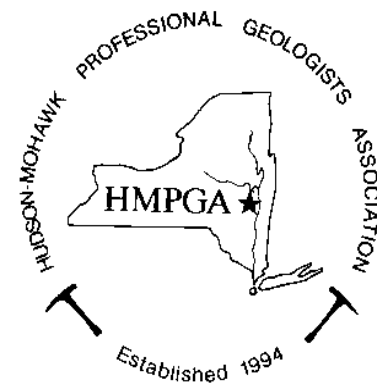


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November Newsletter

www.hmpga.org



November 28, 2007

Bioremediation: An Update on the State of the Practice

Maureen Dooley
North East Regional Manager
Regenesis, Inc.

Abstract: Bioremediation has been applied as a remedial technology to address groundwater and soil contamination for over 20 years. This technology is used primarily to address petroleum hydrocarbon or chlorinated solvent contamination. The presentation will first cover as background, volatile and aromatic organic compound degradation pathways, and conditions for favorable degradation and destruction. The importance of proper site characterization and the effects of site-specific geologic and hydrogeologic conditions on site remediation will be discussed. A review of how and where bioremediation is used most effectively as well as some of the difficulties that can be encountered will be presented, including specific examples of sites where bioremediation was applied to address chlorinated solvents. Looking forward, we will examine a new trend that combines chemical oxidation and bioremediation.

About the Speaker

Ms. Dooley has over twenty years experience in many aspects of environmental industry including project management, research and development, senior technical oversight, remedial design and laboratory management. Currently, Ms. Dooley is responsible for managing both sales and technical support associated with Regenesis bioremediation and chemical oxidation products in the Northeast. As part of her responsibilities at Regenesis she has reviewed hundreds of potential projects and provided recommendations for remediation. Much of her work over her career has been focused on the development and implementation of bioremediation programs. Over the past 3 years, she has been focused on chemical oxidation applications at petroleum and chlorinated hydrocarbon sites. Ms. Dooley holds a M.S. degree in Biology, University of Dayton, Dayton, OH, and a B.S degree in Biology, St. Bonaventure University, Olean, NY.

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HMPGA sponsors, coordinates, and participates in events to help educate the community and its members with respect to geological or geotechnical issues. Events include regular meetings with evening dinners and guest speakers. Other events include workshops, short courses, or field excursions. If you have questions, comments, or suggestions for our organization, please contact a HMPGA Officer or Board Member.

November's Meeting and Event Information:

When: November 28, 2007

Schedule:

Calaway Grill
The Saratoga Room
(attached to the Wingate Hotel)
661 Albany Shaker Road, Colonie

Board Meeting	4:00pm
Social Hour	5:00pm
Dinner	6:00pm
Program (free)	7:00pm

Dinner:

\$10.00/person for student members
\$20.00/person for members
\$22.00/person for non-members

Notes:

Vegetarian or fish meals are available with prior request. Individual will be responsible for the cost of dinner unless a cancellation notice is received 24 hours prior to the meeting. Walk-ins will be charged an additional \$2.00.

Reservations: Reservations are required for dinner attendance. Call or e-mail Diane Merolla at (518) 348-6995 or dmerolla@alphageoscience.com by noon on **November 28, 2007**. Please register even if you are only attending the Program.

Thank you in advance!

PRESIDENT'S MESSAGE

Greetings



I can honestly say that I never look forward to that last Saturday in October (or now what has apparently become the first Saturday in November) when we are required to "turn back our clocks" and return to standard time. Although I certainly enjoy the extra hour of sleep (as does the rest of my family), I find it somewhat depressing to drive home from work each day with my headlights on. However, my thoughts have already begun to focus on the upcoming Holiday season and all the fun times with family and friends that lie ahead. The same holds true when I think about all of the exciting speakers and activities that the HMPGA Board of Directors have lined up for the remainder of 2007 and 2008. In addition, based on the briefing that we received at the October dinner meeting from Mr. Mark Williams, President of NYSCPG, we are very optimistic and hopeful that 2008 will (finally) mark the year that a bill is passed allowing for the licensure of geologists in New York State. The most recent version of the bill, which was introduced in April, establishes new guidelines to become a professionally licensed geologist in New York, including experience, education, and examination requirements. This year's bill, which unanimously passed the State Senate in May and was moved to the State Assembly without changes (i.e. same as), is now in the hands of the Assembly's Higher Education Committee. According to Mark, the difference this year (as opposed to previous years when the bill ultimately stalled) is that the Higher Education Committee has a new chair person, and there also appears to be increasing support for the bill among the Assembly. We are certainly fortunate to have dedicated individuals such as Mark Williams, Sam Gowan, and others leading the charge in this monumental effort!

