OKI GROUNDWATER COMMITTEE  
SEPTEMBER 8, 2004 - 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. Update on Local Groundwater Management Efforts  
   Jim Fox, Mike Ekberg, Tim McLelland, K.D. Rex, Janay Mourer, Dick Renneker

4. OKI Staff Update

5. New Legislation and Regulations for Small Septic Systems and Their Groundwater Impacts  
   Jean Caudill, Ohio Department of Health

6. Other Business

7. Adjournment

* SEE the MAP and DIRECTIONS on the REVERSE HARD COPY  
(or in separate attachment to email)
Ohio Department of Health
Bureau of Environmental Health

New Legislation and Regulations for Small Wastewater Systems

Groundwater Impacts?
ODH Household Sewage Program

UNLIKE OTHER ODH ENVIRONMENTAL HEALTH PROGRAMS:

• Currently no enabling legislation specific to household sewage systems; only ORC 3701.34(A) related to PHC authority
• No mandated surveys of LHD programs
• No LHD collection & transmittal of a state permit fee to ODH to fund state program
Groundwater Impacts?

Have there been groundwater impacts from very limited state oversight of local household sewage system permitting?

Is there a problem with high variability in system types approved for use in local health department jurisdictions?
Substitute HB 231

- Representative Tom Niehaus is lead sponsor for HB 231 introduced on June 24, 2003
- Rep. Collier wanted larger systems included; Sub HB 231 now includes option for a BoH to regulate Small Flow On-site Sewage Treatment Systems (SFOSTS) that treat up to 1000 GPD
- Substitute HB 231 passed the House by a vote of 67 to 32 on May 25, 2004
New ORC Section 3718.02 (A)
Public Health Council Rules

1. Approve/disapprove sewage treatment systems*
2. Conduct a site evaluation
3. Standards for siting, design, installation, operation, monitoring, maintenance, and abandonment of HSTS
   a. Soil absorption specifications
   b. Specifications for discharging systems (per NPDES)
   c. Requirements for maintenance (per manufacturer)
   d. Maintenance in lieu of required inspection
* Existing operable systems shall be deemed approved
New ORC Section 3718.02(A)
Public Health Council Rules (cont’d)

4. BoH Notification of system and component reviews by Technical Advisory Committee and approval by Director of Health

5. Installation and Operation Permit criteria including installer limited warranty and notice to ODH within 60 days of all PTI issued

6. Inspection of systems within 18 months of installation to assure proper operation; notice to ODH within 60 days of inspection
7. Registration of installers, service providers, and septage haulers

8. Requirements for collection, transport, disposal, and land application of domestic septage

9. BoH records sufficient to assure compliance with rules
New ORC Section 3718.02(A)

Public Health Council Rules (cont’d)

10. BoH and manufacturer requirements for providing O&M instructions
11. Criteria for 711 compliance (subdivisions)
12. Criteria and procedures for establishing HSTS management districts
13. Criteria for Small Flow On-Site STS

PHC may adopt other rules under (A) that are determined necessary to implement ORC
BoH may choose to regulate SFOSTS through written notification to directors of ODH and OEPA. If an ODH survey of the local BoH finds non-compliance with SFOSTS rules, director of OEPA and the BoH are notified and BoH ceases regulation of SFOSTS (reverts to OEPA).
New ORC Section 3718.05

Duties of Director of Health

(A) Administer / enforce ORC and PHC rules
(B) Examine BoH records for compliance
(C) Review any more stringent BoH rules
(D) Survey BoH programs per ORC 3718.07
(E) Develop with TAC standards and guidelines
(F) Provide O&M instructions on ODH website and provide copies as requested
New ORC Section 3718.07

ODH survey of local programs

• ODH shall survey every three years, but may resurvey as necessary

• Substantial compliance required to be placed on “Approved List”

• If not approved, ODH or contracting district may conduct HSTS program, and a SFOSTS program would revert to OEPA
NEW ORC Section

**ORC 6111.441** Exempts those SFOSTS regulated by local BoH per ORC 3718.021 from OEPA administrative and permitting requirements provided the BoH remain in compliance with the rules adopted under (A)(13) of ORC 3718.02
Sections 3 & 4

Effective Dates

• OAC 3701-29 remains in effect until superseded by new rules required under ORC 3718.02 (if enacted)

• ORC 3718.021 regarding SFOSTS becomes operative on the effective date of the rules adopted per (A)(13) of ORC 3718.02 (if enacted)
Groundwater Impacts?

Do SFOSTS pose a greater threat to groundwater due to waste characteristics and waste strength issues?

