

JANUARY 28, 2016

President's Message

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I wanted to begin Section's calend renewing your membership ren receive Civil Eng access to your

I wanted to begin the second President's Message of the Section's calendar year by saying thank you for renewing your ASCE membership for 2016. Your membership renewal assures that you will continue to receive Civil Engineering magazine every month, have access to your 5 free professional development hours through ASCE's Free On-Demand Webinars, access to the Society's member resources and continue to be an active supporter of the Civil Engineering community.

As for the Central PA Section, we have now held three dinner meetings providing technical presentations and

networking opportunities. We began the year in September with a presentation focusing on Full Depth Reclamation, a process to replace roadways in a sustainable manner. In October, the now officially recognized, Student Chapter at Messiah College hosted the Section Dinner Meeting and educated the attendees on the College's move from oil based energy use to more energy efficient natural gas. In November, the Section was honored to have Rich P. Vilello, Executive Director of the Governor's Center for Local Government and former Mayor of Lock Haven, talk to the members about civil engineering, ethics and engineering management at the local government level with examples from Mr. Vilello's time as Mayor. In addition to our Dinner Meetings, our Technical Groups also provided many technical presentation opportunities such as the Hydraulic Design of Dams in the US hosted by the Hydraulics and Environmental Technical Group, two lunchtime presentations and the 28th Central PA Geotechnical Conference all hosted by the Section's Geotechnical Groups.

In my first message, I briefly discussed one of ASCE's three initiatives, our country's Infrastructure challenges and our role as civil engineers. For this message I wanted to touch on another ASCE initiative, the Society's push to Raise the Bar. Over the last several years, the requirements for a Bachelors of Science in Civil Engineering degree have required less and less civil engineering courses; this will not be sufficient to prepare licensed civil engineers of the future. ASCE is recommending additional education for those seeking professional licensure; the additional education is a Masters Degree or 30 hours of graduate level courses. The goal of this initiative is to ensure that college graduates have the knowledge that is necessary to tackle our complex, modern day challenges and ultimately strengthen the civil engineering profession. ASCE is urging State Boards to adopt the provisions of this initiative or something similar. In August of 2015, the National Council of Examiners for Engineering and Surveying (NCEES) approved a position statement which reflects the Raise the Bar vision, so this is certainly one more step in reaching the goals of the initiative.

Finally, I want to end this message by again thanking everyone who contacted their Senators and Representatives regarding the importance of investment in our Nation's infrastructure. Your efforts ultimately culminated in the passage of the FAST Act, a five year transportation bill which will modernize our transportation infrastructure and provide a safer and more reliable system for its users. The American Society of Civil Engineers was integral in the passage of this bill and its passage and implementation should

VOLUME 46, NUMBER 2



WELCOME NEW MEMBERS

Francisco Aguirre, PE Stephen Polasko, EIT be considered a great success for our industry and the public whom we serve. Sincerely,

Christopher W. Smith, P.E., M.ASCE 2015-2016 Central PA Section President

2015 Christmas Party Enjoyed by All

Submitted by: Austin (Joe) Eberly, Vice President

On Wednesday, December 9, 2015, the Section held its annual Family Christmas Party. The event was attended by over 50 people, which included ASCE Central PA Section members, their families, and guests. A traditional Christmas dinner buffet was served, along with appetizers and a limited bar. This year's event was held at the Park Inn by Radisson on the Carlisle Pike in Mechanicsburg. The location was well-appointed, from the Park Inn's festive holiday décor to ample on-site parking.

Attendees enjoyed an evening of socializing and catching up with fellow members and friends. The highlight of the evening was a visit from Santa himself, who stopped by with presents and treats for the kids. He even took the time to sit with each child and review his or her wish list, before moving on to his next stop.

Again this year, the annual Kid's Coloring Contest was held, sponsored by the Central PA Younger Member's Group. Entries were separated into age groups and six \$15 Toys-R-Us gift cards were awarded to the winners. It is remarkable each year the quality of artwork that the kids create, congratulations to all the winners!

