

# Ground Water Rule “The Utility Perspective”

**July 17, 2009**

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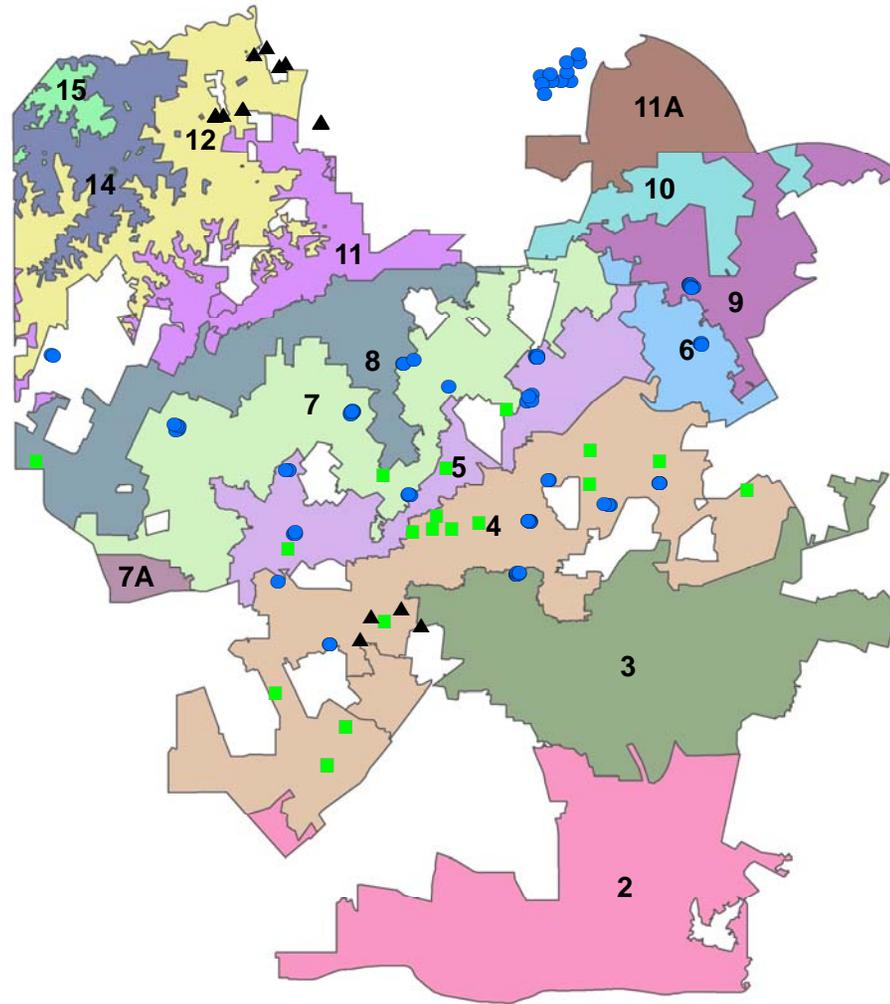
# Ground Water Rule - Requirements

- Comprehensive Compliance Investigation (CCI) reviews and evaluates the adequacy of system sources and operations
- Source Water Monitoring
  - Triggered if positive coliform and system does not achieve 4 log inactivation
  - Assessment monitoring for wells without sanitary easements/construction data for well
- Operational Reporting will be required if 4 log inactivation is chosen as a treatment method

# Production Well Locations

15 Primary  
Pump  
Stations

Isolated  
Stations



21 Secondary  
Pump  
Stations

# Source Water Sampling

- Required unless the System provides 4-log treatment inactivation and was in compliance during the event
- The majority of SAWS Primary Pump Stations can achieve 4-log inactivation
- Secondary pump stations cannot - Raw water sampling required at the well
- Wells at 5 locations are sampled monthly to achieve compliance (Lackland City #3, Mission # 6 & 7, Turtle Creek #2, Gateway # 1 & 2, S&S Hills #4)

# Source Water Sampling

## Without 4-Log

## Pressure Zone 2

Route Number	Tract Sample Address	Tract Site ID	Source ID Sample Site
1	7706 Maxwell	8705	Mission # 1 (G0150018M), Mission #2 (G0150018P), Mission #3 (G0150018Q), Mission #4 (G0150018R), Mission # 5 (G0150018N), Mission # 6 (G0150018O), Mission # 7 (G0150018S), Market #1 (G0150018G), Market # 3 (G0150018I), Market # 4 (G0150018J), Artesia # 3 (G0150018C), Aretisa # 4 (G0150018D), Aretisa # 5 (G0150018E), 34th St. # 1 (G0150018W), 34th St. #2 (G0150018X), 34th St. # 3 (G0150018Y), 34th St. # 4 (G0150018AY), Marbach # 1 (G0150018AG), Marbach # 2 (G0150018AH), Marbach #3 (G0150018CY), Gateway # 1(G0150018BG), Gateway # 2 (G0150018BH), Lackland # 6 (G0150018AW), Lackland # 6A (G0150018AX), Lackland City (G0150018AV)

## With 4-Log

## Pressure Zone 2

Route Number	Tract Sample Address	Tract Site ID	Source ID Sample Site
1	7706 Maxwell	8705	Lackland # 6 (G0150018AW), Lackland # 6A (G0150018AX), Lackland City (G0150018AV)

# Corrective Action

- No presence of **Fecal** indicator organism
  - No action

# Corrective Action

- Presence of **Fecal** indicator organism
  - Issue acute MCL violation public notice within 24 hours
  - Obtain TCEQ directive regarding corrective action
    - Correct significant deficiencies
    - Provide alternative source of water
    - Eliminate source of contamination
    - Disinfect the well
    - Take the well off-line
    - 12-months of source sampling if well remains in service with public notice in effect

# Challenges

## Cost of additional sampling

- Manpower
  - Lab
  - Sampling
  - Operational
  - Modeling
- Modeling
- Lab expenses
- Training
- Public notice/education

# Challenges Cont.

- Implement 4-Log at Primary Stations will require Operational Reporting (self-reporting)
- What if Utility cannot remove a well as corrective action
  - **Public notice until corrective action is completed**
- Impacts from Wholesale customers

# What Have We Learned

- Training is going to be critical
- Dedicated sample sites for TCR samples should be considered
  - 08 we had 7 positives out of about 4,200
  - 09 five so far
  - 06 had a over 20
- Recommend 4-log inactivation if possible
  - Additional monitoring by control center and self reporting of operational excursions
  - Does eliminate sampling of most primaries if a positive in the Distribution System

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