CNYAPG Newsletter April 1997

INSIDE:

WETLAND CHARACTERIZATION: The Conflict Between Science & Politics

Presented by Dr. Donald I. Siegel Syracuse University

Wetlands are highly regulated parts of the landscape. Traditionally, scientific approaches used by the Army Corps of Engineers have dictated how wetlands are defined, although the scientific definitions regarding wetlands diverge substantially from those used in regulatory practice. To resolve these differences, former President George Bush (at the request of Congress) authorized the National Academy of Science (NAS) to convene a panel to determine conclusively the answer to the questions: WHAT IS A WETLAND? AND HOW DO YOU BEST DELINEATE A WETLAND'S BOUNDARIES?

The NAS wetland report produced by the panel was summarily rejected by the House of Representatives, which proposed a wetland delineation approach that was substantially different than that used by the Corps of Engineers or that suggested by the panel. The controversy over the NAS report and its conflict with Congress resulted in significant press coverage and a national debate which continues today. This debate is heightened by the recent Corps of Engineers decision to regulate any wetland area greater than 0.25 acres.

In his presentation, Dr. Siegel, who served on the NAS panel, will discuss the regulatory and scientific issues related to wetland characterization and delineation, and how the dynamics of scientific debate are different in the academic and political areas. He guarantees that the presentation will be informative, vexing, and amusing to those who attend.

APRIL 1997 Dr. Siegel is a Professor of Earth Science at Syracuse University. He has an international reputation as a distinguished researcher in contaminant hydrogeology. Dr. Siegel has presented talks on contaminant geochemistry as the Geological Society of America 1993 Birdsall Distinguished Lecturer in Hydrogeology and has served on the National Academy of Science panel on Ground Water Vulnerability to Contamination. He is Associate Editor of the journals Water Resources Research and Ground Water. PAGE 2

PRESIDENT'S MESSAGE

By Dave Palmerton, Jr.

APRIL 1997

On March 7, 1997 a bill for licensure of geologists was submitted to the NYS Legislature by Assembly Member Steve Englebright. It's important that you contact your State Senator and Assembly Member to encourage support of this important piece of legislation. Your support, in both dollars and time, is greatly needed. Watch for and support the fundraising efforts coming up in your area. You can learn more about the bill by contacting the New York State Council of Professional Geologists (NYSCPG) on the Internet at http://pbisotope.ess.sunysb.edu/nyscpg or Bill Kelly, president, at (518) 474-7559. Also note that the NYSCPG would like to expand their current geologist mailing list. They now have about 1100 names across New York State.

Don't miss the CNYAPG short course with Don Siegel on Thursday, April 10, 1997. Registration is due by April 4,

1997. If you need an application, call Sarah McCulloch @ (607) 836-4403.

Thanks to our guest speaker, Bill Kappel of the U.S. Geological Survey, the March meeting was a great success. Bill always manages to find new insights regarding New York State and Central New York geology.

Finally, if you haven't checked out the CNYAPG Web page, look us up at http://www.dreamscape.com/cnyapg . Gerry Gould is our "webmaster" and is doing a great job.

CNYAPG CANDIDATES FOR 1996 - 1997

The CNYAPG is pleased to announce the following candidates for offices for the 1996-1997 year:

President: Meg Harris Vice President: Christin Gachowski Secretary: Gerry Gould Treasurer: Roy Wagner Directors:: Vita DeMarchi Greg Flick Bill Gabriel George Kelley Associate VP: Stefe Crook

If you are still interested in being a candidate or nominating a candidate, please contact Sarah McCulloch. The election ballots will be included in next month's newsletter.

CNYAPG AND FUTURE EDUCATION COMMITTEE PROJECTS by Vita DeMarchi

With the Most Science Fair sponsorship successfully completed, what next? Several people have approached me at past meetings asking how they could be involved and offering suggestions for programs. I think our best approach for success is to be focused on one or two programs at a time. Remember, our time at CNYAPG is volunteer time and our commitment needs to be realistic. Any ideas and desires, please contact me to discuss them or leave a message at (315)446-9120 (ext. 161).

MOST SCIENCE FAIR JUDGING: A LEARNING EXPERIENCE

First, a thank-you to all CNYAPG members who participated as judges at the MOST Science Fair held at Syracuse University on March 16, 1997. Your volunteer time promoting future scientists is beneficial to us all. I find there is much to learn or re-learn by talking with young people about science. They are full of excitement and possibility and help us remember our own enthusiasm for science and learning.

A special thanks to Nancy Gensky for participating with me as a special awards judge for the CNYAPG Environmental & Geologic Sciences Award. We interviewed and judged 20 junior projects and 18 senior projects qualifying for the special award; each deserving merit in their own right. The quality of the projects and exhibits in both the junior and senior divisions were remarkable. It was no easy task deciding on a winner. After a full day of talking and questioning each of the students, time ran out, and we were left with making the final difficult decisions to determine the winners: Junior Division: David Allen, sixth grade at Fulton Catholic School Project title: EROSION (pictured below left). We were impressed by his understanding and articulation of the subject, his experimental methodology, and an overall excellent exhibit. David was modest and offered improvements to his

project were he to do it in the future. Senior Division: Andy Lofaro, ninth grade at Liverpool High School Project title: Water Movement Through Soils (pictured below right). Andy conducted a mini Darcy's experiment to determine permeability of different soil types. We were pleased to see he expanded the final objective of the experiment to include applicable uses of different soil types based on their permeability; a great combination of theory, experiment, and application.