How important will it be that SFOSTS rules be consistent for the <1000 gpd non-HSTS systems that would be permitted by either OEPA districts or local health departments?
ODH Program Efforts
to assure a level of adequate treatment

• Prioritize Site & Soil Evaluation
• Reduce Off-lot Point Discharges
• Expand Onsite Alternatives
• Assure Monitoring & Maintenance
Prioritize Site & Soil Evaluation

• Siting the system and replacement area in proper landscape positions on the lot

• Assuring adequate vertical separation distance to the limiting condition:
  • Bedrock *
  • Groundwater * * only two in current rules
  • Seasonal or Perched Water Table
  • Restrictive Soil Layer

• Using soil texture and structure to estimate wastewater loading rates
Assess treatment capacity of the soil
Groundwater Impacts?

How likely is direct impact to groundwater from soil-based wastewater treatment in Ohio?

**HIGH** – karst areas, rapidly permeable soils, fractured bedrock, …

**LOW** – restrictive soil layers, seasonal perched water, …

How much of Ohio is HIGH or LOW risk?
Reduce Off-lot Point Discharges

- No discharge would be permitted if a soil based system can be sited *(no new lots approved for HSTS point discharges)*
- Discharges for existing lots must meet effluent quality, monitoring, and *receiving environment* requirements
- There would be a waiver of receiving water criteria for replacement HSTS (abating sewage nuisances, so no degradation)
Expand Onsite Alternatives

• Until there are rule revisions, alternative systems must be permitted through the experimental variance provisions

• Statewide Concurrence for Mound Systems when the siting criteria in OSU Extension or SSWMP manuals can be met

• The following examples are being used in Ohio as experimental systems ...
Alternative Pretreatment Components

Alternative Media Types:
• textile
• foam
• peat
• etc.
Mound
Combined Treatment & Dispersal Components

- Synthetic Fabric
- Distribution Pipe
- And Gravel
- Topsoil
- Sand
- Original Grade
- Chisel Plowed Surface
- Observation pipe
- Minimum Vertical Separation
- Limiting Condition

Limiting Condition
Sand
Fill
Minimum Vertical Separation
Chisel Plowed Surface
Original Grade
Topsoil Sand
Distribution Pipe
And Gravel
Synthetic Fabric
Observation pipe
Topsoil Sand
Sand
Fill
Minimum Vertical Separation
Chisel Plowed Surface
Original Grade
Topsoil Sand
Distribution Pipe
And Gravel
Synthetic Fabric
Observation pipe
Alternative Dispersal Components

Example: Drip Distribution
Monitoring & Maintenance

Design & Install for Monitoring

Observation Ports

Clean-out & Distal Pressure Test
Operation Inspection Programs

Kudos to Local Health Departments in Ohio

2002 survey showed almost 50% doing some type of inspection program.
Groundwater Impacts

Legislation does not specifically address groundwater protection, but requirement for site and soil evaluation does …

Rules will address assessment of local risk conditions including groundwater pollution potential, source water protection areas, and source water susceptibility issues.
Ohio Water Resource Council

OWRC Workgroup hosted by OEPA-DDGW:

- Just began meeting on August 30, 2004
- Trying to address need for consistency in wastewater, animal waste, and solid waste rules related to groundwater protection
- Recommend rational isolation distances and/or use of designs or BMPs that provide comparable protection based on risk factors
OWRC Workgroup

- Workgroup should make recommendations to OWRC by this December or early 2005
- Will help ODH with HSTS / SFOSTS rule development following passage of legislation
- Should impact the in-progress OEPA draft rules:
  - Land Application of Treated Wastewater
  - On-site Wastewater Treatment and Dispersal Systems
Any more time for discussion of Groundwater Impacts?
Additional Information

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OKI GROUNDWATER COMMITTEE MEETING SUMMARY
Wednesday, September 8, 2004
OKI Board Room

Attendees:

Jim Fox, Chair       Village of Indian Hill
Milovan Beljin       M.S. Beljin & Assoc
Jean Caudill         Ohio Department of Health
Dan Cloyd            Ohio EPA - Southwest District
Barry Conway         City of Springboro
J. Dwight Culbertson City of Fairfield
Frank Divo           Southwest Ohio Water Company
Gary Dursch          City of Middletown
Mike Ekberg          Miami Conservancy District
Bob Fischer          Paramount King’s Island
Carl Gatton          Warren County Water Service
Brian Gibson         Clermont County General Health District
Bill Gollnitz        Greater Cincinnati Water Works
Todd Kehr            City of Trenton
Scott Kirk           Western Water Company
Jim Lauver           Village of Glendale
Mike Lippert         City of Wyoming
Kristin McAllister   Dayton Daily News
Tim McLelland        Hamilton to New Baltimore Groundwater Consortium
Robert Marsh         Southwest Regional Water District
Paul Michalski       TriHydro (Chevron)
Kevin Newberry       Tate Monroe Water
Bruce Pletsch        Miami Conservancy District
Michael Proffitt     Ohio EPA – Southwest District
Tom Schumann         U.S. Geological Survey
Ken Shearwood        Village of New Richmond
Cliff Shrive         Arcadis FPS
Jim Stiertz          Cinergy
Dan Swart            Tate Monroe Water
David Weihrauch      City of Oxford
Bruce Whittleberry   Greater Cincinnati Water Works
Scott Wilson         Butler County Health District

OKI STAFF
Bruce Koehler, Fran Malone, Jane Wittke
**Welcome and Introductions**
Jim Fox called the meeting to order at 10:05 a.m. Everyone introduced themselves.

