

Ground Water Rule (GWR)

April 2011

New Mexico Environment Department
Drinking Water Bureau

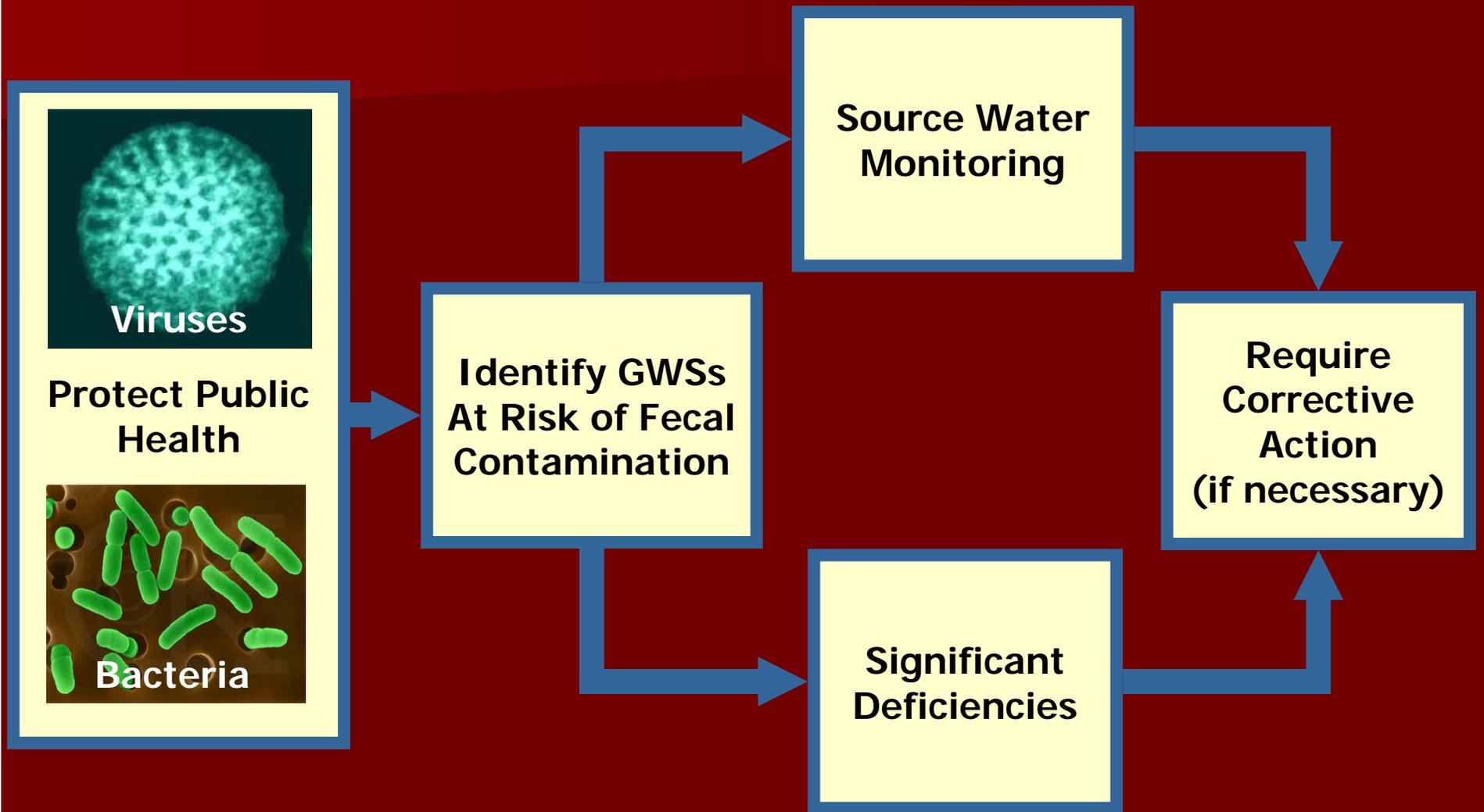
Overview

- Introduction
- GWR Basics
- Source Water Monitoring
- Compliance Monitoring
- Sanitary Surveys
- Significant Deficiencies
- Corrective Actions
- Public Notice



