the news

PHILADELPHIA SECTION
AMERICAN SOCIETY OF CIVIL ENGINEERS
Web site: http://www.asce-philly.org
National ASCE Central Number 1-800-548-ASCE • Toll Free

The Sidney Robin Memorial Newsletter of the Philadelphia Section ASCE

Vol. 89-9 — Our 104th Year — May 2017

PHILA. SECTION COMMITTEES

Our Section runs very well and it is mainly a result of the dedication and service of our many volunteers, both our Officers and Board Members as well as our various Committees. While many of you know the former group well, you may not be all that aware of the latter. Our Committees address many of our regular and ongoing issues and keep our Section vibrant and in the forefront of service to our membership. A list of our current Committees, chairs and members is provided below.

This list is intended to let you know what Committees there are and who serves on them, in order to recognize their diligence and service. Additionally, if you have a particular interest in helping the Section as a Committee volunteer, this list advises you what groups we offer. If you would like to join a Committee, please reach out to us at **info@asce-philly.org** or through our Section Secretary, **Briana Earle** (contact information is provided on page 2).

AUDIT – Jen Reigle (chair), Guy DiMartino, Cathy Farrell, Marc Preim, Angelo Waters

AWARDS – Bob Wright (chair), Carol Martsolf, Allan Moore, Joe Natale

Engineers Week Hall of Fame Recognition – Ruben David

BUDGET AND FINANCE – Marc Preim (chair)
- *Capital Improvement* – Spencer Finch (chair), Guy DiMartino, Joe Platt, AnnMarie Vigilante, Bob Wright

CIVIL ENGINEERS IN GOVERNMENT – Ruben David, Bob Wright (co-chairs)

COMMUNICATIONS – Briana Earle (chair)
- *E-mail Outreach* – Nha Truong
- *Webmaster* – Joe Natale
- *Newsletter* – Bob Wright (editor); Spencer Finch, Nha Truong (contributors)

Sponsorship – Bob Wright

CONTINUING EDUCATION – Angelo Waters (chair)

Continued on Page 5

ASCE VISION
Civil Engineers are global leaders building a better quality of life.

ASCE MISSION
Provide essential value to our members and partners, advance Civil Engineering, and serve the public good.

2017 SPRING SOCIAL & DINNER DANCE

American Society of Civil Engineers, Philadelphia Section

THURSDAY, MAY 4, 2017

Cocktails & Networking 6:00 PM, Dinner 7:00 PM, Social Program – following Dinner

Sky Philadelphia, Top of the Tower, 3 Logan Square, 1717 Arch Street, 51st Floor

We hope you will be able to join us at our last Section event of the season, our annual Spring Social. As is our custom, we will thank our outgoing Officers and Board Members, induct the incoming slate, highlight our Delaware Valley Science Fairs 1st Place winners, and honor our Section Award recipients for this year.

MENU CHOICES: Honey mustard glazed chicken • Pan-seared New York strip steak • Chef's choice vegetarian entrée

RSVP: Please visit our website for registration information (www.asce-philly.org) RSVP's close on May 1

COST: $70, $40 for government agency employees
A cash bar will be available. Two drink tickets will be included in the dinner price.

PLEASE JOIN US for our end-of-season festivities, socializing, networking and fun at an interesting and different venue, which provides extraordinary views of the City skyline and region.

DREAM BIG!

On April 11 and 12 our Section brought the **Dream Big** film to Philadelphia, where it was shown in the IMAX theater at the Franklin Institute. There was an excellent turnout for this amazing event, with one showing on April 11 with 277 attendees and two showings on April 12 which brought out another 131 and 167 viewers respectively. Thanks to Section Director **Kazi Hassan** who did a wonderful job coordinating the effort to bring the film to our area.

The appreciation is reflected in the quotes below from some of the attendees:

"This is great for kids because it shows how exciting and influential Engineers are! Kids don't know what Engineers do." – Cindy O'Kane

"Made the image of science soar! Not just for nerds!" – Joanne Bernardini

"As an educator, I loved seeing the children engaged, having a blast while exploring STEAM. Science is fun and this film captures the spirit and energy of what is possible in this world. Children viewing this film see Engineering as art, but most importantly, the way Engineers can change and shape the way we live. While I want to DREAM BIG, I won't sleep tonight!" – Jennifer Bernardini

"My daughter is a teacher running a STEAM program at her school. This movie is an inspirational for any child to be an Engineer." – Rick Bernardini

"This movie made me feel like a kid again. This is why I became an Engineer." – Darren Black