**Announcements**
The next Groundwater meeting is scheduled for December 1, 2004 at the OKI offices.

**Updates on Local Groundwater Management Efforts**
**Jim Fox, Village of Indian Hill,** reported on recent developments at a former gravel pit that is slated to become parkland. The gravel pit sits above the aquifer that Indian Hill uses for a water source. Cursory sampling of lakes in the gravel pit in the spring indicated traces of lead and mercury. The Enquirer reported that this sampling indicated a potential pollution source to the aquifer, and that there were reports that a target range had once operated there. Since the initial sampling, Indian Hill has followed up with due diligence in more sampling and thorough testing, and expects to have a report from its consultant sometime soon.

**Mike Ekberg, Miami Conservancy District,** spoke about a ground water level survey in the buried valley aquifer between Trenton and New Miami. The survey was undertaken in January and May 2003 at 87 residential and monitoring wells and 4 drive points in the river between Trenton and New Miami. The points were surveyed to make the measurement more exact in creating a groundwater level contour map. This map is now available as a GIS shape file, and Mike passed a sample copy around. The groundwater level contour map will help groundwater managers determine the depth to groundwater and groundwater flow directions and will provide important base data for future groundwater modeling studies.

**Tim McLelland, Hamilton New Baltimore Groundwater Consortium,** reported that the River Days event in Hamilton will not be held this year because of delays in event planning and funding issues. The national Groundwater Guardian Conference will be November 4-5, 2004 in Washington, D.C. The Youth Groundwater Congress will be held at the same time in conjunction with the Groundwater Guardian Conference.

A new housing development with 200 homes is being proposed near Trenton in a very sensitive area over the aquifer near the Southwest Regional Water District North Well field. This is an area with a history of concerns about water quality and water quantity issues, where many studies have been conducted by U.S.G.S, MCD, and Miller Brewing Company. The Butler County Planning Department contacted the Consortium about the new development, and the Consortium expressed its concerns about potential development impacts. The stormwater division of the Butler County Engineer’s Office has recently issued a Request for Qualifications for additional modeling to be performed in the Trenton area, which may help to clarify further some of the water quality and quantity issues.
The Butler County Water Festival is scheduled for October 15, and volunteers are still needed. Please contact Tim if you would like to help.

As Tim reported at the May Groundwater Committee meeting, the Consortium hired a consultant to evaluate low-level perchlorate detections in Fairfield. Perchlorate is an unregulated contaminant and health effects information for low-level exposure is inconclusive. The consultant’s report is not yet complete, but they expect that it will be done in the next few weeks. The National Academy of Science recommendations about setting a standard for perchlorate have been delayed. NAS was originally going to issue a report in August, which has now been delayed until at least December. The setting of a maximum contaminant level (MCL) for perchlorate is not expected until more evaluation and analysis are completed.

The Schlichter Landfill, a former construction and demolition debris facility in Butler County, is appealing orders from the Director of the Ohio EPA to investigate the vertical and horizontal extent of contamination at the site. In a network of early warning monitoring wells there has been detection of certain volatile organic compounds (VOCs). Schlichter’s appeal is supposed to be in Columbus and the outcome could affect some wellfields in the area, such as the Southwest Regional Water District’s.

Carl Gatton, Warren County Water, described a number of projects in Warren County. The expansion project in the County’s north wellfield involves Tetra Tech and four wells, which will double capacity to 6 MGD (million gallons per day). They have chosen not to soften the water. This project also involves about 1,000 ft. of riverbank restoration in order that the well field is not infringed upon. With the expansion of that plant they will be eliminating the Union Road Plant, which is very old infrastructure.

The Deerfield Hamilton Plant expansion involves an increase from 6 MGD to 9 MGD. Draft engineering is now being reviewed that may mean the addition of new wells in some places that have not had wells before. It also means hydro-geological testing.

For the first time, the County has a Water Master Plan in the works, and a Sewer Master Plan is running at the same time. A wellhead protection team is being established for the north well field to develop a management plan. Another such team will be formed for the Deerfield-Hamilton wellhead plant expansion to do its management plan. In addition, the County is updating the Emergency Response Plan and has completed the Vulnerability Assessment.

