



DBP/MRD L RULE Monitoring Locations

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Ensure that your submittals are being sent to R8DWU@epa.gov.

Use the correct subject line info when sending! Example: DBPR results, DBP Results, MRDL results, LRAA DBP, etc.

A background image of a river with a small waterfall and a fallen log. The water is flowing over rocks, and the log is partially submerged. The background is slightly blurred.

TTHM/HAA5 Monitoring Locations

Chlorine Residual Measurements



Who does this apply to?

Community Water Systems and Non-Transient Non-Community Water Systems (NTNCWS) that add chlorine as a chemical disinfection.

Where do Disinfection By Products come from?

**DBP Precursor in
Water**

**Natural Organic Matter
(NOM-TOC)**

Bromide

+

Added Disinfectant

Chlorine

Chloramines

Chlorine Dioxide

Ozone

=

**Disinfection Byproducts
(DBP)**

TTHM

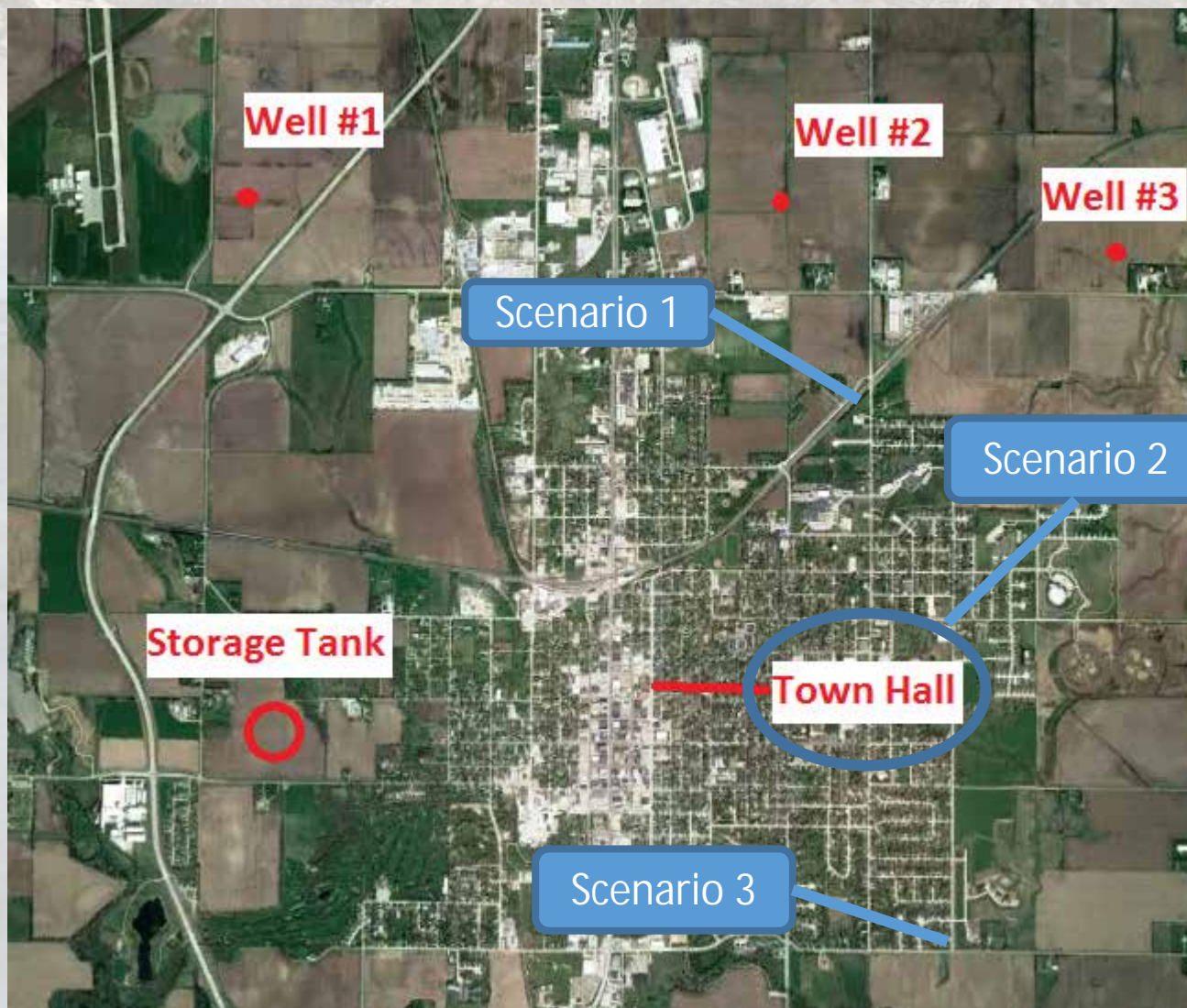
HAA5

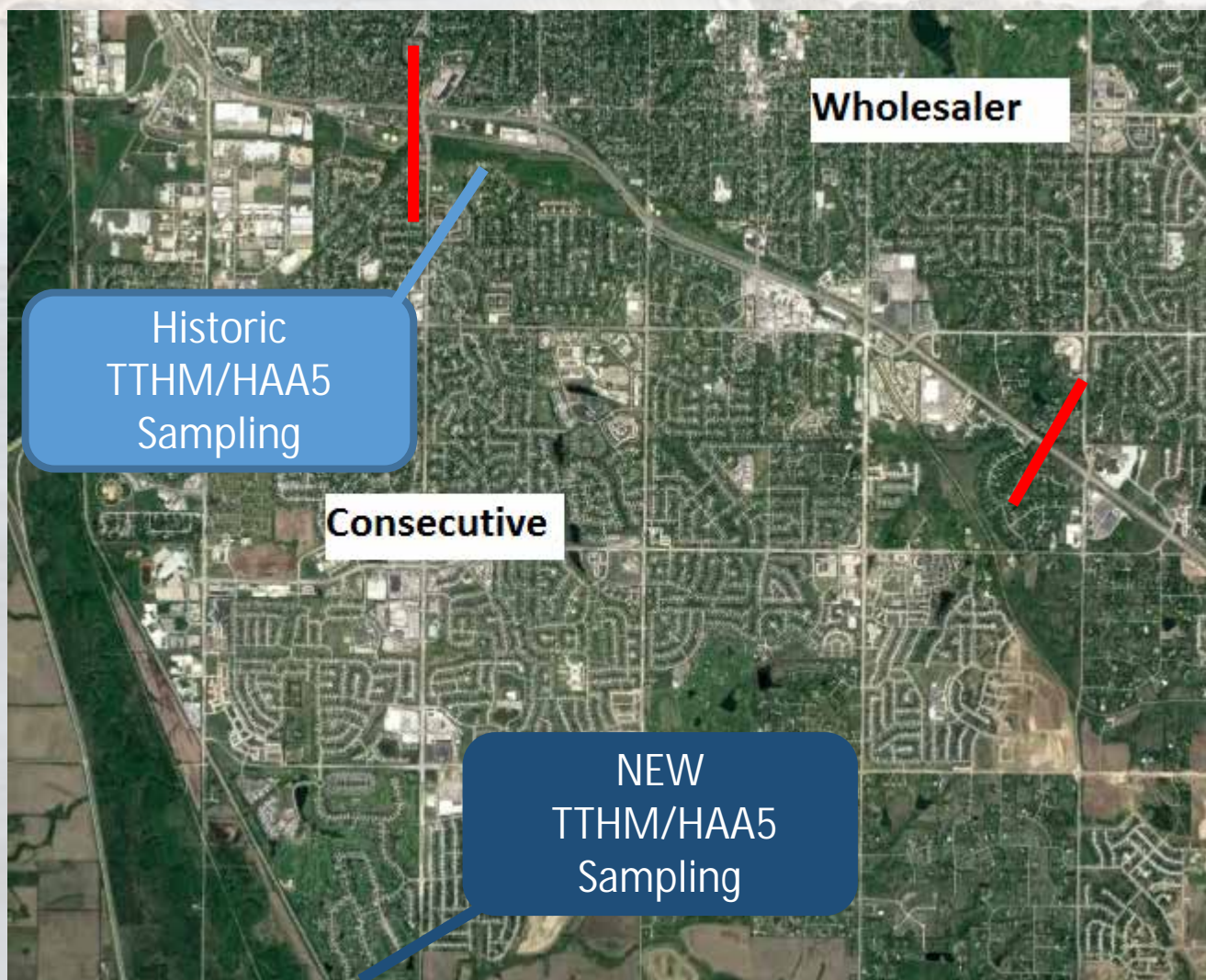
Chlorite

Bromate

- Where am I suppose to sample?
- At the EPA approved locations on your approved monitoring plan:
 - Highest TTHM location
 - Highest HAA5 location

- Is my plan location up to date?
 - Does plan reflect your current system?
- When collecting the sample, does it reflect these rules of thumb?
 1. TTHM location = Oldest water age
 2. HAA5 location = Average water age, unless a small system





- Is my plan sample month up to date?
 1. Does your current plan reflect your water sources?
 2. When collecting the sample, does it reflect the warmest water temperature?

What does a TTHM/HAA5 Report consist of?

QUARTERLY MONITORING	ANNUAL/TRIANNUAL MONITORING
<ul style="list-style-type: none">1. TTHM/HAA5 LAB RESULTS2. STAGE 2 DBP LRAA FORM <p>If TTHM > 0.080 mg/L or HAA5>0.060 mg/L</p> <ul style="list-style-type: none">3. Operational Evaluation Report (OEL) CALCULATION4. OEL REPORT	<ul style="list-style-type: none">1. TTHM/HAA5 LAB RESULTS

<https://www.epa.gov/region8-waterops/reporting-forms-and-instructions-reporting-forms#dbpr2>



TTHM/HAA5 Reporting schedules

When are the reports due?

