Virginia Department of Health (VDH)
Private Well Regulations Workgroup
October 5, 2016, Meeting Summary

Roanoke Health Department
1502 Williamson Road N.E.
2nd Floor
Roanoke, Virginia 24012

List of Attendees:

Private Well Regulations Workgroup Members

John Danielson – Virginia Water Well Association
Mark Perry – VDH (Office of Drinking Water)
Jon Richardson – VDH (local health department)
Scott Bruce – Department of Environmental Quality
Dr. Kelsey Pieper – Civil and Environmental Engineering, Virginia Tech
Ronnie Helmick – Virginia Water Well Association
Erin Ling – Virginia Household Water Quality Program
Wayne Fenton – Virginia Water Well Association
Dennis Duty – Manufacturer
Greg Hudson – Onsite Soil Evaluator
Jeff Walker – Onsite Soil Evaluator
Ben Spence – Virginia Water Well Association
Janice Tatum – Southeast Rural Community Assistance Project

VDH Staff and Members of the Public

Lance Gregory – VDH Tim Baker – VDH Gary Thomas - VDH

Administrative

1. Welcome.

Mr. Gregory welcomed the workgroup and thanked the members for their participation.

2. Travel Reimbursements.

Mr. Gregory distributed travel reimbursements to workgroup members.

3. Introduction of Workgroup Members.

Workgroup members then introduced themselves.

4. Approve agenda.

The workgroup reviewed the agenda; there were no suggested edits.

5. Review Summary from September 8, 2016 meeting.

The workgroup reviewed the summary from the September 8, 2016 meeting; there were no edits.

General Information

1. Purpose of the Private Well Regulations Workgroup.

Mr. Gregory reiterated the purpose of the workgroup is to assist VDH in developing proposed revisions to the Private Well Regulations (12VAC5-630-10 et. seq., the Regulations).

Mr. Gregory also shared a list of public comments received during the period review for the Regulations which closed on October 10, 2016. The public comments can be viewed at http://www.townhall.virginia.gov/L/ViewPReview.cfm?PRid=1526 .

2. Ground rules for workgroup meetings.

Mr. Gregory reiterated the ground rules for the workgroup as discussed during the August 4, 2016, meeting.

Discussion

1. Follow up on questions from previous meeting.

Mr. Gregory then shared with the workgroup initial feedback regarding questions from previous meetings.

Requiring abandonment of dry wells and contaminated wells.

VDH looked at this issue several times for specific issues, such as uranium mining in Virginia. In those cases VDH determined that a specific revision to the Code would be required to provide VDH the authority to require the abandonment of a contaminated private well.

Creating construction and abandonment criteria for geotechnical wells and exploration wells.

The Private Well Regulations define "observation and monitoring wells" as a well constructed to measure hydrogeologic parameters, such as the fluctuation of water levels, or for monitoring the quality of ground water, or for both purposes. Section 420 of the regulations exempts observation and monitoring wells unless they will remain in served after completion of the study. The definition of "water well" or "well" in the Regulations also exempts these types of wells from the regulations. However, the Code definition of "private well" is broad enough that these additional well types could potentially fall under the definition.

Revising section 340 to require an easement, even if the property owner is the same.

The Private Well Regulations and the Sewage Handling and Disposal Regulations do not require an easement if the property owner is the same. There may be some property rights issues to require an owner to give themselves an easement.

Creating maintenance requirements for wells.

Section 32.1-176.4 provided VDH the authority to adopt regulations pertaining to the location and construction of private wells; it does not mention operation and maintenance. A Code change was required to provide VDH specific authority to require operation and maintenance for alternative onsite sewage system. Therefore, it would seem that similar specific Code authority would be required to allow VDH to develop maintenance requirements for private wells.

Creating regulations for water haulers.

The Code doesn't provide VDH authority to regulate water haulers. It does provide authority to regulate sewage haulers. There is potential for VDH to revise the Regulations to create specific criteria for water used during the drilling process, but VDH may need additional Code authority to regulate the trucks or people hauling the water.

Regarding the potential to create specific criteria for water used during the drilling process, the workgroup there was some general agreement to adding a requirement that water used in well construction be from a suitable sources or treated. Comments on this issue included:

- Should not add chlorine to drilling water because it breaks down the drilling mud.
- If you have to haul water from a potable source, it would cost way too much.
- Should allow hauling water from ponds and creeks, and chlorinating the water.
- Need to clarify which specific chlorine can be used.
- The water used in the construction of the well is pumped off during construction.
- Pool tablets have herbicides; owners need to know not to use those tablets for their well.

