

Missouri Department of Natural Resources OPERATOR CERTIFICATION SECTION

Water & Wastewater

SUMMER 2013

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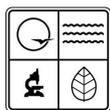
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MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

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Drinking Water Voucher Program Expands to Include Wastewater in 2013

How the Wastewater Voucher Program Will Work:

Eligible wastewater treatment plants will be mailed vouchers which will include forms and a sheet of stickers mid calendar year. To use the voucher stickers, the operator will complete a voucher processing form, place the appropriate dollar value of stickers on the form and submit it to the trainer on the first day of class or with the exam or renewal application for payment of eligible costs. Wastewater vouchers can be used to pay for department approved training, wastewater exam fees and wastewater certification renewal fees. Instructions will be included in the packet.

New Color Coded Stickers

To differentiate between drinking water and wastewater vouchers, stickers will be color coded. Drinking water voucher stickers are blue, wastewater voucher stickers will be green. Both will expire Dec. 31.

Keep in mind each voucher eligible course offered will be approved for either drinking water or wastewater vouchers, not both. Wastewater voucher stickers will only be accepted for courses that have at least double the wastewater hours compared to the highest number of drinking water or distribution hours. Changes are underway to update the online schedule of upcoming classroom training so operators can determine voucher eligibility for courses; www.dnr.mo.gov/calendar/search.do.

Recipients of Wastewater Vouchers

Wastewater vouchers will be issued to domestic wastewater treatment plants required to be operated by a certified operator and whose discharge is less than one MGD per day, as well as any wastewater treatment plant the department has determined requires a certified operator to protect waters of the state. The number of wastewater voucher recipients will be much smaller than the number of drinking water voucher recipients. This is due to certification requirements being different for drinking water systems compared to wastewater treatment facilities.

Amount Issued and Timeframe

Eligible wastewater systems will receive \$625 in wastewater vouchers in mid-2013. This is the same amount issued to drinking water distribution systems and is based on similarities in the number of renewal hours needed. Each subsequent year wastewater and drinking water vouchers will be mailed in January and will expire Dec. 31. Only one allotment of vouchers per system will be issued for a calendar year. Systems will receive a set, standard amount. The voucher program allows wastewater treatment plants flexibility in deciding who among their staff will use the vouchers and for what eligible purpose (training or certification expenses). Additional wastewater and drinking water vouchers will not be available. Both wastewater and drinking water systems will be encouraged to budget wisely and plan their voucher usage for the year.

Need Your Password to Login?

Certified operators are encouraged to access training reports online at www.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.

New Source Water Protection Newsletter

The Water Protection Program's Public Drinking Water Branch is pleased to announce the release of the premier edition of *The Source Protector: The Official Newsletter of the Missouri Source Water Protection Program*! This bi-annual publication is designed to promote source water protection planning and recognize the tremendous efforts of public water systems and communities that made protection planning a reality and success.

If you or your community would like to be added to our mailing list, call Ken Tomlin at 573-526-0269 or email ken.tomlin@dnr.mo.gov.

Consumer Confidence Reports

The Public Drinking Water Branch provided the 2012 Annual Water Quality Reports/Consumer Confidence Reports to all community water supplies in April. This is a reminder that the reports must be distributed to all customers by July 1, 2013. A copy of final reports and forms are due back to the Public Drinking Water Branch by Oct. 1, 2013. If you have any questions, call Kristin Vermillion at 573-526-3832 or Ellen Harrel at 573-751-1077 or email CCR@dnr.mo.gov.

Electronic Delivery of CCRs now Available

Beginning this year, community water systems have the option to deliver their 2012 Consumer Confidence Report, or CCR, to their customers via the Internet. This can be done by means of an internet address identifying the location of a file on the internet, also known as a Uniform Resource Locator, or URL. Unless an alternative address is given to the department or specifically requested not to be posted, the department will post all CCRs at www.dnr.mo.gov/env/wpp/pdwb/ccr/MO#####.pdf where ##### is the unique Public Water Supply identification number, or PWSID, for your water system. This URL will contain the "skeleton" CCR the department has provided in past years. If you have changes or prefer to use your own URL, provide those by email to CCR@dnr.mo.gov.

Delivery of the CCR to customers must be "direct delivery," meaning if the water system provides a URL to their customers via their utility bill or other means, the URL must go directly to the full CCR for that year. If the water system is aware of a customer's inability to receive a CCR electronically or a customer requests a paper copy, the water system must provide the customer's CCR by other means allowed by the rule. The CCR may also be delivered as an email attachment by embedding the CCR in the message, or emailing the URL. Use of social media such as Twitter or Facebook does not meet the electronic delivery criteria because it would require the customer to gain membership to an Internet outlet. Additionally, the water system should include a short statement about water quality in order to promote readership. The URL should be kept short, if the web is the method of delivery.

