

**OKI GROUNDWATER COMMITTEE
SEPTEMBER 3, 2008 - 10:00 A.M.
OKI Board Room
720 East Pete Rose Way (at the corner of Eggleston Avenue)***

AGENDA

1. **Welcome/Introductions**
2. **Announcements**
3. **OKI Staff Updates**
4. **Update on Local Groundwater Management Efforts**
Tim McLelland, Dick Renneker, Donna Runkle, Ken Shearwood
5. **The Ground Water Rule: How Will It Affect Ohio?**
Bob Moore, Ohio EPA
6. **Other Business**

ADJOURNMENT

**** SEE the MAP and DIRECTIONS on the REVERSE HARD COPY
(or in separate attachment to email)**

The Ground Water Rule How Will It Affect Ohio?

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Summary From Federal Register states that the GWR will...

- ...provide increase protection against microbial pathogens
- ... establishes a risk-target approach
- ... requires groundwater (GW) Public Water Systems (PWSs) that are at risk to fecal contamination to take corrective action

The GWR will require...

- All States to conduct a sanitary survey
- Identify higher risk systems through existing TCR monitoring
- Ground water source monitoring for systems that don't provide 4-log treatment of viruses

4-log Treatment

- Inactivation through disinfection
- Removal with membrane technologies, or
- Inactivation, removal or combination of inactivation and removal through alternative treatment technologies.

Measures to protect public health include...

- Treatment technique requirements to address sanitary survey significant deficiencies and fecal contamination in ground water.
- Compliance monitoring to ensure that 4-log treatment of viruses is maintained to meet compliance with the GWR.

Systems with a Significant Deficiency or evidence of fecal contamination must:

- Consult with the Ohio EPA and then either
 - Correct the significant deficiency,
 - Provide an alternate source,
 - Eliminate the source of contamination, or
 - Provide treatment that reliably achieves 4-log virus inactivation or removal

Triggered Source Water Monitoring (TSWM)

- Not required if PWS provides 4-log treatment before or at first customer.
- Within 24 hours of notification of a TCR positive sample, at least one sample from each source in use at the time the TCR sample was collected.

Or...

TSWM continued

- Representative Sampling – If approved by the Ohio EPA, Systems with more than one well may take a representative sample.
 - What wells were in operation at the time of the TCR sample? This information is key if you have multiple wells.

TSWM continued

- A GW PWS with less than 1000 in population *may* use one of the four repeat samples collected from the GW source to meet the requirements of the GWR and the TCR.

TSWM continued

- A TSWM fecal positive raw water sample will require an additional 5 source water samples be collected from the *same tap* within 24 hours of being notified.

- [tswmrequirements.pdf](#)

Treatment Technique Requirements / Options

- Existing systems provides 4-log treatment of viruses
 - Must notify the State in writing by 12/1/09
- Monitoring Requirements
 - Systems greater than 3300 must monitoring continuously
 - Systems less than 3300 must take a daily grab sample at peak hourly flow or time specified by the State.
 - Failure to maintain 4-log treatment w/ 4 hours will result in a treatment technique violation.

Wholesale and Consecutive Systems

- Wholesaler systems that do not provide 4-log treatment must collect a TSWM sample w/in 24 hours of being notified by consecutive system.
- Consecutive systems if buying from a multiple sources or have multiple entry points, you **MUST** know what source of water you are sampling from for **EVERY** TCR sample you collect.

Exceptions to TSWM requirements

Are few to none.

- TC positive Sample collected...is caused by a distribution system deficiency
 - ‘The State determines and documents in writing...’

GW Sanitary Surveys

- Community Systems will be conducted every 3 years.
- Non-Community Systems will be conducted at minimum frequency of one every 5 years.

Required Components of a Sanitary Survey

- Source
- Treatment
- Distribution
- Finished Water Storage
- Pumps, pump facilities and controls
- Monitoring, reporting and data verification
- System management and operation
- Operator Compliance

Significant Deficiency Identified or Corrective Action Required

- Ohio EPA requires corrective action or GWS must consult with Agency within 30 days of notification.
 - Within 120 days of a Significant Deficiency or a fecal indicator positive the GWS must have the complete corrective actions or be in compliance with State-approved schedule.

Corrective Action Options

- Correct Significant Deficiencies
- Provide an alternate source of water
- Eliminate the source of contamination
- Provide Treatment that reliably achieves at least 4-log treatment of viruses

Public Notice

- Tier 1 – Confirmed fecal indicator positive in a source sample(s)
- Tier 2 – Ground Water Rule Violations: Failure to take corrective action or failure to maintain at least 4-log treatment of viruses
- Tier 3 – Failure to monitor

Still Under Review

- Assessment Source Water Monitoring
 - Used for systems “with one” fecal positive source sample to determine if fecal source is nearby.
 - Used for systems in ‘sensitive’ geologic areas.