**OKI Staff Updates**

Bruce Koehler reported that The Great Miami Runoff Reduction Project, a $65,000 project with funding from the Miami Conservancy District, recently installed three lysimeters to help monitor and evaluate the effectiveness of a pervious parking area and rain garden. These best management practices will be installed at Heritage Park,
which is the Colerain Township new passive recreation area along the Big Bend of the Great Miami River. More monitoring equipment will be installed.

On September 14, OKI staff will attend a meeting of Ohio’s State Selection Committee, an inter-agency group that will make funding recommendations on grant applications for nonpoint source pollution reduction grants under Section 319 of the Clean Water Act. With a variety of project partners, OKI is sponsoring two applications: one for an implementation grant to install surface water best management practices along the upper Mill Creek in Butler County, and one for a local drinking water source protection planning grant to develop a drinking water protection plan for the Village of New Miami while expanding the potential pollution source inventories of public water systems from New Miami to northern Hamilton County. Both applications also propose extensive educational and technology transfer activities.

On September 24, OKI staff will organize, equip and lead a canoe tour of Mill Creek restoration sites. The Metropolitan Sewer District of Greater Cincinnati (MSD) requested the educational event to better inform consulting firms that seek MSD contracts to design projects ordered by a consent decree that MSD negotiated with federal authorities.

On October 15, OKI staff will be a presenter at the Butler County Water Festival. Mr. Koehler said students take an avid interest in presentations that feature streams flowing near their schools.

Jane Wittke reported on the funding situation for regional water quality management efforts, such as the OKI Groundwater Committee. She explained that prior to 1997, OKI’s Water Quality Management Program was funded primarily by federal Clean Water Act dollars with a local match. This funding has varied significantly with Congressional appropriations, mainly because the Clean Water Act has not been re-authorized.

In 1996, OKI’s Groundwater Committee and OKI’s Board of Trustees asked the Ohio EPA to share the license-to-operate fee levied on water suppliers so that a portion would be consistently available for regional water management planning activities. Ohio EPA didn’t want to set a precedent by splitting the fee, and wanted it to be consistent with all six areawide agencies in the state that have historically performed a regional water management planning function. Instead, Ohio EPA supported the six agencies’ making a request to the General Assembly for a line item from General Revenue Funds.

After hearing from water suppliers and other constituents from across the state, the General Assembly appropriated $900,000 in 1997 for State Fiscal Years 1998 and 1999, and again in 1999 for State Fiscal Years 2000-2001, or $450,000 a year divided equally among the six agencies, so that each received $75,000 per fiscal year, matched by no less than 30% in local funds. In 2001, reflecting the state budget crisis, the General
Assembly appropriated $500,000 to the areawides for State Fiscal Years 2002 and 2003. Because the 2001 appropriation was taken from Ohio EPA’s budget, however, rather than added to it, as had previously been the case, Governor Taft exercised his line item veto on it along with 48 other vetoes.

In the currently existing FY2004-2005 state budget, no appropriation was made to areawides because of the state budget crisis. Consequently, for the past 3 years and going into a fourth budget year, OKI and the other areawides have had to ask for increased local funding support and have had to cut back on services to constituents, even while federal programs and mandates have grown and local governments have asked for more help.

Because federal pass-through funding has declined to about $50,000 a year and the U.S. House of Representatives recently passed a 37% cut to their version of EPA’s budget, the funding situation is growing more dire all the time.

Consequently, the areawide agencies have been talking about the need to reinstate the state contribution and at a higher level. What is needed is a state contribution for each areawide of $150,000 a year, or $300,000 in the biennium. With six areawides, the total request from the state budget would be $1.8 million in the biennium. Because the Groundwater Committee has been a key support in the past, as has the OKI Board, continued support would be key for any renewed request.

Chairman Jim Fox stated that he would support such an initiative and asked the Committee for their reaction. In response, Mike Ekberg made the following motion:

The Groundwater Committee urges the OKI Board of Trustees to maximize their efforts to restore the State of Ohio’s contribution to areawide water quality management planning in the State Fiscal Year 2006-2007 Budget.

The motion was seconded by Carl Gatton, and passed unanimously.

**New Legislation and Regulations for Small Septic Systems and their Groundwater Impacts, Jean Caudill – Ohio Department of Health**

**Jean Caudill, Ohio Department of Health** described House Bill 231, new enabling legislation that was passed by the Ohio House of Representatives in May to improve management of small septic systems such as those at homes and unsewered commercial facilities. Representative Tom Niehaus of Clermont County was the lead sponsor for HB 231, which passed by a 67-32 vote in the House and is expected to pass the Ohio Senate this fall.

New regulations associated with the legislation will improve groundwater protection because these rules will address assessment of local risk conditions including
groundwater pollution potential, source water protection areas, and source water susceptibility issues. A summary of Ms. Caudill’s presentation is attached.

**Adjournment**

After reminding the Committee that December 1 is the next meeting date, Jim Fox adjourned the meeting at 11:55 a.m.