

OWNERS AND OPERATORS HANDBOOK FOR NON-COMMUNITY PUBLIC WATER SUPPLIES



This handbook is intended to help owners and operators of non-community water supplies (motels, restaurants, schools, etc) understand state and federal laws and regulations that apply to their water supply. The handbook is easy to understand and you should read it even if you have owned or operated a supply for some time. New owners and operators should read the handbook so they are aware of the obligations they have.

Toward the end of the handbook is a list of commonly asked questions and commonly made mistakes.

If you wish to know about a certain item, check the table of contents and index to find the location.

PWS ID # MO- _____

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OWNERS and OPERATORS HANDBOOK FOR NONCOMMUNITY WATER SUPPLIES

This handbook is a basic outline of information needed to help you meet regulatory requirements for your water system. The most important thing in this handbook is **CALL 417-891-4300** if you have any questions. This is the telephone number for the Department of Natural Resources Southwest Regional Office. Our mailing address is: Department of Natural Resources, Southwest Regional Office, 2040 W. Woodland, Springfield, Missouri 65807.

IF YOUR WATER SUPPLY IS IN CAMDEN, MILLER OR MORGAN COUNTIES: We also have a small office located in Osage Beach, Missouri, but there is only one person that works in the public drinking water area and she is often working out of the office. The number there is **573-348-2442**.

If this handbook were all-inclusive and gave all necessary details about your water supply system it would be as thick as a dictionary, so **CALL US**. For convenience, the handbook is divided into sections of common problem areas.

SECTION 1 – General regulatory requirements

- A. State and federal law require that water supplies that serve water to the public meet certain standards. A public water supply is defined as any system that supplies water to at least fifteen (15) service connections or regularly serves an average of at least twenty-five (25) individuals daily at least sixty (60) days out of the year. This is done to protect the public from waterborne illnesses. The most important of these requirements is that sampling of the water be done. Normally, a sample for bacteria is required every month that you serve water to the public. If you have a sample that has bacteria in it, you will be required to take more samples. You will be notified by telephone and by mail of sample results and the need to take more than the one sample each month. **THIS IS IMPORTANT**. Follow the instructions closely when you are told to collect more than one sample each month. Failure to follow instructions may mean you are in violation of state and federal regulations.
- B. You may either collect samples yourself or hire a contract operator to do the work. The following instructions are for owners that collect their own samples. If you have a contract operator they should take care of all sampling.
- C. You will, at various times throughout the year, get in the mail or by UPS water containers that are different from the monthly bacteria sample. These are in addition to the monthly sample. These containers will have instructions included. If the instructions are not clear, call us. **DO NOT** delay taking these samples. These additional samples are not always mailed to the same address

that you send your monthly routine samples so check the instructions carefully.

- D. Use the identification number you have been assigned on all correspondence and sampling forms. It is a seven digit number preceded by the letters MO. Be sure the seven digit number is on the carboned information form you fill out for the monthly sample. **IF YOU DO NOT PUT THE NUMBER ON THE FORM, YOU MAY NOT GET CREDIT FOR TAKING THE SAMPLE.** There are many “Joe’s restaurants, and Harbor Condominiums” statewide and the laboratory has thousands of samples to deal with.
- E. Failure to do sampling may result in legal action being taken against the owner and the operator of the public water supply. See section 11 for more information on non-compliance with regulations.

SECTION 2 – Monthly sampling for bacteria, general information

- A. The sample you collect each month is referred to as the “routine” sample. It is important to follow proper procedures when collecting the monthly routine samples. Bacteria are everywhere and it is easy to contaminate the sample so establish a routine and follow it. It is best to have the same person collect the sample each month. If you do not have experience in collecting monthly samples **CALL US AND WE WILL SHOW YOU.**
- B. If it is late in the month and you suddenly realize you have not collected a sample for that month **CALL US. YOU CANNOT COLLECT TWO SAMPLES FOR THE NEXT MONTH AND GET CREDIT FOR THE PREVIOUS MONTH.** Complete all required parts of the carboned information form that is included in each box. Put your name and telephone number so we can contact you if there is a problem. The most common errors are failure to include ID # and leaving off the date and time and type of sample. **FAILURE TO PROVIDE REQUIRED INFORMATION WILL RESULT IN THE SAMPLE BEING DISCARDED AND NOT ANALYZED.** If the form is not complete, the sample will not be accepted and you will have to collect another one.
- C. **PLEASE WRITE OR PRINT LEGIBLY. THE LABORATORY IS NOT FAMILIAR WITH YOUR HANDWRITING AND YOU MAY NOT GET CREDIT FOR THE SAMPLE IF THEY CANNOT READ A NAME OR NUMBER.**

BACTERIOLOGICAL SAMPLING CARD

SEE REVERSE SIDE FOR INSTRUCTIONS

▲ LAB USE ONLY ▲		PUBLIC WATER SYSTEM NAME AND ADDRESS		BOTTLE NO.	
		SUPPLY NAME			
		STREET ADDRESS		MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES STATE PUBLIC HEALTH LABORATORY	
		CITY		BACTERIOLOGICAL WATER ANALYSIS	
		COUNTY		CHLORINE RESIDUAL (AT COLLECTION POINT)	
				FREE	TOTAL
				mg/l	mg/l
COLLECTION POINT		SAMPLE TYPE		SAMPLE DATE AND TIME	
		ROUTINE		MO	DAY
		REPEAT		YR	TIME
		REPLACEMENT			
		SPECIAL			
		REPEAT LOCATION (CHECK ONE)		COLLECTED BY	
		<input type="checkbox"/> ORIGINAL			
		<input type="checkbox"/> UP		DAYTIME PHONE NO.	
		<input type="checkbox"/> DOWN			
SAMPLE LOCATION ID		PWS ID		ANALYSIS RESULT	
				LAB USE ONLY	
				<input type="checkbox"/> <1	<input type="checkbox"/> COLIFORM +
				<input type="checkbox"/> CWO	<input type="checkbox"/> OVER 30 HOURS RESULTS MAY NOT BE VALID
				<input type="checkbox"/> TWO	<input type="checkbox"/> OVER 48 HOURS
				<input type="checkbox"/> FC +	<input type="checkbox"/> FC -

PLEASE RETURN BOTH COPIES

MO 580-0751 (8-01) LAB 10B

Routine:
Check this box for your monthly sample

Special: Check this box if you are submitting a sample that is not intended to be counted towards your monthly sample requirement. For instance, if you recently replaced your pump or a section of line and want to be sure that no contamination entered your system, submit a special sample. Therefore, if the sample is found to be present for bacteriological contamination, you will not receive a violation notice.

Repeat: Check this box if your routine sample is positive for coliform bacteria. For instance, if you sent in one routine monthly sample, and it was positive for coliform bacteria, you will need to submit 4 repeat samples. If you sent in more than one routine monthly sample, you will need to submit 3 repeat samples. A department representative will more than likely collect the repeat samples. Otherwise, you are responsible for collecting and submitting the samples.

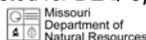
Replacement: Check this box if your sample is received by the lab over the time limit (30 hours) from the time you collected the sample, there was a lab accident, or there was incomplete information on the bacteriological sampling card. A department representative will more than likely contact you regarding submitting a replacement sample. Otherwise, you are responsible for collecting and submitting the sample.

TIME: This is very important. Time is recorded in military time. For instance, if you collect a sample at 8 AM, you would write "0800", if you collect a sample at 3PM, you would write "1500." The lab will not accept samples that are over 30 hours in holding time. Below you will find a diagram that can assist you in determining the correct time to write on the sample card.