PRESIDENT'S MESSAGE

As my President's term winds down, I would like to thank the dedicated Section Board members, who I had the pleasure to work with over the last year. The Section continues to be successful due to their passion and commitment. I would like to thank: **Cathy Farrell** for organizing our fantastic schedule of monthly Section Dinner Meetings; **Angelo Waters** for his coordination with PDH credits and coordination with our Technical Groups and Institutes; **Briana Earle** and **Mohamed Elghawy** for coordinating the monthly Section email blast, and managing all the Section's correspondence; **Marc Preim** and **Jennifer Reigle** for handling all the finances and keeping the Section's budget on target; **Nha Truong** for keeping up to date on all the membership information, preparing the slide show that gets presented at every Section dinner meeting, and sending the Section's email blast. Also, I would like to thank our Directors who handle many tasks – **Troy Illig** for coordinating the dinner meeting logistics at Maggiano's and planning the always anticipated Spring Social on May 4th; **Andrew Bechtel** for heading the scholarship committee; **Spencer Finch** for advancing grand plans to memorialize Engineering feats in the area; **Kazi Hassan** for bringing **Dream Big** to Philadelphia; **Joe Natale** for being the Section's webmaster; and **Jeanien Price** for heading the check-in table at our monthly dinner meetings. Thanks to **Josh Amsler, Dennis MacBride, Jay McKelvey, Eric Lindhult,** and **Bill Thomsen** for providing leadership to our Technical Groups and Institutes; and **Kevin Brown** for his leadership with the active Younger Member Forum. Last but not least, I would like to extend a thank you to **Bob Wright** for all that he does for the Section. He wears many hats, serving as the Section's Editor-in-Chief of *THE NEWS* and the chair of the awards committee, but most notably is a fantastic mentor and resource for the Section.

Again, I want to thank the Section for great support throughout the year. It has truly been an honor and pleasure to serve such a great group. With your support and active participation, the Section continues to thrive, and is well positioned to continue its successful and esteemed history. Thank you!

Sincerely,
Guy DiMartino, P.E.
President, ASCE Philadelphia Section

MEMBERS IN THE NEWS

PENNONI NAMED ENGINEERING LEADER OF THE YEAR

Past National and Section President **C. R. "Chuck" Pennoni** was named the **2017 Engineering Leader of the Year** by the College of Engineering at Drexel University at a ceremony at Drexel on March 9. Chuck was cited as "not only a brilliant Engineer but one of the greatest University benefactors Drexel has ever known" by the University.

Since 2003, the College of Engineering has chosen a worthy delegate for this prestigious award, and Chuck is the 14th Leader of the Year, alongside a distinguished list of individuals that includes presidents and chief executive officers of major corporations, inventors, astronauts, academics, and industry leaders. This award is given to individual who demonstrate leadership in the development of technology-based solutions to societal problems, and serve as an example of outstanding achievement for current and future generations of Engineers. Chuck has spent much of his career teaching other Engineers and remaining highly involved in education. He has served on the Engineering advisory boards of Widener University, the University of Pennsylvania, and Drexel University and is governor emeritus at the Pennsylvania State System of Higher Education. The company he founded, Pennoni Associates, celebrated 50 years in business in 2016.

We congratulate Chuck on yet another honor in his illustrious career!

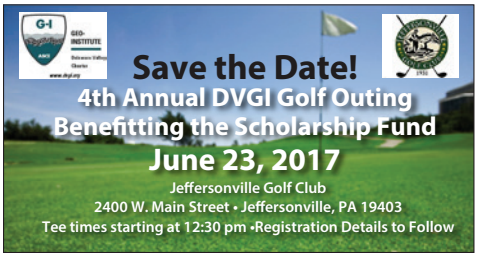
SECTION SCHOLARSHIPS AWARDED

We are happy to report that Section Scholarships were awarded to four deserving students. A total of seven good applications were submitted. Awards were made for the Section Scholarship to **Cory Bogas** of Temple University, **Maissoun Ksara** of Drexel University and **Sarnina Tufano** of Drexel University and for the Section Member Scholarship to **Catherine Martsolf** of Temple University. All of the students were on hand to be recognized and receive their checks at our April Section Meeting.

Thanks to the Scholarship Committee and Chairman **Andrew Bechtel** for handling this always difficult task, which was not made any easier by the caliber of the candidates and submissions.

The Delaware Valley Engineers Week/ASCE Undergraduate Scholarship was awarded to **Danielle Schroeder** of Drexel University during Engineers Week in February. This is administered and selected by the Engineers Week Committee and funded by our Section.

Congratulations to all of our Section Scholarship recipients!



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PUBLICATIONS COMMITTEE
Editor of *THE NEWS*
Robert Wright

Section Outreach Coordinator
Nha Truong

SEND COPY TO:
ASCE News, c/o Urban Engineers,
530 Walnut Street, Philadelphia, PA 19106

COPY DEADLINE FOR Summer 2017 ISSUE
June 28, 2017

YOUNGER MEMBER FORUM NEWS

Nicole Eno, Forum Editor
Kevin Brown, Forum President 2016-17
Urban Engineers, Inc.
530 Walnut Street
Philadelphia, PA 19106
kbrown@urbanengineers.com

K-12 OUTREACH

FEBRUARY 24 – NORTH PENN E-WEEK WRAP UP

YMF returned for a second year in a row to North Penn High School in Lansdale, as part of our Engineers Week programming, with the purpose to allow students to engage with professional Engineers and Engineering college students. YMF K-12 Co-Chair **Charlie Mumford** introduced the day's four hour planned activities and ASCE's film *Dream Big* with clips to highlight Engineer paths and Engineering roles in society. He coordinated the effort, recruited numerous volunteers and presenters, and led and facilitated the entire visit.