Our Earth Science Week essay and picture contest entries are in, and they are currently being evaluated by several of the Board members. The theme of this year's contest was "The Pulse of Earth Science." We will provide a listing of the winning entries in next month's newsletter. During our last Board meeting, we discussed various ways that HMPGA can potentially become more involved with the promotion of earth sciences and geology at the elementary through high school grade levels. And we continue to aggressively pursue and enhance our relationship with the Geology Department faculty and students at St. Rose College and Skidmore College, respectively. To this end, please feel free to share any ideas with HMPGA Board members regarding this important topic of improving HMPGA's outreach to local schools, colleges, and universities.

Our November speaker will be Ms. Maureen Dooley, Northeast Regional Manager for Regenesis, Inc. As I'm sure many of you are aware, Regenesis is a leader in the development and supply of advanced remediation technologies for the in-situ treatment of contaminated soil and groundwater. Regenesis offers a wide variety of specialty soil and

groundwater remediation products that are used on a daily basis for the purpose of achieving enhanced aerobic and anaerobic bioremediation, bioaugmentation, chromium immobilization, and chemical oxidation. Ms. Dooley's presentation will focus on the application of bioremediation as an effective remedial technology, while placing particular emphasis on the importance of geology and hydrogeology in making remedial decisions.

Therefore, please make your reservations now to attend our November dinner meeting to be held at the Calaway Grill in Colonie on November 28th. (Please note the date change to the fourth Wednesday of the month due to the Thanksgiving Holiday). Plan to arrive between 5:00 p.m. and 6:00 p.m. and enjoy a cold beverage with fellow geologists. Dinner will be served at 6:00 p.m. and the talk will begin promptly at 7:00 p.m.

Our membership renewals are in pretty good shape, but we are still waiting on payment from a few of you. Therefore, if you haven't already done so, please send in your dues as soon as possible. A current membership form is included in this newsletter and is also available on our website (www.hmpga.org).

I look forward to seeing you on **November 28th** at the Calaway Grill!

Steve Le Fevre
Managing Geologist with Barton & Loguidice, P.C. in Albany

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**Earth Science Workshop
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July 6-11th, 2008 (Sun 6pm-Fri 6pm) Residential 45 contact hours

The Earth Science Workshop is intended for science teachers who are assigned to teach Earth Science/Physical Setting during the school year. This workshop is designed to help Earth Science teachers improve Regents Examination scores by becoming more familiar with the geologic environment and geologic history of New York State.

- facilitate hands-on investigation of the State's geologic evolution;
- establish close, continuous working relationships between State Earth Science teachers and the professional geologists from the NY State Museum;
- help Earth Science teachers obtain additional experiences and prepare materials for use in teaching Earth Science/Physical Setting.

MAJOR TOPICS INCLUDE:

- Denudation processes - the present is the key to the past;
- Pleistocene processes - Glaciations of New York;
- Geology, processes and life forms Paleozoic Era;
- The role of evolution in geologic interpretation;
- The economic impact of New York State geology;
- Field trips to illustrate concepts and processes



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SUMMER 2008 PROGRAM DATES

Application Request deadline: February 28, 2008

Registration Submission deadline: April 4th, 2008

Juried Entry selections will be made by April 25, 2008

Questions may be directed to Donna Jornov
NY State Museum Room 3140, Albany
(518) 474-5816 email [Donna Jornov](mailto:Donna.Jornov)

Thank you for your support 2007-2008 Corporate Members!

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Are you into Blogging?

The Paleontological Research Institute and the Museum of Earth welcomes you to their Global Climate Project.

The goal of their website is to collect and synthesize available information on global change and present it in a straightforward, unbiased, easily-accessed format for scientists, educators, students, and members of the public. Much information is available on the internet and in the media about the important subject of global change, and it can be difficult to sift through. This site is a resource for those wishing to educate themselves and others so that as individuals and citizens we can make informed choices and learn to live more lightly on the planet.

