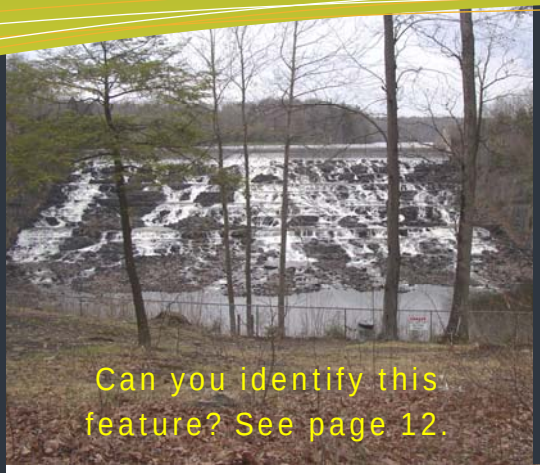
Issue
03
2010

PCPG Newsletter

Communicating Key Information & Concerns to Geologists & Environmental Professionals



this issue

Board of Directors

Message from the President

For more than 99% of currently licensed PGs in Pennsylvania, continuing education (CE) credits will be required for license renewal by September 30, 2011. As in the past, sometime in August 2011 you will receive a license renewal notice mailed to you by the State Registration Board. **Be sure the State Registration Board has your correct mailing address or you may not receive your renewal notice.**

As a licensed PG, it is up to you to obtain the necessary CE credits and maintain proof that you comply. However, at the time of your renewal, you will not need to provide proof that you comply. Rather, the renewal application will have a question that requires you to "Affirm" that you meet the requirements at the time of renewal. To keep things honest, the State Licensing Board will audit a certain percentage of the renewal applications. If audited, you will need to provide proof that you have the required CE credits. Audited or not, if you cannot meet the CE requirements by September 30, 2011, you will have a one-time grace period, until March 31, 2012, to obtain the required credits.

By the 2013 renewal date, regulations will likely have been developed that spell out in more detail how the CE process will work. In the meantime, the State Registration Board recognizes that there will be many questions and circumstances that would best be addressed by the regulations. Until the regulations are drafted and adopted, the State Registration Board will exercise discretion in interpreting the CE requirements in this first renewal period.

One thing is clear, 99% of us will need to have 24 CE credit hours by September 30, 2011. To help Pennsylvania PGs comply with the CE requirements, PCPG is developing a "Frequently Asked Questions" section to our website. Learn more about this endeavor on Page 13 of this newsletter.

Regards,

Jim LaRegina, P.G.
PCPG President

A Busy Fall Schedule for the Pennsylvania Legislature

- Donald R. Wagner, P.G. (Governmental Affairs Committee Chairperson)

Time is running out on the 2009-2010 legislative session and PCPG's Government Affairs Committee (GAC) is busy tracking numerous proposed environmental bills. For the remainder of the year, the Pennsylvania Senate is scheduled to be in session for three weeks (the weeks of September 20, 30 and October 12), and the House is scheduled to be in session for six weeks (the weeks of September 13, 20, 37, October 4 and November 8 and 15). While most of the environmental legislation deals with the natural gas industry, there are a couple of other bills dealing with geologic hazards and geospatial issues. The pending environmental legislation that is being tracked by the GAC includes:

Oil and Gas Severance Tax

The budget compromise in July included a commitment to pass a Marcellus Shale natural gas severance tax by October 1, 2010, with revenue from the tax to be allocated to the Commonwealth, counties, municipalities and environmental projects. Presently, there are six severance tax proposals under consideration, three in the House and three in the Senate, including: SB905 (Musto, D), SB997 (Dinniman, D), SB1254 (Dinniman, D), HB1489 (George, D), HB2443 (Levdansky, D, and HB2438 (Evans, D). You can read the full text of these bills by following the embedded hyperlinks provided, or read summaries of these bills provided in the GAC September Board Meeting report that will be posted on the PCPG website.

It is important to note that none of these bills earmark any proceeds from the severance tax to Pennsylvania's Geologic and Topographic Survey. The Survey's mission is to serve the citizens of Pennsylvania by collecting, preserving, and disseminating information on the Commonwealth's geology, geologic resources, and topography to contribute to the understanding, wise use, and conservation of its land and resources. As such, the Survey provides valuable benefits to the citizens of Pennsylvania, not only with respect to mineral, oil and gas resources, but also with respect to education, water supply, geologic hazards such as landslide and sinkhole prone areas and tourism. ***PCPG urges you to reach out to your State representatives and senators and request that severance tax legislation include specific earmarks to support the Survey.***

Other Pending Marcellus Shale Legislation

There are many other bills pending dealing with various other aspects of natural gas industry regulation, including:

- Abandonment of Mineral Rights – HB1436 (White, D)
- Gas Moratoria – three bills pending, including HB2609 (Mundy, D), HB2235 (Vitali, D) and SB1447 (Ferlo, D)
- Royalties -- HB2214 (George, D)
- Wastewater Treatment -- SB1451 (Baker, R)
- Water Supply Protection: -- many bills pending in both the House and Senate, including HB1155 (George, D), HB1205 (Pickett, D), HB2608 (Mundy, D), HB2613 (Hanna, D), HB2630 (Boback, R), HB381 (Mundy, D), SB1416 (Costa, D), SB1452 (Baker, R), SB1461 (Leach, D), and HB2213 (George, D).

