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REPORTER

The Magazine of the Pennsylvania Society of Professional Engineers



Electromagnetic field safety certification methods
complete story p.10

Also Inside

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The Impact of the Chesapeake Bay Tributaries Strategy
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NSPE Code of Ethics for Engineers Engineers' Creed

As a Professional Engineer, I dedicate my professional knowledge and skill to the advancement and betterment of human welfare. I pledge:

To give the utmost of performance;

To participate in none but honest enterprise;

To live and work according to the laws of man and the highest standards of professional conduct;

To place service before profit, the honor and standing of the profession before personal advantage, and the public welfare above all other considerations.

In humility and with need for Divine Guidance, I make this pledge.

Adopted by National Society of Professional Engineers, June 1954

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Michael Fischer, EIT of Millennium Engineering, P.C is performing a rooftop electromagnetic field radiofrequency (RF) safety survey of the rooftop exposure levels from various radio communications antennas.

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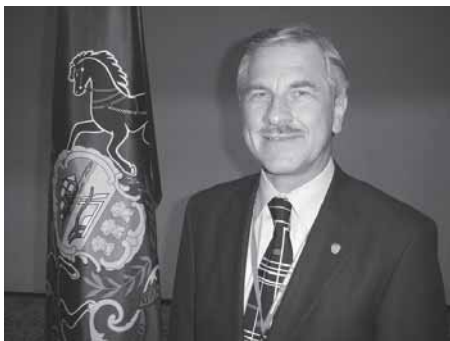
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President's Message

Harvey D. Hnatiuk, P.E., F.NSPE

The Resolve of Many

*"The seemingly unattainable
is realized through the resolve
of many."*

~Henry Ford

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The past few months make me believe that our PSPE is continuing to realize the rewards of the resolve of many. The beginning of this year...our year together... included a lot of "cogitating" (to borrow a phrase from John Ackerman, PE, FNSPE) that resulted in the development of a new Strategic Plan.

Planning on this level is an intense effort. But, as strategic planning guru Peter Drucker wisely noted: "Nothing happens until we reduce strategy to work." We, as the PSPE, are presently in the "work" phase...and things are going well!

As an engineer, I relate this process to what many of us do for a living. We take an idea, develop a concept, and then engineer a project. The project is generally detailed on a set of drawings and within a book of specifications. It is only in the construction phase that our work begins to jump off the drawings and then define itself in "bricks and sticks" and the like.

How do we, PSPE, define what we do? How do we measure our results? How do change course when needed?

The Strategic Plan includes our Mission Statement: "Promote and defend the interests of Pennsylvania's Professional Engineers" and it includes our Vision Statement: "PSPE is the recognized voice and advocate of all Professional Engineers who are licensed in Pennsylvania."

The plan's objectives and strategies provide further detail on what we do, where we are going and how we, PSPE, plan to get there. At the end of this year and the beginning of next year, we will evaluate our progress and make adjustments to our course where needed.

PSPE's committees and task forces are the key elements of our efforts. Several committees are up and running, working in concert with PSPE's objectives and strategies.

The Publicity Committee is working to improve the recognition of what professional engineers do and what PSPE brings to the process. We'll be "back on the air" this year during February but this time on different radio stations with wider audiences. Messages will be placed in engineering school publications to reinforce the words "professional" and "licensure" in students' lexicons.

The Membership Committee has a plan of action that, when fully executed, will help to direct PSPE to continual growth and the Awards Committee continues to be on track for another solid year. The Nominating Committee has come up with a great slate of candidates to lead our organization in the years to come.

Our Conference Planning Committee has the 2007 Conference in Reading just about finalized...with a great array of events and learning opportunities.

There remains, however, much work to be done...much more that we can do to live our mission as professional engineers in Pennsylvania.

The remainder of the year includes priorities to get our Young Engineers group organized and to form a Legislative Affairs Committee. These areas represent tremendous opportunities for the leadership and involvement in PSPE.

It has been said that an organization's "product" such as PSPE's is a changed human being and that the organization is a human-change agent. I can identify with that when I think about how my activities in PSPE have helped me personally and professionally.

Henry Ford's words ring true: Our PSPE needs the resolve of many to continue to move forward. If we live the mission, we will realize our vision.

Thank you for all you do for PSPE. ■

NSPE Names New Executive Director

ALEXANDRIA, VA (January 10, 2007) — The National Society of Professional Engineers is pleased to announce that **Lawrence A. Jacobson** has been named to serve as the Society's executive director by the NSPE Board of Directors at its meeting on January 6 in Jacksonville, Florida.

Jacobson brings a wealth of leadership experience in association management and will lead the organization in its efforts to promote professional licensure and the engineering profession.

"The engineering profession is one of the cornerstones of our global society, with professional engineers constantly looking for innovative and cost-effective ways to maintain and secure the public's health, safety, and welfare," said Jacobson. "I look forward to growing NSPE's efforts and success in meeting the needs of its members, the engineering community, and the public."

Jacobson most recently served as the executive director of the MATHCOUNTS Foundation, which increases enthusiasm for and enhances achievement in middle school mathematics throughout the U.S. He

brings more than 20 years of nonprofit management experience to NSPE, with a history of leading organizations through impressive periods of program and financial growth. Prior to MATHCOUNTS, Jacobson served as executive director of the Association of Specialists in Cleaning & Restoration, executive vice president for the National Association for Search and Rescue, and president of the Building Owners and Managers Institute.

"We've had the benefit of great executive directors for our entire 73-year history," said Robert S. Miller III, P.E., president of NSPE. "Larry will continue to raise our already high standards, and NSPE will take giant steps forward immediately and relentlessly. He is a consummate professional with a great work ethic, unique talents, and uncompromising principles."

Jacobson possesses an M.A. in history from the Wheaton College Graduate School in Wheaton, Illinois, and a J.D. from the John Marshall School of Law in Chicago. He is a member of the Illinois Bar, the American Society of Association Executives, and the American National Standards Institute. ■



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On Capitol Hill

John D. Wanner, CAE

O'Brien elected House Speaker with 99 Democratic, Six Republican Votes, Promises Reforms

In a history-making surprise move, House Democrats, who had won a majority of seats in the November elections, chose a Republican to be Speaker of the House, rather than restore outgoing Speaker John Perzel.

Perzel was defeated in his bid to win a third term as House speaker by a Republican from a neighboring Northeast Philadelphia district: Rep. Denny O'Brien. When it became clear that Democratic Leader Bill DeWeese, D-Greene, could not defeat Perzel on his own, DeWeese instead nominated 14-term Philadelphia Republican Rep. Dennis O'Brien, stunning House Republicans and many Democrats who learned of their party's new nominee only after reaching the House floor for swearing-in ceremonies. O'Brien defeated Perzel 105 votes to 97.

In a post-session news conference with House Democratic leaders, O'Brien said he did not plan on switching parties. "I'm a Republican," responded O'Brien to repeated questions about his party affiliation. The plan developed quickly, literally overnight, on New Year's Eve, when DeWeese lieutenant Rep. Josh Shapiro called O'Brien and suggested it. Later Gov. Rendell and some Democratic leaders joined in, and the deal was made. Earlier in the week, Reading Democrat Tom Caltagirone had sent a letter to his colleagues announcing he could not vote for DeWeese as Speaker, and expected other Democrats to follow his lead. Since Democrats held only a one-seat majority, this made it possible for Perzel to win back the Speaker's Chair, despite being in the minority. DeWeese and others tried to get Caltagirone to relent, but were unsuccessful, so they launched Plan B.

Six House Republicans ultimately voted for O'Brien: Curt Schroder (R-Chester); David Steil (R-Bucks); Rohrer; Kerry Benninghoff, R-Centre; Jim Cox, R-Berks; and Brad Roae, R-Crawford. Three House Democrats voted for Perzel: Thomas Caltagirone, D-Reading, and Angel Cruz and Rosita Youngblood, both D-Philadelphia. A voting error caused O'Brien to be listed as having abstained from voting.

In a speech following his swearing-in as speaker, O'Brien promised he would move forward as expeditiously as possible with long-sought

reforms to the way the House conducts its business. He also said he looked forward to using his new position to continue to work on the issues important to him. O'Brien has been a strong advocate for autism research. He has a 21-year-old nephew who was diagnosed with autism as a young child.

