



# **REVISED TOTAL COLIFORM RULE (RTCR)**

**MALEHA**

**June 18, 2015**

# REVISED TOTAL COLIFORM RULE (RTCR)

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- Published in Federal Register on 2/13/13
- **Effective date is April 1, 2016**
- Applies to CWS & NCWS
- No impact on residential wells



## FEDERAL REGISTER

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### Part II

### Environmental Protection Agency

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40 CFR Parts 141 and 142

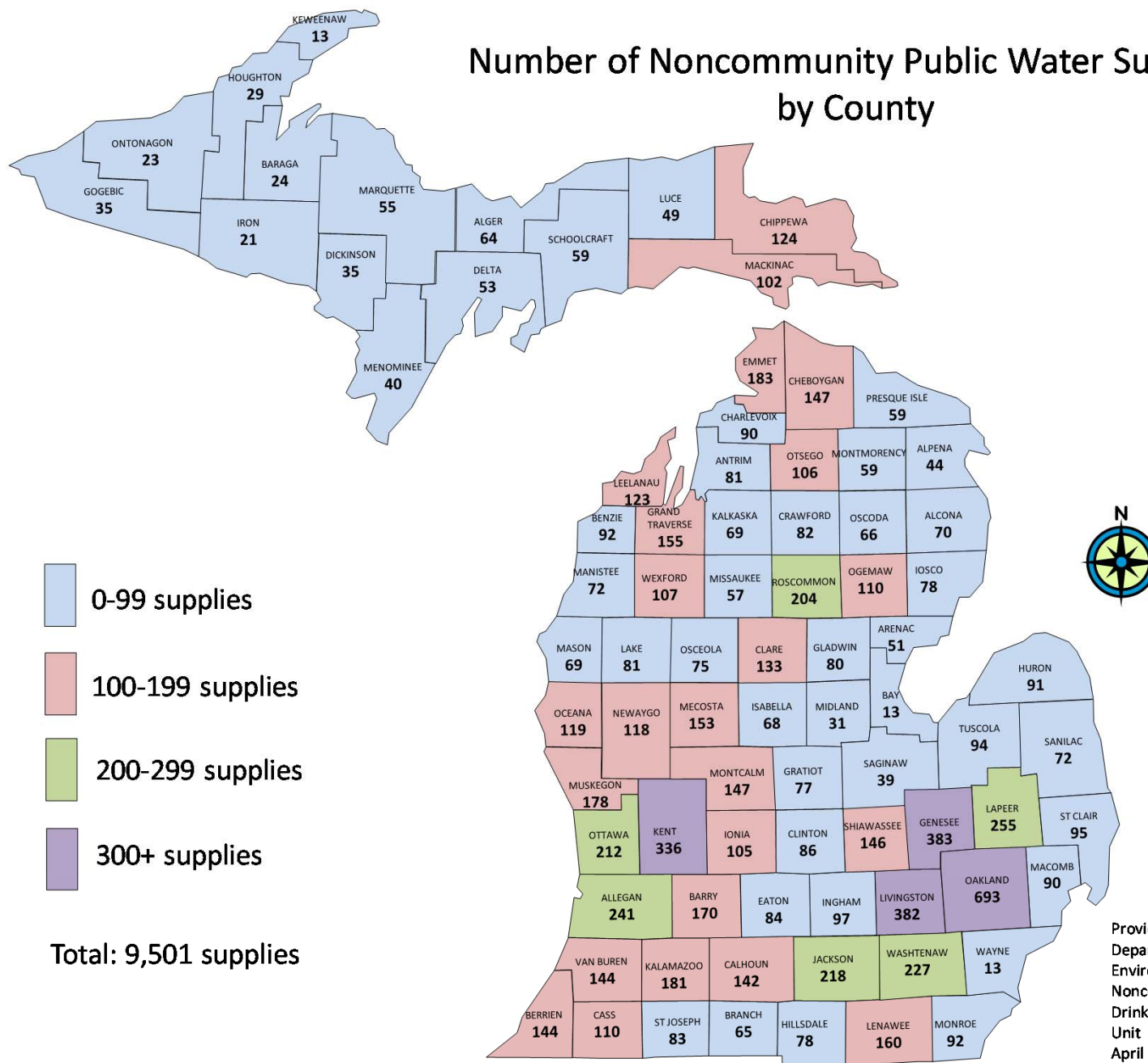
National Primary Drinking Water Regulations: Revisions to the Total Coliform Rule; Final Rule

# MDEQ'S RESPONSIBILITIES

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- Must adopt all federal drinking water rules within 2 years of promulgation.
- Regulations must be no less stringent than the federal requirements.
- Must have an adequate compliance and enforcement program.
- Must have legal authority to compel compliance with standards, assess and collect fines and penalties.





