

The Ground Water Rule

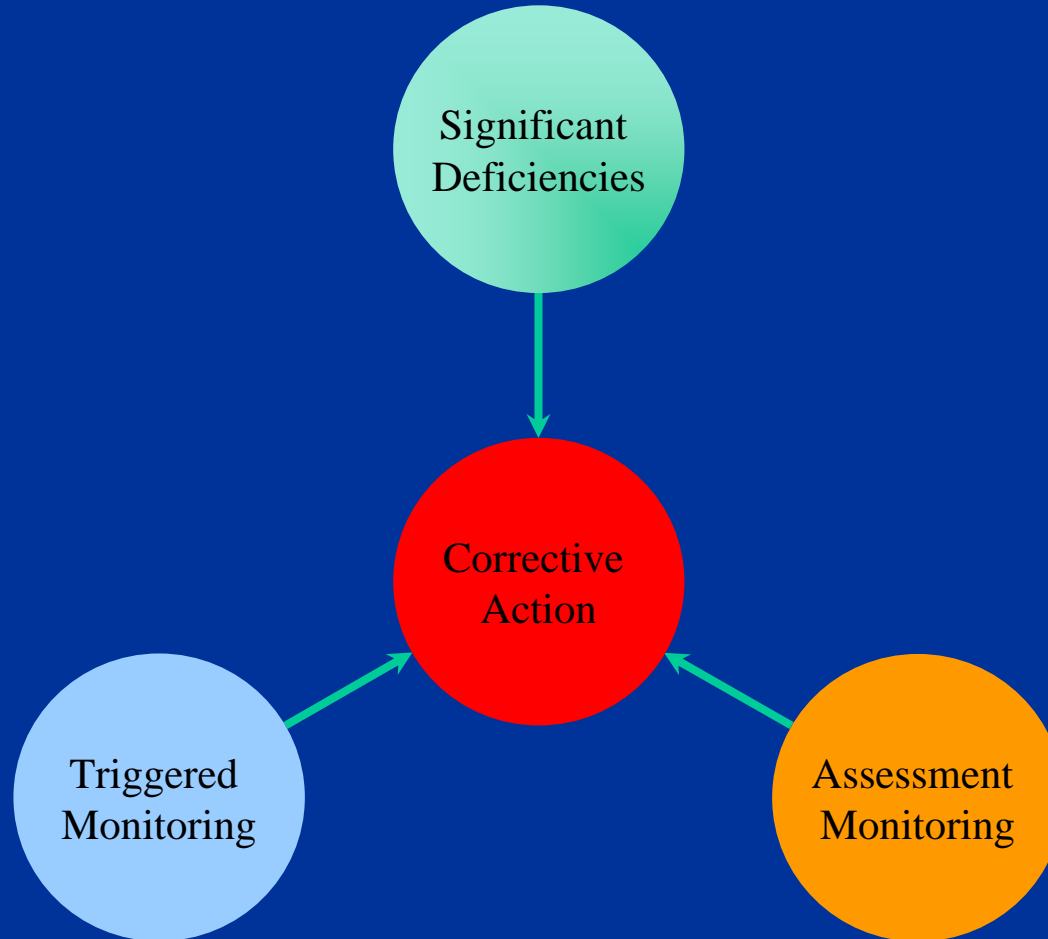
The Corrective Action Process

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Drinking Water Section

The Gist of the GWR





Corrective Action

- 💧 Once a Significant Deficiency is identified or source is determined to be fecally contaminated (via Assessment Monitoring or Triggered Monitoring), GWS must either:
 - Complete the appropriate corrective action within 120 days; or
 - Be in compliance with a state approved corrective action schedule



Corrective Action

- 💧 30 day consultation period between the GWS and state subsequent to written notice to discuss appropriate course of action
- 💧 Rule requires systems to notify customers of uncorrected significant deficiencies.



Corrective Action

- DWS may prescribe corrective actions and completion dates, including immediate and/or interim corrective actions, in lieu of the consultation process.



What are the Options for Corrective Action?

- 💧 Correct all significant deficiencies
- 💧 Eliminate the source of contamination,
- 💧 Provide an alternate source of water, or
- 💧 Provide treatment which reliably achieves 99.99 percent (4-log) inactivation or removal of viruses.




Correct All Significant Deficiencies

💧 Examples:

- Repair/replace well cap, vent
- Repair atmospheric tank vent screen
- Well casing extension




Eliminate The Source Of Contamination

-  Examples:
 - Remove failing septic system
 - Redirect drainage or run-off
 - Relocate point source





Provide An Alternate Source Of Water

-  Examples:
 - Replace well with one that is RCOSA compliant
 - Interconnect with another viable PWS



Provide Treatment That Reliably Achieves ≥ 4 -log Treatment Of Viruses

-  Examples:
 - Inactivation
 - Removal
 - State approved combination treatment
-  Treatment will be detailed in the next presentation

Interim measures

- The state may specify interim measures for the protection of public health pending State approval of the corrective action plan and schedule or pending completion of the corrective action plan.

Interim Measures

- 🔹 Requiring the system to provide an alternate, temporary source of water;
- 🔹 Requiring the system to provide customers with notices to boil all water to be used for consumption;
- 🔹 Requiring the system to provide temporary disinfection in a manner prescribed by the department;
- 🔹 Requiring the system to inactivate a water source or sources.