As above, you can read the full text of these bills by following the embedded hyperlinks provided, or read summaries of these bills provided in the GAC September Board Meeting report that will be posted on the PCPG website.

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Other Pending Environmental Legislation:

- Geologically Hazardous Areas – HB1450 (Deasy, D) providing for the designation and regulation of geologically hazardous areas within the Commonwealth. This bill was reported out of the Environmental Resources and Energy Committee on June 29, 2010 and was recommitted to the Rules Committee. Re-reported from the Rules Committee on September 13, 2010 and laid on the table.
- Geospatial Coordinating Counsel – HB2300 (Fairchild, R) creating a State Geospatial Coordinating Counsel, an advisory board to provide advice and recommendations to the Governor on geospatial issues, providing for uniformity, data standards, coordination and the efficiency of geospatial policy and technology issues among Federal, State and local government agencies, academic institutions and the private sector. Re-reported from the Rules Committee on September 13, 2010 and laid on the table.

…and that's not even a complete list!

If you have specific comments, suggestions, questions or recommendations on any of the above-referenced bills, please e-mail them to our GAC chairperson, Don Wagner.

Pennsylvania Brownfields 2010

Promoting Partnerships Across the Commonwealth

September 28 & 29, 2010 ▮ Holiday Inn Center City ▮ Allentown, PA

The Commonwealth of Pennsylvania is pleased to announce the sixth-annual Pennsylvania Brownfields Conference, scheduled for September 28 and 29, 2010.

This year, we moved the Conference to the Lehigh Valley, where attendees will experience first hand the results of regional cooperation. A guided tour of the former Bethlehem Steel site (the largest privately-owned brownfields in the nation), another round of "Extreme Makeover - Brownfields Edition," and an outstanding program with industry experts promise to make this Conference the best yet!

For more information on this Conference, or to become an attendee, sponsor or exhibitor, please contact the Conference Manager at (717) 763-0930 or klougee@psats.org.

photo credit: Lehigh Valley Economic & Development Corporation

An Interview With… Jay Parrish

-- Kelly Lee Kinkaid, P.G. (Communications Committee Chair)

As a new feature to our quarterly newsletter, the PCPG Communications Committee will interview prominent geologists in Pennsylvania. This quarter we interviewed Jay Parrish, immediate-past State Geologist and Director of the Pennsylvania Topographic and Geologic Survey (Survey). Our interview was performed on August 31, 2010. Mr. Parrish's last day with the Survey was on September 10, 2010.

Photo above: Jay Parrish, former State Geologist and Director of the Pennsylvania Topographic and Geologic Survey.

Q. I hear that you are leaving the Survey. How long have you worked there? How long at State Geologist?

A. 9 years 2 months 26 days as of today. Soon after arriving I became acting Geographic Information Officer. Sam Berkheiser was acting State Geologist. Sam probably holds distinction of most often being the acting State Geologist.

Q. Have you noted any significant changes in the role of the Survey during your tenure?

A. Yes. The Survey has always done the basic geologic mapping for the Commonwealth, but now we are doing more work that ties to DCNR's needs…carbon sequestration, Marcellus, stray gas…more outreach and more topographic mapping. In the past, the Survey paid the USGS to do the topographic mapping. Now, through PA Map, we've collected topographic data of the entire state for the first time in over 100 years using LiDAR. DCNR funding paid for this with some assistance from USGS grants and a variety of smaller contributions from other state and federal agencies. Really…DCNR Secretary John Quigley fought for and got the funding for this project from DCNR's budget and I need to give him credit for that.

Q. What do you see as the role of the survey in the future?

A. The Survey's role will continue to change. Resistance to state funding for projects that serve the long-term pubic need is a problem. More time will be spent searching for soft money…grant writing, research funding, etc. The Survey mapped the Marcellus over 100 years ago and should be doing more geologic research today that will be used as the basis for economic development in the future. Right now, we are doing more to serve immediate needs…being reactive instead of proactive to serve long-term needs.

Q. What are those immediate needs?

A. Marcellus, stray gas, geothermal projects are a few things the Survey is likely to get funding to pursue. Some basic geologic mapping is happening through Great Lakes Coalition and State Map, both funded by USGS. Survey staff are also working on a Marcellus website jointly funding with USGS and DOE. But we must give up staff to work on these projects and something else won't get done. There is always a long-term price when dealing with the immediate needs. In my opinion, the Survey should be looking more at water resources, but don't have the staff to do so. There is only one person for the entire state to do water resources research....the Survey needs to look forward, to legislation for water well construction regulations. The current database information will be insufficient to address future problems looming (droughts, etc.).