Time line

- Draft Rules should be available for comment by the end of this year.
- Rule takes effect December 1, 2009

Questions

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But first...

- If the results are fecal positive why isn't the system considered ground water under the direct influence of surface water?

OKI GROUNDWATER COMMITTEE MEETING SUMMARY
Wednesday, September 3, 2008
OKI Board Room – 10:00 a.m.

Attendees:

Dave Weihrauch, Chair, City of Oxford
Bruce Whitteberry, Vice Chair, Greater Cincinnati Water Works
Milovan Beljin, MSB and Associates
Chris Brausch, Warren County Water and Sewer Department
Ken Broberg, S.M. Stoller
John Bui, City of Hamilton
Peggy Collins, League of Women Voters
Barry Conway, City of Springboro
J. Dwight Culbertson, City of Fairfield
Frank Divo, Southwestern Ohio Water Company
Mike Ekberg, Miami Conservancy District
Jim Fox, Stantec
Carl Gatton, Warren County Water and Sewer Department
William Gollnitz, Clermont County Water and Sewer Department
Ralph Haefner, U.S. Geological Survey
Mariano Haensel, Ohio EPA Southwest District
Karen Hawkins, City of Fairborn
Jamey Hinkle, Western Water Company
Ralph Johanson, GRW Engineers, Inc.
M. Scott Kirk, Western Water Company
Jim Lauver, Retired
Robert Leichman, City of Trenton
Mathew Lindsay, Miami Valley Regional Planning Commission
MaryLynn Lodor, Butler County Water & Sewer Department
Tim McLelland, Hamilton to New Baltimore Groundwater Consortium
Terry Morris, City of Springboro
Matt Newman, City of Milford Water Department
Dean Niemeyer, Hamilton County Regional Planning Commission
Norma Pennock, Southwest Regional Water District
Bruce Pletsch, Miami Conservancy District
Allison Reed, Ohio EPA
Richard Renneker, Warren County Water & Sewer Department
Ken Shearwood, Village of New Richmond
Tim Sorrell, City of Trenton

OKI Staff

Gayle Foster, Bruce Koehler, Jane Wittke

Welcome/Introductions

Dave Weihrauch called the meeting to order at 10:05 a.m. and those attending introduced themselves. After introductions Dave announced that the next meeting will be on Wednesday, December 3, 2008.

OKI Staff Updates

Bruce Koehler presented an update on the Great Miami Drinking Water Protection Project's potential pollution source inventories along the Great Miami River and several tributaries in St. Clair Township and the vicinity of the City of Hamilton. The tributary streams and the river were included in the inventory because a surface water pollutant has the potential to become a groundwater pollutant through induced infiltration.

Bruce shared slides of several potential pollution sources discovered in the inventory, including storm water outlets, sump pumps used for washing machine discharges, railroad bridges, old metal drums, pipelines, construction sites, an outhouse and maintenance work on a hydroelectric dam. In all there were about 175 potential pollution sources in the study area.

Gayle Foster explained how a new paperless system of sharing meeting summaries and large supporting documents will work. Many of the documents associated with meetings are extremely large electronic files because of visual and mapped materials, so large that they often exceed the capacity of committee members' email boxes. To address this issue, OKI has investigated the options available through scribd.com.

Everyone on the committee who has provided OKI with an email address was sent a test email with links to the website portal scribd.com containing all of the materials from the June 3, 2008 meeting. If you have not received an email from OKI you may have to check your junk mail or spam catcher. These detectors may screen OKI emails because OKI is sending them to you as a part of multiple mailers. It is a good idea to check your box.

Scribd is a document storage container that can have private controlled access or internet publishing available to all to view. You can picture Scribd not only as a huge filing cabinet, but also as an online library where you can access millions of volumes of documents that are catalogued and available by keyword search. OKI will make documents available to you through private access. The Groundwater Committee documents will be available only through the link that will be sent to you in your email.

Gayle demonstrated how Scribd works online. You are able to view documents in several different ways and you can download and print all documents. You will always have electronic access to the documents at any time. We will continue to mail hardcopies of the Groundwater Committee materials to those committee members without email access.