Five Corrective Action Example Scenarios



Drinking Water Section

Scenario #1



Drinking Water Section

Options under GWR

💧 Corrective Action/Corrective Action Plan

- correct all significant deficiencies
 - eliminate the source of contamination
 - provide an alternate source of water
 - provide treatment
-
- State prescribes corrective action and timetable
 - State orders interim measures

Options under GWR

💧 Corrective Action/Corrective Action Plan

- ✓ correct all significant deficiencies
- X eliminate the source of contamination
- provide an alternate source of water
- provide treatment

🤔 State prescribes corrective action and timetable

🤔 State orders interim measures

Scenario #2



Drinking Water Section

Options under GWR

💧 Corrective Action/Corrective Action Plan

- correct all significant deficiencies
 - eliminate the source of contamination
 - provide an alternate source of water
 - provide treatment
-
- State prescribes corrective action and timetable
 - State orders interim measures

Options under GWR

💧 Corrective Action/Corrective Action Plan

- ✓ correct all significant deficiencies
- eliminate the source of contamination
- ✓ provide an alternate source of water
- ✓ provide treatment

- State prescribes corrective action and timetable
- ✓ State orders interim measures

Which is the Best Option?

- 💧 Consultation period important here
- 💧 Considerations: lot constraints, maintenance of treatment system, quality of aquifer
- 💧 Likely corrective action plan vs. corrective action

Scenario #3



💧 Triggered Monitoring - Confirmed fecal indicator at Well #1

Options under GWR

🔹 Corrective Action/Corrective Action Plan

- correct all significant deficiencies
 - eliminate the source of contamination
 - provide an alternate source of water
 - provide treatment
-
- State prescribes corrective action and timetable
 - State orders interim measures

Options under GWR

💧 Corrective Action/Corrective Action Plan

- ? correct all significant deficiencies
- ? eliminate the source of contamination
- ? provide an alternate source of water
- ? provide treatment

? State prescribes corrective action and timetable

State orders interim measures

Considerations

- 💧 Need more info...
- 💧 Does the well have deficiencies?
- 💧 Is there a nearby septic system or sanitary sewer line?
- 💧 Is a replacement source possible? Lot size, aquifer quality, distance to water main, etc.

Considerations, cont'd

- How do you know what caused the fecal contamination?
- Will the problem be solved if:
 - the well cap is replaced, or
 - if the septic system is moved, or
 - the well is replaced?

Options under GWR

💧 Corrective Action/Corrective Action Plan

- ✓ correct all significant deficiencies
- ✓ eliminate the source of contamination
- ✓ provide an alternate source of water
- ✓ provide treatment

- ✓ State prescribes corrective action and timetable
- ✓ State orders interim measures

Scenario #4



Drinking Water Section

Options under GWR

💧 Corrective Action/Corrective Action Plan

- correct all significant deficiencies
 - eliminate the source of contamination
 - provide an alternate source of water
 - provide treatment
-
- State prescribes corrective action and timetable
 - State orders interim measures

Options under GWR

💧 Corrective Action/Corrective Action Plan

- ✓ correct all significant deficiencies
- X eliminate the source of contamination
- X provide an alternate source of water
- X provide treatment

🤔 State prescribes corrective action and timetable

🤔 State orders interim measures

Scenario #5



Drinking Water Section

Options under GWR

🔹 Corrective Action/Corrective Action Plan

- correct all significant deficiencies
 - eliminate the source of contamination
 - provide an alternate source of water
 - provide treatment
-
- State prescribes corrective action and timetable
 - State orders interim measures

Options under GWR

💧 Corrective Action/Corrective Action Plan

- ✓ correct all significant deficiencies
- ✓ eliminate the source of contamination
- ✓ provide an alternate source of water
- ✓ provide treatment

- ✓ State prescribes corrective action and timetable
- ✓ State orders interim measures

Summary

- 💧 Sometimes the appropriate corrective action will be apparent, but not always.
- 💧 Sometimes there will be more than one acceptable corrective action.
- 💧 Consultation period important to make sure everyone is on the same page and the proper course of action is charted.



Corrective Action Verification

- 💧 GWS must notify the DWS within 30 days of completing the Corrective Action
- 💧 DWS must verify that the Corrective Action is satisfactory, either via a site visit, or by documentation submitted by the system.



Corrective Action Public Notification Requirements

TABLE IV-4.—SUMMARY OF GWR PUBLIC NOTIFICATION REQUIREMENTS

Systems must comply with the following notification requirements when . . .	Reference
Tier 1 Public Notification	
Triggered source water monitoring sample or assessment source water monitoring sample is positive for <i>E. coli</i> , enterococci, or coliphage (and is not invalidated).	§ 141.402(g).
Tier 2 Public Notification	
A system fails to take corrective action following: <ul style="list-style-type: none"> ■ State direction to take corrective action for a fecal indicator-positive sample, ■ Receipt of laboratory notice of fecal indicator-positive ground water source sample as a result of triggered source water monitoring under § 141.402(a)(3), or ■ Receipt of State written notice of significant deficiency. 	§ 141.404(d).
A system fails to comply with a State-approved schedule and plan (including interim measures) related to correcting a significant deficiency and/or eliminating fecal contamination in a ground water source.	§ 141.404(d).
A system that elects to provide such treatment in lieu of triggered source water monitoring fails to maintain 4-log treatment of viruses [NOTE: There is no violation and public notification required if the system restores 4-log treatment within four hours.].	§ 141.404(d).
Tier 3 Public Notification	
A system fails to conduct triggered source water monitoring or assessment source water monitoring.	§ 141.403(d).
A system fails to conduct monitoring to demonstrate compliance with 4-log treatment requirement.	§ 141.403(d).



Questions?

- The next presentation will detail treatment and compliance monitoring.