As for leadership of the House Democratic caucus, everyone then moved back down a notch, making DeWeese majority leader and Rep. Keith McCall, D-Carbon, majority whip. Rep. Phyllis Mundy, D-Luzerne, who had been picked by her colleagues to be caucus secretary, will instead head a committee.

House Democrats will keep all 22 committee chairmanships. There had been some discussion by those seeking to reform House rules to split the chairmanships between Republicans and Democrats.

Time will tell how long, or how well, this arrangement will last. House Republican leaders met with Perzel later in the month, and decided to make him "Speaker Emeritus", a new position, so he would remain part of the leadership team, without taking any of the positions the caucus had elected in December, or taking a Committee chairmanship from one of the other senior members.

House Democratic Committee Chairs Named

House Majority Leader Bill DeWeese and Whip Keith McCall have announced the selection of Democratic committee chairs for the 2007-08 legislative session. Among new Committee chairs this session is Professional Licensure Committee Chairman Mike Sturla (D-Lancaster).

An alphabetical listing of standing committees and their respective chairs follows.

Aging and Older Adult Services – Rep. Louise Williams Bishop
Agriculture and Rural Affairs – Rep. Mike Hanna
Children and Youth – Rep. Phyllis Mundy
Commerce – Rep. Peter J. Daley
Consumer Affairs – Rep. Joseph Preston
Education – Rep. James Roebuck

"Capitol" continued p. 22

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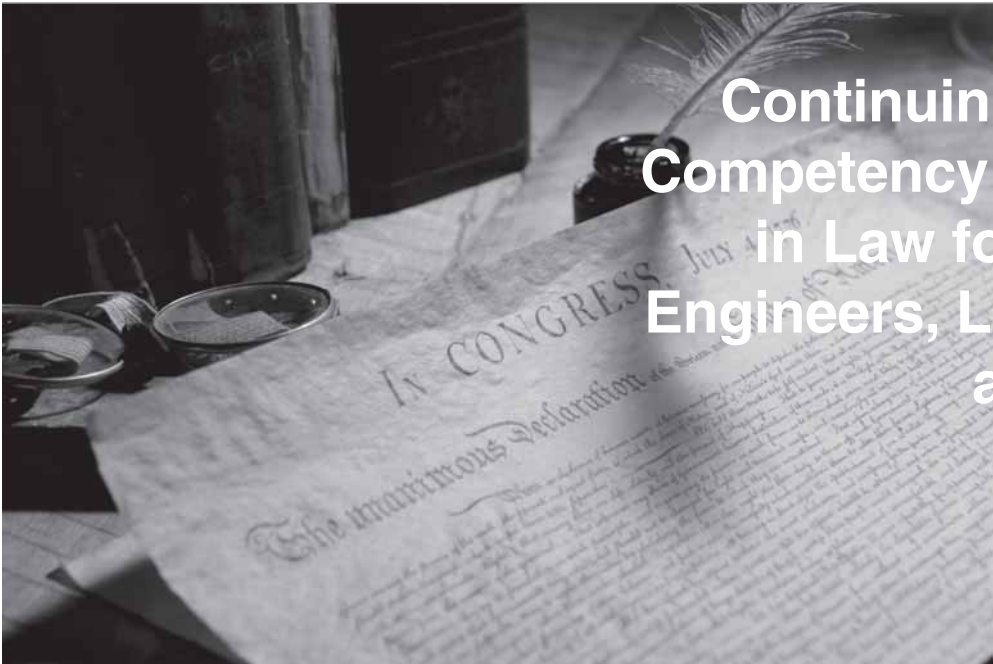
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Continuing Professional Competency Requirements in Law for Professional Engineers, Land Surveyors and Geologists

...Step One

John D. Wanner, CAE
PSPE Executive Director

Since the passage of Senate Bill 655 in November 2006, PSPE has received many inquiries as to what Professional Engineers need to do to meet the continuing professional competency (CPC) requirements. The answer is: nothing yet.

The original language in Senate Bill 655 was quite specific in terms of the types of activities that qualified as meeting the CPC requirements. Those requirements were based on the National Council of Examiners for Engineers and Surveyors (NCEES) law and regulations, but the bill was changed dramatically in the House.

The House Professional Licensure committee wanted to make the wording of the bill more similar to other licensure statutes in Pennsylvania that mandate continuing education hours. As the end of the 2006 legislative session drew near, the House committee leadership made a decision to not deal with Senate Bill 655 at all. PSPE persuaded the leadership to reconsider that position, and was eventually offered the option of allowing the committee to completely redraft the bill or wait until next session to start

again from the beginning of the process with a new bill. Ultimately, PSPE agreed to the House rewrite.

The bill that passed is relatively brief. In essence it simply says that licensees (engineers, land surveyors and geologists) must obtain 24 credit hours of continuing education every 2 years. The details of what is acceptable education are left to the state licensing Board which has up to 18 months to develop the more detailed regulations. The new law also grants the Board power to waive the requirement in cases of illness, hardship or military service.

A reading of the new law could lead some to believe that the Board must approve each and every program. According to the House attorney who wrote the language and representatives from the Department of State who will help the Board write the regulations, that interpretation will not be the case. Instead, the Board will adopt a regulation pre-approving named providers of continuing education. Any course offered by a pre-approved provider will be deemed acceptable, excluding courses that deal with "practice building or office management." The Pennsylvania landscape architects already have such a system. In fact, NSPE and its affiliates (State and Local Chapters) are pre-

approved providers named in the landscape architects Board's regulations.

While we cannot be certain that the regulations will develop in exactly the same way as other licensing Boards, we do know that the Engineers Board's members favor patterning the regulations after the NCEES model. Also keep in mind that the process used to develop regulations is open to public comment and must go through the Independent Regulatory Review Commission as well as the House and Senate professional licensure committees. That process can be lengthy and the Board may need all 18 months to finalize the regulations.

P e n n s y l v a n i a e n g i n e e r s licenses renew in 2007 and the continuing education requirements will not be in effect for this renewal. That means that the 2009 renewal will mark the first time Pennsylvania licensees will be asked to verify that they have met the continuing education requirements. As the regulations are developed, PSPE will work closely with the licensing Board, the Department of State and the regulatory review committees to ensure that these new requirements simple to understand and user friendly. The Society will regularly update the membership on this evolving process. ■

Risky Business

Rebecca Bowman, P.E., Esq.

They're here . . . continuing education classes should be on your schedule.

On November 29, 2006, Governor Ed Rendell signed Act No. 170 into law. The full text of the law is provided. I have highlighted the part you care about. The estimates are that the first renewal for which the law will be effective will be 2009. However, that's a no-brainer. Starting January 28, 2007 (60 days after enactment) and counting two year forward, would put any renewal after January 28, 2009 under this law.

*Some of you have gnashed
your teeth at me in the past
when I have written about
why it is absolutely critical to
our professional credibility
and our legal protection to
have a continuing education
requirement. ...*

*I know that dirt has not
changed much and electricity
has not changed much and
sewage has not changed much,
but everything else has.*

SECTION 1. Section 4(L) of the Act of May 23, 1945 (P.L.913, NO.367), known as the Engineer, Land Surveyor and Geologist Registration Law, amended December 16 1992 (P.L.1151, NO.151), is amended to read:

SECTION 4. GENERAL POWERS OF BOARD. —The Board shall have power -
(L) Administrative rules and regulations.— To adopt, promulgate and enforce such administrative rules and regulations, not inconsistent with this act, as are deemed necessary and proper by the Board to carry into effect the powers conferred by this Act[.], which shall include establishing requirements for continuing education to be fulfilled by individuals licensed and registered under this Act.

The rules and regulations shall include any fees necessary for the Board to carry out its responsibilities regarding establishing continuing education requirements.

SECTION 2. The Act is amended by adding a section to read:

SECTION 4.5. MANDATORY CONTINUING EDUCATION.—

(A) The Board shall adopt, promulgate and enforce administrative rules and regulations establishing requirements of continuing education to be fulfilled by individuals licensed and registered under this Act. Except as otherwise provided in this section, beginning with the licensure period designated by regulation, individuals licensed and registered under this Act shall be required to complete twenty-four hours of mandatory continuing education during each two-year licensure period as a condition of biennial renewal.

(B) An individual applying for initial licensure and registration shall be exempt from the requirement set forth in subsection (A) for the licensure period immediately following initial licensure and registration.