Voice your opinions, concerns, questions, and comments on their Blog:
www.climatechange101.blogspot.com

Climate Change 101

Introducing a 12-part series from the Paleontological Research Institution and its Museum of the Earth

By Elizabeth Humbert
Special to The Ithaca Journal

What is global warming? Are Ithaca's summers going to get hotter and longer? How will climate change affect MY life? Haven't Earth's climates changed before? Over the next 11 months, we will answer these and other questions about climate change and its impact on our community, our landscape, our economy and our lives, while giving insight into what we can do to lessen our impact on an already overburdened Earth.

The term "climate change" refers to changes in our climate system due to both natural and human-influenced factors. Climates on Earth do change for many natural reasons such as the Earth's position and orientation relative to the Sun, the placement of the earth's tectonic plates, variations in solar radiation, volcanic emission of carbon dioxide and aerosols and asteroid impacts.

The first of these factors generally happen over millions of years, allowing the animals and plants of earth to adapt over time to changing conditions. The last two factors however are catastrophic and fast! The dinosaur extinction, 65 million years ago, is believed by many to have occurred because a large asteroid impact triggered a massive climate change over months and years. Though human activities are subtler, the current rate of change is still dramatic — on the scale of decades to hundreds of years.

How are we inadvertently changing the earth's climate? The emission of greenhouse gasses that hold more heat from the sun in our atmosphere, the depletion of the ozone layer allowing more UV radiation to enter the lower atmosphere, the emission of aerosols (airborne microscopic particles) produced by burning fossil fuels that change the way energy is moved through the earth's atmosphere, and forest clearing, which impacts carbon dioxide emissions and solar radiation absorption. In addition, these actions trigger initial changes that can compound the climate change by producing feedback loops, like the melting of ice sheets and movement of ocean currents.

The majority of scientists believe that climate change is occurring and that we are the cause. Many have referred to this change as "global warming," in reference to the gradual increase in global temperature. Though there have been periods of natural warming throughout Earth's history, science indicates that current warming is more accelerated than would occur naturally. Climate changes are especially evident in the rising global surface temperature, melting of glaciers and sea level rise.

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We see throughout the earth's history that climates have repeatedly changed, so why is current climate change such a concern? In Earth's past, climate change was usually a slow process occurring over thousands and millions of years. In contrast, predicted rates of current change indicate dramatic climate shifts that will be difficult for either humans or other organisms to adapt to. This will cause, for example, more dramatic extinctions of animal and plant species and affect large human centers of population because of sea level rise, extreme weather events, and rising temperatures.

The Paleontological Research Institution (PRI) and its Museum of the Earth's Climate Change 101 series will appear monthly in the Wednesday Life Science and Environment Section of the Ithaca Journal. Check out our blog for weekly updates on IthacaJournal.com. Elizabeth Humbert is Education Resources Manager at PRI's Museum of the Earth.

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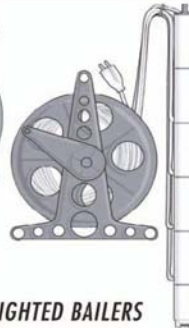
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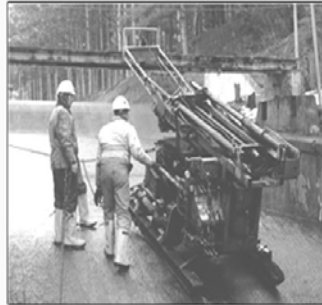
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As much as half of the energy used in your home goes to heating and cooling. So making smart decisions about your home's heating, ventilating, and air conditioning (HVAC) system can have a big effect on your utility bills — and your comfort. Take these steps to increase the efficiency of your heating and cooling system. For more information, see our [Guide to Energy Efficient Heating & Cooling](#)  (708KB).

Change your air filter regularly

Check your filter every month, especially during heavy use months (winter and summer). If the filter looks dirty after a month, change it. At a minimum, change the filter every 3 months. A dirty filter will slow down air flow and make the system work harder to keep you warm or cool — wasting energy. A clean filter will also prevent dust and dirt from building up in the system — leading to expensive maintenance and/or early system failure.