D. After you collect the sample it must be to the laboratory in 30 hours or it will not be accepted. Therefore, if you mail the samples, do not collect on a Thursday, Friday or when holidays will interfere with delivery of the samples. **HEAVY MAIL VOLUME NEAR CHRISTMAS MAY RESULT IN LATE SAMPLES. YOU SHOULD SAMPLE EARLY IN THE MONTH.**

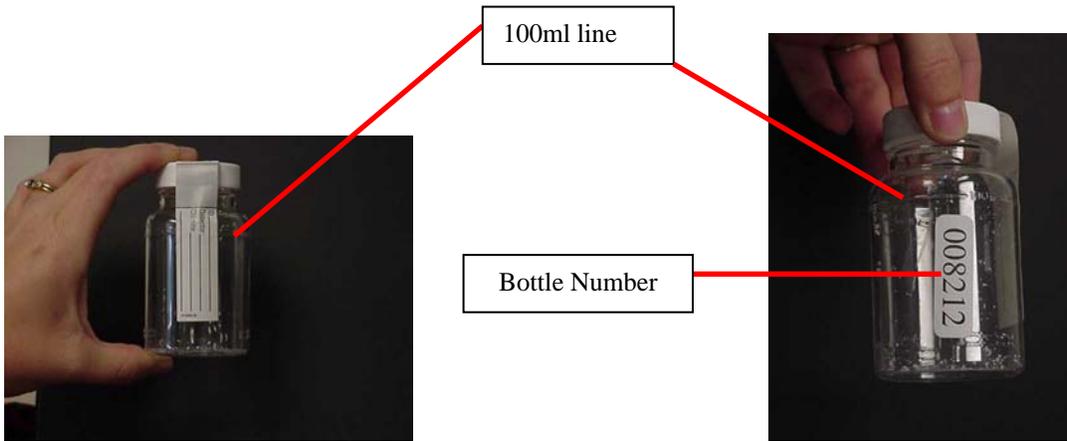
SECTION 3 – Monthly sampling for bacteria, specific requirements

You should have a faucet that has only cold water if possible. Mixing faucets can be used but increase the possibility of contamination. Outside faucets, such as frost-free hydrants, are undesirable because they are exposed to environmental contamination such as dust and insects. It is better to take the water sample before a water



softener is used because a water softener is another place where contamination can occur. If there is any question about proper sampling places CALL US.

A. Once you have selected the best possible sampling place, you should turn on the water and let it run for 2 or more minutes to flush the line. Next, you must disinfect the faucet so that bacteria that are on the faucet are not washed into the bottle when you collect the sample. Both chlorine bleach and heat may be used to disinfect the sample tap or faucet. If you use chlorine you must flush the faucet for 2 minutes after applying the chlorine so chlorine does not get into the bottle. **IMPORTANT: DO NOT ALLOW BLEACH TO SIT UNUSED IN THE LIGHT FOR A PROLONGED PERIOD OF TIME (over a week). THE DISINFECTION POWER OF THE BLEACH WILL DISSIPATE OVER TIME AND WILL BE USELESS IF LEFT OUT AND EXPOSED TO LIGHT.** There is a white powder in the bottles. It is supposed to be there, do not rinse it out. If you are not experienced in disinfecting faucets CALL US and we will give you a demonstration. **USE CAUTION** when handling the bottles. It is easy to contaminate a good water sample by careless handling. Your hands should be clean. Do not touch the inside of the bottle or the lid. Do not take the lid off the bottle until you have a stream of water running and are ready to fill the bottle. Do not put the lid down, carefully hold it in your hand while filling the bottle. Fill the sample bottle up to or slightly above the 100ml mark on the neck of the bottle. Do not overtighten the lid. Be sure to include the sample information form in the box. Use the mailing label that is in the box. **DO NOT** place correspondence in the box with the bacteriological sample. Be sure to order more bottles before you run out. There is an orange order card in the large box of individual boxes, use it to order more bottles.



BACTERIOLOGICAL BOTTLE

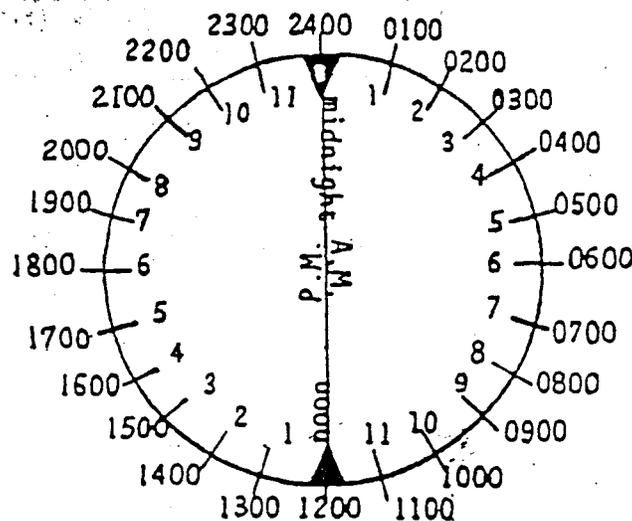
FROM:	
TO:	MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES STATE PUBLIC HEALTH LABORATORY 307 W McCARTY ST P O BOX 570 JEFFERSON CITY MO 65102
	WATER SAMPLE FIRST CLASS MAIL

Mailing Label

MO 580-0904 (1-02) IT IS ILLEGAL TO USE THIS CONTAINER FOR WORK TO OTHER THAN SPHL. LAB-9 (R1-02)

- B. If your sample has bacteria in it you will be called and notified. We may either have you collect more samples or have department staff collect more samples. If you collect the samples you have to mark them “repeat” instead of routine on the carboned information form. You will be given specific instructions when you are called. When you collect more than one sample at the same time, **FILL OUT A CARD FOR EACH BOTTLE AND EACH BOX**. If you are told that you have to collect 4 repeats then you have to have 4 bottles, 4 boxes, and 4 carboned information forms. Individual bottles are separated at the laboratory and if each bottle does not have its own carboned information form, it will be thrown out. After you collect the sample and fill out the carboned information form you have to get the sample to one of our laboratories. There is an address sticker in the box. You will mail to either the Jefferson City or Springfield laboratory.
- C. If the repeats are collected the month following the original coliform positive sample, you are **STILL RESPONSIBLE FOR COLLECTING THE ROUTINES** for that month. For instance, if you collected a routine sample on September 30 that was coliform positive, you will be required to collect 4 repeats in early October as well as 5 routine samples in the same month.

- D. You also may use certified private laboratories rather than use the state laboratory. If you use a private laboratory **BE SURE THAT THE REPORT GETS MAILED TO THE DEPARTMENT**. Some private laboratories provide you a copy of the results but do not mail a copy to the Department of Natural Resources.
- E. Sometimes you will be called and told that you forgot to complete required information on the carboned information form and are required to send in another sample. This sample will be marked “replacement” instead of routine.
- F. There is a sample category called “special”. This is used only when the samples are not intended to be part of the sampling record for the supply. For example, a seasonal operation might collect a special sample before opening in the spring to ensure that the water meets standards before opening to the public.



TIME: This is very important. Time is recorded in military time. For instance, if you collect a sample at 8 AM, you would write “0800”, if you collect a sample at 3PM, you would write “1500.” The lab will not accept samples that are over 30 hours in holding time. This diagram can assist you in determining the correct time to write on the sample card.

The following form outlines the method for collecting bacteriological samples:

METHOD FOR COLLECTING DRINKING WATER SAMPLES FOR BACTERIOLOGICAL ANALYSIS

This method is for collecting potable (drinking) water samples. Only samples collected in bottles prepared by the State Public Health Laboratories and collected in accordance with these instructions will be accepted for analysis. **DO NOT OPEN BOTTLES UNTIL ALL INSTRUCTIONS HAVE BEEN READ!**

The sample should be taken from a smooth-nosed cold water tap if possible. Avoid collecting samples from leaking taps that allow water to flow over the outside of the tap or from frost-proof hydrants (8) or hot-cold mixing faucets (9), since it is not practical to sterilize these fixtures.

