

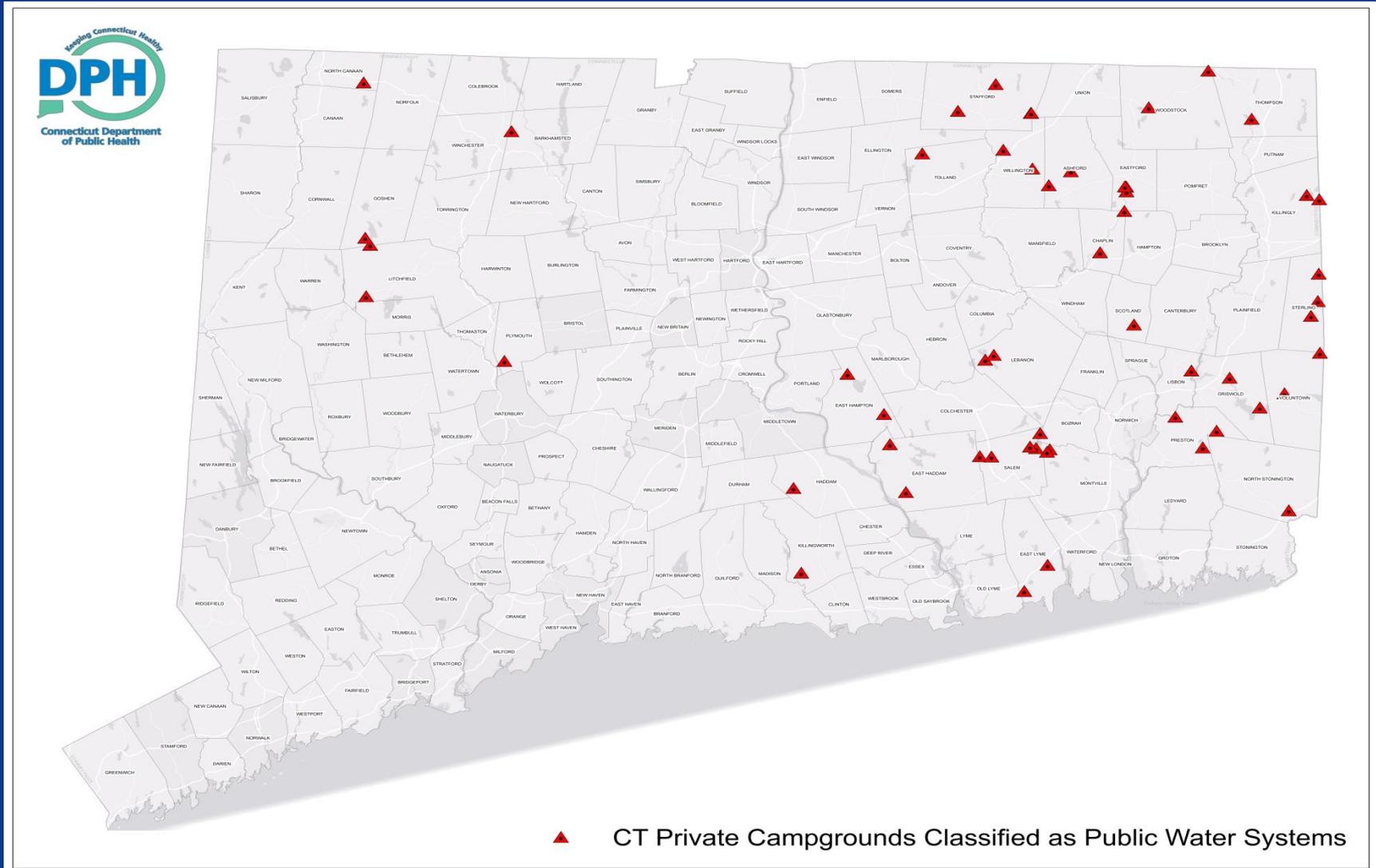
# RTCR Guidance and Important Regulatory Updates for Seasonal Public Water Systems

Presented by:

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# Fifty-Four (54) Private Campgrounds Classified as Public Water Systems



# Common Causes of Total Coliform and E.coli Bacteria

- ✖ Improperly constructed wells and water sources
- ✖ Non-watertight well caps (drilled wells with pitless adapters)
- ✖ Drilled well sanitary seals with unsealed openings (well pits, basement wells)
- ✖ Dug wells with improper covers and construction violations
- ✖ Flooded well pits
- ✖ Atmospheric storage tank vents, screens, and maintenance
- ✖ Failure to properly inspect and disinfect seasonal systems
- ✖ Improper sample collection

# Well Construction Regulatory Requirements

- 👉 Well is not subject to surface wash.
- 👉 Well casing projects at least 6 inches above the established grade.
- 👉 Well is equipped with a watertight well cap. connections to the well casing are watertight.
- 👉 Well is equipped with a shielded and screened air vent when the drawdown is 10 or more feet.
- 👉 Steel Well casing with no flaws or defects.