Provided by the Michigan  
Department of  
Environmental Quality  
Noncommunity & Private  
Drinking Water Supplies  
Unit  
April 1, 2015

## RTCR ELEMENTS SIMILAR TO EXISTING RULE (1989)

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- Routine Monitoring
- Repeat Sampling
- Approved Sample Siting Plans
- *E. coli* Maximum Contaminant Level (MCL)
- Public Notice Requirements
- Monthly Monitoring for Supplies Serving Over 1,000 people per day



## NEW ELEMENTS

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- No longer a total coliform MCL
  - No public posting required
  - Not required to provide bottled water
- Level 1 Assessment
- Level 2 Assessment
- Coliform Treatment Technique Violation
- Seasonal System Start Up Requirements



## LEVEL 1 ASSESSMENTS

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### Level 1 Trigger

- Repeat(s) sample total coliform positive
- Failure to collect required repeat sample(s) after a total coliform positive routine sample

### Level 1 Assessment

- Basic examination of the source water, treatment, distribution system and relevant operational practices
- Conducted by owner/operator or local health department
- Can be completed over the phone



# LEVEL 1 ASSESSMENT FORM



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE

## LEVEL 1 ASSESSMENT FORM FOR NONCOMMUNITY PUBLIC WATER SUPPLIES

*Issued under authority of the Safe Drinking Water Act, 1976 PA 399, as amended, MCL 325.1001 et seq., and its Administrative Rules (Act 399).  
Failure to submit certification is a violation of Act 399 and may subject the water supply to enforcement actions.*

This assessment is intended to review general water system infrastructure and operating and sampling protocols. This form should be completed by a knowledgeable representative of the water system. To avoid a violation, this form must be completed and returned to the local health department (LHD) no later than \_\_\_\_\_.

Noncommunity Water System Name:		Water Supply Serial Number:	Source ID (if applicable):	Date Completed:	Form required in response to:
Name/Title of Person Completing Onsite Assessment:		Telephone Number:	E-mail Address:		Total Coliform Positive(s): <input type="checkbox"/>
					Failure to Collect Repeat Samples After Initial Routine Positive: <input type="checkbox"/>
<b>Issues</b>		<b>Check</b>	<b>Description (attach additional sheets if necessary)</b>		
1.	Has anything unusual occurred prior to sample collection? Loss of pressure, power outage, operation and maintenance activities, vandalism, visible indicators of unsanitary conditions, heavy rainfall, etc.	Yes <input type="checkbox"/> No <input type="checkbox"/>	Describe all issues identified along with the approximate date of the occurrence (e.g., replaced well pump on May 1, samples taken next day, results were positive for total coliform, etc.).		
2.	Have there been any recent changes to the water system? New plumbing installed, pump replacement, pressure tank replacement, treatment system installed, operational changes, issues with, or new potential sources of,	Yes <input type="checkbox"/> No <input type="checkbox"/>			
3.	Sampling Site/Protocol: Sample tap damaged or inaccessible, improper sampling techniques, improper sample location, failure to collect repeat samples after initial routine positive, etc.	Yes <input type="checkbox"/> No <input type="checkbox"/>			
4.	Well: Damaged, loose, or missing well cap, vent screen, conduit; problem with wellhead; evidence of flooding, etc.	Yes <input type="checkbox"/> No <input type="checkbox"/>			
5.	Treatment Process (if applicable): Interruptions, chemical refill overdue, filter change due, incorrect chemical solution concentration, dosage adjustment needed, other operations and maintenance issues, etc.	Yes <input type="checkbox"/> No <input type="checkbox"/>	<b>Corrective Action (attach additional sheets if necessary)</b>		
6.	Pressure Tank: Recent work performed, pressure tank issues, pump runs more often than normal, etc.	Yes <input type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/> Supply will be following Level 1 Corrective Action Plan (CAP) provided by the local health department (LHD); e.g., chlorination, flushing, sampling, etc., on or before: _____ (date). OR <input type="checkbox"/> A detailed CAP proposal and timeline is attached. OR <input type="checkbox"/> No sanitary defect(s) identified – No CAP proposed.		
7.	Distribution System: Plumbing in disrepair, leaking joints, pressure loss, cross connections, dead-end plumbing, frozen pipes, etc.	Yes <input type="checkbox"/> No <input type="checkbox"/>			
8.	Other: Check applicable box and, if yes, describe event or condition in "Description" box.	Yes <input type="checkbox"/> No <input type="checkbox"/>			
<b>Local Health Department Use Only</b> <input type="checkbox"/> LHD collected assessment information (above) via phone					
Date of Trigger: _____		Date Reviewed: _____		Reviewed By: _____	
<input type="checkbox"/> CAP Paperwork Complete		Date System Notified CAP Approved: _____		<input type="checkbox"/> Corrections completed within approved timeline	