- (1) Remove aeration devices and screens from faucets before sampling. Open the tap fully and let water run to waste for 2 or 3 minutes or until the service line has been thoroughly flushed.
- (2) Flame sterilize the tap from its nose to the valve, being certain that the open end has been well heated;

- OR -

Chemically disinfect the tap by thoroughly rinsing both the inside and outside of the tap with a 100 ppm solution of sodium hypochlorite (NaOCl). If tap cleanliness is questionable, provisions should be made to allow the solution to remain in contact with the tap for up to 15 minutes or to increase the strength of the solution to ensure adequate disinfection. Chemical disinfection should be used for plastic faucets or other sampling sites at which flame sterilization is not practical. (A 100 ppm sodium hypochlorite solution can be made by mixing 1/2 ounce (1.5 teaspoons) of household bleach with one gallon of clean water.)

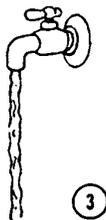
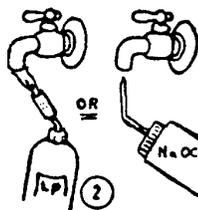
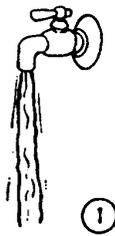
- (3) Flush the tap for an additional 2 or 3 minutes, then reduce to a gentle flow to permit filling the bottle without splashing.
- (4) **DO NOT RINSE THE SAMPLING BOTTLE and KEEP BOTTLE CLOSED UNTIL IT IS TO BE FILLED.** The bottles contain a chlorine neutralizer that is present in liquid or crystalline form. They are sterile and ready for use when shipped. A loose cap does not affect sterility.
- (5) Grasp the cap along the top edge and remove. **DO NOT TOUCH THE INSIDE OF THE CAP OR THE BOTTLE, AND DO NOT ATTEMPT TO CLEAN OR RINSE THE BOTTLE.**
- (6) Hold the bottle so that water entering it will not come in contact with your hands. Allow water to flow smoothly from the tap and fill the bottle, leaving 1/2 inch air space at the top (or fill to the black line present on some bottles). **SAMPLE WILL NOT BE TESTED IF THERE IS LESS THAN 1/2 INCH AIR SPACE IN THE BOTTLE.**
- (7) Replace cap on bottle and tighten securely.

SHIPPING INSTRUCTIONS

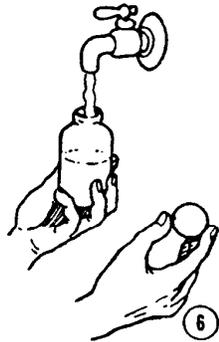
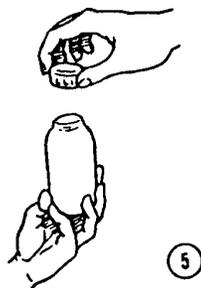
Due to the laboratory's mailing schedules, a water supply may receive bottles at the end of the week. **COLLECT SAMPLES ONLY ON MONDAY, TUESDAY, OR WEDNESDAY, EXCEPT IN AN EMERGENCY.** Samples should not be en route to the laboratory over a weekend or state holiday (New Year's Day, Martin Luther King Day, Lincoln's Birthday, Washington's Birthday, Truman's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, and Christmas.)

SHIP SAMPLES IMMEDIATELY AFTER COLLECTION. This is important because samples should be in transit no more than 24 hours for best analytical results. Check with your local postmaster for time of dispatch and collect the samples shortly before shipment to the laboratory. To ensure shortest shipping time, use first class postage. **SAMPLES RECEIVED IN THE LABORATORY MORE THAN 48 HOURS AFTER COLLECTION WILL NOT BE TESTED.**

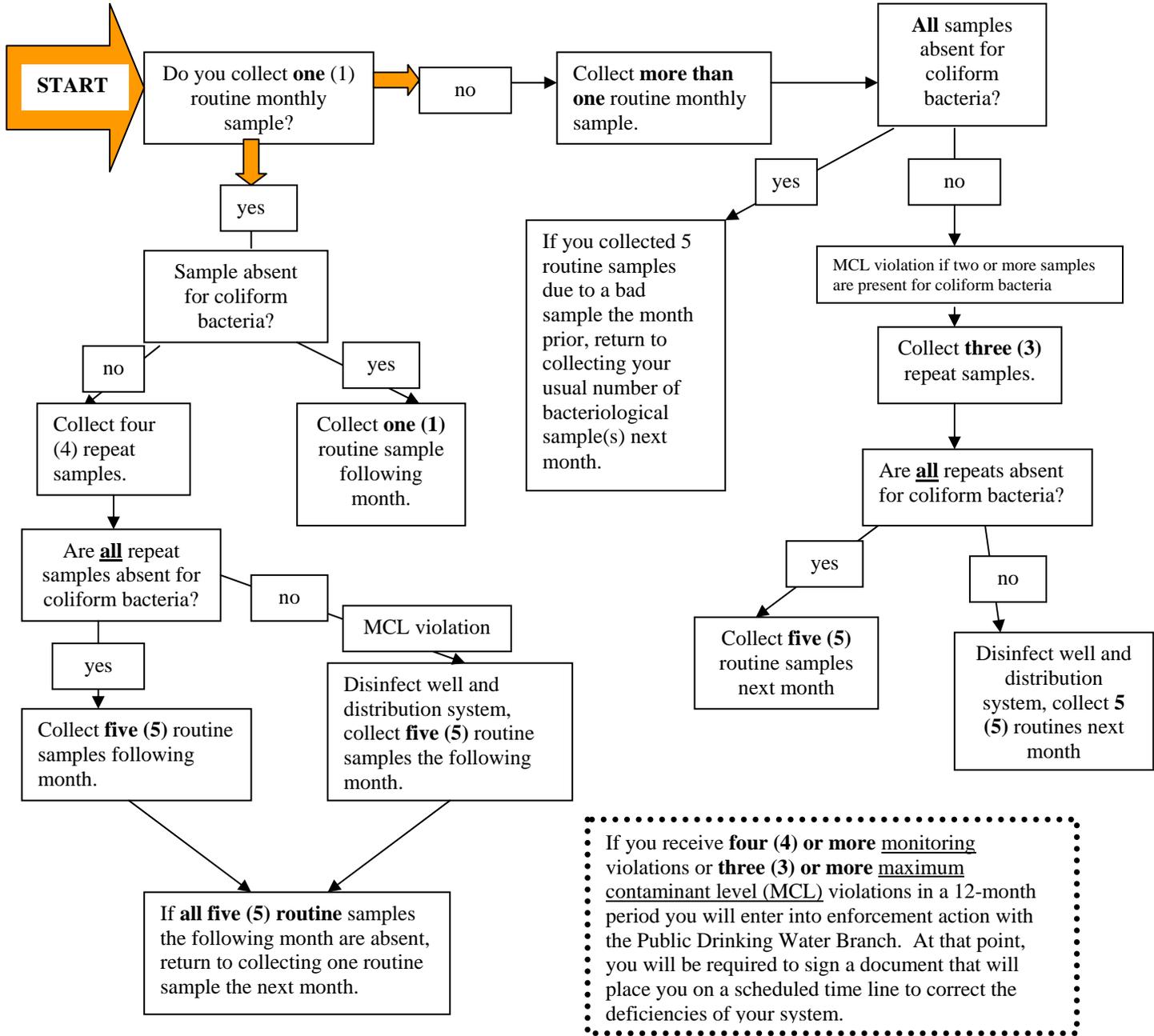
INFORMATION FORM: Fill out a separate form for each water sample submitted. Supply all information requested on the form and enclose with the sample container. Be certain that the number on the form matches the number on the bottle. **SAMPLES WITH INCOMPLETE COLLECTION INFORMATION WILL NOT BE TESTED.**



Bottle is clean and sterile
 Ready for sample
 (A loose cap does not affect sterility)