Volunteers led multiple round-robin rotations with all 200 students, dividing students in small groups and rotated from Engineer to Engineer to have candid, genuine discussion about the Engineering field.

More details on this event will be provided in the next edition of *THE NEWS.*

GETT CONFERENCE

MARCH 25

YMF participated in the **17th Annual GETT (Girls Exploring Tomorrow's Technology)** Conference. We ran a booth called **MacGyver Challenge: Impossible Tower**, where students had to build the tallest structure out of a sheet of paper, a foot of masking tape, and a paper clip. Additionally, we ran a breakout session called **Keeping You In Suspension**, where high school students learned about bridges and built beam and suspension bridges out of straws. The conference was attended by over 800 girls in grades 5–10 and over 300 parents.

YMF/DELCO PSPE NETWORKING EVENT

MARCH 30

YMF joined forces with members of the Delaware County Chapter of the Pennsylvania Society of Professional Engineers at Sligo in Media. The event consisted of about an hour or so of networking, with small bites offered, followed by a series of brief technical presentations with one PDH being offered to attendees. **Alaina Roberts** of Boeing presented on what Civil Engineers do at Boeing. **Jesse Gormley** of Pennoni followed on a steel bridge repair project in Mount Holly, NJ. Finally, **Catania Engineering** presented on sanitary sewer force main replacement. The event was well attended, and all three presentations were exceptional. YMF would like to extend a thank you to PSPE for yet another successful year of this event.

CANSTRUCTION

MARCH 31

YMF's team competed in the 11th Annual CANstruction Philadelphia Competition, against 10 other teams, in a very successful competition. YMF built a "can" replica of the Philadelphia Art

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NEWLY-INSTALLED LIFE MEMBERS HONORED IN APRIL

Life Membership in ASCE is a major milestone in a member's tenure. To achieve Life Membership, one must have reached the age of 65, paid dues for a minimum of 30 years, and have 10 years' continuous membership immediately preceding the attainment of Life Membership.

Life Members are exempt from dues and need only pay a small service fee to receive *ASCE News* and *Civil Engineering* magazine.

This year, we are proud to have a relatively large "crop" of 24 new Life Members in our Section for 2017:

Thomas Branigan, Benjamin Brindley, Mark Cipollini, Daniel Daily, Charles Denny, Michael D'Onofrio, George Duda, Anthony Eith, Alexander Fazzini, Howard Hawkins, Michael Keffer, Walter King, Gary Knappick, Robert Mackie, William Mulloy, Charles Olivo, John Peirce, Fredric Plotnick, Walter Sawruk, Faruq Siddiqui, Rodney Simonetti, Jerry Snyder, Robert Strunk, Joseph Viscuso.

We were pleased to be able to have Messrs. Branigan (and Mrs. Branigan), Mulloy, Peirce and Siddiqui in attendance at our April Section meeting as our guests for their citation and congratulations.

PAST PRESIDENTS HONORED IN APRIL

It has become another in a series of Section traditions to honor our Past Section Presidents at our April meeting. Each April, we invite them to come out, be recognized, and enjoy a dinner courtesy of the Section (not necessarily in that order of priorities!) to cite their contributions to the Section. We are always happy to see them, and many of them are in attendance at Section meetings when their busy schedules permit.

This year, we were pleased to see 17(!) of them taking the time to be at the April meeting:

William Malarkey, 1983-84
J. Richard Weggel, 1989-90
Klaus Fuelleborn, 1992-93
Robert Wright, 1993-94
William Thomsen, 1994-95
Faruq Siddiqui, 1999-2000
Thomas Branigan, 2000-01
Chris Rood, 2001-02
Ruben David, 2002-03
Carol Martsolf, 2006-07
James Markham, 2007-08
Mark Tiger, 2008-09
Kristen Bowman Kavanagh, 2009-10
Jeremy Colello, 2012-13
Jennifer Walsh, 2013-14
Joseph Platt, 2014-15
AnnMarie Vigilante, 2015-16

Thanks to Membership Secretary **Nha Truong** for contacting the Past Presidents and getting them to come out (maybe by offering them a free dinner...?).