(C) The Board may waive all or a portion of the continuing education requirement established in subsection (A) for an individual licensed and registered under this Act who shows to the satisfaction of the Board that the individual was unable to complete the requirements due to serious illness, military service or other demonstrated hardship. The request shall be made in writing, with appropriate documentation, and shall include a description of circumstances sufficient to show why the individual is unable to comply with the continuing education requirement set forth in Subsection (A). Requests for waiver of the continuing education requirement shall be evaluated by the Board on a case-by-case basis. The Board shall send the individual written notification of its approval or denial of the request for waiver.

(D) An individual seeking to reinstate an inactive or lapsed license and registration shall show proof of compliance with the continuing education requirement for the preceding biennial renewal period.

(E) All courses, locations, instructors and providers of mandatory continuing education shall be approved by the board. However, no credit shall be given for a course in practice building or office management.

(F) The Board shall promulgate regulations to carry out the provisions of this Section within eighteen months of the effective date of this Section.

SECTION 3. This Act shall take effect in 60 days.

Some of you have gnashed your teeth at me in the past when I have written about why it is absolutely critical to our professional credibility and our legal protection to have a continuing education requirement. Now it doesn't matter. It's here.

Note some things that are not in the law. You are not required to take any of those hours in ethics. That has been a requirement for other professions. It may still turn up in the regulations, but it is not in the law.

There is not a type-specific requirement. You are free to expand your knowledge outside your registration type. I know that the law

says that you will not get credit for practice building classes, but learning new skills outside your experience area can only help you to build your practice.

Now, note some things that are in the law. As long as the provider is approved (and there will be a pre-approved list of providers so that you won't have to guess), all those seminars you are already taking to keep up with new regulations and new technologies will count.

Yes, I know that dirt has not changed much and electricity has not changed much and sewage has not changed much, but everything else has. I know I'm showing my age, but when I started doing finite element analysis, it was a huge ordeal. Now, it's a 10-minute input. [Of course, I still have the concerns I have talked about before with regard to dependence on software without understanding the process. If you don't understand the process the software is supporting, you cannot recognize an impossible result. Those concerns will never change.]

One thing I have noticed in other professions, especially in the ethics sessions, is that those practitioners most in need of the training are sitting in the back reading the paper, merely putting in their time. Those who sit in front, interacting with me, asking questions, discussing the issues, probably do not need the training anyway. I pray that none of you will be among those back-sitters.

I'm sure that, to the contrary, most of us are already taking close to one hour each month of seminars. That is all that's being asked

of us. Your chapter will be happy to point out that you can accomplish that just by participating in your chapter meeting, if you help make sure that the program has qualifying content.

Here is another benefit: If your employer used to hassle you about those seminars, or make you take them on your own time, now you are in a position to explain that they're required for you to maintain your licensure. Now, of course, I hope that you don't work for an employer so short-sighted as that, but just in case. (I used to work for a company that believed that all continuing-education seminars were just job fairs. Accordingly, they would only permit employees to attend seminars that they put on. If you work for a company like that, maybe you should use your seminars as a job fair.)

So, gnash you teeth at me if you like, but get ready to comply. Otherwise, your future as a licensed professional may be a risky business. ■

The "Risky Business" column offers articles covering liability from both the legal and engineering perspective. Mrs. Bowman's articles share general information and should not be relied upon as professional legal advice of either a general or specific nature. Rebecca Bowman is a civil engineer-attorney in solo private practice in McMurray, Pennsylvania for more than 25 years. Her practice is a certified woman-owned business. Her B.S. in Civil Engineering is from the University of North Dakota.

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Electromagnetic Field Safety from Radio Communications Antennas

Paul Dugan, P.E.

Spending a late January afternoon on a large building rooftop in downtown Buffalo New York during a heavy snowstorm is Michael Fischer, EIT of Millennium Engineering, P.C. Mike is performing a rooftop electromagnetic field radiofrequency (RF) safety survey of the rooftop exposure levels from various radio communications antennas. Millennium Engineering routinely performs independent evaluations of communications sites to provide certifications that existing or proposed wireless facilities comply with the Federal Communications Commission (FCC) exposure limits and guidelines for human exposure to radiofrequency electromagnetic fields (Code of Federal Regulation 47 CFR 1.1307 and 1.1310). As a registered professional engineer I am under the jurisdiction of the State Registration Boards in which I am licensed to hold paramount the safety, health, and welfare of the public.

The cover photo depicts Mike holding a Narda survey meter with a broadband probe. The instrument measures all electromagnetic field exposure levels from 300 kHz to 50 GHz. Mike performs what is known as whole body spatial average measurements in a grid-like pattern in all controlled and uncontrolled access areas. The instrument logs time averaged data which represents the composite FCC percentage of the maximum permissible exposure.

Figure 1



The FCC sets the national standard for electromagnetic field safety. Millennium utilizes many different methods of evaluating facilities and determining compliance including near/far field calculations, rooftop modeling software, and field measurements from calibrated instruments. The methods are based on FCC prescribed methodologies as outlined in Bulletin 65 of the FCC's Office of Engineering and Technology entitled "Evaluating Compliance With FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields." The methods Millennium uses depend on the particular type of facility, and sometimes multiple methods are used as an evaluation of proposed facilities that do not yet exist or to create upper limit scenarios for a worst case evaluation.

More extensive methods of determining compliance are utilized on rooftop collocations where occupational workers are in much closer proximity to wireless base station antennas. Fig. 1 represents a platform near the top of a smokestack in which broadcast antenna systems are collocated. Fig. 2 is an FM broadcast antenna just below

the upper platform of the smokestack. Evaluations (calculations or modeling) of proposed facilities are based on reasonable upper limit parameters for an upper limit determination of compliance. Also we take into account future growth of the facility, usage surges, and ground reflections where appropriate. All evaluations include composite (sum total) exposure from all transmitting antenna systems collocated on a structure or in close proximity.

The FCC's exposure limits are frequency dependent in which the exposure levels for all frequencies across the frequency spectrum are not uniform due to the absorption rate of electromagnetic fields which varies for humans depending on the frequency of the transmitted radio signal. The FCC has two tiers of exposure limits. One tier is generally for controlled access areas only visited by occupational workers who should have training in basic

electromagnetic energy awareness and can exercise control or take precautions to limit exposure. The other more restrictive tier is for the general public that does not have knowledge that antennas exist in close proximity and therefore do not have the ability to limit exposure.

The FCC exposure limits are based on recommendations of standards setting and electromagnetic safety organizations. These recommendations are based on the best available scientific evidence and many decades of research on the potential impact on electromagnetic fields and levels of absorption by humans. The standards are primarily thermal in nature, and exposure limits are set 10 to 100 times more restrictive than levels that could result in any measurable change in temperature in body tissue.

Most radio communications facilities comply with the FCC exposure limits and guidelines by a substantial margin. For this reason, there is no need to institute exposure access controls such as "Notice", "Caution", or "Warning" signs, fences, painted demarcation lines, or personal protective clothing for example simply since exposure is too low in all areas to warrant concern due to the elevated mounting locations of antennas and the low power which most facilities operate. Most high power broadcast facilities are elevated high on tall communications towers where the general public does not have access. With an AM tower the entire steel structure is generally the transmitting antenna and ground level fences are used to limit access close to the tower base.

When exposure levels could meet or exceed the applicable standards, a combination of the above mentioned exposure access controls must be instituted along with a RF safety program for a site where radio communications antennas exist. Compliance with the federal guidelines is the shared responsibility of all FCC licensees and failure to comply can result in fines to the license holder.

FCC licensees must demonstrate compliance with the federal guidelines on rooftop facilities with any change in the antenna

configuration or operating parameters. When antennas of the base station are located on an antenna structure such as a self-supporting lattice type tower, monopole, guyed tower, watertank or smokestack, the antennas are typically 10 meters or more above ground level (10 meters = 32.81 feet). With the relatively low power and elevated positions of most antennas on a communications tower with respect to ground level, the maximum ground level exposure can rarely approach 1% of the applicable FCC exposure limit regardless of how many sets of antennas are collocated on the structure. For this reason, the FCC considers the facilities "categorically excluded" from routine evaluation at antenna heights above 10 meters (or above 32.81 feet). Categorical exclusion exempts a site from routine on-site evaluation. However, the facility is not excluded from compliance with the federal exposure limits and guidelines. Low power radio communications facilities elevated on antenna structures (away from access to close proximity, ie. greater than 10 meters or 32.81 feet) simply cannot generate ground level exposure levels that approach the limits under any circumstances due to the path loss of the radio signal over distance.