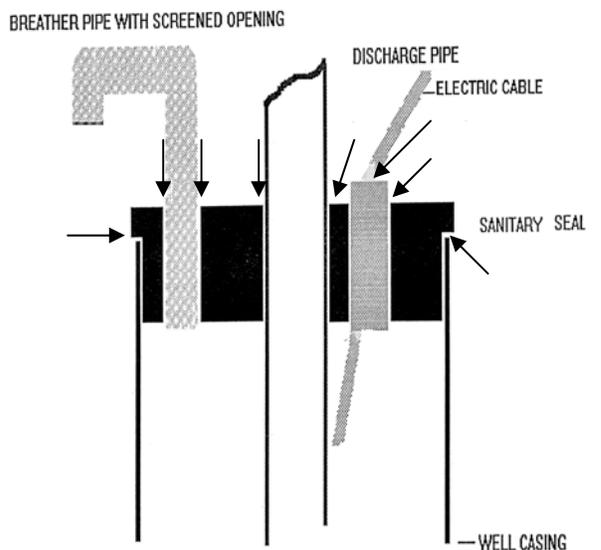
The following is a flow chart regarding the collection of bacteriological samples:



SECTION 4 – Making sure your well is not the cause of bad samples

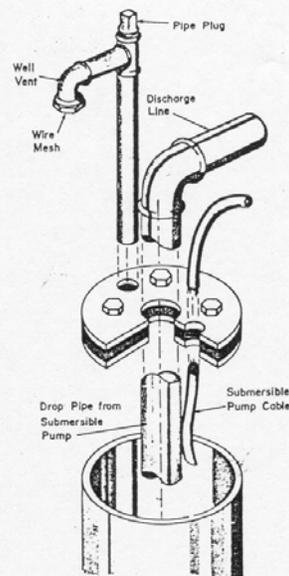
A. Most groundwater in central Missouri meets regulatory standards. The most common failure is due to contamination that entered the well through the wellhead. The wellhead is the part of the wellpipe that extends above ground or floor level. Remember that a well is just a hole in the ground with a pipe in it and **the pipe extends down into the ground directly into the water** that you are pumping back to the surface to use. Therefore, if there is a way that environmental contamination such as dust, dirty water, insects, etc can get into your wellhead, it is a straight shot down into your water.

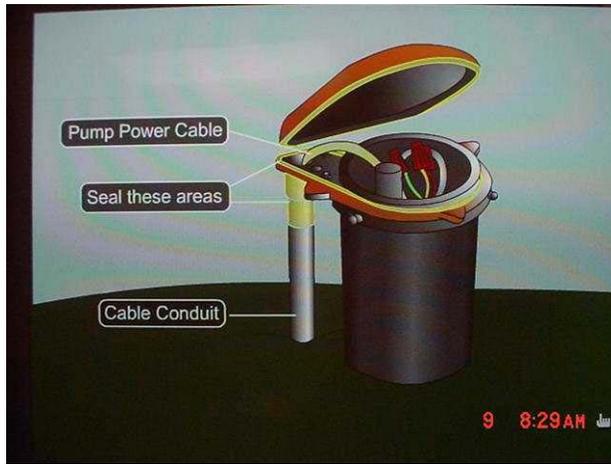
- B. Your first line of defense is to be sure the wellhead is sealed with caulk to prevent contamination from entering around the gasket, wiring, or piping. A downward pointing, screened vent should be the only opening in the wellhead. This vent is necessary to allow air to enter the well when water is being pumped out and to allow air to be expelled when the pump shuts off and underground water comes in to replace the water that was pumped out. These vents must be properly constructed and screened or contamination may enter along with air. It is not possible to tell by a casual examination if the wellhead is properly sealed. If the wellhead is located out of doors or is close to the ground, the possibility of contamination is increased. A department staff member can help you decide if improvements are needed.
- C. Sometimes wellheads are improperly constructed and that makes it more difficult to seal. A DNR inspector can examine your wellhead and tell you if improvements need to be made. The area around the wellhead, whether in a wellhouse or basement or wherever, should be kept clean so that contamination entering through the vent is minimized. The following document can assist you with determining key areas to seal on your wellhead. The arrows show sites where contamination can enter your well. **IF YOU HAVE WORK DONE ON YOUR WELL BE SURE TO DISINFECT IT OR YOU PROBABLY WILL GET BAD SAMPLES WHEN THE WELL IS PUT BACK INTO SERVICE.**



THIS WELL HEAD IS SHOWN WITH A NUMBER OF DEFECTS, THE VENT PIPE, SANITARY SEAL, POWER CABLE AND DISCHARGE PIPE ALL HAVE LEAKS.

Well seal for submersible pump installation.





The picture shown on the left is a pitless type well. It is structurally different than the well shown above due to the cap top. It is very important to insure that the cap on this type of well is securely fastened to guard against contamination entering the well.

SECTION 5 – What to do when a sample has bacteria in it

- A. Sometimes in spite of taking all of the precautions listed in sections above you may get a call from us telling you that you have bacteria in your water. You will then be given specific instructions that may include collection of repeat samples to confirm that the first routine sample was not a sampling error. If the repeat samples also have bacteria you may be instructed to disinfect the system. You can either do this yourself or have a well service company do it. If you decide to do it yourself you will be given specific instructions on how to accomplish this. You will have to either flush the system or wait until the chlorine is gone through normal usage before you can take more samples.
- B. **WHENEVER YOU HAVE A SAMPLE WITH BACTERIA IN IT YOU ARE REQUIRED TO COLLECT 5 ROUTINE SAMPLES THE FOLLOWING MONTH.**

A maximum contaminant level violation (MCL) is issued to a facility when two or more monthly bacteriological samples are present for coliform and/or e.coli bacteria.

The following is guidance on how to properly disinfect your well and distribution system:

Disinfecting Small Drinking Water systems

The most commonly used method for disinfecting drinking water systems is by shock chlorination. Shock chlorination is the addition of chlorine to the water to obtain a high concentration of chlorine to kill the bacteria. Water with high concentrations of chlorine should not be used for domestic purposes. It is acceptable for stool flushing. The most commonly used form of chlorine is liquid household laundry bleach (unscented).

The amount of chlorine necessary to effectively disinfect a system is dependent on such factors as the amount of water in the system, physical layout of the system and level of contamination in the system. For systems contaminated with low concentrations of coliform bacteria without fecal bacteria, a low concentration of chlorine can be used to effectively disinfect the system in most cases. The advantage of disinfecting at a low concentration is the water can still be used for most domestic use (drinking, cooking, laundry and bathing). However, for systems contaminated with both coliform and fecal bacteria, a higher concentration may be needed to disinfect the system. **At higher concentrations the water is not safe for domestic use.** The Missouri Department of Natural Resources - Southwest Regional Office should be contacted for assistance on determining the proper chlorine concentration for disinfection.

Water systems which have either no storage or only small volume pressure tanks for storage can use the following process to shock chlorinate their systems. This procedure may result in a high concentration of chlorine and should not be used for domestic purposes:

1. Introduce proper amounts of chlorine directly into the well(s). For a chlorine concentration of around 50 mg/L, the table on page 14 gives the recommended amount of liquid laundry bleach needed for shock chlorination based on the diameter of the well and depth of water in the well. **IF YOU DO NOT KNOW THIS INFORMATION USE ONE GALLON OF LIQUID LAUNDRY BLEACH.**

The most convenient method of introducing the chlorine into the well is to pour the liquid bleach (unscented) into the wellhead through the vent tube and then flush it down with a water hose for about 30 minutes. Flushing is needed to mix the chlorine with the water in the well. If you cannot use a hose at least pour several gallons of water down the vent.

If you have a pitless system, remove the cap and look into the well. If you see wiring and pipes then you need to use a piece of pipe and funnel to bypass the wiring and pipes when you pour the bleach down the well. Remember to flush the bleach with water.