SECTION OFFICERS AND BOARD OF DIRECTION – 2017–18 SEASON

At our upcoming Spring Social on May 4, our Section's officers and Board members for the coming season will be officially installed. This slate was recommended by our Nominating Committee and adopted by our Board. They are as follows:

President Elect: Cathy G. Farrell, HNTB, Inc.
President Elect: Angelo Waters, Urban Engineers, Inc.
Vice President: Kazi Hassan, Pennoni Associates, Inc.
Secretary: Briana Earle, Langan Engineering & Environmental Services*
Treasurer: Jennifer Reigle, Pennoni Associates, Inc.
Membership Secretary: Mohamed Elghawy, Traffic Planning & Design, Inc.
Directors: Andrew Bechtel, College of New Jersey; Kevin Brown, Urban Engineers, Inc.; Spencer Finch, Langan Engineering & Environmental Services*; Troy Illig, WSP*; Joseph Natale, WSP*; Jeanien Price, Philadelphia Department of Streets
Past Presidents: Guy DiMartino, Traffic Planning & Design, Inc.; AnnMarie L. Vigilante, Langan Engineering & Environmental Services**; Joseph Platt, Traffic Planning & Design, Inc.**

**These positions have one year remaining to serve in their current terms.*

***In accordance with our Constitution and Bylaws, only the immediate Past President will serve on the Board, and only for a one-year term. We show the most recent three Past Presidents as has become our tradition.*

We wish these brave and generous folks our collective good luck for the coming season.

OVER AND OUT...

It's that time again – we conclude another successful (at least as we see it...) season and our Section's extended summer vacation is in sight, meaning that publication of *THE NEWS* is completed until the fall. While we like to think of this as a somewhat sad occasion, we realize there will probably be some dancing in the streets – and keep in mind this would be Engineers dancing, so be on the lookout for some particularly unusual moves. In keeping with custom, the busy and dedicated staff of *THE NEWS* will put our pens, blue pencils and keyboards down, with the promise that someone will wake us from our extended siesta briefly to produce a short summer edition in the late June/early July timeframe.

We know that most of you will wonder why we need a break and from what, but this is what we do, and it works, so we'll keep doing it. Thus, this is our last full edition of *THE NEWS* until our 2017-18 season begins in September. We hope our legions of fans will be able to bear with (or without?) us until then, and we wish you a good summer.

APRIL DINNER MEETING

April 6, 2017 Philadelphia Marriott West, West Conshohocken, PA

Breakout Sessions

by Robert Wright, Editor

April showers were pouring on us as we made our ways to our April Section meeting, just across the Schuylkill River from the trendy town of Conshohocken (a Native American name, allegedly meaning "great round bowl place", referring to the bend in the river at this point). Said river was running fairly fiercely from those April showers, and given the temporary closure of the nearby Villanova Conference Center, our spot for this gathering for the past seven years, we found a new locale for dinner and the three topic choices that followed. (For those of you who are more astute at reading *THE NEWS*, we erroneously noted in the meeting announcement in our last issue that this was the sixth April that we would be offering the breakout session format, merely proving that maybe we can write better than we can count.)

Usually, this time of year, the nice weather and increased daylight work against us getting folks to the meeting, but this year the weather probably helped folks decide to find a dry place, so a nice-size crowd of nearly 140 showed up at the Marriott in West Conshohocken, a new venue for us, to enjoy our last Section meeting of the 2016-17 season.

The topics that were offered were

- **SR 30 ABC Bridge (sponsored by the Structural Engineering Institute (SEI))**; Presenters **Jeff Konrad** and **Pete Mazzeo**, HNTB; an outline of a bridge replacement project in PennDOT District 11-0 on US 30 that occurred over one weekend
- **Partially Grouted Rock (sponsored by the Environmental and Water Resources Institute (EWRI)**; Presenter **Bechara Abboud**, Temple University; which covered the evaluation, selection and design of scour countermeasures for PennDOT bridges, many in District 6-0
- **Lightweight Aggregate (sponsored by the Delaware Valley GeoInstitute (DVGI))**; presenter **Craig Calabria**, University of Pennsylvania; which highlighted the use of foamed glass lightweight aggregates on various highway and bridge applications and green roofs

Section President **Guy DiMartino** had the unenviable task of getting this big crowd organized and seated, and, after a few announcements and thanks for a great season, introduced two representatives of the featured Student Chapter, Villanova University. Co-President **Chris Medora** and Vice President **Amro Amin** gave a short presentation on what the Chapter has been doing this season.

President DiMartino brought Section Director/Scholarship Chair **Andrew Bechtel** to front and center to cite the Section's scholarship recipients for this season (please see the separate article on this).

President DiMartino, with the assistance of Membership Secretary **Nha Truong**, introduced the newly-inducted **Life Members** in attendance and brought them up to receive their certificates and be appropriately honored (please see the separate article on this).

Another custom of sorts at our April meeting is **Past President Night**. Past Presidents were invited to attend as guests of our Section and 17 of them were able to attend and receive a complimentary meal in appreciation of their service. President DiMartino called them to the front to be cited. (Please see the separate article on this.)