# IMPROPER WELL CAPS



# WATERTIGHT (PAS-97) WELL CAPS



# Regulatory Requirements Dug Well Construction

-  The casing must extend at least 6 inches above grade.
-  casing must be watertight concrete that is a minimum of 4 inches thick to a depth of at least 10 feet below grade.
-  Dug Wells must have a reinforced concrete cover that is a minimum of 4 inches thick and overlaps the sidewalls by at least 2 inches.
-  Dug Wells must have a watertight joint between the cover and the sidewalls.
-  If equipped with a manhole; there must be a minimum of 2 inches curbing above the concrete slab and a watertight overlapping cover that is locked or bolted in place.





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# Regulatory Requirements Well Pits

-  Well pits must be avoided wherever possible. Well pits must be accessible and not buried.
-  Well pits must be watertight or suitably drained. when equipped with a drain; the drain must extend at least 25 feet from the pit and drain to the surface of the ground.
-  drains must slope at least 1/8 inch per foot toward the drain outlet and be screened. Well pit drains must not be connected to any sewer, house drain, or storm drain.
-  When well pit are constructed in impervious soils, no porous material shall be used under the well pit floor.

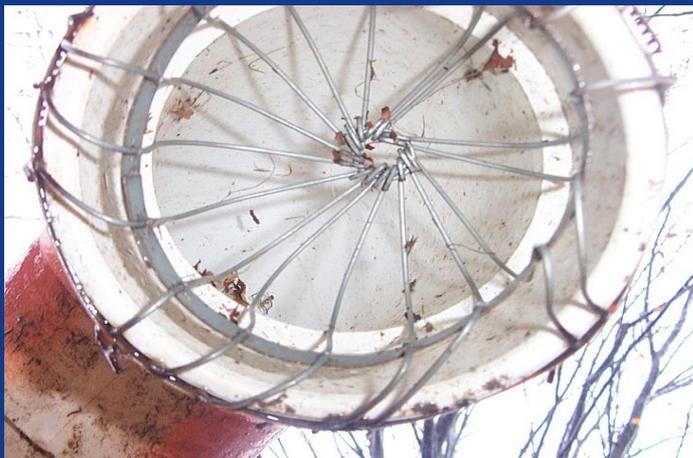




# Atmospheric Storage Tanks Regulatory Requirements

-  finished water tanks must be constructed to provide protection from contamination & to prevent the entrance of storm water & precipitation. Uncovered finished water tanks and basins are prohibited.
-  Tanks must have vents & overflows that are protected & screened to prevent entry of insects, birds or foreign matter.
-  Atmospheric tanks shall minimally be inspected once every 10 years for sanitary and structural integrity. The inspection report shall be retained for reference and be made available on request.
-  In-Ground Water Storage Tanks shall be located at least:
  -  50 feet from subsurface sewage disposal system; 25 feet from watercourses, storm drains or other source of pollution; and 50 feet from sanitary sewers unless the sewer meets or exceeds the Technical Standards for Subsurface Sewage Disposal then the tank must be 25 feet from the sewer.

# STORAGE TANK SCREENS



 **ATMOSPHERIC STORAGE TANK SCREENS AND OVERFLOWS MUST BE CHECKED TO ENSURE THAT SCREENS ARE IN PLACE TO PREVENT THE ENTRANCE OF BIRDS, INSECTS AND VERMIN.**

# Revised Total Coliform Rule (RTCR)

## Major Changes Take Effect April 1<sup>st</sup>, 2016

-  MCL for total coliforms is eliminated
-  MCL for *E. coli* is established
-  a “Sanitary Defect” is defined
-  Treatment Technique requirements are established
  -  Level 1 and Level 2 Assessments (“Find and Fix”)
-  increased and reduced monitoring is allowed
-  **Start-up procedures required for seasonal systems**

# RTCR - Seasonal Systems

☞ Seasonal PWS is defined as a NCPWS that does not operate on a year-round basis. The system starts up at the beginning of each operating season and shuts down at the end by depressurizing and dewatering the distribution system.