2. The chlorine should be left in the well for at least 2 hours.
3. Then introduce the chlorinated well water into the entire system by opening each faucet in the system one by one and letting the water run until a strong chlorine odor is detected or a chlorine residual is detected by a test kit.
4. At this point it is desirable to allow the chlorinated water remain in the system for at least 12 hours. If you must use water in your business and cannot let the chlorinated water remain for 12 hours then go to step 5.
5. Flush the chlorinated water from the system. Start by opening outside faucets and letting them run until the chlorine smell is gone. Finally, run the indoor faucets until the chlorine odor is gone. When done there should be no detectable chlorine smell and the water should be clear and have very little chlorine residual. This procedure will reduce the impact on your wastewater system. **(Note: a small amount of chlorine may be present in the water with no detectable smell, See Note Below.)**

PLEASE NOTE:

Both household pet fish and bait fish are very sensitive to chlorine. Even at very low levels chlorine can kill them. You should not add water to fish tanks until the well, any storage

tanks, all lines, and water softeners and heaters have been thoroughly flushed and all chlorine has been removed. A swimming pool test kit may not be accurate enough to determine if the water is free of chlorine.

If you have any questions, please call the Missouri Department of Natural Resources, Southwest Regional Office at 417-891-4300 for assistance.

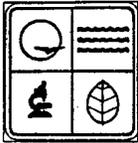
**Table for 5.25% Liquid Laundry Bleach
(Unscented)**

Depth of water in well	Well Casing Diameter				
	<u>4 inch</u>	<u>6 inch</u>	<u>8 inch</u>	<u>10 inch</u>	<u>12 inch</u>
100 ft.	1 cup	2.5 cups	1 qt.	.50 gal	.75 gal
200 ft.	2 cups	5 cups	2 qt.	1 gal	1.50 gal
300 ft.	3 cups	7.50 cups	3 qt.	1.50 gal	2.25 gal
400 ft.	4 cups	10 cups	4 qt.	2 gal	3 gal
500 ft.	5 cups	12.5 cups	5 qt.	2.5 gal	3.75 gal
600 ft.	6 cups	15 cups	6 qt.	3 gal	4.25 gal

SECTION 6 – Sample Results

- A. When you take samples you will get a written confirmation of the results, good or bad. It may take some time before you get the written results but if the samples are bad you will be notified by telephone. When you get the written results, read the letter, there may be information or instructions you need. Keep the results in a file, you may need them in the future.

The following is a sample bacteriological report:



Missouri Department Of Natural Resources
 Public Drinking Water Program
 P.O. Box 176
 Jefferson City, MO 65102 (573)751-5331



Public Water System Bacteriological Report

PWS Name :
 Mail to :

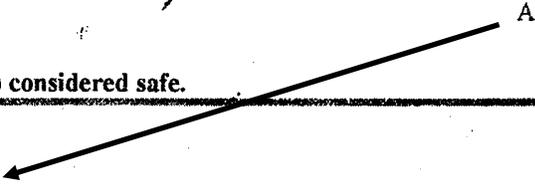
PWS ID :

County :

Please notify us of any
 name and address changes

Date Collected :	Collector :	Sample Type :
		Routine
Lab Sample ID :	Location Name:	Location ID:
		Lab Results :
		A

A=Coliform Absent. Sample(s) considered safe.



If the sample were present for coliform bacteria, the lab result would read 'P'.

SECTION 7 – What is a boil order?

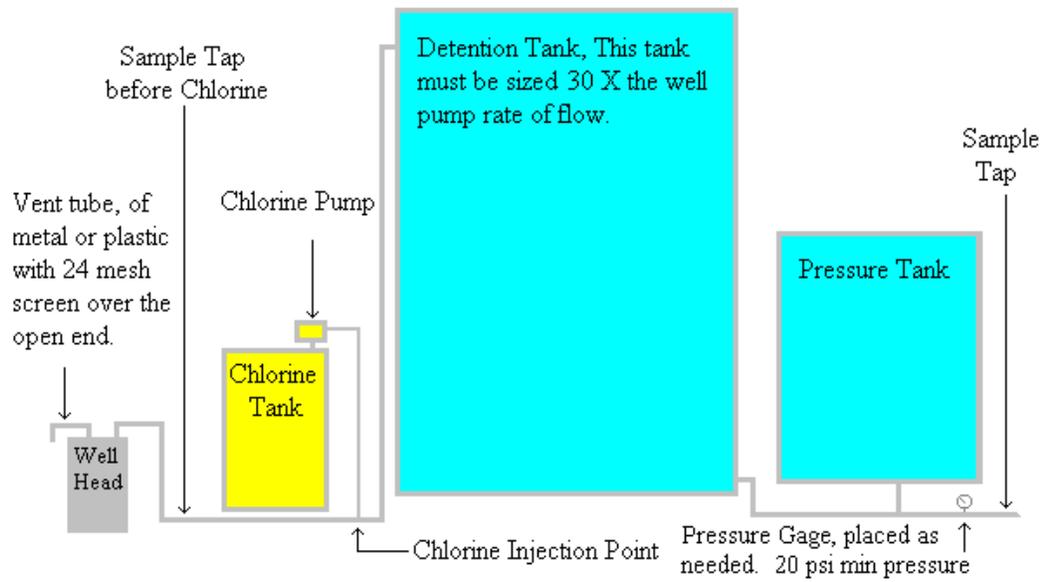
- A. If a certain type of bacteria called E. coli is found in your water during the routine monthly sampling you may be required to have a boil water order at your supply. You will be informed if this happens and given information on what actions you must take. A boil water order means that the bacteria in the water make it unsafe to drink or use for human consumption in any way. This is a serious situation and you must follow all instructions given to you by the Department of Natural Resources personnel. You will not be able to use the water in any food preparation unless it has been disinfected. If the public has access to the water, they have to be warned that it is not safe to use for human consumption.

SECTION 8 – Routine Disinfection

- A. Some water supplies disinfect the water pumped from the well before it is used. This is usually done for one or more reasons. One reason could be that the supply has had some bacteria in the water in the past and either voluntarily or was required to disinfect by the Department of Natural Resources or other state agencies. Sometimes an owner decides to disinfect as a routine safety precaution. Also, sometimes disinfection is done to improve taste and odor problems with the water.
- B. Disinfection is done by the use of a chlorine product to kill bacteria. This method requires that chlorine be added to the water and then requires a time period before the water is used to allow the chlorine to kill bacteria. This means that some storage volume (detention tank) is required to allow “contact time” for the chlorine to work. Department staff can assist you in determining if you have adequate contact time. Chlorine is usually added in the wellhouse with a small injection pump injecting a chlorine and water solution into the piping soon after the water comes out of the well. Systems that drop chlorine pellets into the well are not accepted by the Department because they cause corrosion to the well casing and it is not possible to accurately control the amount of chlorine in the water.
- C. If chlorine is added for only taste and odor problems then the department does not require a specific contact time.
- D. Any system that adds chlorine needs to monitor the chlorine level (residual) in the water at the point of use to ensure that an adequate level is being provided. Inexpensive test kits are available for testing the chlorine residual. Maintaining a chlorine residual is a method of providing assurance that enough chlorine is in the water to kill bacteria.



Pocket Colorimeter used for measuring chlorine residual. Shown at left is a CN-66 color disc/DPD pocket colorimeter. This instrument can be purchased from the Hach company by calling 1-800-227-4224. The test kit costs approximately \$38.95 plus shipping. The Hach chlorine tester is an example of what is available for analysis, however there are other varieties of chlorine testers available for purchase.