President DiMartino returned to the podium as dinner was winding down and closed the business part of the meeting, the last one in his term as President, by thanking everyone for their assistance in the operation of our Section and giving him the opportunity to serve and lead our Section. With that, he closed the main portion of the meeting and dispersed attendees to the three breakout sessions.

REMINDER — 2017 SECTION AWARDEES

Our Section Awards will be presented at our **Annual Spring Social and Dinner Dance** on **May 4** at the **Top of the Tower** in Center City. More information and details on the Social are provided elsewhere in this edition. This year's honorees are:

John Nawn, Fleisher Forensics – Philadelphia Civil Engineer of the Year

Kevin Brown, Urban Engineers – Philadelphia Young Civil Engineer of the Year

Nha Truong, Philadelphia Water Department – Young Government Engineer of the Year

Robert Crawford, James J. Anderson Construction – Geotechnical Engineer of the Year

James Pezzotti, Pennoni Associates – Structural Engineer of the Year

Frank Falcone, Villanova University – Educator of the Year

Katrina Lawrence, DVRPC and **Kevin Walsh**, Pennoni Associates – Community Outreach and Service Award

Michael Carroll, Philadelphia Managing Director's Office – Government Service Award

Centennial Book Committee (31 individuals) – History and Heritage Award

In addition, we will be citing **Charles Mumford**, Pennoni Associates, on his receipt of the 2017 Eastern Region Outstanding Younger Member in Community Activities Award award from ASCE National.

We hope you will join us at the Social to honor our Awardees for this year.

When we return from our summer vacation, in the October edition of *THE NEWS*, we will present more information on the awardees as well as a detailed report on the Social. (Or you could just attend the Social and not have to wait until October…!)

TECHNICAL GROUPS/CHAIRS

Information on the ASCE, Philadelphia Section's Technical Groups is given below. If you have any topics that you think would be of interest to the Groups, please feel free to pass this information along to the appropriate Group Chair.

CONSTRUCTION
Dennis MacBride
dmacbride@septa.org

DELAWARE VALLEY GEO-INSTITUTE (DVGI) www.dvgi.org
Jay A. McKelvey III
jaym@earthengineering.com

ENGINEERING MANAGEMENT
Chair currently vacant

ENVIRONMENTAL AND WATER RESOURCES
Eric Lindhult
eric.lindhult@gmail.com

STRUCTURAL ENGINEERING INSTITUTE (SEI) www.sei-philly.org
Josh Amsler
joshua.amsler@aecom.com

TRANSPORTATION AND URBAN DEVELOPMENT
William T. Thomsen
wtthomsen@urbanEngineers.com

Please check the noted websites as well as the main Section site (**www.asce-philly.org**) for up-to-date information on Technical Group meetings and events. These will be included in our regular e-mail blasts as well.

THANKS AGAIN TO OUR SPONSORS !

As you have seen, the Section Sponsorship Program was once again popular this season, with 14 firms taking part and supporting us. We extend our special and collective *THANKS* to each sponsor for their financial commitment and support.

Sponsor logos have also been included in a special Sponsors section of our website, where a direct link is provided to each sponsor's website to allow folks to easily visit and review potential employment openings and positions. In addition, their business cards are published in each edition of *THE NEWS* to show their commitment and support.

Of course, the key to success is repetition (and we keep hearing that over and over and over again...oh, right), so we'll be contacting current sponsors later this summer to see if they'll go again in the coming season. We hope the program will be as successful then as well.

If you have an interest in joining our sponsorship program, please contact **Bob Wright** at **newseditor@asce-philly.org** for more details.

ENVIRONMENTAL AND WATER RESOURCES GROUP PLANNING

The Environmental and Water Resources Technical Group will hold a **Steering Committee** meeting on **May 3**. If you have any meeting topic/speaker suggestions for the upcoming season, or if you are interested in attending, please contact Group Chair **Eric Lindhult** at **eric.lindhult@gmail.com.**

SCIENCE FAIRS PROJECTS REVIEWED, WINNERS SELECTED

For the 24th time, our Section participated in the Delaware Valley Science Fairs to review student projects and find the winners of our Section's Special Awards. Our diligent team of Past Presidents, led as always by **Chris Rood** and ably assisted by **Ruben David, Chris Menna** and **Bob Wright**, made the trip to the Greater Philadelphia Expo Center in Oaks on April 5 to serve as judges for our Special Awards, consisting of two recognition of individual projects in the Grades 6–8 and Grades 9–12 categories.

The plural in the Science Fairs title is not a typo, as the event is a compilation of 13 different science fairs across a fairly large geographic area, stretching to the Jersey Shore, Delaware, and the Lehigh Valley, bringing students whose projects have won school district and local contests to compete on a regional level. The top medal winners at the Fairs can move on to the International Science and Engineering Fair later this spring.