GWR Basics

Primary Purpose of the GWR



GWR Basics

Key Provisions of the GWR

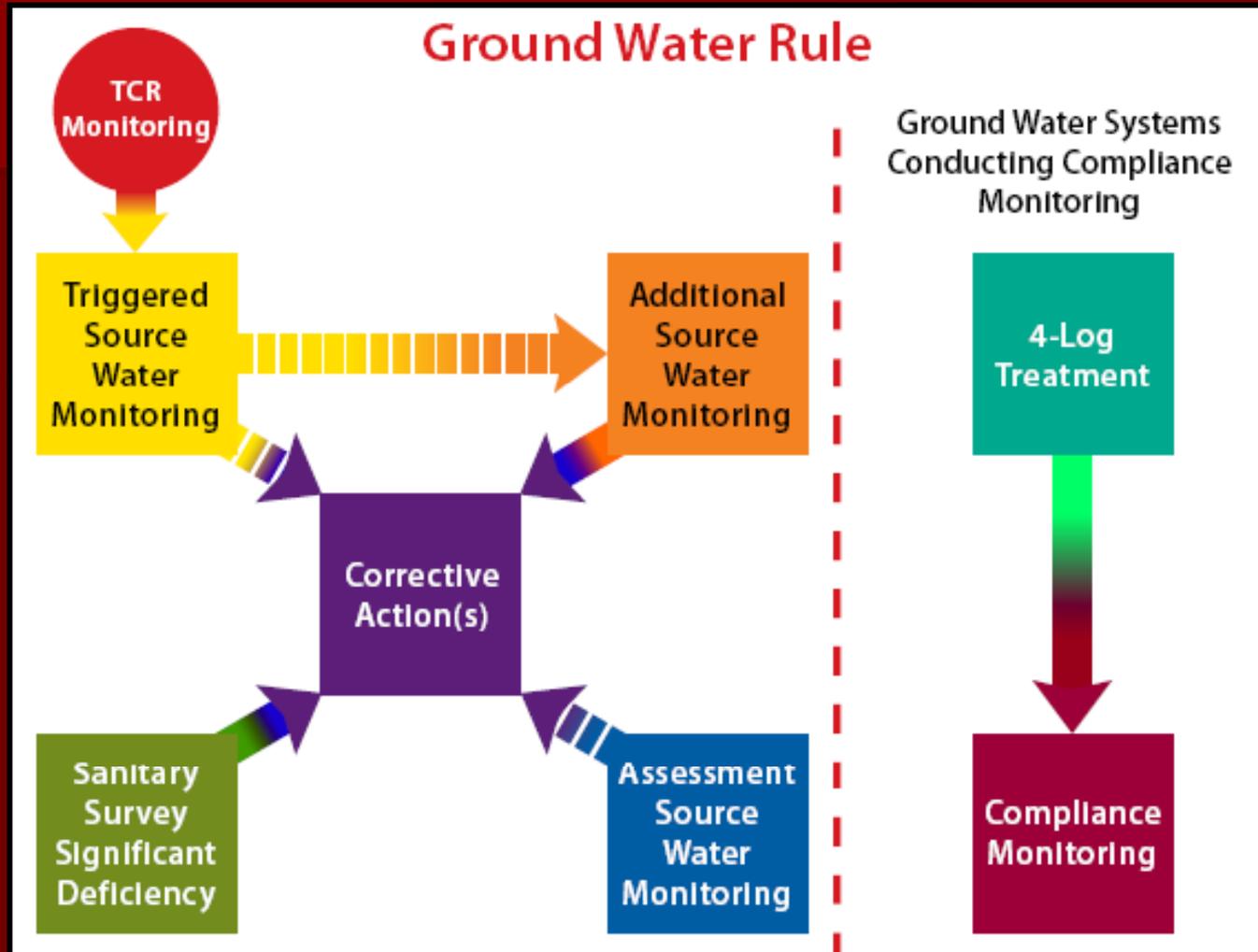
**Sanitary Surveys
of all GWSs**

**Source Water
Monitoring**

**Corrective Actions
for Significant
Deficiencies &
Fecal
Contamination**

**Compliance
Monitoring**

GWR Compliance Tracks



GWR Basics

To Whom Does the GWR Apply?