Example of a properly set up liquid chlorine injection system

SECTION 9 – Change of Owners or Operators

A. It is essential that the Department of Natural Resources have current information on who is the responsible person for the water system. If there is a change in owners, mailing addresses, or person who takes the water samples, call or write to the regional office. Do not put a note in the monthly sampling bottle box. The laboratory is a different department and notifying them does not notify the Department of Natural Resources. The following form must be completed when ownership changes for a facility that already has a permit to dispense:

MISSOURI DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF ENVIRONMENTAL QUALITY
 PUBLIC DRINKING WATER PROGRAM
 P. O. BOX 176, JEFFERSON CITY, MO 65102
APPLICATION FOR TRANSFER OF OPERATING PERMIT

PWS ID NUMBER
MO -

NOTE: THE DEPARTMENT WILL PERFORM A PERMIT REVIEW TO ASSESS COMPLIANCE WITH THE CONTINUING OPERATING AUTHORITY REQUIREMENTS OF 10CSR60-3.020, THE APPLICABLE MAXIMUM CONTAMINANT LEVELS AND MONITORING REQUIREMENTS OF 10CSR60-4.010 THROUGH 4.010, AND THE MINIMUM POSITIVE PRESENCE REQUIREMENTS OF 10CSR60-4.030.			
1.00-3.00 TO BE COMPLETED BY CURRENT PERMITEE (PRESENT OWNER/SELLER) OR THE DNR REGIONAL OFFICE. THE FOLLOWING ITEMS PRESENTLY APPLY TO THIS FACILITY:			
1.00 FACILITY			
NAME			TELEPHONE NUMBER
ADDRESS	CITY	STATE	ZIP CODE
2.00 CURRENT OWNER			
NAME			TELEPHONE NUMBER
ADDRESS	CITY	STATE	ZIP CODE
3.00 OPERATING AUTHORITY: (if same as owner, write same)			
NAME			TELEPHONE NUMBER
ADDRESS	CITY	STATE	ZIP CODE
CONTINUED (OVER)			

NOTE: THE DEPARTMENT WILL PERFORM A PERMIT REVIEW TO ASSESS COMPLIANCE WITH THE CONTINUING OPERATING AUTHORITY REQUIREMENTS OF 10CSR60-3.020, THE APPLICABLE MAXIMUM CONTAMINANT LEVELS AND MONITORING REQUIREMENTS OF 10CSR60-4.010 THROUGH 4.110, AND THE MINIMUM POSITIVE PRESSURE REQUIREMENTS OF 10CSR60-4.080(9). IF THE REVIEW SHOWS THE PROPOSED CONTINUING OPERATING AUTHORITY DOES NOT MEET THESE REQUIREMENTS, A COMPLIANCE AGREEMENT WILL BE NEGOTIATED. THE PERMIT TO DISPENSE WATER WILL BE DENIED UNTIL COMPLIANCE IS ACHIEVED.

THE FOLLOWING ITEMS (4.00-9.00) WILL APPLY AFTER COMPLETION OF TRANSFER (SALE) AND ARE TO BE COMPLETED BY THE APPLICANT FOR TRANSFER OF OPERATING PERMIT (BUYER) OR AUTHORIZED AGENT.

4.00 CHIEF			
NAME		PWS ID NUMBER	TELEPHONE NUMBER
ADDRESS	CITY	STATE	ZIP CODE
5.00 FUTURE OWNER			
NAME		TELEPHONE NUMBER	
ADDRESS	CITY	STATE	ZIP CODE
6.00 OPERATING AUTHORITY (If same as owner, write same)			
NAME		TELEPHONE NUMBER	
ADDRESS	CITY	STATE	ZIP CODE
7.00 FACILITY CONTACT			
NAME		TELEPHONE NUMBER	
TITLE			
8.00 ADDITIONAL INFORMATION			
ANTICIPATED EFFECTIVE DATE OF TRANSFER IN OWNERSHIP			
ARE ANY CHANGES IN QUANTITY OR QUALITY OF WATER PRODUCED BY THIS FACILITY PLANNED OR ANTICIPATED?			
<input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, EXPLAIN (IF ADDITIONAL SPACE IS REQUIRED, ATTACH SHEET)			
9.00 SIGNATURE			
I CERTIFY THAT I AM FAMILIAR WITH THE INFORMATION GIVEN ABOVE, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF SUCH INFORMATION IS TRUE, COMPLETE AND ACCURATE, AND UPON OWNERSHIP TRANSFER, I AGREE TO ABIDE BY THE MISSOURI SAFE DRINKING WATER LAW SECTIONS 640.100 – 640.140, RSMo AND ALL RULES AND REGULATIONS UNDER THE MISSOURI SAFE DRINKING WATER LAW.			
A. NAME (TYPE OR PRINT)		B. PHONE NUMBER (area code & number)	
C. SIGNATURE		D. DATE SIGNED	

SECTION 10 – Seasonal Operations

A. If your supply is not open all year then you only have to collect samples during the months you are open for business. If you are open for a few days during a month, then you must collect a routine monthly sample. If you change your seasonal schedule, for example if you close a month early, notify us so we do not list you as being in violation for not collecting a sample. Before you open for business in the spring you should flush your water system thoroughly. You may wish to consider disinfecting the system before you flush it. Refer to Section 5 for details on how to do this.



Flushing should be the minimum action before taking your first monthly sample.

SECTION 11 – Non-compliance with regulations

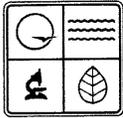
- A. Enforcement of the public drinking water standards is required by state and federal law and regulations. If you have violations of the regulations you may be required to sign a document agreeing to correct any observed deficiencies. If you are notified that you are in violation of any regulations please contact the Department of Natural Resources and one of our staff will discuss the violation and help you understand what you are required to do.

.....
: If you receive **four (4) or more** monitoring
: violations or **three (3) or more** maximum
: contaminant level (MCL) violations in a 12-month
: period you will enter into enforcement action with
: the Public Drinking Water Branch. At that point,
: you will be required to sign a document that will
: place you on a scheduled time line to correct the
: deficiencies of your system.
:

A maximum contaminant level violation (MCL) is issued to a facility when two or more monthly bacteriological samples are present for coliform and/or e.coli bacteria.

A monitoring violation is issued when you fail to collect a required monthly sample.

The following forms are examples of monitoring and maximum contaminant level violations for bacteriological quality:



Missouri Department of Natural Resources
 Water Protection and Soil Conservation Division
 Public Drinking Water Program
 P.O. Box 176
 Jefferson City, MO 65102-0176



**Notice of Noncompliance
 Public Notice Required**

Month
 Violation
 Occurred

Date of Report:
 PWS Name:
 Mail to:

PWS ID:
 County:

Notice of
 Violation
 (NOV) for
 failing to send
 in a monthly
 bacteriological
 sample.

The following is a summary of the bacteriological analysis of water samples submitted for the period ending 5/31/2002

Sample Type	Number Required	Number Taken
Routine	1	0

Violation Type:

MONITORING (TCR), ROUTINE MAJOR

This is a violation of 10 CSR 60-4.020(1). No routine drinking water samples were collected for the testing of total coliform bacteria.

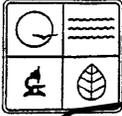
Required Actions:

1. The enclosures give instructions on how to perform public notice and a copy of the public notice itself to distribute, post and provide to any media.
2. Fill in the appropriate information requested on the certification page and sign where indicated.
3. Make copies of the certification and public notice (as seen by the public) for your files.
4. Send the completed certification and a copy of the public notice (as seen by the public) back to DNR at the address given.

For assistance, contact the JEFFERSON CITY REG OFFICE - JCRO at 573-751-2729 or the Public Drinking Water Program at (573) 751-5331.

23VIO

When issued an NOV for a monitoring or a maximum contaminant level violation for bacteriological quality, public notice must be made. After public notice has been posted, you are required to submit the public notice form and the certification of public notice to the Public Drinking Water Branch at the address listed on the form.



PUBLIC NOTICE-CUSTOMERS OF

**FAILURE TO MEET MICROBIOLOGICAL MONITORING REQUIREMENTS
FOR DRINKING WATER**

Public
Notice

**Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.**

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During _____ did not test for total coliform bacteria and therefore cannot be sure of the quality of our drinking water during that time.

This is a violation of Missouri Public Drinking Water Regulations. The Missouri Department of Natural Resources requires that drinking water from this supply be tested for this type of bacteria by submitting at least one valid sample per month. Bacteriologically-contaminated water can cause a variety of disease symptoms. It is important that drinking water be routinely tested to ensure the safety of those who consume it.