We always are hopeful that we are able to recognize and encourage some future Engineers who we believe are deserving of special recognition. Our judging team held to its goal of efficacy, spending much of the day at the Fairs and reviewing most of the over 900 individual student efforts to find those with some Engineering potential. Despite the projects being classified into various science disciplines, including Engineering, our judges often find that they must review many projects in other areas such as physics, earth sciences, environmental sciences, and mathematics that may touch on the ubiquitous nature of Civil Engineering. Sometimes these projects cross different disciplines, and sometimes they are merely misplaced. The high quality of many of the entries only serves to complicate the decision-making process.

After a lot of reviewing (involving a good deal of walking around the expanse of the Expo Center), our intrepid team sorted through and short-listed several projects and came up with two winners in each of the categories of Grades 6–8 and Grades 9–12.

The winning students and their projects were:

GRADES 6–8 FIRST PLACE

Cody McBride
7th Grade
McBride Homeschool, Medford, NJ
"Harvesting Free Energy from Powerful Waves"

GRADES 6–8 SECOND PLACE

Holly Binkowski
6th Grade
Holy Cross Regional Catholic School
"Washing Away"

GRADES 9–12 FIRST PLACE

Lea Burton
9th Grade
Marine Academy of Technology/Environmental Science, Manahawkin, NJ
"How Do Soil Nutrients in Natural Vs. Replenished Dunes Affect the Growth of Vegetation?"

GRADES 9–12 SECOND PLACE

Yihan (Wendy) Wu
11th Grade
High Technology High School, Lincroft, NJ
"The Road to Sustainable Energy: A Novel Design and Implementation of Thermoelectric Systems in Asphalt Paving"

Chris Rood attended the award ceremony on April 6 and presented commemorative plaques and checks to the winning students ($100 for each First Place and $75 for each Second Place winner). The First Place winners were invited to attend the Spring Social so they can show off their work and "rub elbows" with Engineers. We hope they will be able to attend so the rest of us can see the Engineers of the future and allow them to display their winning efforts.

And in an unexpected happening, our judges were awarded with lapel pins citing their years of volunteer service at the Fairs

Thanks to the students and to those who participated in this event.

More information on the Fairs can be found at **www.drexel.edu/dvsf**.

SPONSORS IN THE NEWS

PENNONI ASSOCIATES' HEADQUARTERS RELOCATES

If you're headed to Pennoni's headquarters, please be aware that it may be a shorter walk or maybe not even a subway ride these days. **Pennoni Associates** moved into its shiny, modern new "digs" as of March 27, relocating its headquarters office from its base of nearly 20 years at 3001 Market Street several blocks east. The firm's new address is 1900 Market Street, Suite 300, Philadelphia 19103.

The Philadelphia Museum of CANS – CANstruction 2017

ASCE, Philadelphia Section 2017 Past Presidents

COMMITTEES

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DREAM BIG – Kazi Hassan
HUMPHREY FUND – Tom Branigan (chair); Faruq Siddiqui, John Zarsky (trustees); Guy DiMartino, Briana Earle (members)
MEMBERSHIP – Nha Truong (chair)
MURAL – Angelo Waters (chair), Briana Earle, Joe Natale, Ann Tomalavage, Bob Wright
NOMINATING (FOR BOARD POSITIONS) – Guy DiMartino (chair), Cathy Farrell, Joe Platt, AnnMarie Vigilante, Bob Wright
PROGRAM – Cathy Farrell (chair)
Venue Coordination – Troy Illig
Check-in/Name Tags – Mohamed Elghawy, Jeanien Price
SCHOLARSHIP – Andrew Bechtel (chair), Joe Natale, Angelo Waters
SOCIETY RELATIONS – Guy DiMartino (chair)
Region 2 Governors – Carol Martsolf, Jack Raudenbush
Region 2 Younger Member Representative – Chris Renfro
PA COUNCIL – Ann Tomalavage, Bob Wright
Legislative Affairs – Spencer Finch
SPRING SOCIAL COMMITTEE – Troy Illig (chair), Briana Earle, Kazi Hassan, Jeanien Price, AnnMarie Vigilante, Jenn Walsh, Bob Wright
SUBSIDIARY GROUPS – Angelo Waters (chair)
Construction Management – Dennis MacBride
Delaware Valley GeoInstitute – Jay McKelvey
Environmental and Water Resources – Eric Lindhult
Structural Engineering Institute – Joshua Amsler
Transportation & Urban Development – Bill Thomsen
Younger Member Forum – Kevin Brown

YMF

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Museum entitled **"The Philadelphia Museum of CANS,"** donating more than 2,300 cans to Philabundance, the region's largest food bank and hunger relief organization.

A big "Thank You" to our sponsors, including McCormick Taylor, AECOM, Pennoni, Schnabel, Gilbane, Gilmore, HNTB, JBC, Stantec, Thornton Tomasetti, WSP-Parsons Brinckerhoff, and Powell, Trachtman, Logan, Carrle & Lombardo.

