

Attendees: Katie Gimma, Scott Stewart, Don Maynard, Miles Waite, Allison Murphy, Jim Siriano, Liz Royer, Craig Heindel, Jon Kim, Darlene Autrey, Kira Jacobs (call in)

Jon Kim – Overview of Current VGS Groundwater Projects

- A) Hinesburg Thrust Project – Completed in 2014, article ‘*Tectonic evolution of a Paleozoic thrust fault influences the hydrogeology of a fractured rock aquifer, northeastern Appalachian foreland*’ available
- B) Nitrate Projects with VT Agency of Agriculture
 - a. East Montpelier Nitrate Project – projected completion in Spring 2016, article in preparation
 - b. Sutton Nitrate Project – analysis of well water chemistry underway, public supply has documented increasing nitrates
- C) Bennington PFOA Project – in development
 - a. Background geologic maps – about a dozen have been developed
 - b. Well location – in collaboration with Bennington College: Two professors and five students will be geo-locating wells and tracking down available well logs to pair with documenting contamination for understanding of the aquifer
 - c. Field work to map geologic structures: planning, existing 1950’s map has only limited structure
- D) Hinesburg Well Project – Borehole geophysics in collaboration with SUNY-Plattsburgh
 - a. Bedrock mapping, geophysical logging and preliminary analysis complete
 - b. Integration of geologic framework with pumping tests in progress
 - c. It was raised that the older Hinesburg supply wells will be abandoned shortly, and it might be worth at least logging them prior to closure
- E) Comprehensive Groundwater Analysis of Bedrock Aquifers (with Middlebury College and Department of Health) – looking at 34 parameters in:
 - a. Calais and Woodbury – completed Fall 2015
 - b. Monkton – 29 wells have been sampled
 - c. Champlain Valley shales – 20 wells, to be completed Spring 2016
 - d. Development of a groundwater chemistry data base – assembly underway, besides the problem of time, metadata is also complicated
- F) Champlain Valley Fracture Analysis (with UVM and Green Mountain College)
 - a. Collating fracture data for parts of Burlington, Charlotte, Williston, Hinesburg, Bristol, Colchester, and Milton – preliminary compilation completed, working on analysis of mechanisms of fracture formation and groundwater transport and developing database/visualization (download/rose diagrams/equal area nets?)

Scott Stewart also presented a poster “A GIS-Based Approach to Characterizing Vermont’s Groundwater Resources” <http://anr.state.vt.us/dec/geo/pdfdocs/GaleNEGSAsmWater.pdf> which provides a general summary of the VGS framework for groundwater characterization

John Smeltzer – PFOA Summary/Overview

- A. John provided a summary on the work in progress within North Bennington to address the PFOA contamination. 178 wells within a 1.5-mile radius have been sampled, sampling of 49 additional wells is in progress (some of these are re-tests), soil sampling is also in progress. Daily updates can be found

on the DEC website. Treatment systems are being installed with monthly testing until frequency of replacement of the GAC is determined.

B. General discussion followed on:

- a. Discharge to the septic as potential for redistribution in to the surficial aquifers.
- b. The underlying Shelburne Falls formation – gently plunging syncline to the South, may play into the generally increased concentrations seen to the south of the Chemfab plant.
- c. Jon Kim’s upcoming work with Bennington College doing the well forensics with the geolocation and matching to well logs for wells in the area: recommendation to ask homeowners who the original (or previous) owner was and for the name of the well pump service provider – may lead to difficult to find well logs.
- d. Kira Jacobs - Public relations have been good so far, it also might be a good time (as the public is thinking of water quality) to revisit testing water supplies for single family homes (either as a permit requirement or point of sale, etc.). Kira mentioned that her colleagues, Marcell Bellevue and Jerry Weiss are our points of contact and offer their support.
- e. Discussion of the various health advisories (EPA vs VT vs NY vs NH) – EPA is likely finalizing a MCL in about a month.

As a follow up John Smeltzer sent this: At the present moment, the main source of discrepancy in HA limits is whether it is calculated for a child (0-1 years) or for an adult. You can view the response below on page 4 of the [VDH PFOA Health FAQ sheet](#).

Has EPA developed exposure limits for PFOA? Does PFOA accumulate in the body?

The State is in contact with the EPA regarding the PFOA contamination of private drinking water. EPA sets Maximum Contaminant Levels (MCLs) for chemicals that can be found in drinking water. So far, EPA has not set an MCL for PFOA. EPA advised the town of Hoosick Falls, NY to set a drinking water level of 100 parts per trillion (ppt) for PFOA.

Here in Vermont, the Health Department set the drinking water level for PFOA at 20 ppt, which is lower than what EPA advised. The Health Department based the calculations on the same science that EPA used, but Vermont accounts for exposure to children early in life. EPA considers exposure to adults. When people are exposed to PFOA, the chemical stays in the body. These chemicals do not dissolve in fat like other persistent pollutants. Instead, they accumulate in the blood.

f. Recommendations from discussion:

- i. **PFOA issues remains on the GWCC agenda moving forward (action item)**
- ii. The EPA and State should get together for a follow-up call sometime in the near future.
- iii. A smaller advisory group on this issue was recommended. In addition to providing input on PFOA in particular, they could work on an emergency reaction policy development – it was pointed out that this type of policy is in progress with emergency management.

Other Items of Interest

Science Advisory Committee (SAC) – Reviewing CCL lists – This ANR group was recently tasked with review of the Contaminant Candidate List (CCL)(<https://www.epa.gov/ccl>). The goal is to target potential future concerns for Vermont – there was a request that cyanotoxins be included in this review (confirmed: they are on the CCL4 list) and that the GWCC remain informed on how this process moves forward.

Health Dept. ‘Tracker’ - <https://apps.health.vermont.gov/gis/ias/querytool/>

VDH has released a new tracking/data reporting program (link above) that includes some topics that may be of interest/use to members of the GWCC (public and private drinking water systems data) and the public.

Bill 595 – Use of surface water as potable water supplies for single family residences

This bill has moved from the House to the Senate:

<http://legislature.vermont.gov/assets/Documents/2016/Docs/BILLS/H-0595/H-0595%20As%20Passed%20by%20the%20House%20Official.pdf>

Members of the GWCC are encouraged to review this bill and contact the Senate Committee on Natural Resources and Energy to provide comment/testimony (majority are opposed).

NEXT MEETING: April 21, 1pm in the CATAMOUNT ROOM

Agenda is TBD – Send in your recommendations