1
Systems
relying 100%
on ground
water

2
Consecutive
systems
receiving
ground water

3
Mixed
surface &
ground water
systems*

***Exception (if all ground water goes through the treatment process of surface water)**

GWR Compliance Dates?

PWS Requirements	Required By:	
Notification of 4-log treatment of viruses	December 1, 2009	
Triggered source water monitoring Corrective actions Compliance monitoring New sources placed in service must meet triggered source water monitoring requirements or conduct compliance monitoring for 4-log treatment of water States can require GWSs to conduct assessment source water monitoring	Required Beginning: December 1, 2009	
	State Requirements	Required By:
	Complete sanitary surveys for most CWSs	December 31, 2012 (& every 3 years after)
	Complete sanitary surveys for NCWSs & remaining CWSs	December 31, 2014 (& every 5 years after)

Relationship with the TCR

- TCR and GWR work together
- Samples in distribution system may indicate a problem in source
- Total coliform-positive sample under the TCR will trigger source water monitoring

Source Water Monitoring

- Two possible source water monitoring scenarios:
 - Assessment Source Water Monitoring
 - Triggered Source Water Monitoring
 - Additional source water monitoring

Source Water Monitoring: Fecal Indicators

- States may select one or more fecal indicators (e.g., *E. coli*, enterococci, coliphage)
- When selecting indicator(s), states should consider:
 - Aquifer type
 - Historical water sampling data
 - Lab availability
 - Other environmental factors
- See Ground Water Rule Source Water Monitoring Methods Guidance Manual for more information

Sampling Requirements

- GWSs must:
 - Collect:
 - At least 1 sample per positive TCR routine sample at each ground water source
 - Within 24 hours of learning of the total coliform positive(s)
 - Analyze sample(s) for fecal indicator (*E. coli*, enterococci, coliphage)
- Extension of 24-hour time limit
 - State determines exceptions/new time

Compliance Monitoring

- GWSs must conduct compliance monitoring if they:
 - Provide 4-log treatment of virusesAND
 - Notify the state of treatmentAND
 - Begin compliance monitoring
- Monitoring requirements differ for systems:
 - Serving $> 3,300$ people using chemical disinfection
 - Serving $\leq 3,300$ people using chemical disinfection
 - Using membrane filtration
 - Using alternative treatment technologies
- All systems must notify the state any time they fail to meet state-specified compliance criteria

Sanitary Surveys

- Sanitary surveys are conducted for **all GWSs** to address the 8 elements
- They must be conducted:
 - Every 3 years for community GWSs;
 - AND
 - Every 5 years for
 - Noncommunity GWSs
 - Community GWSs that provide 4-log treatment of viruses or have an outstanding performance record as determined by the state

Significant Deficiencies

- A significant deficiency is a defect that could potentially cause the introduction of contamination into finished water (e.g. defects in design, operations, maintenance, etc.)
- States must notify GWSs of significant deficiencies no later than 30 days after identifying the deficiency

Corrective Action

- GWSs must take corrective action upon:
 - Receiving notice of a significant deficiency
- OR
- Receiving state notice that corrective action is required for a fecal indicator-positive triggered or assessment source water monitoring sample
- OR
- Receiving notice of a fecal indicator-positive additional source water monitoring sample

Corrective Action Options

- GWSs have 4 options:
 - Correct all significant deficiencies
 - Provide an alternate source of water
 - Eliminate the source of contamination
 - Provide treatment that reliably achieves 99.99% (4-log) inactivation and/or removal of viruses
- GWSs must be in compliance with state-approved corrective action plan

Required Notices to the Public

- GWR requires several categories of notification
 - Public Notification (PN)
 - Community and Noncommunity GWSs
 - Consumer Confidence Report (CCR)
 - Community GWSs
 - Special Notice
 - Community GWSs – Notice included in CCR
 - Noncommunity GWSs
 - Required for:
 - Fecal indicator-positive ground water source sample
 - Uncorrected significant deficiency

Example CT Calculations



Questions?

Conclusion