Gayle also introduced another electronic application called "Survey Monkey" that will be used to take a quick survey of who will attend meetings. A survey link will be sent to you through email. There will be one or more questions pertaining to your attendance at the next Groundwater meeting. You will need to check a box and click "done," which should take less than a minute to complete.

Jane Wittke reiterated the importance of updating your email address on the sign-in sheet to ensure you will receive committee materials. She presented an update on the St. Clair Township Comprehensive Planning Project being funded by the Miami Conservancy District and led by OKI. This project is integrating source water protection into comprehensive planning from the beginning of the planning process. Seventy percent of St. Clair Township overlies the aquifer; the Township's major industry is Miller Brewing; and planned sewer extensions will enable growth, so that the Township has a vested interest both in pursuing comprehensive planning and in source water protection.

The Township's planning advisory group is directing the planning process and has had a high turn-out in monthly meetings since November of last year. Jane explained that at the previous advisory group meeting on August 25, 2008, project partners gave an extensive tag-team presentation on source water management and related issues, including Tim McLelland of the Hamilton to New Baltimore Ground Water Consortium, Jerry Lanich, the Township's Zoning Administrator, and Joe Schmidt of the Butler County Department of Development.

In the first part of the August 25th presentation, Tim McLelland described basic concepts of groundwater availability, use, movement, interaction with surface water and vulnerability to contamination. In the second part of the August 25th presentation, Jerry Lanich briefly described the Township's existing wellhead protection ordinance and a recent amendment to it which prohibits siting an intermodal freight terminal over time-of-travel zones for drinking water. In the third part of the August 25th presentation, Joe Schmidt described conservation development and its benefits for source water management, and Jane Wittke then concluded with a list of actions that individuals can take to protect source water.

Jane concluded her report by saying that the St. Clair Township plan is scheduled for completion by the end of this year and to be up for adoption within the first three months of next year. She said that the August 25th slide show and other meeting materials are available on the Butler County of Development planning website:

http://development.butlercountyohio.org/content/txtcontent/plan/StClair_Comp_Plan/StClair_Comp_Plan.cfm

Local Groundwater Management Update

Tim McLelland from the Hamilton to New Baltimore Groundwater Consortium reported that the Consortium is in the process of re-delineating time-of-travel zones. This project is about 50% complete and URS, the consultant involved, should complete

their work by the end of the year. This is the Consortium's most comprehensive look at time-of-travel zones since 1991.

Tim also announced that the Miami Conservancy District (MCD) has provided a grant to the Consortium to help address the issue of unused monitoring wells and unused residential wells. Part of the grant will be used to help homeowners seal unused wells within the most sensitive drinking water protection areas. The Southwest Regional Water District also received a grant from MCD to assist with addressing concerns about the Schlichter Landfill, and MCD will install three to five monitoring wells in the area.

The Consortium's public education efforts include planning and participating in Great Miami River Days, a public event scheduled in Hamilton for September 6 and 7. There will be several education booths and a water education scavenger hunt for children. The Butler County Water Festival will take place on Friday, October 17, 2008. To date the festival has reached more than 10,000 children. Volunteers are still needed for this year.

Dick Renneker from the Warren County Water & Sewer Department reported that Warren County completed the expansion of their north wellfield located near the Great Miami River and Twin Creek. The expansion increased capacity from three to six million gallons a day (MGD). The wellfield on Union Road has now been taken out of service. The county's south treatment plant in Hamilton Township, located across from Kings Island, will be expanded from a capacity of six MGD to nine MGD.

Warren County is currently relocating water lines to accommodate the ODOT expansion of HWY122 to serve the new Atrium-Middletown hospital. The county is also at the beginning of interconnecting the north water system and the south system, with the design for interconnection in the drafting stage now. There have been significant problems with securing easements with these projects. Dick also commented that a recent change in Ohio law has greatly increased the time and cost associated with acquiring easements. (Amended SB 7 was passed in 2007 after the Ohio Supreme Court decision in the Norwood Eminent Domain case of 2006.)

The new law requires appraisals for all easements and Warren County must offer the owner of the property the appraised value, title searches must be performed, and a release from the mortgage company must be secured. The bottleneck is in locating mortgage companies. Many of the mortgages have been sold and resold so that the owner cannot locate the actual company that holds the mortgage. The new law has delayed new projects by a year, and significantly raised the cost of administration to an average of \$2,500.00 per easement.

Ralph Haefner of the U.S. Geological Survey (USGS) presented an overview of the data collection efforts of the USGS. The agency's Ground Water Website is located at <http://groundwaterwatch.usgs.gov/>. This site features three different information networks. The first is the Active Ground-Water Level Network, showing the water levels

that were measured in the last year. The second is the Climate Response Network, showing spatial patterns where levels are higher or lower than usual. The third is the Real-Time Ground Water Level Network which records data at 15- 60 minute intervals.