## ☞ Start-up procedures for seasonal systems

☞ Must be performed prior to serving water to the public

☞ Based on existing Seasonal Water System Start-Up Guidelines

☞ Proposed state regulations require monitoring prior to serving water to the public

☞ Acceptable sample results can be used to satisfy routine monitoring requirements

☞ Start-Up Procedure Certification statement is required

☞ an approved sampling plan must be followed

# Seasonal Systems Start-Up Procedures

Shall include steps to ensure that the drinking water is safe for human consumption **PRIOR** to opening to the public. This procedure should include a description of how the PWS will inspect, service, and test the system as part of the start-up process to include:

- ☞ Flush the well to waste prior to filling storage tanks or flushing the distribution system.
- ☞ Sanitize and inspect atmospheric storage tanks prior to filling.
- ☞ Flush and sanitize the distribution system prior to pressurization.
- ☞ Disinfect the entire system following the State guidance document
- ☞ Perform initial round of water quality compliance testing.
- ☞ Submit documentation **prior** to serving water to the public stating that the system's DPH approved Start-up Procedure was followed.

# RTCR - Seasonal Systems Shut-Down Procedures

Steps to ensure that the PWS is adequately protected during the time period of inactivity. Procedures should include a description of how the entrance of animals, insects and other foreign material into the system will be prevented while the system is non-operational and that system components will not be damaged including:

- ☞ Ensure that water system components are properly drained (especially above ground components) to prevent damage due to frost or freezing;
- ☞ Ensure that pipes and other openings into the system are sealed to prevent the ingress of animals, insects and foreign material;
- ☞ Ensure that chemicals and other contaminants are not stored in the immediate vicinity of the water system to prevent accidental entry.

## REVISED TOTAL COLIFORM RULE – SEASONAL SYSTEM START-UP PLANS

☞ Start-up plans must include all the requirements listed on the certification form. The use of the DWS Start-up Guidance Document and Checklist is the preferred procedure. Some modifications are expected based on individual system configurations.

➤ Most Importantly.....

☞ At the start of each season, **PRIOR** to serving water to the public, seasonal systems must submit a **statement** indicating that the DPH approved startup procedures were followed.

☞ A system that **fails** to submit a statement prior to serving water to the public **will** receive a **treatment technique violation** that requires public notification to consumers.

# RTCR Seasonal System Monitoring Requirements

-  Seasonal PWS sample site plans must designate the time period for monitoring based on:
  -  peak system demands, or;
  -  vulnerability (if the PWS monitors less than monthly)

<b>Monitoring Requirements PWS Type</b>	<b>Routine Monitoring</b>	<b>Reduction</b>
Seasonal	Monthly	Quarterly

# RTCR Seasonal System Monitoring Reduction Requirements

The following criteria must be met:

-  Non-community water systems must have had a DPH sanitary survey, a DPH site visit, or a voluntary level 2 assessment completed within the last 12 months
-  Non-community water systems must be free of sanitary defects. Sources of supply must be protected and meet the separating distance requirements.
-  Non-community water systems must have a clean compliance history\* for a minimum of 12 months. (\* "Clean compliance history" means a record of no maximum contaminant level violations, no monitoring violations, no coliform treatment technique trigger exceedances, and no treatment technique violations.)

# RTCR VIOLATIONS

## E. coli MCL (Tier 1 Notice)

-  Note: Failure to collect all repeats following a Routine (RT) E. coli+ is an MCL

## Treatment Technique Violations (Tier 2 Notice)

-  Failure to conduct Level 1 and/or Level 2 assessment within 30 days;
-  Failure to correct sanitary defects or have a DPH approved schedule for correction in-place
-  Failure to complete seasonal start-up procedures

## Monitoring Violations (Tier 3 Notice)

-  Failure to collect all routine samples

## Reporting Violations (Tier 3 Notice)

-  Failure to submit a monitoring report (results)
-  Failure to submit a completed assessment form

# RTCR – Level 1

## Level 1 Treatment Technique Triggers

- >40 samples/month: >5% TC+ samples in the same month;
- <40 samples/month: 2 or more TC+ samples in the same month;
- Failure to collect every required repeat sample

## Requires Level 1 Assessment within 30 days

- Performed by system
- Identifies potential Sanitary Defects
- Sanitary Defects must be corrected or on a schedule for correction
- Form and guidance will be available
- Level 1 Assessment Form under development

# RTCR - Level 2

## Level 2 Treatment Technique Triggers

- E. coli MCL Violation;
- Exceeded 2 of the level 1 treatment technique triggers in 12-month period

## Requires Level 2 Assessment within 30 days

- Performed by an approved Level 2 Assessor
- More intense PWS review to identify potential Sanitary Defects
- Sanitary Defects must be corrected or on a schedule for correction
- Form and guidance will be available



Connecticut Department of Public Health Website:  
<http://www.ct.gov/dph/publicdrinkingwater>

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# QUESTIONS?



# THANK YOU

