

STATE COORDINATING COMMITTEE ON GROUND WATER

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TO PROMOTE AND GUIDE THE IMPLEMENTATION OF A COORDINATED, COMPREHENSIVE AND EFFECTIVE GROUND WATER PROTECTION AND MANAGEMENT PROGRAM FOR THE STATE OF OHIO

Oct. 22, 2009

ODNR – Fountain Square
Building D-3 Conference Room

The October 2009 SCCGW meeting consisted of Agency announcements and a facilitated discussion of the need for regulation of geothermal well installation in Ohio.

ATTENDANCE

Ohio EPA: Tom Allen, Elizabeth Bailik, Michael Eggert, Scott Heidenreich, Bob Knipmeyer, Barb Lubberger
ODNR: Wayne Jones, Rick Pavey
ODH: Rebecca Fugitt, Russell Smith
ODOT: Doug App
PUCO: Sue Daly
NRCS: John Armentano
USGS: Ralph Haefner

“Reinvesting in Ohio Water”. More information is available at <http://www.wmao.org/meetings.shtml>

Balanced Growth. The Ohio Water Resources Council has put out a Request for Proposal for new Balanced Growth projects. There have been two responses from entities in the Great Lakes basin, and another eight from entities in the Ohio River basin.

Ohio Department of Natural Resources, Division of Geologic Survey:

Funding. The division is currently researching funding options, in light of its recent loss of all General Revenue Funding.

Ohio Department of Transportation:

Restructuring. The planning division at ODOT has been revamped and Andrea Stevenson has been promoted to head up planning for multi-modal projects.

Ohio EPA, Director’s Office:

Stimulus Projects. Getting ARRA-funded projects entered into contracts or under construction by February 17, 2010 is an Ohio EPA priority at this time.

AGENCY UPDATES AND ANNOUNCEMENTS

SCCGW Chair:

National Ground Water Monitoring Network. Ohio has decided not to submit a Statement of Interest to the Advisory Committee on Water Information (ACWI)/Subcommittee on Ground Water (SOGW) for the national ground water monitoring network pilot program, but will look forward to participating in it in the near future. Tom is representing ASDWA on ACWI/SOGW and pilot selection committee.

WMAO Fall Conference. The Water Management Association of Ohio will hold its annual fall conference on November 4-5 at the Ramada Plaza Hotel on Sinclair Road. The conference theme is

Natural Resources Conservation Service:
Staff Changes. Doug Pauley, formerly District Conservationist in Ross County is now ASTC-Field operations in Chillicothe. Tom Sewell, formerly Area Resource Conservationist in the NRCS Area 2, is now ASTC-Field Operations in Zanesville.

Ohio Dept. of Natural Resources, Division of Soil and Water Resources

Funding. The division is still working to shore up Soil and Water Conservation District funding in SFY 11 (looking at a 25-30% reduction in state support if nothing is done.)

Cleanups. The division is being very proactive in leveraging funds into Ohio for nutrient, sediment, pharmaceuticals (residential), and mercury (residential) cleanup through the Great Lakes Restoration Initiative and Mississippi Basin Healthy Watersheds Initiative.

Watershed Coordinators. The division's Watersheds Program is preparing the details of the next Watershed Coordinator RFP; the division is hopeful but not entirely sure if it can afford to sponsor new groups at this time.

Grand Lake St. Mary's. The division field staff are very engaged on the Grand Lake issues.

Midwest Ground Water Conference. Several staff attended the annual Midwest Ground Water Conference, which was held in St. Louis, Missouri last week. The agenda and the speakers were excellent.

Ohio is scheduled to host the conference next year. A planning committee will be organized in the next few weeks.

Ohio EPA, Division of Drinking and Ground Waters:

New Well Rules. Effective September 1st, 2009, rules for public water well standards were updated, including

- New wells are subject to additional siting criteria
- A drinking water source protection plan must be completed within 2 years of activating a new well.

New Sole Source Aquifer. The "MICHINDOH" Sole Source Aquifer—which covers portions of northwest Ohio, southern Michigan and northeast Indiana--has been proposed for U.S. EPA approval. Comments are due November 6th to U.S. EPA.

Pesticide Sampling Opportunity. The USDA Pesticide Program, which has been monitoring surface and ground water nationwide, has offered to partner with Ohio state agencies to sample up to 300 wells in Ohio. State staff would need to collect the samples, but USDA would provide the analyses of 128 chemicals at detection levels of parts per trillion. SCCGW staff will work together to identify key areas to sample.

Clyde Investigation. More ground water sampling is scheduled over the next 3-4 months in the areas surrounding Clyde, including portions of Sandusky and Ottawa Counties.

Ohio EPA, Division of Solid and Infectious Waste Management

Ground Water Assessment. The division is working with the Ground Water program in Division of Drinking and Ground Waters to streamline ground water assessment rules and standardize ground water standards for landfills.

C&DD Rules. The Director currently is reviewing proposed liner and cap rules for Construction and Demolition Debris (C&DD) landfills.

Leachate Studies. The Division recently published its C&DD leachate studies, which found that a significant proportion of C&DD landfills are leaking. At this time, 15-16 C&DD landfills have applied for expansions.

Ohio EPA, Division of Surface Water

Coal Mine Permits. Currently six Ohio coal mine permits are being reviewed by U.S. EPA.

Great Lakes RFP. The Great Lakes Restoration Initiative Request for Proposal should be issued by the end of the month.

