

MEMORANDUM

To: Groundwater Advisory Council
From: H. Bokuniewicz
Re: Minutes of the meeting of 28 April 2008
Date: May 9, 2008

PRESENT

R. Alvey
N. Bartilucci
H. Bokuniewicz
S. Colabufo
J. Meliker
K. Roberts
W. Spitz
S. Terracciano

REGRETS

M. Alarcon
S. Jones
L. Koppelman
R. Liebe
R. Mazza
M. Nofi
D. Paquette
G. Proios
A. Rapiejko
K. Willis

1. The revised minutes from the last meeting (March 24) were distributed. Some editorial revisions had been made and Nick Bartilucci's name was inadvertently left off the attendance list.
2. Pharmaceuticals in water supplies continue to be a public-relations issue in the media. All of these occurrences are in surface water supplies and agencies may need to avoid liability for testing public supply wells at this stage. The NYC Water Board solicited testimony. Pat Philips testified for the USGS on occurrence data he has collected. Teflon was found in the Chicago water supply but it's not clear whether it has an industrial source or comes from household use.

We believe hospitals incinerate medical wastes, but there apparently is no state or federal requirements that hospitals or drug stores take-back unused medication. In fact it's discouraged because of the lack of tracking and potential for abuse. People used to be told to flush them down the toilet but now the preferred advice is to discard them in household trash. Steve Englebright and Senator Alesi, however, want to make it illegal to dispose of waste drugs in landfills and want to require drug companies to provide for safe disposal. One television news broadcast said that people should dissolve waste medicine in water, mix it with cat litter and put it in the trash.

3. Jaymie Meliker was introduced.

Jaymie Meliker

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He has recently joined the Stony Brook Faculty. He has his degree in Environmental Health from the University of Michigan.

Stony Brook is building a Program of Public Health which would include biostatistics, health behavior and education, health care, environmental health and epidemiology. Dr. Meliker specializes in the human health risks associated with the fate and transport of contaminants in water. Since 2002, he has been involved in a case-control study of arsenic and the occurrence of bladder cancer. Arsenic and the occurrence of stroke may become another issue. This work uses space-time GIS to track the movement and history of subjects. (The breast cancer study on Long Island only tracked people over 20 years and didn't look at where subjects moved.) The research was funded by the Michigan Department of Environmental Quality after the guidelines for arsenic went from 50 ppm to 10 ppm in 2001. 8000 measurements of arsenic showed concentrations as high as 11 ppm and occurrence in about 10% of private wells. Such contamination could affect 250,000 people.

In discussion, it was pointed out that processes controlling arsenic may be related to those influencing nitrates. On Long Island nitrates are slowly rising. There's some nitrate in every supply well and treatment is not easy especially the disposal of brines. Some deep wells have shown persistent nitrate concentrations of 23 mg/L for forty or fifty years. Although there is no problem when the well is first turned on, as oxygen is introduced, arsenic may go into solution. Wells are usually abandoned or deepened or water is blended rather than treated. There is one treatment plant in Garden City Park in Nassau and three or four districts used blending. Nitrate is generally under control although new studies that may be looking at any link to some cancers may force a re-examination of the issue.

The SBU graduate Masters' program in Environmental Health graduated its first class in 2004. There are three tracks: Community Health, Evaluation Sciences and Generalist. A Ph.D. program is to be started. Other programs are at Albany, Buffalo and Downstate at CUNY and Hunter.

4. Joe Haas has left the DEC to take a job with the NYS Attorney General's Office.

Joseph E. Haas II, M.Sc., P. Hg., P. Eg.

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5. Updates:
 - a. The Long island Geologist meeting was held on 12 April. Jennie Munster gave a paper on perchlorate and Lisha Zhou presented some of her results on the use of radar data to get precipitation statistics over Long Island.

- b. The Web Ex on sealcoats is to be held this Friday. We have a small group of participants.
- c. The Pine Barrens Research Forum will be held on Thursday, October 2, 2008. We might consider a presentation on Smart/Dumb Growth and/or the crumb-rubber issue.
- d. The study of nitrogen inputs due to underflow will take place in Manhasset Harbor and Northport Harbor next month. The LISS set limits on nitrate inputs without considering underflow. STP's only remove about 60% of the nitrate and additional sources to open water come from the atmosphere, surface runoff and underflow. These sources are probably sufficient to fuel algal growth so that the effectiveness of upgrades to STP must be questioned. Phosphate, not nitrogen, may now be the limiting nutrient in open water. One report (Larry Swanson?) from SBU suggested that taking out more nitrogen in STP's was not going to improve the situation in western Long Island Sound and that climatic factors are now controlling. Nevertheless, many millions of dollars are being spent on STP upgrades.

Hicksville may put in treatment and some STP treat and discharge info recharge basins without ammonia removal. The USGS investigators from Woods Hole bring quite a toolbox to the study and Gil Hanson and Caitlin Young will be investigating denitrification. A similar project is to be done on the south shore next year.

- e. With Joe Haas' help we are planning to have another workshop for DEC and others on in-situ remediation.
 - f. Bruce Brownawell is giving a talk titled "Our Groundwater Resources: Water supply and quality issues" for the HERA group on Wednesday 30 April, 2008 (3 PM in Physics S240, SBU).
 - g. The NYS Water Resources Institute at Cornell has a new director, Susan Riha. She is a faculty member in the Department of Earth and Atmospheric Sciences.
6. The next meeting will be on Monday, June 2, 2008 at the offices of the Suffolk County Water Authority in Oakdale, 9:30 – 11 AM.