Shared communications sites are much more the norm and multiple licensees typically attempt to collocate antenna facilities to minimize the proliferation of towers. There is a substantial amount of cooperation among competing licensees to share antenna support structures.

The Telecommunications Act of 1996 states (paraphrased) that "no municipality may deny an application for a wireless telecommunications facility based on concern for any potential impact on health or safety from electromagnetic fields provided the licensee demonstrate via a qualified engineer that the facility complies with the applicable FCC exposure limits and guidelines."



Figure 2

The following links are helpful web sites that cover the subject of electromagnetic fields from wireless telecommunications facilities:

http://www.ctia.org/wireless_consumers/health_and_safety/index.cfm/AID/425

<http://www.fcc.gov/oet/rfsafety/>

<http://www.mcw.edu/gcrc/cop/cell-phone-health-FAQ/toc.html>

In summary, FCC licensees are required to take appropriate measures to ensure that all telecommunications facilities comply with applicable exposure limits and guidelines adopted by the FCC governing human exposure to radiofrequency electromagnetic fields (FCC Bulletin OET 65). Federal law (FCC Rule Title 47 CFR 1.1307 and 1.1310) sets the national standard for compliance with electromagnetic field safety to ensure the health, safety, and welfare of the public. The FCC exposure limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) and the International Radiation Protection Association (IRPA.) Thus, all facilities must comply with the standards of the IRPA, FCC, IEEE, ANSI, and NCRP. ■

Paul Dugan is a consulting engineer and founder of Millennium Engineering PC, a radio-system design and regulatory support firm based in Phoenixville, PA. For more information visit the firm's website www.millenniumengineering.net

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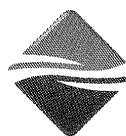
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Timothy S. Ormiston, P.E.

Happy New Year! With the beginning of the New Year, the Membership Committee will begin to formalize the details of our initiatives: Retention, Recruitment, Chapter Programming & Practices, and Student Outreach. Our 2007 Operating Plan includes:

- Establish committee with diverse regional and practice representation.
- Meet by conference call – quarterly
- Identify objectives – present and future
- Assign tasks to committee members
- Maintain or increase membership

The basic definitions of “membership” and some thoughts to go with them...

n1. the state of being a member, as of a society or club.

We've got mail! We received several responses to the Member Question of the Month published in the last issue. The most interesting one to me was from a member who wrote: *“In response to the question about what PSPE chapter activity or program I most enjoy, I got to thinking that I'm not aware of any at all! I've been a member since only 2004, but during*

this time I do not recall seeing notification of any activities...”

Sadly, the reason this person has not been contacted by his chapter is that the chapter in the area has been inactive for years. Regrettably, he is not alone – PSPE has a few inactive chapters, most in rural areas; which led to the “Question of the Month.”

For those members fortunate to belong to a chapter that provides programs and activities, an important part of being a member is participating. Our committee initiative addressing Chapter Programming and Practices will encourage Chapters to develop successful activities that draw member participation.

n2. the status of a member.

The PSPE website is a good starting point should you want on-line, up-to-date information about the Society. The Membership page is where you can ask questions about your membership information, learn more about our Associate Members, or direct potential members for application details. The NSPE web site is another great resource for membership information. Check out these

sites: www.pspe.org/membership.shtml or www.nspe.org/membership/

n3. the total number of members belonging to an organization, society, etc.

As of January 8, 2007 there are 2,316 members in PSPE. This is the number by which we will measure the success of our Committee efforts. Our goal for this calendar year is to maintain or increase the membership ranks relative to this number. For those with renewal dates of 12.31.06, you should have received your membership renewal letter from NSPE in December 2006. I encourage you to promptly renew for 2007! As always, I am interested in new ideas from members, ways to increase membership, and ways to add value to membership. If you have an idea that fits with our goals, please contact me via e-mail at: tsormiston@zoominternet.net.

**Reference from Dictionary.com Unabridged (v 1.0.1) Based on the Random House Unabridged Dictionary, © Random House, Inc. 2006*

What I find most rewarding among PSPE activities is our monthly chapter board meetings.

What kind of geek am I anyway? As an officer of Valley Forge Chapter for the last several years, I like to know that we're getting things done, planning ahead for at least a few months, and making decisions that benefit all members of our chapter and of PEs in general. Only at local board meetings can that happen most effectively. (I also don't have much interest in more formal affairs, including award ceremonies and banquets.)

I enjoy the camaraderie with the other officers and directors of our Board, even if they can only attend a few times per year. Also, an offhand remark by someone can occasionally kindle an interest for a new initiative or program, or encourage one of us to partake of a new activity. One of the biggest obstacles each of us faces in any volunteer organization is overcoming the inertia of our daily lives, including the use of our free time.

*Kurt Leininger, PE
Treasurer, and 2003-04 Past-President
Valley Forge Chapter*

Member Question of the Month...

Q If your chapter is not active, would you be interested in joining a virtual (online) chapter? Why or why not? What particular features would you look for?

A Send your reply to pspeinfo@pspe.org with the subject: Member Answer of the Month.

PSPE Award Nominations



Ernest U. Gingrich, P.E., F.NSPE
Engineer of the Year 2006



Matthew J. Carnish, P.E.
Young Engineer of the Year 2006

ENGINEER OF THE YEAR AWARD Requirements and Criteria

PURPOSE

This award is to distinguish and recognize, in a dignified public way, an outstanding engineer each year. It is not primarily to recognize work for or in the Pennsylvania Society of Professional Engineers, since there are other awards for this purpose. Nominations will be eligible for two years.

ELIGIBILITY

For consideration, a candidate must:

- Be nominated by a PSPE Chapter (only one nomination per Chapter)
- PSPE membership preferred but not required
- Have the Chapter supply complete nominating information on PSPE nomination form plus additional sheets if required, to the Awards Chair by March 3 of the year of the award
- Be an American Citizen
- Be a Resident of Pennsylvania
- Be a Registered Professional Engineer

CRITERIA FOR SELECTION

Selection shall be made generally on attainment by the candidate in the following categories:

- Occupational and Professional Achievements - Positions held in companies, businesses, government or other work agencies with which the candidate is associated. Overall responsibilities, both engineering and otherwise, are the prime indicators to be used as guides in judging. This is not to discount candidates involved in smaller units, agencies or businesses, since responsibility per individual in these instances can be equally as large. Consideration of engineering accomplishment - design, development, control, testing, research, writings (both formal scientific and informal journal articles), and other similar effort - will be given.
- Civic and Political Affairs -The active citizenship of the candidate as expressed in his gratuitous involvement in community affairs shall be a factor. This category includes such items as: recognized charity organization activity; public office (school board, municipal governing body, county, state or federal office); quasi-public bodies (civil defense, hospital, YMCA, etc.); semi-public (non-paid government appointed boards, commissions and study committees.)
- Engineering and Educational Affairs -The contribution made by the candidate to his profession and to the education of future engineers shall be a factor. Engineering technical and professional societies and their branches are generally the medium for work in the professional development field, while aid to educational development manifests itself in such things as: Jets, Young Engineers, high school guidance programs, college seminars and teaching, association or group workshops and technical society study committees.

EVALUATION CRITERIA

Collegiate Achievements	12%
Professional Society Activities	15%
Technical Society Activities	12%
Additional Activities (civic, fraternal, religious, humanitarian)	12%
Publications, Papers, Patents	12%
Engineering Experience	12%
Major Achievements	25%
Total	100%

Download an application from <http://www.pspe.org/awards.shtml#1>

YOUNG ENGINEER OF THE YEAR AWARD

Requirements and Criteria

PURPOSE

This award is to distinguish and recognize, in a dignified public way, an outstanding young engineer each year. It is not primarily to recognize work for or in the Pennsylvania Society of Professional Engineers, since there are other awards for this purpose. Nominations will be eligible for two years, provided the age requirement is met.

ELIGIBILITY

- Be nominated by a Chapter of PSPE (only one nominee per chapter)
- Have the Chapter supply complete nominating information, on PSPE nomination form plus additional sheets if required, to the Awards Chair by March 3 of the year of the award
- Be age 35 or under as of January 1, 2007
- Be a Registered Professional Engineer or Engineer in Training
- PSPE membership preferred but not required

CRITERIA FOR SELECTION

- Scholastic achievements
- Technical society activities
- Technical papers and patents
- Professional society activities
- Engineering experience and accomplishments
- Civic and humanitarian activities

EVALUATION CRITERIA

Collegiate Achievements	12%
Professional Society Activities	15%
Technical Society Activities	12%
Additional Activities (civic, fraternal, religious, humanitarian)	12%
Publications. Papers. Patents	12%
Engineering Experience	12%
Major Achievements	25%
Total	100%

Download an application from <http://www.pspe.org/awards.shtml#2>.