Also again this year, attendees of the Christmas party were asked to bring a new, unwrapped toy for Toys for Tots. This effort was a success with more than 20 toys being donated, thanks to everyone who participated. The Central PA Board would also like to thank everyone who helped with the planning of and participated in the Christmas Party, as we look forward to another successful event next December!





Younger Member Group Coordinates Trash Pickup

Submitted by: Chris Woloszyn, Younger Member Group

On Sunday October 18th the Younger Member Group completed their biannual trash pickup PennDOT's with Adopt-A-Highway program. A record turnout of 24 Younger Members and Penn State Harrisburg students attended the event. Members and students were treated to a free breakfast at Cracker Barrel prior to the event where students were able to



the Picture of volunteers prior to pickup

network and connect with the YMG professionals. The YMG is responsible for the Cumberland Parkway Interchange along US 15 in Mechanicsburg and completes a trash pickup event every spring and fall.

ASCE Members included: Kate Aulenbach, Joe Eberly, Bill Kingston, Michelle Madzelan, Jonathan Owens, Bethany Shumaker, Ramya Sivakumar, and Chris Woloszyn. The remaining attendees were students from Penn State Harrisburg.



Picture of volunteers after pickup



Local Government Initiatives at the November Dinner Meeting

Submitted by: Reza G. Lotfi, P.E., ASCE Central PA Chair of Engineering Management and Ethics Professional Group



From left to right: Chris Smith, Richard Vilello and Reza Lotfi.

The Section's Dinner Meeting was held on Thursday, November 12th at the Park Inn by Radisson in Mechanicsburg, PA. The speaker at this event was Mr. Richard (Rick) P. Vilello, Jr. Mr. Vilello is currently serving in Governor Tom Wolf's administration as the Executive Director of Governor's Center for Local Government Services (The Center) which plays an important role in the Pennsylvania Department of Community & Economic Development. Prior to this position, Mr. Vilello served four consecutive terms as the Mayor of the City of Lock Haven.

His presentation at this meeting focused on local government, smart growth, and land use. He touched on open government, transparency and accountability in the expenditure of public funds, municipal statistics and economic development. The Center's mission, he stated, is to be the principal advocate for local governments, and to provide a wide range of technical and financial services. The Center has full-time staff in Harrisburg and in five regional offices throughout

Pennsylvania.

With respect to community planning and land use, The Center recognizes and provides assistance to municipalities and urban communities in revitalizing downtowns and neighborhoods, attracting economic development and capitalizing on history and culture. It supports suburban communities that wish to accommodate growth and minimize traffic and storm water problems and cost of new infrastructure. The Center further aids rural communities to preserve farmland and natural resources. It provides assistance to Pennsylvania's flood-prone municipalities in ensuring compliance with federal laws.

Mr. Vilello remarked on the diligence and perseverance that communities in Pennsylvania demonstrated regarding natural disasters such as the historic floods that ravaged his own city, Lock Haven, where he has lived for many years. He commended engineers, authorities, and, of course, the people of Lock Haven for agreeing not to build a levee just for protection from floods, but to work together and build a beautiful levee with miles of elevated and paved walkway overlooking the scenic West Branch Susquehanna River. With the inclusion of benches, ornamental lights and an amphitheater, the levee project has brought a great deal of enjoyment and civic pride to the community.

As for the engineering students who were present at this meeting, Mr. Vilello encouraged them to get involved in the politics of their cities, towns, counties and municipalities. He told them that the communities and the people of Pennsylvania need their contributions and their leadership so that the infrastructure deficiencies that we face today will not be experienced by our future generations. Once the meeting ended, I was pleased to see that a couple of the engineering students at the meeting expressed interest in running for city council and in participating in the politics of their local government. I consider this to be a positive step and an encouraging one for the engineering community, and I thank Mr. Vilello for being a very motivating speaker as well.