Provide explanation of cause of monitoring failure:

For further information contact:

(Name and business address of system contact person)

(phone #)

You may also contact the department of
Public Drinking Water Program at (573) 751-5331
or JEFFERSON CITY REG OFFICE - JCRO at 573-751-2729.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

23PN

**Major Monitoring Violations for Total Coliform Bacteria
Transient Noncommunity Systems**

DNR Notification Date:

Date Public Must be Notified by

Date to send Public Notification back to DNR by:



- A. Within 30 days you must notify your customers of the failure to monitor for total coliform bacteria. The following methods must be used:
1. Post the notice in logical locations. This may include the cafeteria, drinking fountains and bulletin boards, etc.
 2. Make the notice available to all who request one. This may be done via e-mail or hand delivery, etc. It is strongly recommended that parents or guardians of minors also be notified.
- B. **AFTER** public notice has been made, return a copy of the posted and/or distributed version and the completed certification below to:

Missouri Department of Natural Resources
Public Drinking Water Program
P.O. Box 176
Jefferson City, MO 65102-0176

Please send us this documentation to us within a week after completion of notifying the public. You also need to make copies of the completed certification and public notice for your files. If you have any questions or need any additional information, please call Patty Ritchie, public notice coordinator, directly at (573) 751-8309. You may also contact the Public Drinking Water Program at (573) 751-5331 or DNR's toll-free number at 1-800-361-4827.

CERTIFICATION OF PUBLIC NOTICE

I certify public notice was performed by at the methods checked below:

Hand delivery

Date: _____

Standard Mail

Date: _____

Posting:

Begin Posting Date: _____

End Posting Date: _____

Locations: _____

(Signature)

(Title)

(Date)

PWS ID #:

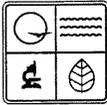
System Name:

County:

23CERT1

Certification form that must be sent with the public notice form to the Public Drinking Water Branch after posting.

Notice of Violation for exceeding maximum contaminant level for bacteriological quality:



Missouri Department of Natural Resources
Water Protection and Soil Conservation Division
Public Drinking Water Program
P.O. Box 176
Jefferson City, MO 65102-0176



**Notice of Noncompliance
Public Notice Required**

Date of Report: _____ PWS ID: _____
PWS Name: _____ County: _____
Mail to: _____

Please notify us of any name and address changes.

The following is a summary of the bacteriological analysis of water samples submitted for the period ending _____

Sample Type	No. TC Positive	No. FC or EC Positive
Routine/Repeat	4	

Violation Type:
MCL (TCR), MONTHLY
This is a violation of 10 CSR 60-4.020(7)(A). Two or more samples tested positive for total coliform bacteria.

Required Actions:

1. The enclosures give instructions on how to perform public notice and a copy of the public notice itself to distribute, post and provide to any media.
2. Fill in the appropriate information requested on the certification page and sign where indicated.
3. Make copies of the certification and public notice (as seen by the public) for your files.
4. Send the completed certification and a copy of the public notice (as seen by the public) back to DNR at the address given.

For assistance, contact the _____ at _____
or the Public Drinking Water Program at (573) 751-5331.

22VIO

Month violation occurred

Notice of Violation for exceeding Maximum Contaminant Level for bacteriological quality.

Public notice and the public notice certification form must be made and sent in to the Public Drinking Water Branch for maximum contaminant level (MCL) violations. The public notice and certification forms for an MCL violation are similar to those used for a monitoring violation.

SECTION 12 – Certified operators

- A. There are some non community public water supplies that are required to have a certified operator. The most common are called non-transient non-community public water supplies. This would include factories and schools where the same people use the water every day. A less common non community public water supply required to have a certified operator is one where the source is either surface water or ground water under the direct influence of surface water (GWUDISW). If you are notified that you are required to have a certified operator, you can either hire a private contract operator or have one of your employees become certified. Contact our office for assistance if you need a _____ certified operator.

- B. If you have a certificate, you must attend training to keep your certificate current. Check with the department to make sure you understand the requirements to maintain your certificate.

SECTION 13 – Permits to dispense

- A. Each public water supply is required by state law to have a permit to dispense water to the public. There is no fee associated with the permit. This permit is similar to having a license for your automobile. Certain requirements must be met before a permit to dispense can be issued. One of the most important requirements is that the well be constructed according to standards. The water that is used by the public also has to meet all applicable standards according to the sampling program discussed earlier. If you do not have a permit to dispense you will be given an application to apply for one (see below).
- B. If the well you are using was not constructed to be used as a non-community supply, department staff will evaluate the records to determine if the supply can be “grandparented” and have a permit issued on the basis of the supply having been in use before the regulations were passed.

The following form must be completed and submitted along with any information you have concerning your water system, such as a well log, within thirty (30) days of becoming a public water supply. It is very important to find out any and all information concerning your well (date drilled, well driller, total depth, casing depth). The Public Drinking Water Branch will evaluate the compliance status of your water system and a permit to dispense will be issued after all permitting criteria are met.



Bob Holden, Governor • Stephen M. Mahfood, Director

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY

Jefferson City Regional Office

210 Hoover Road P.O. Box 176 Jefferson City, MO 65102-0176

(573)751-2729

FAX (573)751-0014

APPLICATION FOR PERMIT TO DISPENSE WATER
NONCOMMUNITY WATER SUPPLY

Name of Supply PWS ID#
Address City
County Zip Phone
Person to Contact
Address Phone

Well information (if known): Storage:
Total Depth feet Water Tower gallons
Casing Depth feet Pressure Tank(s) gallons
Pump Capacity gallons per minute Concrete Reservoir gallons
Certification Number Steel Tank(s) gallons
Date Constructed ** Other: gallons
TOTAL gallons

*Note: If more than one well is being used, please write information on the back.

**If an exact date of construction is not known, but the well is known to exist prior to July, 1987, please indicate the approximate date on the application. A CONSTRUCTION DATE MUST BE GIVEN BEFORE THE APPLICATION WILL BE PROCESSED.

Average number of persons per day using water system:

Number of connections/hookups:

Water treatment (please describe):

I hereby request a permit to dispense water to the customers of:

Signature of Owner/Operator:

Title:

Date:



SECTION 14 – Inspections

- A. At least every few years a department inspector will visit your supply and make a visual inspection of your water system. If there are improvements that need to be made to ensure the safety of the water system, you will be notified at the time of the inspection and will receive a letter confirming the need for improvements. One of the most common deficiencies found during inspections is the lack of a screened vent on the wellhead. Another common problem is a wellhead that has deteriorated and needs caulking and other improvements to prevent the entry of contamination into the well.
- B. Also, during the inspection, records will be examined and you will be informed of any need for improvements. Some of the records that should be available include: permit to dispense, sampling results, violation notices, and other official correspondence from the department. There is a list of minimum retention times for records but the easiest approach is to keep all records for at least ten years.
- C. In addition to the routine visits mentioned in A, a special inspection may be scheduled if your water sampling results in unsatisfactory results.

SECTION 15 – Correspondence from the department

- A. In addition to the sampling results mentioned in SECTION 6 ‘A’ above, you will periodically receive correspondence from the department on a variety of issues. This correspondence is to inform you of changing requirements, sampling schedules, and other information you need to know as an owner or operator. PLEASE OPEN AND READ the correspondence. If you have any questions call us. Most correspondence should be filed and permanently retained.

SECTION 16 – Well information and contingency contact plan form

- A. We suggest that you use this page to record information about your well, to record maintenance done on the well, and to keep the name and telephone number of well maintenance services you have used.

WELL INFORMATION AND CONTINGENCY CONTACT PLAN

The following information may be useful if it is necessary to perform maintenance on the well or water storage system. This is especially true if your usual well maintenance business happened to be unavailable or if the owner or manager of the water supply was unavailable. Having this information readily available may make the difference between being back into operation in a short time or having to shut down the business for several days. If you sell the business this information will be valuable to the new owner.

Names and phone numbers of three (3) facility personnel that have the authority to implement repair practices in an emergency situation, such as a pump outage, well and distribution system shock chlorination, water line break or leak, etc:

- 1 _____
- 2 _____
- 3 _____

Name and telephone of well service business. List second choice if possible.

Location of well. Sometimes wells are located in strange places, such as in the basement, under a paved driveway, etc. Give as much detail as possible.

