

**MEMORANDUM**

To: Groundwater Advisory Council  
From: H. Bokuniewicz  
Re: Minutes of the meeting of January 27, 2014  
Date: January 28, 2014

**PRESENT**

M. Alarcon  
N. Bartilucci  
H. Bokuniewicz  
P. Granger  
D. Paquette  
J. Pilewski  
K. Roberts  
M. Scorca  
W. Spitz  
S. Terracciano

**REGRETS**

S. Colabufo  
C. Gallagher  
L. Koppelman  
A. Rapiejko

1. We did not meet in December (I'm embarrassed to say that I couldn't find a date). The minutes of the last meeting (November 18, 2013) had been sent earlier and copies (with minor revisions) were distributed. There were no additional comments.
2. Jen Pilewski was welcomed to the table. Jen will be attending the meetings for the DEC; Bill expects to retire in April (9<sup>th</sup>). Jen will be responsible for water-resource issues in Region 1. She has been at The DEC for about a year. She is a graduate of SBU and previously worked for the USGS. Welcome aboard!
3. As discussed last time, SBU and NYU are engaged in a "think-tank" activity for the Governor's office on the impacts of Superstorm Sandy. LIGRI is to prepare a section on any impacts that Sandy had on potable groundwater on Long Island. While this section will be only a small part of the total document, it is a chance to bring attention to the fact that there were no widespread disruptions or contamination issues, and that those that did occur were dealt with, although, perhaps, (with State help?) districts could prepare even better for any future events.

The "message" will be that there were no disruption of potable water supply except at Long Beach and Fire Island. Supply wells at Mill Neck Estates were also flooded (other places?) Advisories were issued to boil water as a precaution but no evidence of contamination, including bacteria contamination was subsequently found. I will meet with Steve Colabufo and contact Jack Scully (Manager at Long Beach; thanks, Paul) for details. If wells are flooded, precautionary advisories to "boil water" are issued by the water purveyors. Water purveyors are required to issue advisories, sometimes by hand. During Sandy,

communication of these advisories may have been problematic because some affected areas were without power (TV, radios) or even phone access. In addition, “blanket” advisories by the media, reached households for which the concern was unnecessary adding some confusion.

Although it’s important to point out that there were no widespread disruptions in service, there were difficulties that had to be managed by the individual water suppliers. The report is expected to include recommendations that facilitate the response to future events.

While all suppliers were prepared to rely on auxiliary power, an uninterrupted supply of fuel is essential. After Sandy, the Towns cooperated with the water purveyors, to maintain fuel supplies. The job was hampered, however, by the loss of power at the distributors. The delivery infrastructure could be made more resilient. Legislation has been proposed to require auxiliary-power arrangements at distribution facilities, but we were unsure of the status of that legislation. Priority deliveries to pump stations would be helpful.

Diversity and redundancy in the LI groundwater supply system has been effective in preventing any widespread shortages. Because the summer demand is so large (due to lawn watering mostly), only a few wells in each area are actually needed to supply the basic (winter) demand. In addition, supply systems are interconnected to some degree. Widespread disruptions in water supply were not a problem nor are they likely to be in the future. However, there could be room for improvement. Some interconnections, for example, required manual setting of valves and some of these could not be reached because of burial, debris, or impassable roads. Perhaps, State support to automate valve management might help.

Flooded wells would be assumed immediately to be contaminated and taken off-line. In the face of power disruptions, pressure was lost in some parts of the system. If the pumping supply is compromised by loss of power, the loss of pressure could cause contamination by backflow. While precautionary advisories are prudent, the confirmation and justification require testing. Agents need the ability to confirm water quality as quickly as possible after an event. While conductivity measurements can be continuous and essentially instantaneous, other important (bacteriological) tests require 18 to 24 hours. Some rapid tests, like turbidity, might be used as surrogates for other contamination.