Engineers turn ideas into reality.

Paul Dugan, P.E. (Valley Forge PSPE President) took PSPE President Harve Hnatiuk, P.E.'s constant reminders that "Engineers need to toot their own horns more" literally.

Paul, an accomplished musician, is seen here playing his saxophone at a Chester County senior citizens center.



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Schedule

THURSDAY, MAY 31

12:00 pm

Reading Chapter Golf Tournament
Reading Country Club

FRIDAY, JUNE 1

8:00 am - 10:00 am

Professional Engineers in Private Practice Board Meeting

9:00 am – 12:45 pm

Tour and Glassblowing Class (Spouse option)
GoggleWorks Center for the Arts

10:00 am - 12:00 pm

Session: Start and Operate Your Own Engineering Firm

Panel:

Virginia Dailey, P.E., D & D Engineering, (est. 1995)
Joe Boward, P.E., Garvin Boward Engineering (est. 2004)
Robert Roop, P.E. Criterium Lockatong Engineers (franchise; branch est. 2001)
Michel Sadaka, P.E., Sadaka Corp. (est. 1994)

10:00 am – 12:00 pm

*Session: Constructability Reviews
Tom Kerins, Urban Engineers Constructability Dept.

12:00 pm - 1:00 pm

Lunch
Professional Engineers in Private Practice Award Presentation

1:00 pm

Shuttle begins to Penn State Berks Campus

1:30 pm - 3:00 pm

*Session: Katrina Levee Failure
Dr. Robert G. Traver, P.E.

3:15 pm - 4:45 pm

Session: I Have to Speak in Public?
Jackie Reeves, Nyman Group

3:15 pm – 4:45 pm

*Session: Nanotechnology
Mark Rutkowski, P.E.

5:30 pm – 6:30 pm

Welcome Dinner

7:00 pm – 10:00

Fabulous '40's Big Band concert and dance
Mid Atlantic Air Museum

SATURDAY, JUNE 2

8:00 am - 9:00 am

PSPE Past President's Breakfast

9:00 am - 12:00 pm

PSPE Board of Directors Meeting

12:00 pm - 1:00 pm

Lunch

2:00 pm – 3:00 pm

PSPE Former President's Council

5:00 pm – 6:00 pm

Order of the Engineer Ceremony

6:00 pm - 7:00 pm

President's Reception

7:00 pm - 9:00 pm

Installation and Awards Banquet
Speaker: Mayor Tom McMahon, PE

Watch www.pspe.org for
complete details!

* NY PDH eligible - approval pending



The Impact of the Chesapeake Bay Tributaries Strategy on Small Municipal Sanitary Sewer Systems

Eric J. Moore, P.E.

The Chesapeake Bay is a unique ecosystem and a natural resource that is valued by many people in the mid-Atlantic area for a myriad of uses from commercial activity to recreation. Unfortunately, the health of this precious natural resource is currently compromised by nutrient and sediment pollution entering the Bay from its tributary streams and rivers. The pollution has resulted in the formation or expansion of "dead zones" where the Bay waters no longer possess sufficient oxygen to support a healthy ecosystem. As a result, the Chesapeake Bay has been placed on the federal list of impaired waters.

Background

In 1983 the first Chesapeake Bay Agreement was developed as a voluntary government partnership to coordinate Bay restoration efforts. The original agreement was updated with the enactment of the Chesapeake 2000 Agreement in June of 2000, which was signed by Pennsylvania, Maryland, Virginia, District of Columbia, the Chesapeake Bay Commission, and the federal government. The Chesapeake 2000 agreement is intended to result in improvements in the Bay water quality and ecosystem health sufficient to remove the Bay from the impaired waters list by 2010. As a corollary to the 2000 agreement, the signatories were joined by New York, Delaware and West Virginia in a Memorandum of Understanding to cooperatively establish and coordinate pollution reduction measures.

The Chesapeake Bay Tributaries Strategy, currently under development by the Pennsylvania Department of Environmental Protection (PA DEP), provides the roadmap for the state's efforts to achieve pollution reduction. Targeting both point sources and non-point sources of pollution, the Strategy will impact sewage treatment plants, agricultural activity, and stormwater runoff, among other

sources of pollution. The Strategy as currently established applies to sewage treatment facilities receiving or permitted to receive more than 400,000 gallons per day (gpd) of sewage. Treatment facilities receiving less than 400,000 gpd must not exceed the limits for a 400,000 gpd plant, which means that treatment facilities with flow as low as 100,000 gpd could be affected. The PA DEP is promoting the use of nutrient credit trading to offset the impact of the Strategy; however, it appears likely that many small municipal wastewater treatment systems will struggle with the cost of complying with the new nutrient limits.

Costs to Comply

For many systems, the capital cost of upgrading treatment facilities will be by far the most significant cost encountered during the process. However, other ancillary costs will be incurred which municipal managers should consider when determining the impact of the Strategy on their customers. These additional costs will vary depending on the type and size of the treatment system. The following is a sample of the type of costs which may accompany nutrient removal:

Infiltration and Inflow: Infiltration and Inflow (I&I) are excess, non-sewage waters which enter the sanitary sewer system through the ground (leaking pipes and manholes) and from direct connections (sump pumps, interconnections with the storm sewer), respectively. The intermittent large increases of flow which result from inflow and the diluted wastewater strength that results from excessive infiltration can limit a system's ability adequately to treat the wastewater and remove nutrients. I&I are addressed primarily through two means: removal of I&I sources and/or storage and equalization of the flow surges which accompany I&I. The costs for either approach can be significant.

Testing & Monitoring: The Strategy will require additional testing for permit compliance, and operation of a nutrient removal system will require frequent, regular testing to monitor the process health. Complicating this issue for small municipal systems is the PA DEP's laboratory accreditation requirements. Many small systems have foregone the use of their own laboratories for much of the necessary permit compliance testing to avoid the significant QA/QC process required to maintain accreditation. These systems must employ outside testing

laboratories for compliance monitoring. As testing demands increase, an increase in the cost of testing services should be anticipated as a simple matter of supply and demand, especially in areas where there is a limited presence of testing laboratories.

System Operators: Operation of a nutrient removal system can require significantly more operator attention and sophistication than a conventional treatment system. The PA DEP is likely to establish a new operations license subclass to address nutrient removal systems. Municipal managers should anticipate an increase in training costs as a result. Additionally, the demand for skilled operators will increase, resulting in increased operator salary demands.

Electrical Power: Many small treatment systems are not currently achieving complete nitrification, the first step in the nitrogen removal process. Additional aeration will be required to achieve nitrification in these facilities, resulting in significantly higher electrical power costs for these systems. The additional electrical power necessary for any given facility will depend on the individual system; however, some additional power requirements can be anticipated for most facilities. Adding to the electrical cost component is the impending expiration of electrical rate caps established as a part of the industry deregulation. The rate caps will be lifted at different times depending on the service area, and should be completely lifted throughout most of the state by the end of 2010. Electrical power rates are anticipated to increase significantly, as much as 50% or more.

Sludge Disposal: Treatment systems which dispose of sludge by sending it to a larger treatment facility for processing may see a significant increase in their cost to dispose of sludge in this manner. The receiving treatment facility will need to account for the significant nutrient load presented by the sludge under their nutrient cap. This may lead some facilities to reduce the amount of sludge they accept or increase the cost of processing.

Other Issues

Municipal managers' concern should extend beyond just the potential increase in

sewer system costs, as the Strategy will have a more far-reaching impact. The nutrient caps will have an effect on new development, as new connections to the public sewer system will need to be accommodated under the receiving facility's nutrient cap. The caps are finite; therefore, to accommodate growth treatment systems will eventually need to obtain additional capacity through further improvement of the treatment system or through purchasing of nutrient trading credits. For areas experiencing significant growth the limited availability of capacity under the nutrient caps may drive development into rural areas, and possibly into adjoining municipalities.