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Q. What is your proudest accomplishment and biggest achievement, and are they one in the same?

A. Biggest achievement is LiDAR (PA Map) of the entire State…it provides a basis for much geologic mapping, and is the first modern topographic map of the state. It's a watershed moment in the history of the State. I'm also very pleased to have gotten air photos on-line dating back to the 1940's. In terms of the Survey itself, it's helping the Survey move into the digital age. The staff are more comfortable with integrating electronic format into their work. Also, on a personal note, were able to get a seismic line placed to view geology at depth in a part of the State that has never been seen before.

Q. What would you like to be remembered for?

A. The PAMAP project.

Q. What lies ahead for you?

A. I will be teaching in the Dutton Institute at Penn State…on-line education in remote sensing as part of the World Campus. I'm also eager to do research again.

Q. What do you think lies ahead for the Survey?

A. It's a great opportunity for the Survey to bring in new leadership and ideas. I like the idea of there being a fixed-term as State Geologist and allowing for new blood. George Love (Assistant State Geologist) will become Acting State Geologist; George is both talented and nice, with a wealth of experience. I feel that I'm leaving things in good hands.

In closing, I'd like to say that I've been very impressed with the wealth of knowledge of the Survey staff, and their efforts to put together field trips and publications. They do a tremendous job and do it out of a love of geology and dedication to the Survey. I very much appreciated the opportunity to work with them.

USTIF 101 – What is it and How Does it Operate?

- Larry Roach, P.G. (PCPG Board Member)

The Pennsylvania Underground Storage Tank Indemnification Fund (USTIF) is a program that satisfies financial responsibilities in the event of a release from a regulated underground storage tank. USTIF covers the actual costs of corrective action and third party liability. Since its inception in 1994, USTIF has paid approximately $800 million in benefits, and most of these payments have been to the consulting industry for corrective action. USTIF is currently providing claim benefits of approximately $60 million annually. There are 1,500 open claims and actuarial studies indicate that the payout on these existing claims will be approximately $500 million. New claims are being filed at the rate of about 200 per year.

USTIF pays for eligible, reasonable, and necessary costs. Their mission is to apply the reasonable and necessary criteria in a manner that is fair, just, and fiscally responsible. While there are many eligibility criteria, the criterion that is most often problematic with respect to consultants and claimants is reporting. A claim must be reported to USTIF within 60 days of discovery of the release. There is no discretion with this timeframe, and USTIF will deny any claim reported after the 60-day deadline. Thus, it is important to report claims early, even if in doubt. There is no penalty for reporting a claim and then deciding to withdraw the claim later. It is important to note that the report of a release to the PADEP or ICF International is not the same as report to USTIF; claims must be reported to USTIF separately.

Because USTIF technically has a relationship with the claimant and not the consultant, USTIF reimburses the claimant for reasonable and necessary expenses (assuming the claim is deemed eligible). The reimbursement can be made directly to the consultant as a convenience to all parties after the claimant approves the invoice and USTIF determines that the expenses are reasonable and necessary. Based on recent figures, on average over 90% of all costs invoiced by consultants have been have been paid by USTIF.

USTIF is considered a special fund with managerial and administrative functions housed within the Pennsylvania Department of Insurance. USTIF collects fees from underground storage tank system owners or operators as set by the USTIF Board of Directors and uses these fees to make reimbursement payments to program participants. USTIF has engaged the services of a third-party administrator, ICF International, to help manage claims. USTIF has a fiduciary responsibility to act in a fiscally responsible manner so that funds are available for program participants for corrective action and third-party liabilities.

This statutory fiduciary responsibility is one thing that sets USTIF apart from The PADEP. The PADEP is concerned with regulatory compliance, and is not required to consider cost effectiveness in executing its responsibilities. However, USTIF is responsible for funding cleanups, and has a statutory fiduciary responsibility to pay only those costs which are reasonable and necessary.

Most USTIF-funded corrective actions are reimbursed through sole-source, time and materials contracts; however, these types of contracts are not preferred for state reimbursement. USTIF has the authority to require competitive bidding and is starting to require more claimants to enter into fixed-price contracts resulting from either negotiation or competitive bidding. USTIF selects claims for competitive bidding based on a series of priorities that may include: claims where the cleanup has stalled, repeated upward revisions of the time and cost estimates for closure, repeated failure to obtain approval for site characterization reports from PADEP, or claims where the cost to bring about closure is expected to be above average.

Pennsylvanian's USTIF program has remained financially healthy for 15 years and will continue to be so for the foreseeable future. It has and is funding thousands of site cleanups, and provides rewarding opportunities for the consulting community.

