



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM – PUBLIC DRINKING WATER BRANCH
**DISINFECTION AND TURBIDITY REPORT FOR SURFACE WATER
 SYSTEMS < 10,000 POPULATION**

PWS NAME		PWS ID MO	MONTH
ADDRESS		TELEPHONE NUMBER WITH AREA CODE	YEAR
CITY	ZIP CODE	COUNTY	PLANT

SEE INSTRUCTIONS

DISTRIBUTION DISINFECTION 1. Number of samples analyzed, A: _____ 2. Number of samples below 0.2 mg/L, B: _____ [(A-B)/A] x 100 = C: _____ % meeting minimum disinfection required. 3. Avg. disinfectant residual for the month _____ mg/l	TURBIDITY 1. Total number measurements taken monthly, A: _____ 2. Number of measurements below 0.3 NTU, B: _____ [B/A] x 100 = C: _____ % meeting turbidity requirements.
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Date	Hours of operation	Finished water temperature (C)	Lowest disinfectant at entrance to distribution system (mg/L) <input type="checkbox"/> Free Chlorine <input type="checkbox"/> Chloramines	Highest turbidity measurement of the day	Duration disinfectant fell below 0.5 mg/L free Cl ₂ or 1 mg/L chloramines	Value of turbidity measurements that exceed	
						1NTU	5 NTU
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NAME OF PERSON PREPARING REPORT	SIGNATURE OF RESPONSIBLE OFFICIAL	DATE
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INSTRUCTIONS: DISINFECTION AND TURBIDITY REPORT FOR SURFACE WATER SYSTEMS <10,000 POPULATION

Please fill out information completely and legibly.

Distribution Disinfection

1. On line 1, enter the total number of samples from the distribution system analyzed for residual disinfectant concentration (total chlorine or combined chlorine) during the month. The residual disinfectant concentration measurements must be taken at the same time and location as your routine monthly coliform samples. This is the value for A.
2. On line 2, enter the number of samples for the distribution systems that had less than 0.2 mg/L residual disinfectant concentration. This is the value for B.
3. Subtract B, from A. (A-B). Divide that number by A. Then multiply by 100. This will give you the value for C. For example: if A= 20 and B= 3, then $C = [(20-3)/20] \times 100 = 85\%$
4. On line 3, enter the arithmetic average for all residual disinfectant samples taken during the month.

Turbidity:

- 1 On line 1, enter the total number of combined filter turbidity measurements taken during the month. This is the value for A.
- 2 On line 2, enter the number of combined filter turbidity measurements taken during the month, which are less than or equal to 0.3 NTU. This is the value for B.
- 3 Divide B, by A. (B/A). Then multiply that number by 100. This will give you the value for C. For example: if A = 120 and B = 117, then $C = (117/120) \times 100 = 97.5\%$

Hours of operation:

For each day, record the number of hours each water treatment plant was in operation.

Finished Water Temperature

For each day, record the temperature of water entering the distribution.

Lowest Residual Disinfectant at Entrance to Distribution System:

For each day, record the lowest measurement of residual disinfectant concentration (mg/L) in water entering the distribution system (free available chlorine or chloramines).

Duration Residual Disinfectant Fell Below Requirement:

For each day, record the duration (hours, tenths) of each period (if any) when the residual disinfectant concentration in water entering the distribution system fell below 0.5 mg/L free chlorine or 1 mg/L chloramines. Note: should this occur the public water system must notify the department as soon as possible, but no later than by the end of the next business day.

The Highest Turbidity Reading for the Day:

For each day, record the highest turbidity reading on the combined plant effluent during the plants operational period.

Value of Turbidity Measurements that exceed 1 NTU and 5 NTU:

For each day, record the value of any turbidity measurements taken during the month, which exceed 1 NTU and 5 NTU. Note: should this occur the public water system must notify the department as soon as possible, but no later than the end of the next business day.

INDIVIDUAL FILTER MONITORING AND REPORTING

- 1 Was each filter continuously monitored for turbidity and results recorded every 15 minutes? _____
- 2 Was there a failure of the continuous turbidity monitoring equipment? _____
If yes on 2, was the equipment repaired within 5 working days or 14 days with department approval? _____
If yes on 2, was grab sampling done every four hours until failure corrected? _____
- 3 Was any individual filter turbidity level >1.0 NTU in two consecutive measurements taken 15 minutes apart? _____
If yes, perform follow-up actions step 1.
- 4 Was any individual filter level for three months in a row > 1.0 NTU in two consecutive recordings taken 15 minutes apart? _____
If YES, perform follow-up actions step 2
- 5 Was any individual filter turbidity level > 2.0 NTU in two consecutive recordings taken 15 minutes apart for two consecutive months? _____
If YES, perform follow-up actions step 3

FOLLOW-UP ACTIONS to PERFORM

1. Report filter numbers, turbidity measurements that exceed 1 NTU and dates the exceedances occurred and causes if known.
2. Conduct a self-assessment of the filters within 14 days of the triggering event. The system must report the date self-assessment was triggered and the date it was completed.
3. The system must arrange to have a comprehensive performance evaluation performed not later than 60 days following the triggering event. The evaluation must be completed and submitted to the department within 120 days following the triggering event.

The Missouri Department of Natural Resources-Public Drinking Water Branch recommends contacting your local regional office if any individual filter exceeds 1.0 NTU, the lowest trigger in the individual filter standards.