Additional information and examples of electronic CCRs are in EPA's interpretive memo available online at www.water.epa.gov/lawsregs/rulesregs/sdwa/ccr/upload/ccrdeliveryoptionsmemo.pdf. If you have any questions about this process, email CCR@dnr.mo.gov.

Do You Know Your Water Reserves?

Pt. 2: Lakes and Reservoirs

Just as operators of groundwater systems take drawdown measurements of their wells, surface water plant operators should monitor their reservoir or lake levels. Monitoring water levels is an essential part of managing a water supply. Frequent and accurate measurements of water levels, together with elevation vs. storage data for a reservoir, allow operators to assess their water reserves.

A reservoir's water surface elevation can be measured on a staff gage or stadia marker. A staff gage can be as simple as a measuring stick or guide ruled in feet and inches. Staff gages can be attached to the intake structure, or near it. The Department of Natural Resources' Water Resources Center recommends that staff gages use elevations referenced to the North American Vertical Datum of 1988 (Mean Sea Level) so measurements are transferrable to reservoir models. The elevation(s) of the intake should also be referenced to the same datum.

Don't have a staff gage, or it is damaged? During low lake levels might be a good time to install a new one, or repair the old one. Place it where it is easy to observe and is protected from damage or tampering, if possible. The intake structure is one obvious location for staff gages, provided it is not a floating structure. Spillway structures are often concrete and may have a surveyed elevation. The Water Resources Center suggests locating a drought staff gage at the principle spillway, provided it can still be located in the water.

In 2011, the Water Resources Center completed the Missouri Water Supply Study, which includes surveys and analysis of 43 lakes and reservoirs in Missouri. The complete study and individual maps can be downloaded at www.dnr.mo.gov/env/wrc/drought/resopreports.htm.

For reservoirs included in the study, the volume of water in acre-feet for selected elevations in feet above mean sea level was provided (example to right). If your reservoir was included in this study you can determine how much storage remains in your reservoir. First determine the current water surface elevation of your reservoir. Then using the information for your reservoir, note the corresponding volume for that elevation. Next, determine the elevation of the lowest opening of your intake structure. Water below the lowest intake will not be available for normal use without pumping it up into the intake structure. Find the volume that corresponds to the elevation of the intake. Find the difference between the two volumes by subtracting the volume below the intake from the current lake elevation volume. This represents the water available for use. Divide the available volume above the intake by weekly usage to calculate how many weeks of storage remain.

For an example: in Table 30, the lake elevation is 862.4 ft. and the reservoir's volume in acre feet is 353.7. If the intake elevation is 848.0, that volume is 23.4 acre-ft., so the remaining useable volume is 353.7 ac-ft. – 23.4 ac-ft. = 330.0 ac-ft. If the water plant uses 652,000 gallons per day (about 2 ac-ft.) there are 165 days of storage remaining at the current rate.

Elevation (feet)	Area (acres)	Volume (acre-ft)
842.0	0.3	0.2
844.0	2.5	2.9
846.0	5.0	10.5
848.0	7.9	23.4
850.0	12.4	43.7
852.0	16.2	72.6
854.0	20.1	108.8
856.0	23.8	152.7
858.0	27.7	203.7
860.0	33.7	264.7
862.0	39.3	337.7
862.4	40.5	353.7
864.0	48.8	426.1
864.3	49.9	440.9
866.0	57.4	532.0
867.2	63.0	604.2

Table 30

Some operators are not aware these resources are available to them. One water system thought they might be out of water in 90 days because they did not know the total useable volume of their reservoir. Upon consulting their water supply study they were relieved to find they actually had more than nine months of supply at their estimated usage rates.

The Water Resources Center cooperates with the U.S. Geological Survey, or USGS, to maintain several real-time reservoir gages. Data is collected automatically and presented to the public at www.dnr.mo.gov/asp/wrc/currentlakeobservations.asp.

The USGS website for Current Water Data for Missouri is available at <http://nwis.waterdata.usgs.gov/mo/nwis/rt>. It provides real-time monitoring data for stream, lake and groundwater levels, and has links to state-wide precipitation data and drought status maps. Use the dropdown menu under "Predefined Displays" to select the data you would like to access.

If your lake was not covered in the study but you would still like to track the available reserves in your reservoir, call Ken Tomlin with the department's Public Drinking Water Branch at 573-751-5331 or email ken.tomlin@dnr.mo.gov. You can also contact the department's Water Resources Center at 573-751-2867 or www.dnr.mo.gov/env/wrc/

Possible Options During a Drought:

Faced with declining water levels, what can you do?

