of Natural Resources
Operator Certification Section
PO Box 176, Jefferson City, MO 65102-0176

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