2015-16 Student Awards Presented at November Dinner Meeting

Submitted By Christopher W. Smith, P.E. – President, Student Awards Chair

Also at the November Dinner Meeting, the Section recognized the outstanding academic achievements of four students from our Student Chapters; this was the 24th year for these awards. This award was available to students who either attend one of the five colleges/universities within the boundaries of the Central PA Section; Bucknell University, Penn State - Harrisburg Campus, Penn State - University Park, Penn College of Technology and Messiah College, or reside within our Section's geographical boundaries. This year, a total of six students applied for four \$2,000 awards. The four award winners were Danielle Berman, Laura Searles, Eric McCall and Dane Dewire all of whom attend Penn State -University Park. Congratulations once again and continued success throughout the remainder of your academic career and into your professional career.



Student Award Winners Danielle Berman and Laura Searles

Annual Section Hershey Bears Game Outing

Submitted by; Bill Kingston, E.I.T., CFM, YMG President



On November 20th, the Younger Member Group (YMG) hosted the fourthannual Section Hershey Bears Game Outing at the Giant Center in Hershey, PA. The Section/YMG provided discounted tickets to all Section Members and their guests. This year, for the first time ever, the Section reserved a private room, Coco's Den, for attendees to socialize and enjoy dinner before the game and during intermissions. The exciting game culminated with Connor Carrick's shorthanded goal with 14.8 seconds left to play, breaking a tie and sending the Bears to victory with a 3-2 decision over the Portland Pirates. A fun night was had by all in attendance and the event was a big success! We hope you will attend next year's event!



Central Pennsylvania Geotechnical Conference

Submitted by: Bruce Stegman and Jason Bowes

On November 4th , 5th, and 6th , 2015 the 28th Central Pennsylvania Geotechnical Conference was held at the Hershey Lodge and Convention to record levels of attendance. The conference was attended by over 420 engineers, geologists, contractors, and vendors, including 15 distinguished speakers and 72 exhibitors.

Speakers and Topics included: Theresa Andrejack Loux – Processed Recycled Glass Used as Lightweight Aggregate and other Geotechnical Engineering Applications; Donald Bruce – 2015 Terzaghi Lecture; Dr. J. Michael Duncan – Lower Jones Tract Levee Failure; Dr. Robert Holtz – Design of Footings on Clays Reinforced with Aggregate Piers; Dr. Robert Koerner – In-Situ Stabilization of Soil Slopes Using Nailed or Anchored Geosynthetics; Michael Mann. – New Drydock for the Maid in the Mist; Michael McGuire- Stability of Embankment Slopes with Time-Dependent Strength; Jay McKelvey - Challenges in Reinforced Earth Structure Design; Paul Moffitt/Bruce Shelly - I-495 in Wilmington, DE – The Leaning Towers Lateral Squeeze Effects on Pile Supported Bridge Piers Due to Mudwave Emergency Response and Retrofit; Axel Montalvo Bartolomei – A Historical Review of Embankment Seepage Design; Matthew Silveston – Enhancing Reliability and Quality of Drilled Shaft Quality Through Thermal Integrity Testing; Muhannad Suleiman – LRFD Design of Deep Foundations or Geothermal Deep Foundation Design; Dr. Timothy D. Stark, - IHNC Floodwall Failures during Hurricane Katrina: Recent Ruling; Daniel VandenBerge. – A Comparison of Limit Equilibrium and Finite Element Methods for Undrained Rapid Drawdown Analyses; and Steve Wendland – The Value of General-Contractor-Oriented Peer Geotechnical Peer Reviews.

