Ground Water Rule Overview

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Drinking Water Protection Team
Overview

- Purpose
- Components
- Process
Purpose of the Ground Water Rule (GWR)

Provides increased protection against microbial pathogens in public water systems that use ground water sources.
GWR Regulation

- Applies to all PWS using ground water
- Texas: 5,637 GW systems and 381 PWS purchasing water from a GW source
- PWS in Texas use 13,406 GW sources
- Compliance date = December 1, 2009
Primary Purpose of the GWR

- Identify GWSs At Risk of Fecal Contamination
- Source Water Monitoring
- Require Corrective Action (if necessary)
- Significant Deficiencies
- Protect Public Health
- Viruses
- Bacteria

Significant Deficiencies Require Corrective Action (if necessary)
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)
Key Provisions of the GWR

- Sanitary Surveys of all GWSs
- Source Water Monitoring
- Corrective Actions for Significant Deficiencies & Fecal Contamination
- Compliance Monitoring
Periodic Sanitary Surveys

• For CWS every 3 years, unless they meet the performance criteria, then every 5 years
  – Provides 4-log treatment of viruses
  – Outstanding performance record

• For NCWS every 5 years
Source Water Monitoring Scenarios

- Two possibilities:
  - **ASSESSMENT SOURCE WATER MONITORING**
  - **TRIGGERED SOURCE WATER MONITORING**
Compliance Monitoring

• GWSs that:
  – Provide 4-log treatment of viruses at or before the first customer using:
    • Inactivation
    • Removal
    • State-approved combination of 4-log inactivation & removal
  – Notify the state in writing of existing treatment or provide 4-log treatment as a corrective action
  – Begin compliance monitoring
GWSs must conduct triggered source water monitoring if they:
- Are notified of a TC-positive TCR routine sample, and
- Are NOT conducting GWR compliance monitoring for their 4-log treatment
Rule Promulgation (11/8/2006)

1. Source water monitoring (triggered & assessment)
2. Corrective actions
3. Compliance monitoring
4. New source requirements

GWSs choosing to conduct compliance monitoring must notify state that they provide 4-log treatment

11/8/2008

12/1/2009

12/31/2012

December 31, 2014

Complete 1st round of sanitary surveys for CWSs on a 3-year schedule

Complete 1st round of sanitary surveys for NCWSs & CWSs on a 5-year schedule
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
## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>CT</td>
<td>The residual concentration of disinfectant (mg/L) multiplied by the contact time (minutes)</td>
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<tr>
<td>Consecutive System</td>
<td>PWS that receives some or all of its finished water from a wholesale system(s)</td>
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<tr>
<td>TCR</td>
<td>Total Coliform Rule</td>
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<tr>
<td>GWR</td>
<td>Ground Water Rule</td>
</tr>
<tr>
<td>GWS</td>
<td>Ground Water System</td>
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<tr>
<td>CWS</td>
<td>Community Water System</td>
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<tr>
<td>NCWS</td>
<td>Noncommunity Water System</td>
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<tr>
<td>DBPR</td>
<td>Disinfectants and Disinfection Byproducts Rule</td>
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<tr>
<td>SWTR</td>
<td>Surface Water Treatment Rule</td>
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<tr>
<td>LCR</td>
<td>Lead and Copper Rule</td>
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<tr>
<td>Wholesale System</td>
<td>PWS that sells finished water to one or more consecutive systems</td>
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## GWR Compliance Dates?

### PWS Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Required By:</th>
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<tbody>
<tr>
<td>Notification of 4-log treatment of viruses</td>
<td>December 1, 2009</td>
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<tr>
<td>Triggered source water monitoring</td>
<td>December 1, 2009</td>
</tr>
<tr>
<td>Corrective actions</td>
<td>December 1, 2009</td>
</tr>
<tr>
<td>Compliance monitoring</td>
<td>December 1, 2009</td>
</tr>
<tr>
<td>New sources placed in service must meet triggered source water monitoring</td>
<td>December 1, 2009</td>
</tr>
<tr>
<td>States can require GWSs to conduct assessment source water monitoring</td>
<td>December 1, 2009</td>
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</tbody>
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### State Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Required By:</th>
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<tbody>
<tr>
<td>Complete sanitary surveys for most CWSs</td>
<td>December 31, 2012</td>
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<tr>
<td>Complete sanitary surveys for NCWSs &amp; remaining CWSs</td>
<td>December 31, 2014</td>
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</tbody>
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