

MEMORANDUM

To: Groundwater Advisory Council
From: H. Bokuniewicz
Re: Minutes of the meeting of 17 December 2007
Date: December 19, 2007

PRESENT

G. Abouelenean
R. Alvey
N. Bartilucci
H. Bokuniewicz
S. Colabufo
W. Spitz
S. Terracciano

REGRETS

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

1. The minutes from the last meeting were distributed. Any comments or corrections can be sent to me.
2. Dr. Abouelenean addressed the Council. He is a PE on the faculty at Stony Brook and a new member of the University's Groundwater Institute. He is also the director of a new program in Civil Engineering at Stony Brook which will begin in the spring semester, 2008. It is expected that accreditation will be applied for in 2010. Initially, it will be only an undergraduate degree. It's likely that the inaugural class will be composed of existing, Stony Brook engineering students transferring into the new program. A master's and a PhD program are anticipated in about 2 years. We are anticipating that, after, 2010, an additional 30 credits (equivalent to a Master's degree) will be required to take part one of the licensing exam.

The degree will require 132 credits including fundamental courses in soil mechanics, surveying etc. Eight new courses will need to be created but the rest already are routinely taught at the University. A keystone will be a required combination Senior Design Project and Internship. Current academic requirements limit the number of required credits; it was pointed out that other programs have required 168 to 182 credits. A primary objective will be to prepare the students for the preliminary licensing exams.

The program hopes to be flexible enough to allow new course as the market changes. This is an important first step. There is no question of the need for programs to train the next generation of civil engineers on Long Island. Clearly, there is a long way to

go and Dr. Abouelenean will appreciate any advice and letters of support directed to the Dean of the School of Engineering would be helpful.

3. Lisha Zhou, a student at Stony Brook, was working with the weather radar data for estimating precipitation. A (very) preliminary result was shown of the average precipitation on Long Island in 2004 compiled from data collected every 15 minutes on a 4-kilometer grid. The average precipitation was 44.9 inches but it ranged from 56.5 inches in NYC to a low of 31.8 inches half-way out on Long Island. There was no evidence of increased precipitation over topographic highs and people were surprised by the large range in the average precipitation. The question of calibration was raised.
4. I have made my annual report to the University Deans and a copy of the annual summary was distributed. This year we had a few visitors from Spain (former students), Italy and the Water Authority in Barbados who are instigating studies similar to the research we have done here on Long Island; work here is attracting national and international attention.
5. The summer course is off again. Gil Hanson had a syllabus together but participation by the USGS is required by law to be reimbursed. It would take about \$20,000 in direct payments or in-kind services. At other places the USGS has office space associated with universities to cover this. We looked into providing space (at \$25/foot) at Southampton but that has not been possible. We're still looking into viable options. Perhaps it could be somehow part of the renegotiation of space in Coram with the SCWA in October. It may also be possible to get some resources as part of the development of the new civil engineering program.

There has also been some discussion of the best format for a short course. One option is a "methods" course where the exercises are demonstrations of various instruments. Wells might be drilled for the course by SCDHS but it was also suggested that we might look into using Peconic Well Drillers if new wells need to be drilled since SCWA has a standing contract with them. The other option for the course structure would be to assign the students a group project to solve a particular problem. Two-weeks may be too short, however, to get students up to speed and actually solve a problem.

6. The SCWA has issued a press release about the amount of water used by automatic sprinkling systems after customer complaints about high bills. It seemed like the numbers they quoted ("9,000 gallons per hour" and "10,000 gallons per household per month") were high, but extension of the growing season is leading to more irrigation. Bill Spitz pointed this out in the records of water demand at a (much) earlier meeting.

There are ordinances to help control this demand but they are, for the most part, not enforced. While conservation is encouraged, irrigation is not a threat to the water supply and excessive attention may create the illusion of a water shortage. Once the infrastructure is in place to handle the peak demands, the idle capacity still has to be paid for. Extra wells are already in place to meet peak demands, which actually are for fairly short, intense periods and below ground storage may also be part of the solution. The narrow demand may peak only after a week of very hot weather and only in the early morning hours. Underground tanks probably cannot be sited in

Nassau County. The intention of conservation is to avoid the need to “beef-up” the existing supply in developed area. The SCWA may be adding a dozen wells per year (at a cost of \$500,000 each to handle increased demand).

7. The USGS and EPA are trying to encourage people to use STORET. The USGS has the method codes developed and provides a link to the website for adding data. STORET does require QA/QC. The search procedures are being improved to include options like searching in a lat/long box or by date, or parameter, but it’s not “up and running” yet. When it is ready to go the Institute could host a workshop to encourage its use (In the DEC, we might ask Joe Haas to test it).
8. The USGS group in Texas has done a nationwide study of water quality from parking lot runoff. In the western US they use asphalt as a seal-coat but here in the east we use coal tar which adds contaminants. The Institute will try to set up a presentation of these results here in the spring. (The RARE proposal in Nassau County that included a look at parking lot runoff did not get funded).
9. The feminization of fish due to the release of estrogenic compounds is an important area of research in the USGS. STP are not designed to remove these compounds although there is some experience in treatment technologies, mostly European. UV treatment may help. The Institute should consider a workshop on this topic here.
10. The latest DEC work plan includes the development of TMDL for the western bays along the South Shore of Nassau County. This would include an inventory of sources and options for managing the inputs. Although the Jones Beach STP has received a good deal of attention lately, facilities like the Bay Park STP are 1000 times larger. The problem in these shallow bays does not seem to be anoxia and fish kills the waters are too well mixed, but the spread of Ulva. The Institute might consider this project in conjunction with the Waste Reduction and Management Institute. Something might be started now although funding probably would not appear for a year or so.
11. The next meeting will be on January 22 (Tuesday) after Martin Luther King Day. Dates for the meetings after the January meeting are:
 - February 25
 - March 24
 - April 28
 - June 2