UPCOMING EVENTS

September 16, 2010
3rd Quarter PCPG Board Meeting
Middletown, PA

September 23 – 25, 2010
Field Conference of Pennsylvania Geologists
A Tectonic Cross Section of the Pennsylvania Piedmont
Lancaster, PA
www.fcopg.org

September 28 - 29, 2010
6th Annual Pennsylvania Brownfields Conference
Allentown, PA
Link for more information

Sept. 30 – Oct. 1, 2010
Hydrogeology Refresher: Basic and Advanced Principles of Groundwater Hydrogeology
Pittsburgh, PA

October 12, 2010
Surface Geophysics
Middletown, PA

November 3, 2010
Act 2 Tool Kit: Fate & Transport Modeling
Pittsburgh, PA

November 16, 2010
Act 2 Tool Kit: Environmental Statistics
Harrisburg, PA

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Don't forget to check the "Courses & Events" link on PCPG's home page frequently for up to date information on upcoming educational opportunities.

PCPG Education Committee Continues to Provide Quality Courses and CE Opportunities

- Jennifer L. O'Reilly, P.G. (Education Committee Chairperson)

The PCPG Education Committee is busy finalizing our events for 2010 and has already scheduled a variety of seminars for 2011. Members are encouraged to log onto our website and check out the Courses & Events section, as many of our courses that are open for registration have started to fill up.

As a complement to the Borehole Geophysics course that was completed in June, PCPG is introducing a Surface Geophysics course for the first time. This event will be held at the Pennsylvania Geological Survey in Middletown on October 12 and is already sold out! Watch for this course to be repeated in 2011.

In addition, due to a high demand, PCPG is offering a second session of the Act 2 Toolkit -- Fate & Transport Modeling course, which will be held in the Pittsburgh area on November 3rd. We are also offering Environmental Statistics in the 4th Quarter 2010 as an addition to our Act 2 Toolkit series. This course is designed to be of interest to geologists, environmental scientists, and professionals with related backgrounds who collect, analyze, or report data associated with regulated environmental activities, especially in Pennsylvania. The course will focus on understanding and selecting appropriate statistical procedures cited in state and federal regulations and guidance, practical methods to implement them, and determining when alternative approaches are useful or necessary. No specialized statistical knowledge is necessary, and software will be provided to attendees to take with them upon completion of the course.

PCPG has already scheduled a wide variety of technical courses to be held in the 1st Quarter 2011, including our PG Review Course, a two-day course that includes Fundamentals of Geology (Day One) and Applied Geology (Day Two). This course is scheduled for February 3-4, 2011 and will be held in the Pittsburgh area. We are also offering Structural Geology and Hydro-Structural Geology in Malvern, PA (February 15), and a two-day Geochemistry course in Malvern, PA (March 24-25) that includes Introduction to Groundwater Geochemistry (Day One) and Geochemistry of Remediation (Day Two).

We hope to see you at one of our upcoming programs. If you have any questions or suggestions for courses or events, please feel free to email me (Jen O'Reilly E-mail).

For more information or to register for upcoming courses, please link on the "Courses and Events" tab of our home page.

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Pennsylvania Topographic and Geologic Survey Adds New Tool to Pennsylvania Geologists' Toolbox

-- Jeffrey Leberfinger, P.G. (PCPG President-elect)

The Pennsylvania Topographic and Geologic Survey (Survey) is providing the geologists of Pennsylvania with a new tool for evaluating geology in the Commonwealth. They are currently producing an accurate, bare earth model of all of Pennsylvania under the PAMAP Program using Light Detection and Ranging (LiDAR) technology. LiDAR provides high-resolution digital elevation maps generated by airborne and stationary systems. It measures millions of ground surface elevations per minute, even through non-dense tree canopy, because the LiDAR ray can penetrate through the gaps in branches and leaves. LiDAR can also penetrate through water, providing elevation data for stream and lake beds.

In Pennsylvania, the LiDAR data was collected from an airplane which emitted a laser toward the ground, and the precise time of the emission was recorded. The reflection(s) of the pulse were then detected and the precise time of the reflection was recorded. Using the constant speed of light, the delay was converted into a distance. Then, knowing the position and orientation of the sensor from very accurate airborne Global Positioning Systems (GPSs) and Inertial Measurement Units, the XYZ coordinate of the reflective surface was calculated.

LiDAR data has a wide variety of applications for Pennsylvania. It can be used for natural gas exploration and in the design of two-dimensional and three-dimensional seismic surveys. The data can also support infrastructure development, planning and design for the natural gas and other industries (i.e. roads, pipelines, plant and well sites, cut and fill calculations, pad layouts). LiDAR data can also be a valuable tool in the evaluation of geohazards, such as rock slope stability, landslide evaluation, dam and levee studies, sinkhole analysis and mine subsidence investigations.