There are hardly any private wells in Nassau County and these are mostly in the center of the island or along the bluffs of the North Shore where flooding is less of an issue. However, there are still large areas served by private wells in Suffolk County. As suggested, the report will discuss public supply wells and private wells separately. Private wells were more susceptible to salt and bacterial (and other) contamination being shallower. In addition, private wells are unlikely to be tested promptly. It might be recommended that low-lying areas served by private wells (perhaps in the 500-yr flood plain) might be converted to the public water supply. Special arrangements might be made for advisories and testing of areas served by private wells.

4. The so-called Throne-Holst proposal called for the creation of a LI facility to investigate alternative septic systems. The University President had prepared a response that essentially merely pointed out some of the expertise at SBU. Subsequently, (November-December, 2013) Hal Walker (Civil Engineering) and I prepared a more specific proposal to create the necessary labs and a field-test facility (at Stony Brook Southampton) weighing in about \$2.5 million. The President then met with the Governor (just before the State-of-State address). I

don't really know what went on but the word we got was to broaden the proposal to include STPs and surface water quality and raise the sights to \$15 to 20 million. The Governor's actual budget apparently has \$2 million to go to Suffolk County who will provide an additional \$2 million in matching funds for some sort of (Southampton?) facility for testing new septic technologies.

There have always been two strategies for dealing with nitrate contamination or any other contamination for that matter. These are either treating wastewater at the source or treating the public water supply upon withdrawal. The new facility would focus broadly on the first approach. The expanded version would include not only alternate septic technology such as might be suitable for homeowners on Long Island, but also innovative, modern STP technologies. There is also some intention to look at impacts to surface water quality in order to justify claims that investment in new treatment technology actually results in an improvement of surface water quality.

The inclusion of STP's cannot be done in a vacuum, however. Suffolk County is actively pursuing building or expanding sewer systems over fairly large areas. Treated wastewater could either be discharged to the ocean or injected back into the aquifer. Historically, STP injections have impacted supply wells in some instances (like the Shorewood Water District now part of the SCWA).

5. A company, Greenfield Restoration, had approached the DEC (Albany) with treatment technology they proposed for use at Grumman. It seems this is essentially fueling natural bacteria populations in-situ to degrade contaminants. There is a proprietary chemical involved which makes it difficult to assess the efficacy of the method and there does not seem to be any peer-reviewed evaluations of the process. It was pointed out that each plume is different and different sites will impose site-specific bacteriological populations. Not all would respond in the same way or at all, to the treatment. The Grumman situation may seem to be too large and too visible a site for an experiment, although the DEC could approve a disclosed method and still keep it proprietary.
6. The USGS has been funded to revisit groundwater conditions on Fire Island, Assateague Island and Sandy Hook. New geophysics would probably be done on Fire Island.
7. The "check's in the mail" from the Water Conference to help revive the USGS basic monitoring in Nassau County. This would be added to the contribution already provided by the Water Commissioners. This would keep a basic monitoring system in place although it doesn't reach the historical high-water mark when monitoring was supported at a level of about \$500,000.
8. Gil Hanson's Conference on the Geology of Long Island and Metropolitan New York will be held on Saturday, April 12, 2014. Abstracts are being collected now.
9. There will be a Municipal Officials' Conference on managing cesspools at Old Bethpage Village Restoration on 25 March, 2014. The event is being held by the Protection Committees at Oyster Bay/Cold Spring Harbor, Manhasset Bay and Hempstead Harbor, Sea Grant and Friends of the Bay. It is intended to provide an overview of current initiatives on Long Island. See:

<http://cesspool.brownpapertickets.com/>

10. The EPA Clean Water Division (Judith Enck) is holding a conference on 25 February to explain how “we might work together to restore what’s contaminated and prevent pollution.” Invitations have been sent to the environmental communities as well as selected professionals from government academia. The meeting seems like a technical advisory committee but it is unclear how this meshes with other efforts. It will be held at the Uplands Farm Sanctuary (250 Lawrence Hill Road, Cold Spring Harbor), 10:30 -12:30 PM.
11. Suffolk County has released the Executive Summary, the long-awaited, revised final Comprehensive Water Resources Management Plan (see file attached).
12. Future Meetings – 2014 Schedule:
  - 3 March 2014
  - 7 April 2014
  - 5 May 2014
  - 9 June 2014

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