Ralph noted that the Kentucky USGS Office recently released a karst hydrology study, and the Indiana USGS Office is still dealing with work triggered by the floods in June. He announced that the National Ground Water Protection Council will meet in Cincinnati September 21-24, and the Water Management Association of Ohio (WMAO) will hold its annual meeting November 12-13 in Columbus, Ohio. Ralph also announced that he will give a presentation at the next Groundwater Committee meeting on the presence of pharmaceuticals and personal care products in surface and ground water.

Ken Shearwood from the Village of New Richmond reported that their wellhead protection plan was endorsed by Ohio EPA. As part of a pro-active public education plan, a column entitled "On the Waterfront" has been added to an existing village newsletter that is being sent out in the water bills of New Richmond residents, to educate consumers about drinking water issues. Ken reported that because of recent personnel changes, he is now in charge of the wastewater plant as well as the water plant for New Richmond.

Ken also mentioned that the Village Police Chief had approached him about testing the raw effluent at the wastewater plant for pharmaceuticals. If anyone else is interested, the testing is available through Oregon State University at a cost of \$400.00 (excluding shipping), and can detect urinary biomarkers for caffeine, cocaine, methamphetamine, etc.

Allison Reed of the Ohio EPA congratulated the City of Oxford for having its source water protection plan endorsed by the state.

Mariano Haensel of the Ohio EPA commented on what a valuable resource the Groundwater Committee is and asked if there is any way to include water suppliers from counties further north, such as those in Ohio EPA's southwest district. Jane Wittke replied that because the committee is supported by local funds and OKI serves Butler, Clermont, Hamilton and Warren Counties in Ohio, it would not be possible for OKI to incur expenses for areas beyond those counties, such as mailing costs, without additional funding. She noted that all the meetings are open to the public, including anyone who wants to travel from out of the OKI region to attend, and Dave Weihsrauch suggested that Mariano could forward information about the committee by email.

The Ground Water Rule: How Will It Affect Ohio?

Bob Moore, the leader of Ohio EPA's work group for implementing the Ground Water Rule, gave an overview presentation about the state's approach, noting that the federal rule will take effect in December of 2009. The premise of the rule is to provide increased protection against microbial pathogens, to establish a risk-

target approach, and to require ground water-based public water systems that are at risk for fecal contamination to take corrective action.

The new rule requires that all states conduct a sanitary survey; identify higher risk systems through existing monitoring under the Total Coliform Rule; and require ground water source monitoring for systems that don't provide 4-log treatment of viruses. Those systems with 4-log treatment are exempt from the monitoring requirement, and treatment includes disinfection or removal or a combination of both.

Bob explained that triggers for treatment technique requirements are significant deficiencies through a sanitary survey or from a fecal positive sample collected through raw water monitoring. He described corrective action as consulting with the Ohio EPA and then either correcting the significant deficiency, providing an alternate source, eliminating the source of contamination, or providing treatment that reliably achieves 4-log virus inactivation or removal. He also described the source water monitoring and the type of sampling that would be required.

Bob explained how the Ground Water Rule adds another layer of communication and management issues between wholesalers and consecutive systems. He noted that Ground Water Sanitary Surveys will be conducted every three years for community systems and every five years for non-community systems, and described the eight critical components of the surveys.

He described the tiers of public notice required and what violations are required to be reported in the consumer confidence report. He also explained that the state is considering assessment source water monitoring and one example for the use of this rule would be for systems with one fecal hit but no other follow-up positive samples.

He concluded by saying the state's draft rule should be available for comment by the end of this year, and inviting questions and comments. (Note: after this presentation was given, Ohio EPA decided to apply for a two-year extension from U.S. EPA for their primacy application, so that the state's draft ground water rule is not expected to be available before early 2010.)

More detail is provided in his PowerPoint presentation, available as an attachment in hard copy or electronically through scribd.com for committee members. He also provided contact information for those with additional questions after the committee's discussion: Bob.Moore@epa.state.oh.us or by telephone at (937) 285-6476.

Other Business and Adjournment

Bruce Whitteberry reminded everyone that the next meeting of the committee is set for December 3, and will include a presentation by Ralph Haefner on pharmaceuticals and personal care products detected by USGS in water samples, and a presentation by MaryLynn Lodor about safe disposal options for these materials in southwest Ohio. The meeting was adjourned at noon.