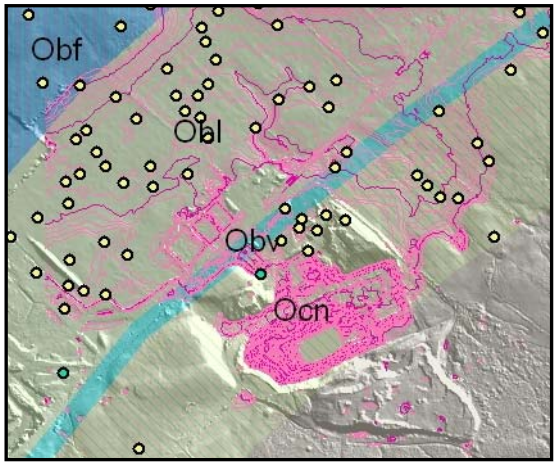

Figure 1: Hillshade map made from 2006 LiDAR data showing portions of Centre County, PA. Source: Penna. Topographic and Geologic Survey

As an example, Figure 1 (left) illustrates closed depressions and potential sinkholes (shown in pink) found in wooded areas that were identified using LiDAR data. These features were previously unidentified in sinkhole and closed depression mapping performed through aerial photograph review.

Because of its ability to penetrate tree canopy and its greater accuracy, LiDAR is also a valuable tool for updating state flood insurance rate maps (FEMA) and for flood risk analysis and flood control projects. Its ability to see through tree canopy is also useful for identifying or mapping potential environmental concerns such as historic landfills or old cemeteries that may be obscured by tree cover and previously could not be identified with aerial photography. its greater accuracy also makes LiDAR a handy tool in other applications such as windmill projects, lake bathymetric surveys, and quarry planning/monitoring.

LIdar can also be used to provide for amazing geomorphic mapping. Figure 2 (next page) is a map view of the Middletown, PA area (7.5 minute quadrangle outlined in black) showing LiDAR-derived terrain. The

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underlying spine of Mesozoic diabase and coarse-grained lithologies of the Gettysburg Formation create the topographic highs shown on this map. Apparent folding of Triassic rocks is evident in the northeast corner of the quadrangle. The topographic high of Hill Island in the Susquehanna River is visible center left where diabase crosses beneath the Susquehanna River. The regular fracturing pattern in the New Oxford Formation is visible in the bottom center.

Individual data sets cover 10,000 feet by 10,000 feet blocks. This data is available from the Survey in several formats including LiDAR Application Standard (LAS) file format, two-foot contour data in 3D shape file format, and a 3.2 foot (1 meter) resolution bare earth DEM (digital elevation model) in GeoTiff format.

As part of the PAMAP program the Survey also had high resolution orthophotography shot for the whole state of Pennsylvania. This data is also available from the Survey.

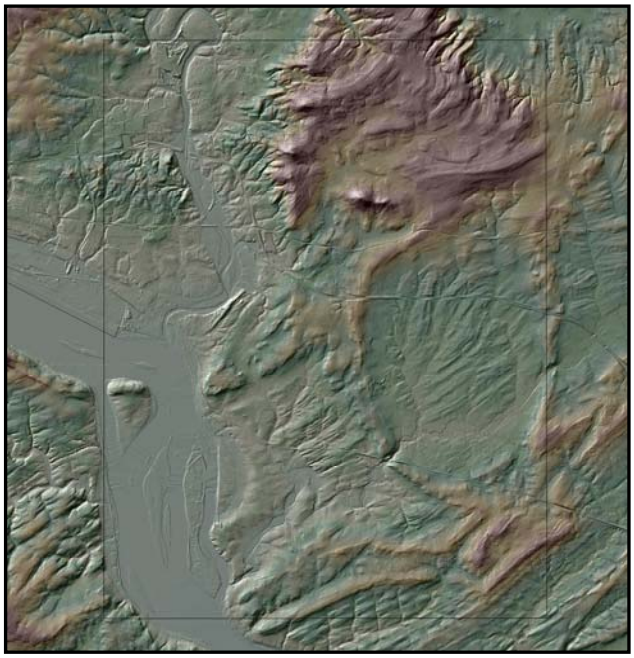

Figure 2: Terrain map of the Middletown, PA area prepared using LiDAR-derived elevation data. Source: Penna. Topographic and Geologic Survey.

Information about the PAMAP program can be found at www.dcnr.state.pa.us/topogeo/pamap. Program staff can be reached at 717-702-2017.

Editorial: Dr. Jay Parrish and the Pennsylvania Geologic Survey

-- Richard E. Wright, P.G. (Permanent Director of PCPG)

In response to PCPG's request to draft an editorial about the Pennsylvania Bureau of Topographic and Geologic Survey (Survey), I met with Jay G. Parrish, P.G., Ph.D., State Geologist and Director of the Survey, on September 3, 2010. We had a two-hour lunch and talked about anything and everything. During this lunch, I learned that Jay would be departing the Survey, thus, for me, the focus of this editorial shifted.