For Groundwater Systems:

- If you have a deep well with several dozen feet of available shaft below the pump, you can lower the pump as needed.
- Throttle the pump down to a lower discharge. Water can only flow into the well at a limited rate. Withdrawing water at a reduced rate will keep more water above your pump. You may have to pump longer, but it could save your pump. Several water systems did this successfully in 2012.
- Have the well cleaned. If the static level remains the same, but the drawdown is increasing (the pumping level is dropping) it means that water is not flowing into the well as fast as before. Mineral deposits and bacterial growth can encrust the well screens or casing slots over time. Increased pumping rates could speed this up.

For All Systems:

- Reduce use by enacting water conservation orders or restrictions.
- Establish interconnections with other water systems. These are the times interconnections can be lifesavers. They may be able to provide enough water along with conservation and other measures to get your system through the worst of the drought.
- Find those leaks! By finding and repairing leaks, one town reduced their daily pumping by just over 30 percent, and another reduced treatment plant hours of operations by 50 percent. Missouri Rural Water Association has two new leak detection devices and the staff to help you locate leaks.
- Haul in water to supplement production. A few small towns did this during a recent drought to provide a longer rest and recovery period for their wells. Water was emptied into the clear-well then pumped up to the tower.

Plan for the future! If the drought of 2012 stressed the capacity of your water supply you need to plan and develop alternatives, supplementary sources and interconnections now.

Stage 2 DBP Compliance Monitoring Plan for Drinking Water Systems

The Stage 2 Disinfectants and Disinfection Byproduct Rule, (Stage 2 DBPR), applies to all community and nontransient, noncommunity water systems that add a disinfectant or purchase water that has been disinfected. In order to comply with the Stage 2 DBPR, all applicable community and nontransient, noncommunity water systems must identify their disinfection byproducts sampling sites in a compliance monitoring plan and provide that plan to the department.

It is important for systems to choose proper sampling locations. Once a sampling location is chosen and approved, samples must be collected from the same location for each monitoring event. The locational running annual average is calculated for a specific sampling location; a monitoring violation may be issued to the system if the same required location is not used for each monitoring event. If a system wishes to change a sampling location, it must request the change with the department and have the change approved prior to sampling; otherwise, the system will be subject to monitoring violations. Detailed instructions on how to select disinfection byproduct sample sites were previously mailed to systems as well as published in the *Water & Wastewater Digest* 2012 summer edition available online at www.dnr.mo.gov/env/wpp/opcert/wwd2012-summer.pdf.

Technical assistance is available from the department to help systems complete the compliance monitoring plan, or CMP. However, a monitoring violation will occur if the CMP is not received by Oct 1, 2013. Therefore, the branch is requesting that plans be submitted several months before the compliance date to allow for data entry and technical assistance issues. About 500 water systems have still not submitted a CMP to the department and will receive a violation if not received before October.

For more information contact Eric Medlock at 573-522-5028 or email eric.medlock@dnr.mo.gov.

Small Loans for Water and Wastewater Systems

Researching and securing financing for infrastructure can be a daunting task with the various funding types and requirements. In an effort to consider the needs of the community, the budgets of residents and the environment, this endeavor can be a true balancing act.

Financing for small scale projects doesn't have to be overwhelming. The Small Borrower Loan program offered through the department could contribute to the success of small scale projects. A small loan, fewer requirements than larger financing and flexible terms make this loan program very appealing for small scale projects. This program can finance sewer or water projects. While project costs due to lack of maintenance are generally not eligible, the program does cover a wide variety of project expenses due to upgrades or new construction.

The program is geared toward communities with smaller populations, typically 1,000 or less. The standard term is 20 years, but can be flexible. The interest rate is based upon 30 percent of the market rate, which over the course of the last six months means a range of 1.29 – 1.31 percent. Compared to market interest rate, this could mean a cost savings of up to \$38,000. The program offers loans up to \$100,000 and is secured by system revenues obligated to loan repayment. Applications are accepted at any time throughout the year. Loan Requirements are less stringent than federally funded programs.

Example one: The village of Bethel, with a population of 121, needed to rehabilitate the existing wastewater treatment plant. The low estimated project costs made this project a prime candidate for the small loan program. The village converted its single-cell lagoon and discharging wetland system to a two-cell lagoon with land application.

Example two: The city of Prairie Home used the Small Borrower Loan program to extend and replace undersized asbestos-cement water distribution mains with new PVC

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water lines. The extension allowed the city to connect additional customers, and to replace deteriorated lines that were frequently breaking and difficult to repair.