Submit lab results (if required LRAA and OEL Forms) by the 10th day in month following your sampling month.

OEL Report due in 90 days after lab result date.

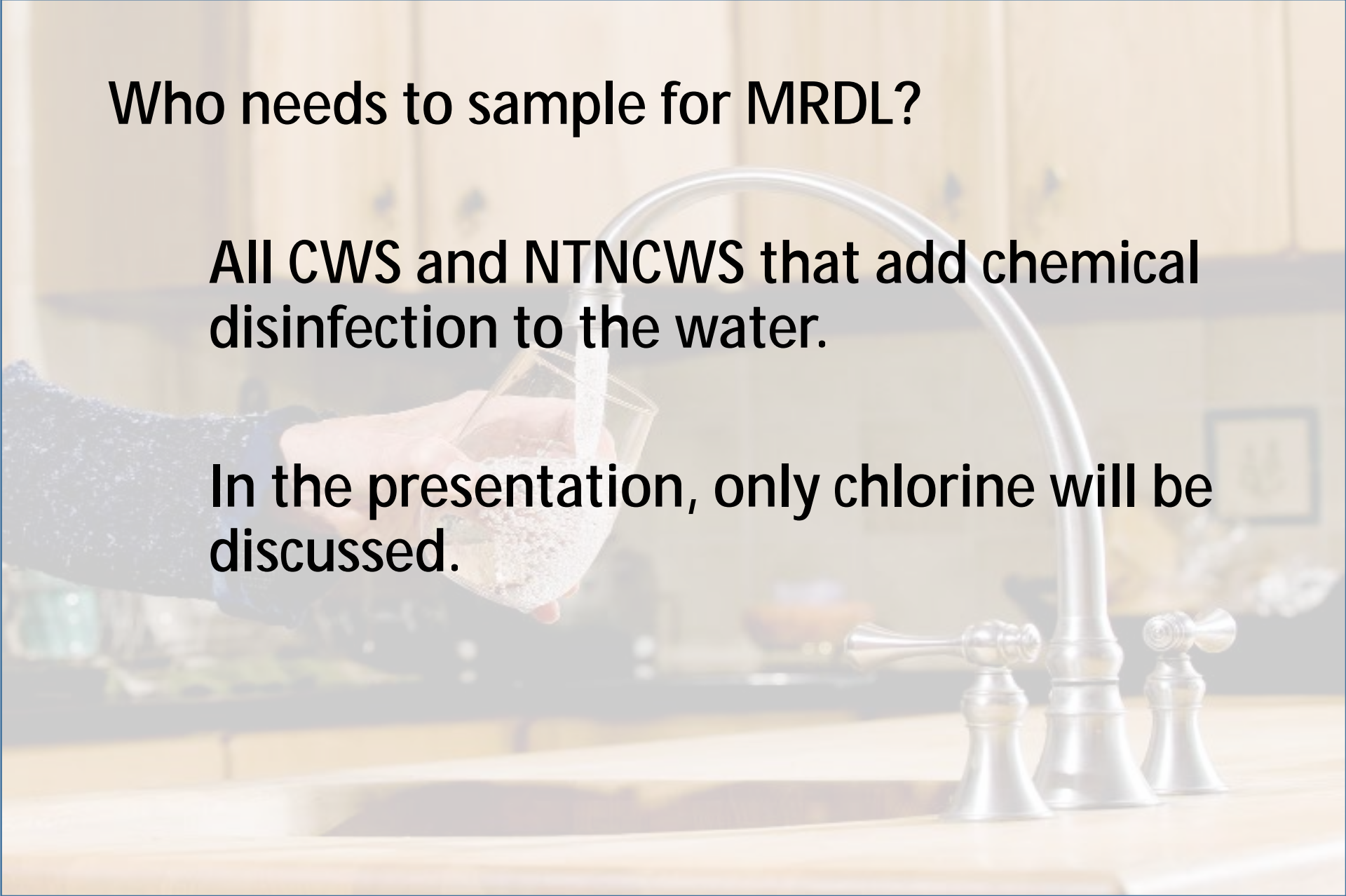




Who needs to sample for MRDL?

All CWS and NTNCWS that add chemical disinfection to the water.

In the presentation, only chlorine will be discussed.



What do I need to do?

Every time you collect a total coliform (bacteria) sample, you must

1. Measure the chlorine residual
2. Report it on your chain of custody
3. Indicate Total or Free Chlorine
4. Ensure your lab reports Chlorine Residual to EPA

What if I only add chlorine periodically?