Submit to LHD:



DEQ Environmental Assistance Center  
Telephone: 1-800-662-9278



## LHD REVIEW OF LEVEL 1 ASSESSMENT

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- ✓ Assessment form submitted within 30 days of trigger
- ✓ Assessment form complete
- ✓ Cause of the trigger identified or statement that none was found
- ✓ Correction(s) completed
- ✓ Acceptable timetable for correction(s)



## CORRECTIVE ACTION EXAMPLES

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- Repair or replace well components
- Repair or replace distribution system components
- Flush well and/or distribution system
- Disinfect well and/or distribution system
- Training on proper sampling technique
- Eliminate cross connections

***Water supply must inform the local health department when a correction has been completed.***



## LEVEL 2 ASSESSMENTS

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### Level 2 Trigger

- An *E. coli* MCL violation
- A second level 1 trigger within a rolling 12-month period
- A second level 1 trigger within 2 consecutive years for systems on annual coliform monitoring

### Level 2 Assessment

- An in-depth examination of the system and its monitoring and operational practices
- Conducted by the local health department



# LEVEL 2 ASSESSMENT FORM



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE

## LEVEL 2 ASSESSMENT FORM FOR NONCOMMUNITY PUBLIC WATER SUPPLIES

*Issued under authority of the Safe Drinking Water Act, 1976 PA 399, as amended, MCL 325.1001 et seq., and its Administrative Rules (Act 399).  
Failure to submit certification is a violation of Act 399 and may be subject the water supply to enforcement actions.*

Noncommunity Water System Name:		Water Supply Serial Number:	Source ID (if applicable):	Date of Trigger:	Date of Onsite Assessment:
Name of Person Completing Onsite Assessment:		Name and Title of Person at Facility Present During Assessment:		Form in response to (check one): E. coli MCL: <input type="checkbox"/> 2nd Level 1 in 12 months: <input type="checkbox"/> 2nd Level 1 in 2 years (annual monitoring): <input type="checkbox"/> Annual Site Visit: <input type="checkbox"/>	
Issues		Check	Description and Corrective Action Taken (including date) (attach additional sheets if necessary)		
1.	<b>Has anything unusual occurred prior to sample collection?</b> Loss of pressure Power outage Operation & maintenance activities Vandalism Visible indicators of unsanitary conditions Heavy rainfall	Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>			
2.	<b>Have there been any recent changes to the water system?</b> New plumbing installed Pump replacement Pressure tank replacement Treatment system installed Operational changes New potential sources of contamination	Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>			
3.	<b>Sampling Site/Protocol:</b> Sample tap damaged or inaccessible Improper sampling techniques Improper sample location	Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>			
4.	<b>Well:</b> Wellhead less than 12" above grade Unapproved/unsecured cap Vent screen missing or damaged Conduit damaged or not sealed to cap Evidence of flooding/standing water around wellhead Reduced isolation distance to sources of contamination Integrity/age of water well may be an issue	Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>			



## LHD AND THE LEVEL 2 ASSESSMENT

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- ✓ Assessment completed by LHD as “soon as practical” (within 30 days of trigger)
- ✓ Cause of the trigger identified or statement that none was found
- ✓ Correction(s) completed
- ✓ Acceptable timetable for correction(s)



## TREATMENT TECHNIQUE VIOLATIONS

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- Fails to conduct a level 1 or level 2 Assessment within 30 days
- Fails to correct all sanitary defects from a level 1 or level 2 assessment within 30 days or within the approved corrective action plan timeframe
- Fails to complete the approved seasonal system start-up procedure



## GROUNDWATER SYSTEMS

# BACTERIOLOGICAL MONITORING FREQUENCIES

System Type	Baseline	RTCR Increased	RTCR Reduced	Notes
Year-Round Serving $\leq 1,000$ people/day	1/quarter	1/month	1/year	LHD conducts <u>ANNUAL</u> Level 2 Assessment by December 31, 2017 and subsequent years to remain on annual sampling.
Seasonal Serving $\leq 1,000$ people/day	1/month while open	NA	1/quarter	Seasonal systems cannot stay on annual.  Seasonal systems on quarterly shall sample during their most vulnerable period.