Name and telephone of plumber or other necessary service personnel.

List any available information on well such as total depth of well, date pump and drop pipe was installed, size of pump, date well was drilled, depth of casing, name of company that originally drilled well, etc.

If there is any other emergency information, such as a connection with another supply that can be activated in case of need, give details here such as contact person and telephone.

SECTION 17 – Abandoned wells

If there is a well on your property that is not in use and there are no plans to use it in the near future, then this is referred to as an abandoned well. A well may be abandoned because it no longer produced adequate water or for a variety of reasons. Abandoned wells usually deteriorate because of lack of maintenance and pose a hazard to other wells in use in the area. When the casing rusts and the top of the well is not maintained, contamination can enter the well and cause wells still in use to be ruined. For information on how to properly close an abandoned well so that it does not pose a threat to the groundwater and other wells, contact the regional office.

SECTION 18 – Responsibilities and duties of owners and operators

The most important duty of an owner and operator is to ensure that consumers have water that is safe to drink and use. This is done by ensuring the water meets all regulatory requirements. One of the most important things that can be done is to do a brief visual inspection of the physical facilities. A daily inspection is recommended. If there is any treatment then a daily inspection would be needed to ensure that equipment is in working order.

The inspection should only take a few minutes and should be done by a person that is aware of how the system **SHOULD** be working. A daily routine could include the following items.

1. Visual check for signs of damage or vandalism, water leaks, burned wiring, leaking roof, etc.
2. Check the well vent to make sure the screen is intact. Check the wellhead to see if caulk or other material makes a tight seal.
3. If you have ultraviolet treatment be sure bulbs are working, any alarm lights are ok, and follow any recommended manufacturers checklist.
4. If you have chlorine disinfection, be sure the chlorine pump works when the well pump comes on. Check the level in the solution tank. Check for obvious leaks or corrosion around the chlorine pump, tank, and piping.
5. If there is a well meter, read and record water usage. This information may help determine the existence of an underground water line leak.
6. **EITHER FIX ANY PROBLEMS FOUND OR REPORT THEM TO A RESPONSIBLE PERSON.**

SECTION 19 – Terrorism, Vandalism and Water System Security

It is unlikely that foreign terrorists will target non-community public water supplies in southwest Missouri. However, homegrown copycat terrorists, vandals, disgruntled customers or employees, or random thrill seekers can easily

do significant damage and cause a serious health hazard for systems that do not take basic precautions. The following is a list of minimum precautions that should be taken by all water system owners, operators, and responsible persons involved in the administration of the supply.

1. Wells and storage tanks should not be easily accessible. All wellheads should be inside a building. Buildings should be sturdy and strong doors with good locks should be installed. Keys to the locks should be limited to persons that have a need to enter the buildings and should be changed anytime personnel changes indicate that security could be compromised. Storage tanks should be protected by high chain link fences. If there is reason to believe that a structure is particularly vulnerable, motion detectors and alarm systems can be installed. Persons that work and live in the vicinity of the wells and storage tanks should be enlisted to watch for suspicious activity and be made aware of the need to notify authorities.
2. All wells and storage tanks should be checked as frequently as is practical, daily would be ideal. These checks would only take a few minutes and would ensure that locks are secure and that no obvious tampering has occurred.
3. All consumers should be made aware that any noticed change in the water quality such as taste, color, or odor should cause them to not use the water until they contact responsible persons in charge of the water supply.
4. Responsible officials of the water supply should have a written plan of action that outlines immediate steps that will be taken if there is a threat to the integrity of the water system. Notification of consumers is the most critical and should be done as soon as a danger has been verified.
5. Determining what action to take to correct a verified attack on the system should be done only after consultation with the Department of Natural Resources. For example, if it was found that someone introduced a foreign substance into the water system, flushing of the system should be done only after it is determined that it would be safe to the public to flush the material onto the ground.

Commonly asked Questions:

Q. Why do I have to do all this sampling and other stuff?

A. Federal and state laws were passed to require that anyone who owns or operates a water source that serves water to the public meet certain minimum requirements. One of the most important requirements is that sampling be done to ensure that water served to the public meets minimum standards.

Q. Has anyone ever benefited from all this expensive sampling?

A. Yes. The awareness that water can be a carrier of disease was a great step toward improving public health. Waterborne illness is less common than a century ago but there are still major incidents such as Milwaukee,

Wisconsin. Locally, there are still cases where water is found to be contaminated with E. coli, the class of bacteria that makes the news when contaminated food or water causes people to get sick and sometimes die. Chemical contamination is increasing, as evidenced by a major supply in Camden county that had to abandon a well because of contamination from a factory.

- Q. Why do you say I own a public water supply? I just have a small resort.
- A. Laws and regulations define a public water supply in several ways: If you have 15 or more living units (mobile homes, apartments, homes, etc) and/or 25 or more persons using the water on a year round basis then you are a public water supply. Also, if you serve 25 or more of the same persons over 6 months of the year (factories, schools, etc) you are a public water supply. And, if you have 15 or more service connections (motel units, etc), or serve water (or use water in food preparation) to 25 or more individuals 60 or more days each year. By these definitions you see that even motels and restaurants that are open only during the summer are a public water supply.
- Q. What do you mean when you say I am an “operator”?
- A. An owner is the person who legally owns the water system. If you do not own the water supply but lease it as part of a business, or if you are the person that is responsible for taking care of the water supply, or you are the responsible person for the business that includes the water supply, then you are referred to as the operator. An operator takes samples, is responsible for repairs, and is generally the person in charge of the water system.
- Q. How can I avoid being a public water supply?
- A. There are two ways. One is to serve so few people or to be open for such a short time that you do not meet the definitions listed above. The other is to connect to another public water system such as a city or water district. The city or district then is the public water supply and has all of the responsibility for sampling and other requirements and you are just a customer.
- Q. What happens if I refuse to take part in the program?
- A. The federal Environmental Protection Agency and the state of Missouri Attorney General have the statutory authority to take legal action against owners and operators that do not comply with requirements.
- Q. What does this cost me?
- A. There is an annual laboratory fee. Most small systems will be charged \$100. You have to pay postage costs to mail in monthly samples and may have to pay postage on other samples if you miss the prearranged pickup times. Also, the water system has to meet certain physical standards, so if your system is old and deteriorated, you may have to make improvements.
- Q. This whole thing is new to me, is there anyone that can help me understand it all?
- A. Yes. Department of Natural Resources staff can assist you in understanding the requirements and guide you through the regulatory process.
- Q. I am going to sell my business. Is there anything I should do?

- A. Yes. First, inform the Department of Natural Resources. You should inform the new owner that there are obligations concerning the water supply. A change of ownership form should be sent to the department. DO NOT send a note with one of your routine sample bottles.
- Q. What do I do with all this correspondence I receive from the department?
- A. First, open and carefully read everything. This may be information about your sampling schedule, about new requirements, about your certification, and other things you should know. Then establish a permanent file and keep it.

COMMONLY MADE MISTAKES

1. Getting in a hurry when taking the monthly sample and not carefully disinfecting and flushing the sample tap.
2. Not filling out carbonated sample form correctly.
3. Collecting a sample on Thursday, Friday, a holiday, or just before a holiday.
4. Thinking that because a non-monthly (additional) sample was collected that the routine sample for the month can be skipped.
5. Not carefully reading all correspondence from the department.
6. Not collecting non-monthly (additional) samples quickly and missing the scheduled UPS pickup time.
7. Not routinely and frequently checking the well, pressure tanks, and other parts of the system to be sure they are in good working order.
8. For chlorinated systems, not performing routine maintenance on a daily or as-needed basis.
9. Collecting repeat samples does not mean that you do not have to collect routine samples for that month. For instance, if you collected a routine sample on September 30 that was coliform positive, you will be required to collect 4 repeats as soon as possible (probably in early October) as well as 5 routine samples in October.
10. Not THOROUGHLY disinfecting a well after you replace the well pump. You should also take a special sample before the well is returned to service.