MEMORANDUM

To: Groundwater Advisory Council
From: H. Bokuniewicz
Re: Minutes of the meeting of 30 April 2007
Date: May 29, 2007

PRESENT

R. Alvey
N. Bartilucci
H. Bokuniewicz
S. Colabufo
R. Liebe
R. Mazza
M. Nofi
D. Paquette
A. Rapiejko
K. Roberts
W. Spitz

REGRETS

M. Alarcon
S. Jones
L. Koppelman
G. Proios
S. Terracciano
K. Willis
P. Witkowski

1. There were no comments on the minutes of the last meeting.

2. Larry Swanson and a graduate student, Christine O’Connell, had an Op-Ed contribution in the Times (22 April 2007) titled “Turn on the Tap” discussing the high quality of NY water and the adverse impacts associated with buying bottled water.

3. The Groundwater Symposium, scheduled for 6 June, was discussed. Save-the-date cards will be sent out to the mailing list of the Water Conference and the Pine Barrens Commission as well as the USGS list. Pre-registration is requested for security reasons but no registration fee is required. We will arrange for coffee-and-donuts in the morning and a coffee break in the afternoon. Registrants will be reminded to bring a picture ID when they arrive at BNL. Some corrections were made to the agenda. We will also ask Stan Schleifer and Naz Khandaker (York College) to provide a poster. The schedule is a tight one so speakers will be contacted beforehand to be sure they are prepared to stay on schedule. Free-standing poster boards can be set on tables but we will also request panels on which posters can be mounted.

4. Aaron Beck has just defended his Ph.D. thesis at Stony Brook on the seepage of groundwater into Jamaica Bay. This was supported by the NY Sea Grant Institute and involved sampling of naturally occurring radium in the Bay water. Radioactive radium occurs naturally in the aquifer material and enters the groundwater when it becomes saline. By measuring the amount of dissolved radium in the bay, you can
calculate the amount of groundwater that must have seeped across the bay-floor to supply that much radium. There are four different, radioactive, radium isotopes with different half-lives, so you can get four different estimates of the groundwater flow. Aaron sampled the bay on 4 occasions. He found higher radium concentrations in the interior of the Bay, as expected. Using different isotopes, he calculated groundwater inflow rates ranging from 1.6 to 7.3 billion liters per day or about ten times the wastewater input, includes a mixture of both fresh-and salt-water. He has calculated that about 9% of the nitrogen load is due to groundwater seepage.

Aaron has done a similar study in Great South Bay. We also have a proposal submitted with the USGS in Woods Hole to study Manhasset Bay and Huntington Harbor where we might expect nitrogen input from groundwater to be a more important component. A continuation of work in the Great South Bay which will include work by Chris Schubert on 3-D modeling is also planned.

It was pointed out that Nelson and Pope had done a recent study of nitrogen input to north shore bays for the counties. Jennie Munster is also completing her study and believes the major source of nitrogen to groundwater is from sewage rather than fertilizer, even where the volume input of sewage is low, because of the high concentration of nitrogen compounds in sewage. Limitations on the nitrogen discharge into Long Island Sound is tending to cause STP’s to discharge into the aquifer to meet the TMDL. Some STPs can handle an additional flux, but cannot do so because of the TMDL. The issue of sewage treatment and TMDL needs to be revisited to avoid additional, mandatory investments in an ineffective solution.

5. The Bond Act money can be used for capital investments and infrastructures (but not maintenance) so funds from the Environmental Bond Act might be used to establish an “ecological” recharge basin. A ecological recharge basin is one that has been restored to a natural setting by revising drainage, introducing native plants, forming ponds to encourage slow recharge and cleaning up any industrial inputs of, say, VOCs and floatable. Floral Park has set up a recharge basin as a “centennial garden” with the maintenance being adopted by the local community. A similar, dual-use, is proposed by Garden City. The “Garden City Sanctuary” has been nominated for funding under the Nassau County Environmental Bond Act in Storm Water Basin #232. The project is expected to cost $2 to 3 million. Other promising projects might be pursued in Syosset and at a Girl Scout Camp with the help of Ducks Unlimited. Monitoring of such “ecobasin” will be an important issue especially since EPA is eager to demonstrate water quality impacts of similar projects.

6. Adelphi and the EPA are hoping to establish a HOBO site which might be integrated into studies of microclimates.

7. The physical groundwater models were used at BNL on Earth Day and attracted a great deal of interest. Most adults visiting had little idea from where their water came. Some training in the use of such a physical model (or an electronic version) might be useful for such forums as the EPA’s Environmental Managers Training Program.

8. The Water-Week water testing is scheduled for 5 May at the Sunrise Mall and Huntington.
9. Our next meeting will be on Monday, June 4th in Oakdale. After that meeting we will break for the summer and resume in September. We will try to schedule a discussion of the SCDHS “Laundromat” study and the work done in the Forge River.

HB/ed
GWminutesapril07.doc
Revised minutes June 6, 2007 – added A. Rapiejko to Attendance List