Rockies Xpress. The Rockies Xpress pipeline has encountered problems with horizontal drilling in Fayette County. Due to unstable soils, the pipeline

must be installed via open-cut, which creates a wide swath of disturbed soil.

United States Geological Survey:

Stream Gage Upgrades. ARRA funds (\$440,000) are being used to upgrade the stream gages and provide them with high data rate radio-transmitters.

New Publications. Recent USGS publications include the following:

- “Effects of Climate Variability and Changes on Groundwater Resources of the United States” Fact Sheet 2009 – 3074, Sept. 2009.
- “Chloride in Groundwater and Surface Water in Areas Underlain by the Glacial Aquifer System, Northern United States”, Scientific Investigations Report 2009-5086.
- NAWQA Study at http://water.usgs.gov/nawqa/studies/praq/gla_caq/index.html

Ohio Department of Health:

Sewage System Installation. Thanks to \$5 million in ARRA funds, sewage systems are being installed in 49 Ohio counties and 11 Ohio cities. The deadline for initiating this work has been extended through Spring 2010.

Green Reserve Projects. The Clean Water Act, which is scheduled for reauthorization, allows up to 20% of funds to be used for green reserve projects.

Great Lakes Beach Cleanup. ODH has submitted a proposal to use \$5 million in Great Lakes Restoration Initiative funds for beach clean-ups and remediating nonpoint sources.

Sewage Issues. Issues still being debated include mandatory maintenance of home systems and the amount of vertical separation from the water table required for a leachfield.

Private Water System Rules. ODH has received an extension and now has till April 2010 to complete the rule revisions.

Public Utilities Commission of Ohio

National Drinking Water Symposium. This year the national symposium featured presentations on climate change.

DISCUSSION: Geothermal wells in Ohio: are regulations or guidance needed?

Michael Eggert (DDAGW) led a discussion that was joined by invited representatives from the Ohio Water Well Association (OWWA) and the National Ground Water Association. This meeting was organized in response to (1) OWWA concerns regarding lack of well drilling standards and documentation of locations of geothermal systems; and (2) numerous recent inquiries from the public to DDAGW about the propriety of siting geothermal systems near public drinking water wells.

OWWA representatives indicated that their two main concerns are: (1) improper sealing around the closed-loop geothermal systems, which provides a preferential pathway for surface water to enter ground water minimally filtered; and (2) accessible documentation of the locations of geothermal systems. Without such documentation, homes could be sold to new owners who would not know exactly where the loops are located. If subsequent excavation or well drilling were conducted on the property, there would be a risk of drilling through a loop and releasing conducting fluid into the subsurface.

Other issues that were discussed included:

Toxicity of fluid. The fluids most commonly used as conducting media in closed-loop systems are methanol, ethanol, and ethylene glycol (anti-freeze), all of which are toxic to humans; ethylene glycol is extremely toxic. These fluids are always diluted to concentrations around 17% and if released into the subsurface, they reportedly break down quickly. The toxicity of any break-down products needs to be researched. Propylene glycol is a non-toxic option but it is less conductive, more expensive, and tends to foul the lines, decreasing the life of the system.

Possibility of leaks. Industry representatives felt that leaks do not pose a major threat. They are reportedly rare and very limited in extent. The typical system doesn't have a leak-detection alarm, but they all have pressure meters that would indicate a loss in pressure. If a drill or excavating tool went through a loop, a more significant release

would ensue, but due to shut-off features, only one loop would be evacuated, not the whole system.

Existing regulation in Ohio. Water well drilling and installation standards apply to the open-loop systems; it is unlikely they apply to closed-loop systems. Both Ohio EPA and ODH are consulting with their legal staff. Ohio EPA's Division of Surface Water is discussing the application of a General (Discharge) Permit to those systems that pump ground water and discharge non-contact water into a surface water body or drainage ditch.

Underground Injection Control (UIC) regulations would apply to those systems that pump ground water out and then re-inject it back into the subsurface. However, UIC rules would only require the owner to register the system with Ohio EPA.

ODNR rules require drillers to submit a well log for most types of boreholes. For geothermal systems, compliance is reportedly spotty. For large commercial geothermal systems, hundreds of boreholes may be drilled. Industry representatives noted that compliance might be improved if ODNR could clarify that for such systems one well log—and one set of lat-long coordinates--per property is sufficient. A note should be placed in the comments box stating the number of boreholes that were installed on that property.

Possible Measures Agencies Could Take.

- Require contractors to be registered.
- Require locations of systems to be recorded in a central database that can be accessed via the internet
- Develop a guidance for siting and installing geothermal systems

Next Steps. ODH is currently revising its rules concerning water well construction standards, and is looking into incorporating registration and documentation requirements for open-loop and closed-loop geothermal systems. Staff from ODH, ODNR, and Ohio EPA will form a workgroup to develop a guidance document addressing geothermal systems within the next year or so. This document may then facilitate an effort to incorporate standards into rules for closed-loop systems and other variations that would not fall under ODH rules.

For example, SCCGW may ultimately make a recommendation to OWRC to initiate additional regulatory controls.

NEXT SCCGW MEETING

...will be the traditional SCCGW Holiday Meeting, and will be held December 17th at the Dutch Kitchen in Plain City, Ohio. The agenda will include a presentation by Heather Raymond (DDAGW) on four dye-trace studies recently conducted in Ohio karst units. Please RSVP by November 12th if you will attend, and whether or not you will stay for lunch.

REMINDER: Meeting agendas and final meeting summaries are posted on the SCCGW Web site: <http://wwwapp.epa.ohio.gov/ddagw/SCCGW/>.