Dr. Pieper noted that she is currently participating in a shock chlorination study that may prove beneficial to the discussion regarding the specific method to use when chlorinating wells.

2. Incorporating data/research needs into discussion.

Mr. Gregory commented that a column for additional data or research needs was added to the table summarizing issues for the workgroup. He encouraged members to keep data and research needs in mind when discussing issues and recommendations for revising the regulations.

Dr. Pieper asked whether the purpose of the Regulations is to protect ground water or to protect public health; better defining the purpose of the Regulations would help in determining data and research needs.

Workgroup members discussed the availability of data regarding water sampling results and potential areas of contamination. Mrs. Ling noted that her program had mapped a few localities.

Dr. Pieper noted that need for a uniform method for sampling and development of uniform messaging when speaking with property owners.

3. Licensure and evaluations for permits.

One of the issues raised during previous meetings was the suggestion to allow well drillers to provide well evaluations to obtain permits. Mr. Gregory noted that this issue has been requested as part of House Bill 558. In the draft HB 558 reports VDH staff reported that it will require a change to the Code to allow well drillers to provide evaluations for all private wells. Section 32.1-176.5:2 states that VDH must accept evaluations from PEs and OSEs, but does not mention well drillers.

There is significant disagreement among workgroup members and other stakeholders regarding this issue. However, the issue would require legislative action before it could be addressed in the Regulations. Proponents for allowing well drillers to provide evaluations noted issues with designated well locations on permits frequently needing to be changed. An example provided was that a number of private sector onsite soil evaluators provide only a single point on the property for the well locations and the location may not be accessible for the well rig. Proponents commented that health districts have begun requiring a redesign and a new fee to move wells outside of the originally permitted location, whereas historically drillers were able to with local health department staff to shift the site. Opponents have voiced concerns with conflicts of interest and the lack of the authority for driller's to provide evaluations.

The workgroup discussed possible solutions for the issue, such as the use of well areas and modifying VDH policies regarding making changes to the permitted well location.

In addition to licensure for evaluation of well sites, the workgroup also discuss the potential to require licensure or certification of individuals collecting water samples required by the Regulations.

4. Construction standards.

The workgroup discussed several issues regarding construction standards. Comment included:

<u>Requirement for mechanical seals/packers.</u>

- Packers prevent water from coming back up and dissolving bentonite grout.
- Recommend adding language to state that for bedrock wells the well casing must be properly sealed at the termination of casing into the bedrock.

<u>Add substantial compliance.</u>

- The workgroup was generally supportive of including substantial compliance.
- How do you keep substantial compliance from getting stretched too far?

Effects of corrosive water on galvanized drop pipe/and casing.

- Just a few galvanized components can bring water above 15 ppb of lead in corrosive water conditions.
- The issue is more about looking at the corrosion issues; treatment is a cheaper option to resolve that changing construction standards.
- One option is to require that well components meet the U.S. EPA's standards for lead free components.

Acknowledging water well system provider license through the regulations.

- There was general agreement to revise the Regulations to acknowledge water well system provided throughout the document.
- The Class B contractor requirement is aimed at the company; still need that language for the company.

5. Separation distances.

Several workgroup members questions how the current separation distance standards were created. Mr. Gregory commented that he believe they were likely similar to separation distance requirements for public water wells in place at the time the Regulation were develop. Mr. Gregory committed to reviewing the matter further to provide additional background to the workgroup.

Several workgroup members noted that there hadn't been any problems with the current separation distances and did not recommend getting into the area of reducing setbacks. Other workgroup members noted a possible need to create different separation distances from onsite sewage system producing higher quality effluent than standard septic tank effluent.

Mr. Walker shared an example of highly treated effluent from an alternative onsite sewage system, and noted that in order to reduce the separation distance to drainfields there would need to be verification that the standards are being met either water quality or sewage quality.

6. Issues of local concern; Piedmont/Valley of Northern Virginia.

Issues of local concern were:

- Maintenance of private wells.
- Issues with degrading grout and casing.
- Occupational Safety and Health Administration Regulations say you have to be 20 feet from overhead line; 10 foot with special training. Need to consider this when siting wells for permits.
- Upgrading a Class IV to a Class III.