On build night, many team members and students showed up to lend a hand to the YMF CANstruction effort. All structures were then left on display from April 1–10 on the first floor gallery exhibit of 990 Spring Garden Street. Several team members were present at the CANstruction Awards Happy Hour. While the YMF did not win an award this year the donated food went to a great cause!

N-ASCE*

THE FIRST WOMAN CIVIL ENGINEER

As we prepare to install our eighth female Section President (out of 105 total, so there's some catch-up to be done), and we realize we missed Women's History Month by a couple of months, we would note that the first woman to obtain a degree in Civil Engineering, and the first woman to be a member of ASCE, was **Nora Stanton Blatch**. She was the daughter of Harriot Stanton Blatch and the granddaughter of Elizabeth Cady Stanton, both of whom were leaders of the women's rights movement in the US.

Ms. Blatch was born in England in 1883 and her family later emigrated to New York City. She studied at Cornell University, where in 1905 she became the first woman in the US to obtain a degree in Civil Engineering as well as the first woman to be admitted as a member (with junior status) of ASCE. She worked for the American Bridge Company and the New York City Board of Water Supply. She also took courses in electricity and mathematics at Columbia University so that she could work as a laboratory assistant to Lee DeForest, inventor of the radio vacuum tube, whom she married in 1908. She worked for her husband's company in New Jersey until 1909, when they were separated, and they divorced in 1912.

Returning to New York City, Ms. Blatch worked as an Assistant Engineer and chief draftsman (person?) at the Radley Steel Construction Company and for several years as an Assistant Engineer for the New York Public Service Commission. She began working part-time in 1914 as an architect and developer on Long Island. In 1916 she gained notoriety when she filed a lawsuit against ASCE, which had terminated her membership when her age passed the limit for junior status. She failed to win reinstatement through the court.

In addition to her work in Civil Engineering, Ms. Blatch devoted her time to the woman suffrage movement. While studying at Cornell she had founded a suffrage club, and from 1909 to 1917 she campaigned heavily for the cause in New York. She became the president of the Women's Political Union in 1915, succeeding her mother, and edited the organization's *Women's Political World*. She subsequently participated in the efforts of the National Woman's Party for a federal Equal Rights Amendment.

In 1919 she married Morgan Barney, a marine architect. They moved to Greenwich, CT in 1923, where she worked as a real estate developer. She has been described as a Civil Engineer, Architect, and Suffragist whose professional and political activities built on her family's tradition of women leaders. She passed away in 1971.

Thanks to the *Encyclopaedia Britannica* for this information.

**N-ASCE – Not always something concerning Engineering…*

COMPOST FOR USE IN GREEN INFRASTRUCTURE AND LAND MANAGEMENT

Once upon a time, compost was primarily used for plant establishment. Ron Alexander of R. Alexander Associates has provided the following article, the third of a four-part series, on other ways to use compost - for erosion control, storm water management, and green infrastructure.

USING COMPOST FOR EROSION CONTROL & STORMWATER MANAGEMENT

Raindrops hit the soil surface and displacement of the soil particles occurs (known as "splash"' erosion). On slopes, the soil particles tumble, causing "rills" to form. Rills become more pronounced and they channel the water, increasing its velocity and ability to carry away soil particles. Pollutants such as heavy metals, nutrients and petroleum contaminants are carried off with the soil particles. The finer the soil particles (silt and clay) the more chemically reactive they are, so the greater the amount of contaminants they can bind up. Moreover, these finer soil particles often evade capture in well-known sediment control devices, such as silt/sediment fences, and water can carry these fine soil particles a long distance. This is the typical sequence of erosion on slopes where there is little or no vegetation and where no effective erosion control measures have been implemented.

In order to protect surface water quality, the United States Environmental Protection Agency (USEPA) and its delegated state environmental agencies implemented requirements that outline erosion and sediment control practices, as well as approved management techniques. To meet these requirements, each state implements its own erosion and sediment control policies and techniques, and often a set of best management practices (BMPs). Many agencies have amended the existing regulations and BMPs since the establishment of the National Pollutant Discharge Elimination System (NPDES) Phase II regulations. Among other things, these new requirements call for the establishment of erosion and sediment control plans, and appropriate measures for all construction projects of one acre in size or greater.[1] Often states, counties, and cities develop and implement their own set of regulations and BMPs. These BMPs or approved technologies and products vary based on their field application. Compost-based technologies for erosion and sediment control have been proven in the field and in research, and widely adopted over the past 15 to 20 years. The American Association of State Highway and Transportation Officials (AASHTO) has even approved a series of techniques using compost as a soil erosion control strategy. Many State Departments of Transportation, including PennDOT, have also adopted these techniques (and related specifications).