One of the most interesting points of our discussion resulted from my question about what probability exists for there to be a reappearance of the Marcellus and a thickening of the section due to thrust faulting. Jay said that there is absolutely no question in his mind about the fact that this has occurred, and that it could potentially be thousands of feet thick. More data is needed, however, and the certain knowledge of its existence means a great deal to the future total gas yield of the Marcellus Shale.

We opined for a while on how much gas may really be available in the black shales as a result of thrusting and repetition of the section. Under Jay's tutelage and direction, the answers to questions like this would be available sooner rather than later. He talked about his interest in drilling a deep well at an undetermined location in Lancaster County, as he has a great interest in the Marcellus and saw this endeavor as an opportunity to offer advocacy toward the development of the Marcellus Shale. According to history, the Survey should be permitted (actually encouraged) to aid these commercial endeavors within the Commonwealth to support our mineral and oil and gas industries.

I believe that Jay's performance ranks high in comparison to that of other State Geologists that I have knowledge of since the early '50s. That means over a 60-year period, Jay represents one of the most highly-educated, broad-spectrum thinkers that I have ever had the privilege and pleasure of working with. Jay's ability to have the vision, acquire the funding, and then facilitate having the entire Commonwealth of Pennsylvania flown in LIDAR imagery was phenomenal. Even more unbelievable is the fact that the digital data has now been converted to printable quadrangle-type sheets of LIDAR image and the information is being used by the State on a regular basis.

Because we must continue to be cognizant of the need to generate wealth within the Commonwealth, the Marcellus Shale is incredibly important to the present and the future of Pennsylvania. However, little support has been provided to the Survey by the Department of Conservation and Natural Resources (DCNR). In fact, it is the writer's opinion that the Survey should be separated from the DCNR and set aside as the Department of Geological Resources, with equal stature to the DCNR.

Given the nature of records delivered to the Survey's Pittsburgh office, it is only marginally acceptable that this information be housed there and stored for posterity. There is so much that could be done with the data that the Survey is acquiring…it would make your head swim. Unfortunately, current funding and staff restrictions merely allow for most data to be compiled and stored with little or no review.

Jay has unclouded vision about the future and the need for professional geologists to be an advocates of geologic resource development. As State Geologist, Jay thought circumspectly, with great depth, and with a well-founded portfolio of scientific disciplines and interrelated principles. His thoughts preceded his actions, and from one man's eyes, he performed over and above expectations. We are truly going to miss Jay as State Geologist, even though he had to operate from a position of obscurity and tolerance only for the wonderful job that he did. In fact, it has been apparent to me that the General Assembly is not aware of the presence of the Survey. This represents a challenge to us to alert our House and Senate members to preserve the function and the future need for the Pennsylvania Survey.

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It should be known that the Survey budget was reduced every time a grant was acquired; an amount equal to that of the grant was deducted from the budget. It was also difficult to retain staff; as employees retired, Jay was not permitted to find replacements, thus his staff was reduced by 40%. However, in spite of the issues he confronted, Dr. Jay Parrish filled the bill as the State Geologist. We shall miss him.

Jay assumes a role in "distance learning" at Penn State University and I'm sure that with his breadth of knowledge and the excitement and passion with which he teaches, the program is destined to be a success. He is a champion for the application of geologic and geophysical methods toward the solution of both academic and practical earth resource problems. His passion for teaching will certainly be tested as he embarks upon a distance-learning program in Penn State University's Dutton *e*-Education Institute in the College of Earth and Mineral Sciences, and we certainly wish him God's speed and direction.

Trekking the Himalaya's

PCPG member Scott McQuown (ARM Group) has headed to Nepal for a 25-day trek through the Nepalese Himalayas. He invites you to follow him on this adventure at:

http://www.mcquown.us/index.html

His 200-mile route crosses several passes over 16,000 feet to reach a pristine environment that was closed to foreigners until the 1990s. You can view his planned route map, satellite images of his trek, and 360-degree panoramic photographs, as well as photographs and videos of past treks at the above website. This website will also provide you with a link to background information about the area he is travelling through in this adventure

Continuing Education Regulations are in the Works

- Ted Tesler, P.G. (State Registration Board for Professional Engineers, Land Surveyors and Geologists)

The State Registration Board for Professional Engineers, Land Surveyors and Geologists (Board) has drafted several regulation packages to address the Continuing Education (CE) and other provisions of Act 25 of 2010. The final CE regulations were approved by the Board, and as of September 3, 2010, were conveyed to the Independent Regulatory Review Commission (IRRC) and legislative committees for review. We collectively hope this regulation will be approved quickly to assist licensees in timely compliance with the new CE requirements.