Virginia Department of Health
Private Well Regulations Workgroup
Tentative Agenda

Date:	October 5, 2016
Time:	10 am to 2 pm
Primary Location:	Roanoke Health Department 1502 Williamson Road N.E. 2nd Floor Roanoke, Virginia 24012

Administrative (30 minutes)

1. Welcome. (5 minutes)
2. Travel Reimbursements. (5 minutes)
3. Introduction of Workgroup Members. (5 minutes)
4. Approve agenda. (5 minutes)
5. Review Summary from September 8, 2016 meeting. (10 minutes)

General Information (10 minutes)

1. Purpose of the Private Well Regulations Workgroup. (5 minutes)
2. Ground rules for workgroup meetings. (5 minutes)

Discussion (25 minutes)

1. Follow up on questions from previous meeting. (20 minutes)
2. Incorporating data/research needs into discussion. (5 minutes)

Break (5 minutes)

Discussion Continued (60 minutes)

3. Licensure and evaluations for permits. (20 minutes)
4. Construction standards. (40 minutes)

Break (5 minutes)

Discussion Continued (60 minutes)

5. Construction standards continued. (40 minutes)
6. Separation distances. (20 minutes)

Break (5 minutes)

Discussion Continued (40 minutes)

7. Separation distance continued. (20 minutes)
8. Issues of local concern; Piedmont/Valley of Northern Virginia. (20 minutes)

Adjourn

Virginia Department of Health
Private Well Regulations Workgroup
Summary of Issues Identified by Workgroup and Previous Draft Revisions

Issue	Code/ Regulations/ Policy Revision	Possible Recommended Revision(s)	Fast-track or NOIRA	Economic Impact	Data/ Research Needs
Abandonment					
Clarify abandonment requirements.	Regulations/Policy	Bored well abandonment should include mix rate (1/1/2) same as grouting of the well; cement. Grout materials cannot contain CCP (fly ash). Define clean fill as not containing source of contamination, impermeable material. Use same grout requirements as used for construction.			Does VDH have statutory authority to require abandonment of contaminated or dry wells? What are the abandonment requirements in other programs (ODW)?
Revise abandonment procedures (shallow wells, geotechnical and exploration wells, grout mixtures).	Code/Regulations	Create a method for abandoning geotechnical wells that is not required by permitting. Create a standard/BMP.			Does VDOT or neighboring states have any data from impacts of improperly grouted geotechnical wells? Does VDH have authority to regulate geotechnical wells? How do other agencies/states define geotechnical wells? Is there an ASTM standard?
Reduced setbacks from abandoned wells (e.g. separation distance from posed septic system).	Regulations				
Required abandonment of contaminated wells. Need to clarify whether the well	Code				

is the source or if the well is being contaminated by another source.					
Consistency with Other Agencies/Offices/Regulations					
Siting a well downslope of a septic system.	Regulations				
Inconsistent implementation of regulations.	Policy				
Need to update implementation manual.	Policy				
Consistency with other, sometime more stringent, regulations (e.g. Ground Water Management Areas – screening and GPS requirements).	Regulations				
Bring GMPs into the regulations.	Regulations				
Add substantial compliance (similar to Sewage Handling and Disposal Regulations).	Regulations				
Bring frequent variances into the regulations.	Regulations				
Consistency with GWMA regs requirement for GPS locations on UWWCR.	Regulations				
Construction Standards					
No emphasis on construction of the well; proper grouting and sealing.	Regulations/Policy				

Revise grouting requirements for downslope siting of a well.	Regulations				
Alternate grouting procedures for closed-loop geothermal.	Regulations				
Requirement for mechanical seals/packers.	Regulations				
Add substantial compliance.	Regulations				
Separate construction standards based on geology.	Regulations				
Effects of corrosive water on galvanized drop pipe.	Code/Regulations				
Proper sealing of PVC casing at interface with bedrock.	Regulations				
Revised construction standards for Class IIIA wells.	Regulations				
New types of Class IV wells (e.g. IVA)	Regulations				
Standards for converting a Class IV well to a Class III.	Regulations				
Requirement for lead-free components.	Code/Regulations				
Standards for product approvals (e.g. WSC, NSF).	Regulations				
Revised standards for	Regulations				