Compost blankets, berms, and socks are used for temporary and permanent erosion and sediment control (TESC) on construction sites, roadside and other projects. Unlike other erosion-control BMPs that are often expensive to remove and dispose of, compost can be left onsite permanently to enhance plant growth. In many situations, seed is applied along with the compost which acts as an enhanced soil. This provides for extensive rooting and a much better plant survival, long-term growth, and erosion prevention, even on difficult sites.[2]

It is important to note that a courser grade of compost (typically a ¾ or 1-inch screened compost) is typically used in these erosion control applications. When compared to the more finely screened composts (⅜ to ½ inch screened), typically used in landscape soil incorporation applications, these coarser composts are found to be more effective. You can find the AASHTO compost erosion control specifications at www.alexassoc.net (click on Library of Articles, then "erosion control" (within the compost specification section)).

Probably the greatest advantages to using compost-based systems are that they:

1) Are cost competitive with existing methods and practices used today
2) Provide immediate and effective control
3) Improve the establishment of a vegetative cover
4) Perform as a filter to capture sediment but let water flow through
5) Bind and/or degrade many chemical contaminants, including heavy metals (e.g., cadmium, lead), nutrients, and hydrocarbons, and buffer alkaline pH (e.g. concrete wash-off) toward neutral
6) Improve the health of soils, creating a stronger base for long-term retention of vegetation and infiltration of water[3]

COMPOST-BASED TECHNOLOGIES

Compost Blankets are usually 1 to 2 inches thick. They are installed by pneumatically blowing compost onto up to 2:1 slopes, or on shallower slopes by spreading compost with conventional equipment. Compost blankets have also been used successfully on up to 1:1 slopes, with additional stabilization technologies used in conjunction. This technology is ideal for managing water running in 'sheet' flows, but not those running in concentrated flows (e.g., channeled water). As with any surface BMP, it is important to prevent "run on" of concentrated flows from the top of the grade that is being protected. In this application, the coarser compost particles (woody fraction) disperse the energy of the raindrops, while the fine particles absorb the water. Because compost is so absorbent, it can significantly reduce the volume of water leaving the treated slope. For this reason, compost blankets are also seen as a low-cost method to manage excess stormwater.

Compost Berms are a method of perimeter sediment control, as well as used in series running down a slope to capture sediment and reduce the velocity of storm water. Compost berms are increasingly preferred over silt fencing. Berm widths are typically twice their height, so a 1-foot high berm is 2 feet wide. Berms are typically installed using a pneumatic blowing unit, but can also be placed using a front-end loader. The compost used in berms (as well as compost filled socks) is coarser than the blanket compost and should also contain fewer "fine" particles. In the case of both berms and socks, the coarse compost is used as a 3-dimensional water filter. Therefore, the compost is designed for the water to pass through it, leaving sediment on the slope side of the berm. Many university research studies have proven that compost filter berms and socks are many times better than silt fences at removing fine soil particles.

Compost Socks are another perimeter control measure which are fast replacing silt fences and straw bales. They may be quicker and cheaper to install with a blower truck than compost berms, because they require about 1/3 the volume of compost. They control sediment and other pollutants well, because they possess a large filtration capacity and maintain excellent ground contact. You can choose biodegradable sock material for installations lasting up to 6 months, but if non-biodegradable socks are used, you still need only remove the light fabric, and can leave the compost on-site. This is much cheaper than silt fence removal. Socks can be filled in place by compost suppliers with a blower truck. Suppliers can also deliver filled socks on pallets. Unlike many BMPs (wattles, silt fence), you do not have to trench socks in. Just walk along the top of them to ensure good soil contact, and stake through the sock on slopes. The great advantage of using compost-filled socks is that you can attach them to the soil surface using stakes, thereby allowing their use in concentrated water flow situations.

Much like any erosion and sediment control device, compost-based technologies should be used where appropriate and be installed properly. Further, the appropriate grade of compost should be used to obtain the best results. This should not be difficult for those located in Pennsylvania and Delaware, however, as many composters are now producing erosion control grade composts. But don't just use this technology because it's "green", use it because it's extremely efficient and cost effective. Remember, these compost-based technologies have been well-tested and proven successful in difficult field conditions around the US, and internationally.

References:

1. National Erosion/Sediment Control Specifications for Composted Products, The Recycled Materials Resource Center, University of New Hampshire. 2003.
2. Erosion Control with Compost. Seattle Public Utilities, www.Building Soil.org. 2008.
3. National Erosion/Sediment Control Specifications for Composted Products, The Recycled Materials Resource Center, University of New Hampshire. 2003.

Mr. Alexander has over 30 years of experience working with compost and other organic recycled products on large-scale construction projects. He began his career in Philadelphia, and is now the President of R. Alexander Associates, Inc., a consulting company specializing in product development for organic recycled products. He is the author of the 'Field Guide to Compost Use', American Association of State Highway and Transportation Officials' Erosion Control Specifications for Compost, and 'Landscape Architecture Specifications for Compost Utilization'.

He provides technical assistance to Laurel Valley Soils, a large composter in Avondale, PA (http://laurelvalleysoils.com/). Contact Ron Alexander at alexassoc@earthlink.net or 919-367-8350 if you are interested in additional information on compost use or a related Lunch & Learn.