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RE: BACTERIA SAMPLING AT OUTSIDE TAPS/SPIGOTS/HOSE BIBS and HYDRANTS

The Drinking Water Program (DWP) recognizes the difficulty that many public water systems are facing when trying to access approved bacteria sites during the COVID-19 situation. At this time, we are allowing systems to deviate from their approved sample site plan if an adequate number of sites cannot be accessed. This may include collecting samples from alternate locations that are more accessible or sampling from outside taps/spigots/hose bibs and hydrants. It should be noted that there has been no change in the number of samples required based on population, or the deadline for required sampling to be completed within each monitoring period.

Outside sampling locations like taps, spigots, hose bibs and hydrants are open to the atmosphere, dust, and animals, and may be subject to higher levels of contamination than inside sampling taps. As such, outside bacteria sampling sites are not generally recommended. If during the COVID-19 emergency, a Public Water System (PWS) has no other choice but to use an outside sampling site as a bacteria sampling location, the PWS must follow the guidelines presented below in order to ensure representative samples acceptable for compliance purposes.

For outside taps/spigots/hose bibs, take the following actions before collecting the sample:

- Remove hose bib vacuum breaker and any other spigot appurtenances.
- Do not use frost-free spigots as these may have an internal backflow-prevention device.
- Thoroughly clean and disinfect the tap, following proper contact time for disinfectant used.
- Using heat/flame to sterilize the tap is not generally recommended due to possible damage to the faucet and seals, and potential burns to sampling personnel and risk of fire.
- Thoroughly flush the tap to be sure stagnant water is evacuated. Take field measurements (temperature, chlorine residual, pH) to determine that the water is representative of the distribution system before collecting the sample.
- It is recommended that sample collectors carry an adapter to convert the outside tap to a smooth-nose tap in order to control the flow. If used, the adapter must be kept sanitary between uses, and disinfected and flushed before each use.

Special precautions for hydrant sampling:
Dry-barrel hydrants are the most common type of hydrant. In a dry-barrel hydrant, the vertical portion of the hydrant (barrel) is empty of water (dry). The upper section remains dry until the main valve is opened by means of a long stem that extends up through the top (bonnet) of the hydrant. They are designed to be operated with their valves fully open. **Tools such as a hydrant sampler are designed to allow the hydrant valve to be fully open while collecting samples in a controlled, safe manner. Before sampling from a hydrant , the PWS must take the following actions:**

- Obtain all necessary permissions to access and open the hydrant.

- Ensure that the hydrant and the sampling equipment are clean and disinfected prior to use. It is also recommended that the sampling equipment be disinfected after each hydrant is sampled, when more than one hydrant is being sampled. Follow proper contact time for disinfectant.
- Take field measurements for temperature, chlorine residual, pH or other such measurements and compare them to historical results for that area to ascertain that the water is representative of the distribution system before collecting the sample. If the field measurement results are not typical, flush the hydrant more and retest until satisfied that the location is representative of the distribution system.
- Thoroughly flush to be sure stagnant water is evacuated. Collect and review temperature results throughout flushing to determine when the water is representative of the main.
- Use a hydrant sampler to control flow while sampling.

See EPA's Hydrant Sampler Procedure, Parts List and video for additional instructions, including pictures. https://www.epa.gov/sdwa/hydrant-sampler-procedure-and-parts-lists.

When collecting any outside sample(s) the sample collector must pay attention to the following:

- Ensure the sample bottle and cap do not touch the tap/spigot/hose bib or hydrant. Please note that it will require time and practice to get a "pencil thickness" flow from an outside tap/spigot/hose bib or hydrant.
- If it is raining, provide umbrella or other protective device over the sampling location to ensure rain does not enter the sample bottle; or you may sample after the rain event. All samples do not have to be taken on the same day.
- Do not sample from a low-lying spigot or hydrant that results in splash-back from the ground surface. This could contaminate the bottle and sample.

Bacteria results at an outside tap/spigot/hose bib or hydrant
Please be aware that, during Routine Sampling, if a PWS samples at an outside tap/spigot/hose bib or hydrant and receives a positive result, the PWS will be required to perform repeat samples at suitable sites and include the repeat samples in determining whether an assessment has been triggered.

At all times, samplers should continue to follow all bacteria sample collection procedures, including wearing gloves. See EPA's "Quick Guide to Drinking Water Sample Collection" at https://www.epa.gov/sites/production/files/2015-11/documents/drinking_water_sample_collection.pdf

For questions, please contact your DWP Inspector or call our main phone number at 207-287-2070.

Thank you for your continued dedication to providing safe drinking water for the people of Maine. Please stay healthy and safe.

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