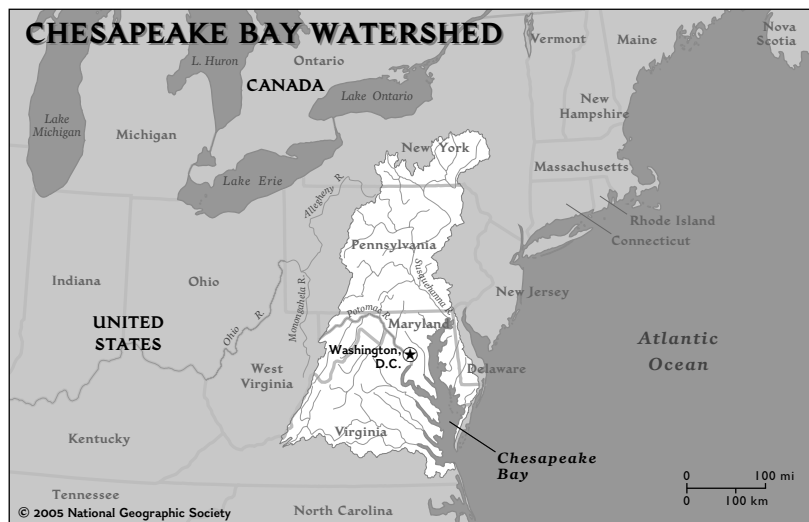
Sewage disposal is performed in areas without public sewers through the use of on-lot disposal systems. In order for on-lot systems to function properly, the solids accumulated in the septic tank (septage) must be removed periodically and disposed of. Failure to remove the septage may result in the permanent failure of the on-lot system over the long term. Many small municipal treatment systems accept septage, which is typically very high in nutrient content when compared to typical domestic sanitary sewage. The Strategy does not include any credit for the receipt of nutrients from septage toward a facility's nutrient cap. This may lead some facilities to reduce the amount of septage they accept and increase the cost of septage disposal. The increase in septage

disposal costs may in turn influence on-lot system owners to have their septic tanks pumped out less often. A reduced frequency of pumping will result in an increased occurrence of septic system failure. Failed on-lot systems present a health hazard, and the PA DEP may require the local municipality to provide public sewer to address the hazard. Under this scenario, a municipality may see the occurrence of unintended sprawl as well as the costs related to increasing the treatment facility capacity.

Conclusion

The Chesapeake Bay Tributaries Strategy will result in significant challenges for small municipal sanitary sewer systems, not all of which are readily apparent at first glance, and some of which may require cooperation with adjoining municipalities. Small municipalities often rely on their consulting engineer for guidance regarding sanitary sewer issues. Consulting engineers should initiate discussion of the potential consequences of the Strategy with their clients, and should take care not to limit the discussion to sewer system costs alone. Municipal sewer systems should begin planning for the Strategy now, and should include the ancillary concerns in addition to capital project planning. ■

Eric J. Moore, P.E.; Larson Design Group, Inc.; ejm@larsondesigngroup.com



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I encourage all PSPE members to get involved and toot your firm's own horn. A respectable way of doing this is by submitting an application for the "Private Practice Professional Development Award." The PSPE/PEPP Professional Development Award is presented to the nominated engineering firm that has made outstanding contributions to the advancement and improvement of the engineering profession through its employment policies and practices. The purpose of the award is to recognize those firms with the best engineering employment practices, and to encourage all firms to adopt progressive policies and practices.

A "private practice" employer is a for-profit firm or branch office of a firm, the primary function of which is to provide

engineering design or consulting services for infrastructure, facilities, or processes to clients in accordance with applicable state law. Excluded would be firms that provide both, design and construction services, wholly owned suborganizations supplying design services to a single parent organization, and research and development organizations.

The final selection for the state award will be made by the PEPP Awards Committee on the basis of both current and longtime reputation of the organizations under consideration, with particular emphasis on the preceding twelve months. All nominations must be submitted on the official form or a facsimile thereof. All attachments must be on 8½"X11" paper and be clearly referenced in the application form. The original and six copies of the nomination form and all

attachments must be submitted, no later than March 2, 2007 to: Pa/PEPP Professional Development Award, PSPE, 908 North Second Street, Harrisburg, PA 17102. Incomplete forms may lead to disqualification or low rating of nominees. Applications submitted should contain precise and accurate data. The application is available on the web at www.pspe.org. To obtain printed copies of the form, contact PSPE at 717.441.6051 or e-mail jennifer@wannerassoc.com.

Winners are invited to receive their awards on June 1, at PSPE's Annual Convention (May 31-June 2, 2007.) PSPE will send press releases about the winner to their local media and national publications.

Good Luck,
Johann F. Szautner, P.E.
PEPP, Northeast Region Vice Chair

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Political Action Committee Report

2007 Sponsor Recognition

Many thanks to the following individuals who contribute to the PSPE Political Action Committee fund. The PAC fund allows PSPE lobbyists to influence bills on behalf of PSPE members. PSPE is very active at the Pennsylvania state capitol. Each session we monitor legislation that could impact PSPE members in their profession. Your contributions are critical as PSPE affects bills such as those found in the article "On Capitol Hill."

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"Capitol" continued from p. 5

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The House Republicans had not announced their Chairs as of this writing.

L&I Publishes New Reg on Training and Certification Requirements for Code Administrators; Administration; Elevators and Other Lifting Devices

Pennsylvania Department of Labor & Industry (L&I) published new regulations in the December 16, 2006 PA Bulletin. The purpose of this final-omitted rulemaking is to update §§ 403.21, 403.26 and 405.2 (relating to Uniform Construction Code; swimming pools; and standards), as required by section 304 of the act, to the new successor building codes issued by the International Code Council and ANSI, and to incorporate the 2001–2005 statutory amendments to the act in §§ 401.1, 401.2, 401.5, 403.1, 403.25, 403.45, 403.46, 403.62, 403.62a, 403.65, 403.102, 405.7 and 405.11.

These sections were affected by several amendments to the UCC over the past few years.

The regulation can be found online at: <http://www.pabulletin.com/secure/data/vol36/36-50/2448.html>.

Legislative Activity

No bills of interest to PSPE were acted on since session began.

New Bills Introduced

No bills of interest to PSPE have been introduced yet this session.

2007 House Spring Session Schedule

Following are the scheduled 2007 session Housedays:

January 2, 16 (non-voting), 17 (non-voting), 22, 23, 24 (non-voting), 29, 30, 31

February 5, 6, 7, 12, 13, 14 (non-voting)

March 12, 13, 14, 19, 20, 21

April 16, 17, 18, 23, 24, 25, 30 (non-voting)

May 7, 8, 21, 22, 23

June 4, 5, 6, 11, 12, 13, 18, 19, 20, 25, 26, 27, 28, 29, 30

2007 Senate Spring Session Schedule

Following are the scheduled 2007 Senate session days:

January 2, 16, 17, 22, 23, 24, 29, 30, 31

February 5, 6, 7, 12, 13

March 12, 13, 14, 19, 20, 21, 26, 27, 28

April 16, 17, 18, 23, 24, 25, 30

May 1, 2, 7, 8, 21, 22

June 4, 5, 6, 11, 12, 13, 18, 19, 20, 25, 26, 27, 28, 29

Copies of all bills of interest are available from the PSPE office, or they can be accessed via the Internet at <http://www.legis.state.pa.us/WU01/LI/BI/billroom.htm>. ■

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Engineers Week 2007 Award Winners

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February 18-24, 2007

Engineers Week, a formal coalition of more than 70 engineering, education, and cultural societies, and more than 50 corporations and government agencies, is dedicated to raising public awareness of engineers' positive contributions to our quality of life.

Engineers Week promotes recognition among parents, teachers and students of the importance of a technical education and a high level of math, science, and technology literacy, and motivates youths to pursue engineering careers in order to provide a diverse, vigorous and informed engineering workforce.

Each year Engineers Week reaches thousands of schools, businesses, and community groups across the United States.

PSPE, along with our chapters and the support of NSPE, will be running a series of radio ads February 12 - March 9, 2007.

Listen for our messages on the following stations:

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Delaware Valley Engineers Week Council

Engineer of the Year - Joseph J. Viscuso, P.E., LS
Vollmer Associates

Young Engineer of the Year
Jeremy Colello, P.E., Pennoni Associates Inc.
and
Keith Yamatani, P.E., Washington Group International

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PSPE Pittsburgh Chapter

Distinguished Service
Col. Stephen L. Hill, USACOE

Dedicated Service
Virginia Dailey, P.E.