Some of the most preeminent geotechnical consultants, suppliers and contractors displayed their services including: Academy of Geo-Professionals; ACF Environmental; ADSC-IAFD; Aerix Industries; Aero Aggregates; American Pile driving Equipment; Applus RTD; Berkel & Company; Cascade Drilling LP; Coastal Drilling East; Concrete Jack; ConeTec; Con-Tech Systems Ltd.; Deep Foundations Institute; DYWIDAG Systems International (DSI); Eichelbergers; Elastizell Corporation of America; Enviroscan; GAI Consultants; Gannett Fleming; Geobrugg North America, LLC; Geo-Institute of the ASCE; Geo-Instruments; Geokon; Geonor; GeoStructures; Geotechnics; GMS Piling Products; Golder Associates; GRL Engineers; GZA GeoEnvironmental; Hanes Geo Components; Hayward Baker; Hi-Tech Soil Stabilization; Innovative Geoscience Solutions, LLC; INOVA Geosynthetics; L.B. Foster; L.G. Hetager Drilling; Lally Pipe & Tube; Matrix Construction Products; McCrossin Foundations; McKinney Drilling Company; Menard Group USA; Monotube Pile Corporation; Moretrench; Navarro & Wright; Nicholson Construction Company; PennDrill Manufacturing; Pennsylvania Drilling; Precision Drilling; Quantum Geophysics; Richard Goettle; SAS Stresssteel; Schnabel Foundation Company; SISGEO North America; Skyline Steel; Specrete-IP Incorporated; Star Iron Works; Subsurface Constructors; TenCate Geosynthetics N.A.; Tensar International; Texel; The Neel Company; The Reinforced Earth Company; TRC Engineers; Triad Metals International; Underpinning & Foundation Skanska; Vibra-Tech; Wagman; Williams Form Engineering.

Attendees at this conference were awarded 10 PDHs (Professional Development Hours) for attendance at the 3 day event. These PDHs are awarded in accordance with the National Council of Examiners in Engineer and Surveying (NCEES) model law and rules; 10 PDHs have been approved by New York PE review board for this conference.

In addition to the technical content, the conference provides valuable networking opportunities with industry professionals across the country. Breaks are built into the conference schedule, allowing attendees to socialize, stroll through the exhibitor hall or explore the top-notch amenities and services provided by the Hershey Lodge. On November 4th, an opening reception for attendees was held in the evening. Thursday the 5th featured a social hour and buffet meal following the day's scheduled technical sessions.

The conference was organized by: Cari Beenenga, P.E., Jason Gardner, P.E. and Ida Black Gannett Fleming, Inc.; Bruce G. Stegman, P.E. Stegman Engineering; James B. Pease, P.E. and Casey Grzybowski McCrossin Foundations; and Vicki Porto, P.G..

To obtain further information on this, past, and future conferences, visit our website at: http:// www.central-pa-asce-geotech.org.



Section Geotechnical News

Submitted by: Thomas Imholte

The Geotechnical Committee is at it again. First, on December 17, 2015 the Committee hosted a free webinar at Gannett Fleming's Training Room at their Camp Hill Office. These free webinars are a way for the Central Pennsylvania Section to provide value to our membership. A Professional Development Hour was earned by all the attendees to help with their professional continuing education requirements.

Over 40 engineers and geologists packed the room to hear Dr. Fulvio Tonon, Ph.D., P.E., M.ASCE present the webinar entitled, "Introduction to Rock Mechanics". Rock outcropping is a common occurrence in Central PA so he had the full attention of the all the



attendees. Dr. Tonon provided an excellent introduction to the vast topic of rock mechanics.

He provided a lot of information in a little time and was sure to hit the key points including the impact of fractures and rock behavior under various loading conditions. He stressed that rock behavior can be complex and there are no "one size fits all" approaches to solving engineering problems dealing with rock masses.

Then on January 11, 2016 the Geotechnical Committee continued its Continuing Education Series and hosted a lunch and learn\webex on the use of TENSAR geosynthetic products for the purpose of roadway improvement. We recognize that it is not always practical for members to join lunch and learns in person due to time / travel restrictions. So, this meeting was made available by webex so that members could take advantage of this learning opportunity from the convenience of their own office.