Non-seasonal systems may transition in on current monitoring schedule.



## SEASONAL SYSTEM REQUIREMENTS

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- Perform approved start-up procedures
- Submit start-up certification form
- Transition in on quarterly monitoring when open (annual monitoring not allowed)
- Sample collection during high vulnerability periods

***All systems serving greater than 1,000 people/day must sample monthly.***



# SEASONAL SYSTEM REQUIREMENTS

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SERVING 1,000 OR LESS PEOPLE/DAY

- Sample for total coliforms on a quarterly basis when open and serving the public
  - **Reduction to annual sampling no longer an option**

SERVING MORE THAN 1,000 PEOPLE/DAY

- Collect samples for total coliforms on a monthly basis when open and serving the public



## SEASONAL SYSTEM REQUIREMENTS

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- Follow an approved start-up procedure prior to serving water to the public
- Certify to the local health department (LHD) that the approved start-up procedure was followed before serving water to the public
- Collect samples during high vulnerability periods as described in their approved sample siting plan



# MDEQ PREAPPROVED START UP PROCEDURE:

## 9 TASKS

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1. Evaluate the wellhead and surroundings
2. Evaluate the water system
3. Evaluate the system for cross connections
4. Look at all air gaps & backflow preventers and replace if necessary
5. Obtain certified tester to test the backflow preventers, if due
6. Flush the distribution system
7. Disinfect the depressurized portion of the system
8. Collect 2 pre-opening bacteriological samples 24 hours apart
9. Certify the above tasks were completed and submit form to LHD






MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE

### START-UP CERTIFICATION FOR SEASONAL NONCOMMUNITY PUBLIC WATER SUPPLY

Issued under authority of the Safe Drinking Water Act, 1976 PA 399, as amended, MCL 325.1001 et seq., and its Administrative Rules (Act 399).  
Failure to submit certification is a violation of Act 399 and may subject the water supply to enforcement actions.

This completed form must be submitted to the local health department (LHD) PRIOR TO PROVIDING WATER FOR PUBLIC USE. All of the steps must be completed and deficiencies corrected prior to opening (keep a copy of the completed form for your records).

SUPPLY NAME: _____			
WATER SUPPLY SERIAL NUMBER (WSSN): _____			
ANTICIPATED OPENING DATE TO THE PUBLIC: _____			
<small>Details of the approved pre-opening start-up procedures can be found in the DEQ SEASONAL PUBLIC GROUNDWATER SUPPLY HANDBOOK.</small>			
Pre-Opening Tasks Completed	Yes	Not Applicable	Comments/Findings (Check the box if you provided additional comments on a separate sheet of paper)
1. Evaluated the Wellhead and Surroundings	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Evaluated the Water System	<input type="checkbox"/>		<input type="checkbox"/>
3. Evaluated the System for Cross Connections	<input type="checkbox"/>		<input type="checkbox"/>
4. Looked at All Air Gaps and Backflow (BF) Preventers and Replaced if Necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Testable BF Preventer Assemblies Tested by Certified Tester	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Flushed the Supply	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Disinfected the Depressurized Portion of the System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If disinfected at the wellhead, Michigan registered well drilling contractor name: _____			
8. Collected Two (2) Pre-Opening Bacteriological Samples 24 Hours Apart According to Sample Siting Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dates Bacteriological Sampling Completed: _____ (If using a private laboratory, it is your responsibility to submit the sample results to your LHD)			
9. I certify that I have completed the above-listed tasks in accordance with the START-UP PROCEDURES FOR SEASONAL NONCOMMUNITY PUBLIC WATER SUPPLIES for system-specific LHD-approved procedure(s). The information on this certification is complete, accurate, and true to the best of my knowledge. Any deficiencies observed were corrected and details have been provided above. <small>Submission of this certification each year to the LHD before opening to the public is required under Act 399, referenced above.</small>			
Name/Title (Please Print): _____			
Signature: 		Date: _____	
Telephone: _____	Fax: _____	E-mail: _____	
<b>Local Health Department Use Only</b>			
Certification Reviewed By: _____		Date Reviewed: _____	
Comments: _____		Approved: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Submit to LHD: _____			

DEQ Environmental Assistance Center  
Telephone: 1-800-662-9278

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www.michigan.gov/deq  
EQP 6667 (Rev. 5/2015)

# START-UP CERTIFICATION FORM



## YEAR-ROUND SYSTEMS WITH SEASONAL NATURE

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- Rule 1110

- If the supply depressurizes distribution, they must:
  - Flush distribution
  - Disinfect distribution
  - Collect 2 special purpose samples 24 hours apart

Special purpose samples DO NOT qualify as routine samples.