The Small Borrower Loan program began in 1998 and has distributed more than \$3 million in loans. This amount may seem small compared to the larger State Revolving Fund loan program also offered by the department, but the number of projects that have been afforded assistance is substantial.

For more information about this loan program, contact Traci Newberry at 573-526-0940 or traci.newberry@dnr.mo.gov.

State Revolving Fund Changes for 2013 and 2014

Each year, the department publishes two Intended Use Plans; one for the Clean Water State Revolving Fund and one for the Drinking Water State Revolving Fund. The State Revolving Funds provide low-interest loans to promote water quality and protect public health. The plans contain information regarding the development and management of the State Revolving Fund priority lists for financial assistance for the upcoming fiscal year.

The development schedule and effective dates of the plans are changing. The end date of the fiscal year 2013 Intended Use Plans has been extended from June 30 to Sept. 30. The effective dates for the 2014 Intended Use Plans will run from Oct. 1, 2013 to Sept. 30, 2014.

The change in effective dates will better align the Intended Use Plans with the federal and state budget processes, and will allow the state to extend the application deadline from Nov. 15 to Dec. 31, each year.

Operator Certification and Training

Exam Date	Location	Filing Deadline
Aug. 6, 2013	Department of Natural Resources 1709 Prospect Dr., Macon	July 8, 2013
Aug. 6, 2013	Department of Natural Resources 500 NE Colbern Road, Lee's Summit, MO	July 8, 2013
Aug. 6, 2013	Department of Natural Resources 1101 Riverside Dr., Jefferson City	July 8, 2013
Sept. 3, 2013	Department of Conservation Powder Valley Nature Center, Kirkwood	Aug. 5, 2013
Sept. 3, 2013	Department of Natural Resources 1101 Riverside Dr., Jefferson City	Aug. 5, 2013
Oct. 1, 2013	Department of Natural Resources 2040 W. Woodland, Springfield, MO	Sept. 2, 2013
Oct. 1, 2013	Department of Natural Resources 2155 N. Westwood Blvd., Poplar Bluff	Sept. 2, 2013
Oct. 1, 2013	Department of Natural Resources 1101 Riverside Dr., Jefferson City	Sept. 2, 2013

Regular wastewater examinations are scheduled for 9 a.m. and the water supply examinations are scheduled for 1 p.m., unless otherwise noted on the admission letter. For an application, visit www.dnr.mo.gov/forms/780-1089.pdf.

Draft copies of the 2014 Intended Use Plans will be available on the department's website in June for public review and comment. They will be finalized before Oct. 1.

Missouri's State Revolving Funds have provided more than \$2.5 billion of assistance to 681 recipients since the beginning of the programs. The loans have resulted in interest savings to Missouri communities of approximately \$814 million.

For more information, contact the department's Financial Assistance Center at 573-751-1192 or visit the department's website at www.dnr.mo.gov/env/wpp/srf/index.html.

Engineering Services Grants Can Help Systems Get into the Drinking Water State Revolving Fund Sooner

To ensure small community public water systems can continue to provide safe and reliable drinking water to their customers, the department provides engineering service grants. These grants cover 90 percent of the cost of engineering services to prepare an engineering report identifying the system's needs as well as recommended cost-effective solutions for the system. Grants are available to small community water systems (systems that serve populations of 3,300 or less) or systems serving between 3,300 and 10,000 for projects that primarily benefit smaller systems (consolidation, regionalization, etc.) Obtaining an engineering service grant may be the first step in securing financial assistance for construction of drinking water improvements.

For water systems that can pass bonds, the department's Drinking Water State Revolving Fund program can help systems finance the cost of larger drinking water improvement projects (usually projects costing more than \$250,000). The program provides low-interest loans (currently less than two percent) and grants (up to 50 percent of the project cost or \$2 million, whichever is smaller). To be eligible for state revolving fund loan and grant funds, a water system must pass a bond for the project as well as submit complete facility plans for the project. The engineering service grant can be used to prepare an engineering report that meets the facility plan requirements. The department accepts applications for the Intended Use Plan Drinking Water State Revolving Fund throughout the year. The department plans to make available for public notice the draft 2014 Drinking Water Intended Use Plan by mid-June 2013 and finalize the plan by Oct. 1, 2013.

For more information or a copy of the application and instructions, visit www.dnr.mo.gov/env/wpp/srf/drinkingwater-assistance.htm. For drinking water loan and grant information, contact Darleen Groner, PE at 573-751-3259. For more information regarding engineering services grants, contact Maher Jaafari, PE at 573-751-1127.

Training

The mailed version of this publication included a two page list of approved training courses and exam schedule that was available at the time of printing. For a current listing of training, please visit:

<http://www.dnr.mo.gov/env/wpp/opcert/oprtrain.htm>



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