wells in low areas.					
Revisit construction standards exemptions for Class IIIC and Class IV wells.	Regulations				
Add screening requirements (Coastal Plain region).	Regulations				
Revised grouting procedures for inner and outer casings. Reclassification of wells from IIIC or IIIB	Regulations				
Customer Service					
LHD requiring new permit and fee for relocating well.	Regulations/Policy				
Consistency in design approach; VDH and private sector not on the same page.	Policy				
Need more flexibility with permits.	Regulations/Policy				
Getting permits in a timely manner.	Code/ Regulations/ Policy				
Inconsistent implementation of the regulations.	Policy				
Need to update the implementation manual.	Policy				
Develop guidelines for real estate inspections.	Code/Policy				
Provide clear expectations	Policy				

for implementation.					
Acceptable means for submitting documents to VDH (email, fax, etc.).	Regulations/Policy				
Regulations should not impose an unnecessary economic hardship.	Regulations				
Add substantial compliance.	Regulations				
Recommendations for disinfection when performing maintenance.	Policy				
Timing issue for collection of GPS, drillers are putting it into VA Hydro but then VDH is also collecting a GPS point at a later time.	Policy				
Easements					
Revise section 340 to require an easement, even if the property owner is the same.	Code/Regulations	Revise section 340 to require an easement, even if the property owner is the same. Include single ownership language similar to language contained in the Sewage Handling and Disposal Regulations.			
Improve Private Sector Evaluations					
Consistency in design approach; VDH and private sector not on the same page.	Policy				
Private sector designer's permits are difficult to	Policy				

work with; too much unnecessary information.					
Licensure/Evaluations for Permitting					
Allow drillers to provide wells evaluations for permits.	Code/Regulations				
Acknowledging water well system provider license through the regulations.	Regulations				
Null and Voiding Permits/New Applications and Fees					
LHD requiring new permit and fee for relocating well.	Regulations/Policy				
Consistency in design approach; VDH and private sector not on the same page.	Policy				
Need more flexibility with permits.	Regulations/Policy				
Observation/Monitoring/Geotechnical Wells					
Proper abandonment of geotechnical and exploration wells.	Regulations	Create a method for abandoning geotechnical wells that is not required by permitting. Create a standard/BMP.			Does VDOT or neighboring states have any data from impacts of improperly grouted geotechnical wells? Does VDH have authority to regulate geotechnical wells? How do other agencies/states define geotechnical wells? Is there an ASTM standard?
Defining direct push wells.	Regulations				
Defining environmental	Regulations				

sampling wells.					
Revised exemption of observation and monitoring wells.	Regulations				Does VDH have authority to regulate observation and monitoring wells?
Create standards for environmental sampling wells.	Regulations				Does VDH have authority to regulate environmental sampling wells?
Permit Expiration					
Separate requirements for well only permits and permits in conjunction with a septic permit; different expiration dates.	Code				
Regulatory Oversight					
Grout inspections.	Policy				
Driller notification to LHD for well construction.	Regulations/Policy				
Add substantial compliance.	Regulations				
Revisions to administrative processes (hearings, variances) for consistency with other regulations.	Regulations				
Process requirements for submitting completion reports.	Regulations				
Revised procedures for product reviews and approvals.	Regulations				

Maintenance requirements for wells.	Code				
Required abandonment of contaminated wells.	Code				
Research Needs					
Knowledge gaps in assumptions versus science; research needs.	Code/Regulations/ Policy				
Regulations should not impose an unnecessary economic hardship.	Regulations				
Separation Distances					
Define agricultural zones as relate to setbacks. Inconsistency between LHD's regarding interpretation.	Code/Regulations / Policy				
Reduced setbacks from abandoned wells.	Regulations				
Revise Table 3.1.	Regulations				
Revised setbacks for downslope siting of wells.	Regulations				
Recommended separation distance from utility lines.	Regulations/Policy				
Create separation distance from inactive septic systems.	Regulations				
Revised separation distance from termite treated structures.	Regulations				
Separation distance from repair drainfield to an existing well.	Regulations				

Water Quality					
Improve upon the water quality parameters in section 370 (e.g. North Carolina sampling requirements).	Code/Regulations				
Improve procedures regarding chlorination; chlorination related to pH.	Regulations				
Develop sampling protocols for private wells.	Regulations/Policy.				
Define contamination of a private well.	Code/Regulation				
Regulation of water haulers.	Code				
Required use of lead-free components.	Code/Regulations				
Effects of corrosive water on galvanized drop pipe.	Code/Regulations				
Requirements for quality of water used in well construction process.	Regulations				
Required abandonment of contaminated wells.	Code				
Water Quantity					
How is well yield actually estimated?	Regulations				