Install a programmable thermostat

A [programmable thermostat](#) is ideal for people who are away from home during set periods of time throughout the week. Through proper use of pre-programmed settings, a programmable thermostat can save you about \$150 every year in energy costs.

Seal your heating and cooling ducts

Ducts that move air to-and-from a forced air furnace, central air conditioner, or heat pump are often big energy wasters. [Sealing and insulating ducts](#) can improve the efficiency of your heating and cooling system by as much as 20 percent — and sometimes much more.

Focus first on sealing ducts that run through the attic, crawlspace, unheated basement, or garage. Use duct sealant (mastic) or metal-backed (foil) tape to seal the seams and connections of ducts. After sealing the ducts in those spaces, wrap the ducts in insulation to keep them from getting hot in the summer or cold in the winter. Next, seal ducts that you can access in the heated or cooled part of the house.



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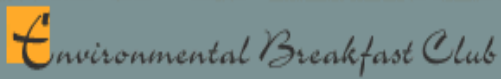
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CAPITAL DISTRICT BREAKFAST CLUB PRESENTATIONS:

The Capital District Environmental Breakfast Club is an informal group of environmental professionals that meets monthly to discuss current environmental issues. Each meeting features a speaker on a topic of interest, a regulatory update, and an open forum. Meetings are held on the first Friday of each month except July and August.

The Environmental Breakfast Club meets at the Holiday Inn Turf on Wolf Road in Colonie, New York. Meetings start at 7:30 am. The cost is \$12 per person which includes a full breakfast buffet.

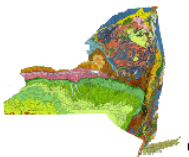
You can find out more details about the Capital District Environmental Breakfast Club at their website:
www.youngsommer.com/CM/Custom/TOCEnvironmentalBreakfastClub.asp



Buffalo Association of Professional Geologists (BAPG)

The BAPG conducts regular membership meetings on the third Wednesday of the month, January through June and September through November. Meetings feature distinguished speakers and interesting topics. Field trips and technical seminars sponsored by the BAPG encourage the exchange of scholarship and expertise.

Visit www.bapg.org for more information!



Central NY Association of Professional Geologists (CNYAPG)

The CNYAPG conducts regular meetings on the second Thursday of each month from September to May. Meetings feature dinner and distinguished speakers whose presentations invite comment and discussion.

Visit www.cnyapg.org for details!



LONG ISLAND ASSOCIATION OF PROFESSIONAL GEOLOGISTS

The Long Island Association of Professional Geologists (LIAPG) is a not-for-profit professional organization dedicated to the professional and business needs of geologists located in the Long Island / Metro New York area.

To contact members or view upcoming events sponsored by the LIAPG, go to their website:
www.lipg.org



AIR AND WASTE MANAGEMENT ASSOCIATION (AWMA) NORTHEAST SECTION:

The Mid-Atlantic States Section of the Air and Waste Management Association (MASS-A&WMA) is a professional non-profit association of engineers and scientists working in the environmental field, with a particular focus on issues related to air and waste. The Association strives to provide an opportunity to enhance the profession by providing opportunities for its members to network with other professionals.

Visit the AWMA website for information on professional activities and updated news!

www.mass-awma.net



THE GEOLOGICAL SOCIETY OF AMERICA (GSA)

The GSA strives to be a leader in advancing the geosciences, while enhancing the professional growth of its members, and promoting the geosciences in the service of humankind.

Discover events and information on their website: www.geosociety.org



New York State Museum

The **New York State Museum** is a major research and educational institution. It is dedicated to promoting inquiry and advancing knowledge in the fields of geology, biology, anthropology, and history, through the investigation of material evidence germane to New York State's past, present and future.

For information on upcoming exhibits visit: www.nysm.nysed.gov.



New York State Council of Professional Geologists

*The **NYSCPG** strives to strengthen and advance the geologic sciences as a profession, promote the protection of public health and welfare and the environment through the professional practice of geologic sciences, and create high standards of ethical conduct among its members and within the profession of geology, as well as the legal standing of geologists and their ability to practice geology in New York State by promoting the licensing of geologists in New York State through statutory regulation.*

To learn more about supporting the licensure of professional geologists in NYS, visit: www.nyscp.org



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