Any time you add chlorine within 30 days prior to collecting a Total Coliform sample, you must measure for a chlorine residual when taking your TC samples.

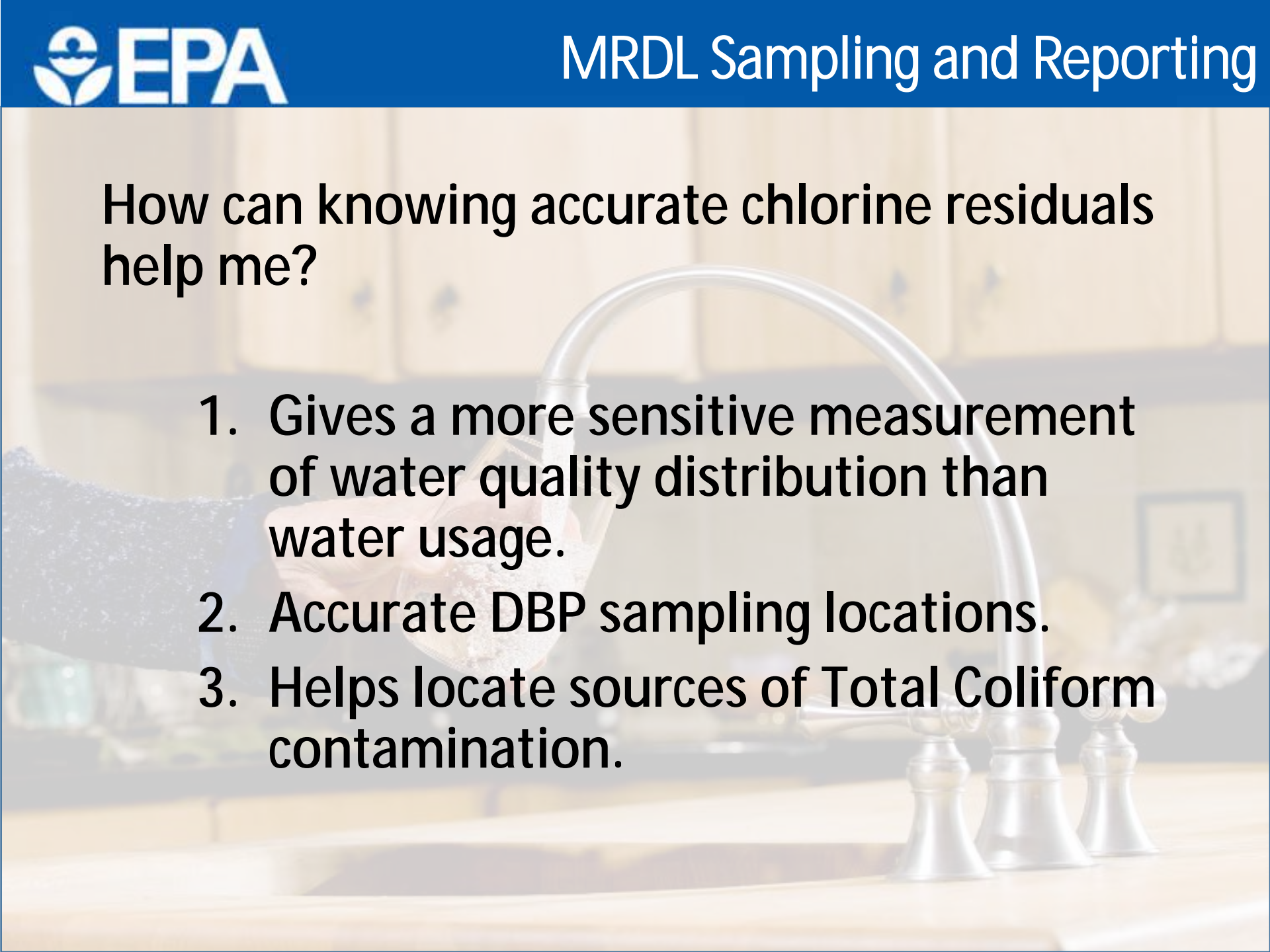
CFR 141.132 – “Systems must take all samples during normal operating conditions”
- Directly applies to DBP/MRDL

EPA recommends using a digital chlorimeter that has been properly calibrated.

Chlorimeters which require visual interpretation leads to variability among operators.



How can knowing accurate chlorine residuals help me?

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- A background image of a kitchen sink with a chrome faucet. A hand is visible on the left, holding a glass under the running water. The image is slightly blurred to make the text stand out.
- 1. Gives a more sensitive measurement of water quality distribution than water usage.**
 - 2. Accurate DBP sampling locations.**
 - 3. Helps locate sources of Total Coliform contamination.**

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<https://www.epa.gov/dwcapacity/resources-small-public-water-system-operators>