A second proposed rulemaking regarding the Geologist-in-Training (GIT) designation and educational requirements as they apply to regular and grandfathered candidates for examination and licensure has also been drafted and the proposed regulations were approved by the Board. The proposed regulation is now in the hands of the Bureau of Professional and Occupational Affairs (BPOA) Regulatory Counsel and Deputy Chief Counsel for review.

The CE regulations are expected to be finalized and the proposed GIT/education requirements for licensure regulations will be published for comment later this year, so watch your e-mail for notification of their publication. The Board looks forward to your comment on the proposed GIT/education requirements for licensure regulations.

Were you able to identify the image on the front page of this newsletter?

It's the Nockamixon Dam Spillway in Bucks County. The spillway is constructed in Lockatong argillite. Excavation was facilitated by the natural joint features. To learn more about the geologic features of state parks, follow the link below to download park guides published by the PA Topographic & Geologic Survey:

Park Guides

PCPG Answers Questions Concerning Continuing Education

-- Roger Moose, P.G. (PCPG Board Member)

While it is the Pennsylvania State Registration Board for Professional Engineers, Land Surveyors and Geologists (State Registration Board), not PCPG, that issues professional licenses and requires continuing education, PCPG has been fielding many questions concerning the continuing education (CE) requirements for Pennsylvania-licensed geologists since Act 25 of 2010 was signed by Governor Rendell on May 5, 2010. PCPG is not legally affiliated with the State Registration Board and does not represent the Board or its decisions and opinions. However, to help Pennsylvania-licensed professional geologists understand and comply with the requirements of the State Registration Board, PCPG will soon be adding a "Frequently Asked Questions" section to the CE section of our website. We have selected a couple of these questions that seem to be asked with a greater frequency to highlight below.

Q. What are the continuing education requirements for Pennsylvania Geologists?

A. Each licensee is required to obtain twenty-four Professional Development Hours (PDH) during each biennial renewal period. The September 30, 2011 renewal will require that licenses affirm that they have completed the required continuing education course work during the 2009 through 2011 licensing period.

Exception—For this first biennial cycle ending September 30, 2011, the Board stated that it will not take disciplinary action against any licensee who does not accumulate the 24 PDH units by the renewal date of September 30, 2011, but does complete them by April 1, 2012. Make-up hours completed during this six-month grace period will be credited to the prior renewal period only (ex: the period ending September 30, 2011).

Exception—CE is not required during the biennial cycle which includes the licensee's initial registration. If you were first licensed in the two year period ending September 30, 2011 you are required to affirm the necessary CE course work for renewal on September 30, 2013.

Exception—Annual CE is not required for Licensees who serve active military duty for at least 120 days in a year.

Exception—The Board may waive CE requirements for a Licensee with illness or demonstrating other extenuating circumstances.

Q. What is the "Professional Development Hour" or "PDH"?

A. Act 25 defines"(t) "Professional development hour" or "PDH" as fifty minutes of instruction or presentation relevant to professional practice or any equivalent." In addition, according to the Act, "(r) "Course" shall mean any qualifying course with a clear purpose and objective which will maintain, improve or expand the skills and knowledge relevant to a licensee's professional practice."

Courses to improve or expand skills and knowledge of groundwater hydrology could, for example, include groundwater sampling techniques, flow modeling, statistics, and establishing data quality objectives. For geology, field classes focused on visiting type-sections or high quality exposures, or coursework in structural geology, sedimentary petrology or petrography, might be examples. For economic geology, CE may include classes or seminars on the Marcellus Shale play, quarrying techniques, or mine reclamation.

The Value of the Pennsylvania Topographic and Geologic Survey

Facilitating Oil, Gas and Minerals Exploration and Production

--William Seaton, P.G., PhD (ARM Oil and Gas Solutions)

The Pennsylvania Topographic and Geologic Survey (Survey) provides a wide variety of products and services to assist landowners, industry, government, commercial enterprises, students and others with information about the earth; from grass roots to deep portions of bedrock strata thousands of feet below the surface. Even down to the Marcellus Shale. The value of the Survey may be realized by those involved in oil/gas/mineral exploration via the available data resources listed below. Data from these resources can be easily imported into a GIS application providing the user with a substantial "foundation" for any project.

1) *Online Database of Oil and Gas Wells and Related Information*: The Survey maintains the PA*IRIS/WIS system (Pennsylvania Internet Record Imaging System/Wells Information System) which allows remote users to view, retrieve, and utilize oil and gas well location, well construction, drilling, production, well logs and permitting data for research, exploration, and business planning purposes for oil/gas/minerals exploration and production projects. The PA*IRIS/WIS system may be accessed directly from the Internet via paid subscription. The Survey also provides direct PA*IRIS/WIS access at either of the Survey offices (in Middletown or Pittsburgh), or by submitting a service request to a Survey staff member.

2) S*tatewide Geologic Mapping*: Existing Survey surface geologic mapping products may be easily acquired in hard-copy or on-line digital formats providing a geologic framework for large scale regional studies or site-specific understanding of the bedrock geology.