Silvio Lorenzi President's Gold Star Award
Dave Briskey, P.E.

Engineer of the Year
Gene Geiger, PE (posthumously)

Young Engineer of the Year
Tom Howell

Central Pennsylvania Engineers Week Council

John H. McCormick Educational Outreach Award
Joseph T. Lester, Jr.
American Society of Mechanical Engineers (ASME)

Young Engineer of the Year Award
Rachel Lingle Govelovich, P.E.
American Society of Civil Engineers (ASCE)
Gannett Fleming, Inc.

Engineer of the Year Award
Gary Hoffman, P.E.
American Society of Highway Engineers (ASHE)
Applied Research Associates, Inc.

Technical Achievement Award
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Pennsylvania Engineering Foundation

2006 Annual Report

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The Pennsylvania Engineering Foundation is a 501(c)3 organization working in partnership with the Pennsylvania Society of Professional Engineers.

908 N. Second Street
Harrisburg, PA 17102
717.441.6051

Cover Photo: Students, coaches and parents pause at the Pennsylvania capitol building. PSPE organized a visit for the group to meet their state Senators in April.

President's Message

William J. Bryan, P.E., P.L.S., F.NSPE, F. ASME

Engineering has played a critical role in the progress of mankind. In the development of modern industrial societies in many parts of the civilized world, engineering was considered more an art or science practiced by artists, designers, and "masters" who had the experience and reputation for the capability of doing a specific work.

Today, there is a growing crisis in the engineering profession that has the potential to produce serious negative effects on our national economy, social system, and defense. Large portions of the populations of North America and Western Europe are preparing to retire; leaving their knowledge, expertise, and skills to younger engineers and a potential significant gap in engineering talent is beginning to be felt. In this high technology world, the competition is not only fierce, it is final. Already the U.S. has experienced decline in predominant positions of steel, auto, electronics, shipbuilding, and manufacturing. Many other industries are under attack, and our strengths are eroding.

Our productivity and leadership in all these fields depend on the efficiency, inventiveness, and quality of our engineers, and the youth who enter the engineering profession. While there has been a reduction in the total number of engineers in the United States, the total numbers in many other countries have held steady or increased. Increases in the number of engineers in Eastern Europe and Asia have been the most rapid. However, growth is happening so quickly in these areas that engineers are still in short supply.

In the future, even more than in the past, the way Americans live will depend on the work and output of its engineers. Their imagination, inventiveness, and driving force will determine, in large part, our standard of living. Our nation's engineers can make the essential difference as to whether America becomes a society of recession, shrinking opportunity, and stagnation, or a nation providing for development, well being, and hope.

The Pennsylvania Engineering Foundation

The Pennsylvania Engineering Foundation (PEF) was incorporated in 1970, under the laws of Pennsylvania as a non-profit organization and is dedicated to using its resources and leadership talents to help meet the demand for qualified engineers. It is headquartered in Harrisburg and is state wide in scope. Its activities reach schools, industries and homes. It is empowered to exercise all rights and powers confirmed by the laws of the Commonwealth of Pennsylvania upon non-profit corporations.

In the future, even more than in the past, the way Americans live will depend on the work and output of its engineers. Their imagination, inventiveness, and driving force will determine, in large part, our standard of living.

- PEF has as its mission the charge of ensuring that engineering will continue to grow as a profession. Its ultimate goal is to inspire dedicated engineers capable of leadership in our industrial, technological society. Through its educational and professional programs and the dedication of its members, PEF is meeting the challenges of a changing world, working to raise the quality of life for all Americans.

- PEF has a board of trustees broadly representative of professional engineers in many disciplines.

- PEF works to foster and preserve the profession of engineering as a career.

- PEF promotes engineering education by providing career counseling material on engineering and technology to high schools and junior high schools in the Commonwealth of Pennsylvania.

And particularly important:

- PEF provides scholarship funds to students entering or enrolled in engineering programs in colleges and universities.

- PEF supports and manages the MATHCOUNTS program – the first national math coaching and competition program for 7th and 8th grade students.

Initially, the Foundation provided scholarship grants for engineering students attending accredited undergraduate engineering programs in the Commonwealth of Pennsylvania. Later, it worked to provide educational materials on engineering, mathematics, and science to high schools and junior high schools in the Commonwealth of Pennsylvania, and also added a graduate level scholarship grant.

In 1983, PEF's support of MATHCOUNTS began. MATHCOUNTS

is the first established nationwide coaching program and math competition for junior high school students. The focal point of MATHCOUNTS is a series of competitions at the regional, state, and national level. However, its real success is measured by the unique coaching component, which constitutes the longest period of time and demands the greatest amount of involvement. The objectives of MATHCOUNTS are:

- To elevate the prestige associated with achievement in mathematics among all seventh and eighth grade students. MATHCOUNTS materials are used with the whole class not just a gifted few;

- To increase awareness of the importance of mathematics among parents, educators, and the general public; and

- To bring about improvements in mathematics curriculum and instruction in seventh and eighth grades throughout the United States.

MATHCOUNTS culminates at the national competition held in May. Presidents Reagan, Bush, and Clinton have recognized MATHCOUNTS in Oval Office ceremonies. The program has received two White House citations as an outstanding private sector initiative. PEF supports this program through financial management and volunteer participation.

If you are interested in continuing the engineering tradition and would like to contribute to PEF contact Jennifer Summers at:

Pennsylvania Engineering Foundation
908 N. Second Street
Harrisburg, PA 17102
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Gifts will support the charitable and educational activities of PEF. ■

Charitable Donations

New legislation enacted by President George W. Bush on August 17, 2006, enables people age 70 ½ and older to be eligible for special tax benefits for charitable donations from their Individual Retirement Accounts (IRAs). This new legislation – the Pension Protection Act of 2006 – will allow older taxpayers to donate up to \$100,000 from their IRAs tax free to charitable organizations like Pennsylvania Engineering Foundation.

The Pension Protection Act contains several new tax provisions that are effective until January 1, 2008. Following are some of the IRA charitable rollover provisions within the bill.

- Donors must be 70 ½ or older
- The legislation only applies to outright gift transfers from IRA plans.
- A gift receipt of the charitable IRA rollover is required by the Internal Revenue Service.
- Distributions must be directed to the charity by the IRA provider.
- Only transfers made during 2006 and 2007 are eligible for deductions.
- Donor-advised funds are not eligible for charitable IRA rollovers.

To learn more about tax-free charitable IRA rollovers, please contact the Foundation at 717-441-6051.

Thank you

2006 MATHCOUNTS Gifts

Corporate

Burns Engineering Inc.
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Pennsylvania Federation of Business and
Professional Women's Clubs Inc.



The following firms, individuals, and organizations were instrumental in the success of Pennsylvania MATHCOUNTS 2006. We gratefully recognize their ongoing support and the value they add. On behalf of the students, coaches, parents and volunteers who enjoy the state MATHCOUNTS program, thank you.

Individual Gifts

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Scholarships

Drexel University
Gannon University
Pennsylvania Engineering Foundation
Pennsylvania State University
Temple University
University of Pittsburgh
University of Pittsburgh at Johnstown

MATHCOUNTS Winners 2006



The MATHCOUNTS team from **Sandy Run Middle School**, coached by **Sandy VanHorn**, placed first in the Pennsylvania MATHCOUNTS competition, taking home the traveling team trophy. Team members **Matt Tanzer**, **Ben Zauzmer**, **Todd Warszewski**, and **Matthew Gordon** scored the highest of 25 schools in the state competition. Sandy Van Horn coached the Pennsylvania team at the National competition. Coach VanHorn is a veteran of two previous National competitions.

Prior to the state competition, over 2,500 students participated in regional MATHCOUNTS competitions across the state. 159 students from 77 Pennsylvania schools competed in the state MATHCOUNTS competition, March 18, 2006.



Pennsylvania team to the National competition, pictured left to right: Douglas Komandt (alternate), Anthony Wang, Matt Tanzer, Ben Zauzmer, Sandy VanHorn, Nick Yannacone, and team mascot Crystal Wang. Pennsylvania placed 8th out of 57 teams in the national competition.