The presenter was David Lipomi - TENSAR, Senior Regional Sales Manager, Oil and Gas Market Manager. Products that were presented include; Geogrids, and GlasGrid. More than 20 Section members attended the event that was also held at Gannett Fleming's Training Room in Camp Hill, PA.

Mr. Lipomi's presentation focused on the use of Geogrids for roadway subgrade improvement resulting in improved performance and lower cost by reducing the requirements for aggregate and asphalt layer thickness. Several practical examples and case studies were presented. The presentation also covered the use of GlasGrid for asphalt overlay applications to minimize reflective cracking and improve the "life" of the roadway. Again, several practical examples and case histories were presented. Dave also shared his knowledge of common installations issues and lessons learned.

Professional development hours for both PA and NY were provided to attendees of this lunch and learn.

The next Geotechnical Committee event will be held on February 10, 2016 when Section Dinner Meeting will have a distinct geotechnical focus as Dr. Donald Bruce, Ph.D., C.Eng., D.GE, M. ASCE; President Geosystems, L.P., will present the 2015 Terzaghi Lecture; "The Evolution of Specialty Geotechnical Construction Techniques: The "Great Leap" Theory. This is a rare treat to be able to hear the Terzaghi Lecture right here in Central PA so be sure to reserve your spot early.



Hydraulic Technical Group Presentation

Janka Ovcharovichova, Ph.D., P.E., Chair

The presentation of Hydraulic Technical Group of Central PA ASCE section was held on Monday, December 14, 2015. The speaker was Paul G. Schweiger, P.E., CFM, manager of Dams and Hydraulics section at Gannet Fleming, Inc., Harrisburg. The title of the presentation was Hydrologic Design of Dams in the United States; past present and future. The presentation earned 1.5 PDH counting toward the professional engineering license requirements. Thirty one engineers and professional were in attendance.

Mr. Schweiger is a Vice President and manager of Gannett Fleming's Dams and Hydraulics Section in Camp Hill, Pennsylvania. He received Bachelor's and Master's degrees in Civil Engineering from the University of New Brunswick, Canada. He has over 30 years of experience working on dams, flood control projects, and water supply systems. His technical specialties include conducting dam assessments, designing new dams, and dam rehabilitation. He is an approved FERC facilitator for performing potential failure modes analysis exercises for dams, and serves as an expert hydrology and hydraulics engineer on Independent External Peer Review panels for several United States Army Corps of Engineers dam and flood control projects. He managed and co-authored the recent update to FEMA's Federal Guidelines for Dam Safety - "Selecting and Accommodating Inflow Design Floods for Dams [FEMA P-94/2013]".

The presentation covered:

- 1. History of hydrologic design of dams in the United States
- 2. Current state of the practice for selecting design floods for dams
- 3. Inconsistencies in current state and federal guidelines
- 4. Highlights from the updated FEMA federal guidelines



Date: 02/22/2016

Our First Engineers Week Breakfast Time: 8:00 AM at Messiah College

Date: 02/24/2016

Our Annual Banquet at the West Shore Country Club Time: 5:30 PM Social 6:00 PM Dinner 7:00 PM Program



Please plan to join us for the Central Pennsylvania Engineers Week Council First Engineers Week Breakfast and our Annual Banquet where we celebrate Engineers Week. More information including flyer to follow.





CPEWC Educational Outreach Activities 2016



 Future City Competition – January 23, PA State Museum Contacts Steve Roman: <u>sroman@wbcm.com</u> and William Sutton Email: pennsylvania_central@futurecity.org Website: <u>http://futurecity.org/pennsylvania-central</u> Facebook Page: futurecitycentralpa This year's theme: Waste Management for our Future

> The Future City Competition provides a fun and exciting educational engineering program for seventhand eighth-grade students that combines a stimulating engineering challenge with a "hands-on" application to present their vision of a city of the future.