3) *Online Digital Mapping (PAMAP) Resources*: The on-line PAMAP application provides extensive aerial photography, topographic (DEM) data, land use, and other commonly used GIS (digital and image format) types of data.

4) *Online Database of Water Supply Well Information*: The Survey maintains the Pennsylvania Ground Water Information System (PAGWIS) on-line database containing a variety of data types associated with domestic, industrial, municipal and other types of water supply wells. Water supply well locations can be posted on maps to indicate the proximity of water supply wells to existing oil and gas wells or new exploratory drilling.

The value of the Survey in providing the data resources described above becomes very apparent when working in areas outside of Pennsylvania. In other states, users must search through several potential sources for needed GIS mapping products, geologic databases, and oil and gas records (if available). The easy access of mapping data and database records from the Survey provides a distinct advantage for those interested in oil/gas/minerals exploration in Pennsylvania.

DON'T FORGET!

2010 Field Conference of PA Geologists

A Tectonic Cross Section of the Pennsylvania Piedmont

Sept. 23 – 25 in Lancaster, PA

Event Details at: http://fcopg.org

DRBC Working to Address Marcellus Shale Drilling & Water Extraction Issues

-- Louis F. Vittorio, P.G. (PCPG Board Member)

By now you have surely noticed the "war of the words" regarding the current gas drilling and water extraction moratorium imposed by the Delaware River Basin Commission (DRBC). Whether you believe the moratorium (enacted in May of this year) to be potentially short or conspiratorially long, pressure from many differing stakeholders has been mounting on the DRBC, calling for regulatory action. Conduct a simple web search (Google: DRBC Marcellus) and you will find many positions on the matter. Look at your local newspaper and you will likely find an article written in the past several days.

The bulk of the news activity is due to forthcoming DRBC regulations that will govern gas and water extraction activities in the Delaware River Basin. The DRBC announced on September 15th that draft regulations are expected to be published by mid-October 2010. In my attempt to inform our membership of changes in regulation and the impact of such regulation, I am currently only able to provide some talking points on the matter. I fall back to common sense and provide some basic concepts:

1) **Water is a Renewable Resource** – Too often the debate is centered on the depletion of water resources. While there is a concern of over-use, we can be certain the DRBC (like the SRBC) recognizes this fact and will only allow water use that is sustainable.

2) **Green Domestic Energy** – For decades, we have collectively criticized our dependence on foreign energy and touted the need for cleaner burning energy sources. In the Marcellus we have a domestic (and local) source of clean burning fossil fuel.

3) **Acceptable Risk** – Gas exploration is an acceptable risk. Make no mistake; there will be mistakes along the way. This is normal and acceptable in all other walks of life, as we are human. But we have the technology to mitigate our mishaps, many which will be minor. Arguments touting Armageddon in the Delaware River Watershed are not constructive.

Providing acceptable risk is where the regulations come into play. Should a gas well be drilled directly adjacent to a high yield water supply well? Common sense tells us "no" even if the risk to water supply is low. Should the watershed be protected? Yes, it is a vital resource. Can the gas resource be developed and accommodate water resource protection? Yes, it has in the past and water resource protection is ongoing. These are just some of the questions currently being tackled by the DRBC as they strive to complete their draft regulations, which are indicated to be forthcoming this month.

For more information, we urge all PCPG members to read PCPG's Marcellus shale Position Paper posted in the website at http://pcpg.org/MarcellusShale and stay tuned for updates.

CONGRATULATIONS!

Moody and Associates, Inc. is proud to announce that Heather A. Trexler has been named Senior Geologist. Heather has been with Moody for 7 years working in the Houston, PA regional office. Her expanded role as Senior Geologist will be a valuable contribution to the decision-making team of Moody.

PRESIDENT'S FOOTNOTE

Tom Earl, P.G., PhD and perpetual instructor of our Hydrogeology course, is retired from member firm Meiser & Earl, Inc., State College, PA. His sessions at PCPG's Hydrogeology course are based on decades of case studies delivered with a sense of humor. Tom continues to offer PCPG the option of finding another instructor to replace him but our Hydro course has become one of our most popular courses, in large part because of Tom. If you are planning to attend our next Hydro course on September 30-October 1 in Pittsburgh, you will learn how hydrogeology solved the case of the body in the basement.

Photograph Above: In August, President Jim LaRegina (R) visited with Tom Earl (L) at Tom's cottage near Acadia National Park where Jim learned that Tom is as skilled with a kayak as he is at hydrogeology.

DEADLINE FOR 4rd QUARTER 2010 NEWSLETTER IS NOVEMBER 25, 2010

For more information, contact our PCPG Newsletter Editor and Communications Committee Chairperson, Kelly Lee Kinkaid, P.G., by E-mail or by telephone at 610-375-9301.

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