Both David and Andy received a $50.00 US Savings Bond and a trophy which consisted of a hand size piece of amethyst atop a marble base with the Science Fair information.

NATURAL GAS AND OIL IN THE CATSKILL MOUNTAIN AREA

A five member team, including members from the State University of New York at Oneonta, are researching if enough natural gas or oil is present in the Catskill area to interest industry. Researchers are looking at the geology of the area

and gathering folk tales or first hand accounts of explosions and/or waters that bubble, have an oily smell, or a surface sheens. The research covers 16 counties including Albany, Fulton, Montgomery, Schenectady, and Schoharie. One explosion occurred in Guilderland 28 years ago. The explosion was caused by natural gas that seeped into the basement of an occupied house via an old 80-foot deep well. The gas ignited when the furnace started and blew the roof off the house. In 1965, Princetown homeowners arranged for a new water well to be installed. Instead of water, natural gas was encountered. After a week of trying to burn the gas off, the homeowners decided to use the gas for heating and they still are!

Although there are no known commercial quantities of natural gas or oil in the Catskill area, the geology of the area may be conducive to conditions appropriate for gas or oil to be present. Organic materials buried in the Catskill delta hundreds of million of years ago, where accumulated and under the right temperature and pressure condition, could yield oil and gas. The Catskill delta extends into West Virginia where commercial deposits of natural gas have been found. New York produces less than 2 percent of the natural gas it consumes each year and all New York gas is produced from well fields west of Binghamton. The remainder of the gas is piped in from western Canada and the Gulf of Mexico. If this research project indicates that commercial quantities of natural gas or oil may be present in the Catskill area, then additional exploration may occur. The researchers will report their findings to the Independent Oil and Gas Association of New York in July.

If you know of a story of a possible oil or natural gas occurrence in the Catskill area, please write to: Catskills Geologic Study, Wilbur Smith Associates, 11 Avis Drive, Latham, New York 12110. Include the type of occurrence, date, location, names of witnesses and other details as well as a map.

NYS MUSEUM FIELD TRIP

On May 3, 1997, the NYS Museum is hosting a geology field trip entitled Tunneling Through the Appalachians. Yngvar Isachsen will lead the field trip which explores mountain building processes. New York State contains three types of mountains: the Catskills, a high standing remnant of an eroded Plateau; the Adirondacks, a large circular uplift; and the Appalachian belt of deeply eroded mountain ranges that extend from Georgia to Newfoundland . This field trip makes a west to east traverse across one of these Appalachian ranges, the Berkshires Hills, from the Taconic Parkway near Hillside to beyond Great Barrington. What happens to rocks such as shale and limestone when they become deeply buried under a rising Himalayan-type range? How do rocks metamorphose in

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GEOLOGIC NEWS OF INTEREST

Compiled by Nancy Gensky and Chris Gachowski

response to the resulting rise in temperature and pressure? Sign up for this field trip and gain an understanding of mountain building processes by actually handling roots of this 450 million year old mountain system and identifying the new mineral forms. Fee is $35 ; pre-registration is required by April 18. Contact NYS Museum Programs, Room 3073, Cultural Educstion Center, Albany, NY 12230. Phone (518) 474-5801.

SCIENCE FAIR

Calling all scientists! Come meet future scientists and view their winning projects at the tenth annual Joseph Henry Science Fair. Science projects from twenty area schools will be showcased in the Terrace Gallery. Participants are winners in local school science fairs in two age divisions. Projects are judged by professionals from the local scientific community including scientists from the Museum’s Biological and Geological Surveys. The program is underwritten by BASF Corporation from Rensselaer, NY. Saturday, May 3, 10:00 a.m. - 12:00 p.m. - Free.

APRIL 1997 CNYAPG CALENDAR PAGE 4

April 10 April 16 April 18April 22 April 24May 6-7 APRIL 1997 Applied Contaminant Geochemistry. Dr. Donald I. Siegel. CNYAPG Short Course from 9 a.m. to 5 p.m. Cost is $90 for CNYAPG members and $100 for others. Contact

Sarah McCulloch at (607) 836-4400.Hudson-Mohawk Professional Geologists Association Technical Seminar on Surface and Downhole Geophysics and Geoprobe. Evening program will feature John Sanders speaking about PCB Pollution in the Huson River - AN Update. Cost for seminar and dinner with speaker is $37 for members, $45 for non-members, and $30 for students. Contact Michael Palleschi at (518) 452-0096.Hydrogeologic evolution of subsidence structures. Dr. Emanuel Mazor of the Weizman Institute. Syracuse University Department of Earth Sciences Seminar at 4 p.m. in Room 113 Heroy Geology Laboratory.Brownfield Redevelopment: Faster, Greener, and Cheaper? Sponsored by BAPG, ASCE, and University of Rochester. From 6 to 10 p.m. in Hubbell Auditorium on University of Rochester River Campus. Cost is $15. Contact Suzanne Wheatcraft at (716) 262-2640.Rocks and Clocks. David Coter of Syracuse University. Syracuse University Department of Earth Sciences Seminar at 4 p.m. in Room 113 Heroy Geology Laboratory.Environmental Site Assessment Practices for Commercial Real Estate. ASTM Technical and Professional Training Seminar. Cost is $595. Contact ASTM at (610) 832-9686, fax (610) 832-9968, e-mail: smurphy@aastmorg.

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