Pennsylvania MATHCOUNTS Countdown Round Top Ten Individuals 2006

Matt Tanzer

Sandy Run Middle School
Coach: Sandy Van Horn
Valley Forge Chapter

Nicholas Yannacone

St. Aloysius Academy
Coach: Dominic D'Amico
Delaware County Chapter

Anthony Wang

Valley Forge Middle School
Coach: Allison Long
Chester County Chapter

Ben Zauzmer

Sandy Run Middle School
Coach: Sandy Van Horn
Valley Forge Chapter

Douglas Komandt

Franklin Regional Middle School
Coach: Linda Lazzaro
Westmoreland Chapter

Benjamin Lei

Valley Forge Middle School
Coach: Allison Long
Chester County Chapter

Matthew Gordon

Sandy Run Middle School
Coach: Sandy Van Horn
Valley Forge Chapter

Timothy Wall

Grey Nun Academy
Coach: Geoff Wall
Bucks County Chapter

Arsenij Kouriatov

Tredyffrin-Easttown Middle School
Coach: Troy Deckebach
Chester County Chapter

Jonathan Katzman

Hershey Middle School
Coaches: Kevin Adams & David Yingst
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Director of Grading

David H. Fleisher P.E.
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Brookes A. Britcher Jr. P.E.
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Albert Mauthe

2006 Regional MATHCOUNTS Coordinators

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Greg Stewart¹**

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David McCullough PE¹

Blair Chapter
Sally Raabe²

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Sally Raabe²

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William Gorman Jr. PE²

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¹ PSPE Member

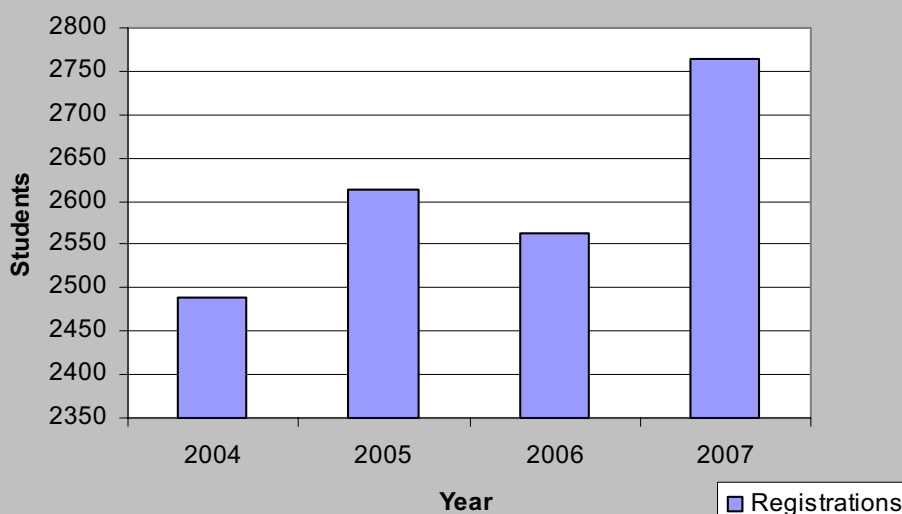
² PA Federation of Business and Professional Women (BPW) Member

³ Gannon University

⁴ Penn State University

⁵ University of Pittsburgh at Johnstown

Annual MATHCOUNTS Student Participation (Pennsylvania Regional Competitions)



Thank you

2006 PEF Scholarship Gifts

2006 Scholarship Winners

Individual Gifts

John F Beadle PE	Corinne A Mansfield PE
Serge Borichevsky PE	Charles D Meads PE
John F Bradshaw PE	Charles A Mouzannar PE
John Brun PE	David G Nichols PE
Daniel J Castellani PE	Kevin B OBoyle PE
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Daniel M Honig PE	Henry J Ufko PE
Richard J Jarosinski PE	H Eugene Waldner PE
Robert S Kaminski PE	David K Williams PE
William J Kormos Sr. PE	Clarence W Wysocki PE
John M Kulicki PE	Ronald W Zborowski PE

PEF \$1000 Award

John T. Trimmer
Lewisberry, PA
Bucknell University

PSCA \$1000 Award

Samantha Horvath
Elizabeth, PA
University of Pittsburgh

Harrisburg Chapter \$1000 Award

Andrew Knisely
Mechanicsburg, PA
Penn State University, University Park

PA Professional Engineers in Private Practice \$1000 Awards

Timothy Brauning
Montgomery PA
Lehigh University

Anna Filatova
Murrysville, PA
University of Pennsylvania

I support the Pennsylvania Engineering Foundation

Enclosed is my personal contribution toward:

MATHCOUNTS Scholarships PEF General Fund
(circle one)

Name: _____

Address: _____

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Amount Enclosed:

- ☐ \$500
☐ \$100
☐ \$ 50
☐ Other: _____

Checks payable to: PEF

Send check to:
PSPE/PEF
908 N. Second Street
Harrisburg, PA 17102

Thank you

There are two groups of people who deserve an enormous amount of thanks, without whom the MATHCOUNTS program in Pennsylvania would surely evaporate - the dedicated coaches who work with students to hone their mathematics skills, and the coordinators who juggle all the details and logistics for the regional and state competition. Following is a list of coaches whose students advanced to the state competition in 2006.

Shirley Beldin
Holy Name School

Vickie Bosso
St. Theresa School

Patrick Brickner
Our Lady's Christian School

Beth Brunnhuber
D.S. Keith Jr. High

Carol Calvert
Margaret Bell Miller

Patrick Campbell
Lower Macungie Middle School

Allan Chandler
Moravian Academy

Jim Collopy
Independence Middle School

William Corter
Central Mountain Middle School

Scott Culley
Rochester Area Middle School

Denise Cummins
Trinity Middle School

Dominic D'Amico
St. Aloysius Academy

Troy Deckebach
Tredyffrin-Easttown Middle School

Michael Duarte
Lower Macungie Middle School

Amy Euen
Richland Middle School

Mary Ferrell
St. Jerome

Matt Gibson
Newtown Middle School

Diane Goldsberry
Seneca Valley Middle School

Janet Graham
Lemoyne Middle School

Tracie Heinack
Butler Junior High

Rebecca Henry
Mount Nittany Middle School

Beth Hoover
D.S. Keith Jr. High

Sue Johnson
Central Mountain Middle School

Roy F. Jones
Hillcrest Christian Academy

Christine Kedzuf
Peters Township Middle School

Greg Keefer
Curtin Middle School

Dr. Susann Keska
Martin L. Mattei Middle School

Jennifer Ketler
William Penn Charter

Joshua Klur
Germantown Friends School

Joyce Komoroski
St. Louise de Marillac

Chris Konkus
Ambridge Area Jr. High School

April Kuzemchak
Bell-Avon Elementary School

Michael LaFave
North Pocono Middle School

Vicki Leiby
Wyomissing Area Jr. Sr. High School

David Lingle
Lycoming Valley Middle School

Allison Long
Valley Forge Middle School

Mrs. Manno
Garnet Valley Middle School

Robert Markley, Jr.
Mother of Sorrows School

Audrey Mars
Charles H. Boehm Middle School

Michael McConegly
Carson Middle School

Julianna McDonald
Philadelphia-Montgomery Christian Academy

Mary Kay Milliken
Albert Gallatin South Middle School

Lynn Mona
Park Forest Middle School

Susan Moyer
MMI Preparatory School

Cindy Murphy
Fretz Middle School

Emily Nelms
Park Forest Middle School

Donna Nunamaker
Beaver Area Middle School

Melissa Ola
Mars Area Middle School

Mike Oravec
Richland Middle School

Alison Overdorf
Moravian Academy

Susan Pors
Fleetwood Middle School

Mary Anne Ritchie
Pennwood Middle School

Lorraine Rutecky
Minersville Area Jr/Sr High

Julie Savage
Tunkhannock Area Middle School

Faith Shapiro
Manor Middle School

Donna Skosnick
D.H.H. Lengel Middle School

Brett Slider
Twin Valley Middle School

Gregory Smith
E.H. Markle Intermediate School

Phyllis Smith
New Hope Solebury Middle School

Sanford A. Smith
Muhlenberg Middle School

Sheila Stephanis
Elizabethtown Area Middle School

Susan Straight
Berlin Brothersvalley Middle School

Susan Szeic
Frazier Middle School

Sandy Van Horn
Sandy Run Middle School

Wendy Vannoy
Freedom Area Middle School

Geoff Wall
Grey Nun Academy

Dan Wallin
E.T. Richardson

Dustin Werdt
Blue Mountain Middle School

Mark Wigand
Keith Valley Middle School