2. Harrisburg Area Mathcounts Competition – February 13, Penn State Harrisburg

Contact Eric Gogola: <u>egogola@gmail.com</u> Website: <u>www.mathcounts.org</u>

A national middle school coaching and competitive mathematics program that promotes mathematics achievement through a series of fun and engaging "bee" style contests.

- 3. Capital Area Science and Engineering Fair February 25, Whitaker Center, Harrisburg
 - Judges needed for all categories

Contact Valerie Knowles - casef@whitakercenter.org.

- Judges needed for CPEWC Special Awards Engineering category Contact Sue Benjamin: <u>Sbenjamin@hersheys.com</u>
- Check with your individual societies for judging of other Special Awards.

Students, grades seven through 12, exhibit projects in one of 15 categories. After a two-day competition, two senior high students will be chosen as grand champions to compete at ISEF.

4. Whitaker Center Engineers Week Activities – February 20-21, Whitaker Center, Harrisburg

Contact Sue Benjamin: <u>Sbenjamin@hersheys.com</u>

Volunteers needed in 2-hour shifts to conduct hands-on demos and activities with students. Share your enthusiasm for engineering and make a difference in a young person's life.

New this year for all volunteers at Whitaker Center, they will ask if you have security clearances that are required for any educational faculty and persons who volunteer. If you haven't applied for the child abuse and FBI clearances, we are asking you to consider doing this. The clearances will be good for 5 years.

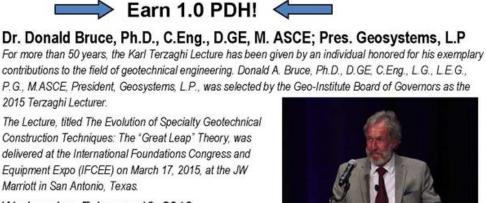


Program:

Newsletter



FEBRUARY 2016 DINNER MEETING TOPIC: Geotechnical



- When: Wednesday, February 10, 2016 5:30 PM – Social Hour with Cash Bar 6:15 PM – Life Member Recognition 6:30 PM – Buffet Dinner 7:30 PM – Presentation
- Where: Park Inn by Radisson Lower Ballroom 5401 Carlisle Pike Mechanicsburg, PA 17050



- Dinner: Dinner Buffet Style Including Salad, Breaded Chicken Breast Parmesan, Meat Lasagna, Pene Pasta, Assorted Desserts, Iced Tea, Hot Tea, and Coffee
- Cost: \$20 Members \$15 – Students \$25 – Non-members Payment at the door (checks made payable to "ASCE Central PA Section")

RSVP to Andrew Ottinger by Friday, February 5, 2016 at 3 p.m.: email aottinger@gfnet.com phone 717-763-7212 ext. 2685

Visit us on the web at http://asce-pa.org/



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New and Events

Event

Date

Section Meeting (Geotechnical Section) Engineers Week CPEWC Breakfast CPEWC Award Dinner Section Meeting (Transportation Section) Section Meeting (Structural Section) Harrisburg Senators Game and Picnic Annual Knoebels Picnic February 10, 2016 February 21-27, 2016 February 22, 2016 February 24, 2016 March 9, 2016 April 13, 2016 June 10, 2016 July 23, 2016

Location

Park Inn By Radisson (see page 10) Details to come Messiah College West Shore Country Club Details to come Details to come Detail to come Knoebels Amusement

Please visit <u>www.asce-pa.org</u> for more information

Address Change? Questions About ASCE?

If you are an ASCE member, and wish to update your address information, please visit: <u>www.asce.org/myprofile</u>.

If you are a member of ASCE, and have questions, please email them to: <u>member@asce.org</u> or <u>centralpa.asce@gmail.com</u>.

Questions about the ASCE Central PA Section Newsletter? Send an email to Jason Taylor, Newsletter Editor, at <u>jtaylor@aegroup-llc.com</u>.