# WHAT HAS DEQ DONE TO PREPARE FOR RTCR?

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## FORM Development:

- Level 1 assessment form
- Level 2 assessment form
- Seasonal system start up certification form



# WHAT HAS DEQ DONE TO PREPARE FOR RTCR?

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## Document Development:

- RTCR Fact Sheet
- Seasonal system start up procedure
- Seasonal system handbook



# WHAT HAS DEQ DONE TO PREPARE FOR RTCR?

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## GUIDANCE and TRACKING :

- Assessment tracking spreadsheet
- Seasonal system tracking spreadsheet
- Seasonal system definition & determination
- Coliform positive flowchart
- E.Coli MCL flowchart
- Google Docs storage

<https://drive.google.com/folderview?id=0B2Hvw92llr4pfnFiY1JaeTJyQ3hVV2U2bEZBUExVVXBzbWh4S0hLOGpEbWg3bHZxT1BfQm8&usp=sharing>



## WHAT HAS DEQ DONE TO PREPARE FOR RTCR?

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### Training to LHDs and NCWS owners/operators:

- 12 public presentations throughout the state
- Presentations to MDARD, DNR, MARVAC, ARVAC, etc.
- Licensed campgrounds notified with license renewal
- LHD webinar in April
- 2 day training in Bay City in April
- Routine emails sent to LHD coordinators
- GovDelivery service started



## WHAT IS DEQ DOING NEXT TO PREPARE FOR RTCR?

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Current projects “in the works”:

- Notification letter to all NCWSs in July
- Seasonal system webinar for LHDs
- “Protected Source” definition
- Update policy on “Population Served”
- Update NC evaluation worksheet/summary
- Update all template letters and enforcement procedures
- Explore additional funding
- SDWIS Prime training when available (2017?)

***Send suggestions our way!***



# WHAT SHOULD LHDs BE DOING NOW TO PREPARE FOR RTCR BEFORE APRIL 1?

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- Determine seasonal vs. year round systems
  - Correct operating season dates
  - Adjust to quarterly monitoring and notify supply
  - Pre-populate tracking system outside WT
- Make contact with seasonal supplies to educate them on RTCR requirements (certification, violations, etc.)
- Examine frequency of year-round systems with seasonal nature. Annual sampling may not be adequate.



# WHAT SHOULD LHDs BE DOING NOW TO PREPARE FOR RTCR BEFORE APRIL 1?

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- Make a decision on sampling frequency for year-round systems\*:
  1. System remain on annual sampling with LHD performing annual Level 2 assessments
  - OR
  2. System frequency increased to quarterly monitoring, and notification sent to supply

\*Serving 1,000 people or less per month



# WHAT SHOULD LHDs BE DOING NOW TO PREPARE FOR RTCR BEFORE APRIL 1?

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- Run reports in WaterTrack to correct:
  - Addresses
  - Contacts
  - Population served (at least two samples monthly sampling for >1,000 people served/day)
- Complete all incomplete or missing sample siting plans, including special purpose samples for seasonal systems



# WHAT SHOULD LHDs BE DOING NOW TO PREPARE FOR RTCR BEFORE APRIL 1?

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- Plan your educational outreach strategy
- Plan for increased paperwork & tracking
  - Increasing sample reminder notifications
  - Review of Level 1 assessments and Corrective Action Plans (CAP)
  - Review of Seasonal Start-up Certifications
  - Review of Level 2 CAP
  - Workflow process for form submittals
- Determine how Level 1 Assessments will be handled (over the phone asap, send form & allow 30 days, etc)
- Prepare for less field verification and increased computer work



## IN SUMMARY

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- April 1, 2016 implementation
- Attend seasonal system webinar
- WaterTrack cleanup of data critical
- Reach out to seasonal systems
- Use DEQ's Noncommunity Website  
[www.michigan.gov/deqnoncommunity](http://www.michigan.gov/deqnoncommunity)
- Give us specifics on what we can do to help

