

WSSC's Asset Management for Sustainable Infrastructure

Ms. Felicia James, P.E., WSSC's Asset Strategy Manager, to present at October meeting

In 2011, the ASCE launched a series of economic reports on the impacts of under-investing in our nation's infrastructure. The second report of this series focused on the water and wastewater infrastructure sector. ASCE projected that the annual needs of this sector will increase from \$91 billion in 2010 to \$195 billion in 2040, while annual funding was estimated to increase only from \$36 billion to \$52 billion. This funding gap, which will reach \$144 billion per year by 2040, will have dire consequences on the U.S. economy unless action is taken to alter this trend. The ASCE report estimated the cumulative effect on Gross Domestic Product will be -\$416 billion dollars by 2020, increasing to -\$4.1 trillion dollars by 2040.

What can and are utilities doing now to bridge this anticipated funding gap? Strategic asset management is an approach to providing a targeted level of service at the lowest life-cycle cost. For the Washington Suburban Sanitary Commission (WSSC), asset management provides for the systematic planning, acquisition, deployment, utilization, control, and decommissioning of capital assets. It integrates strategic-level, mid-level, and operational-level management decisions to maximize the value of the assets per dollar invested. In other words, WSSC is shrinking that funding gap by directing spending in a way that optimizes the mix of maintenance, operation, and capital that gets the most life out of each asset for the least total cost.

Established in 1918, the WSSC is among the largest water and wastewater utilities in the nation, with a network of nearly 5,600 miles of fresh water pipeline and more than 5,400 miles of sewer pipeline serving the 1.8 million residents in Prince George's and Montgomery Counties. In 2007, WSSC

released the first phase of a 30-year infrastructure investment plan. The 30-year plan, which will be developed in phases, will provide the requirements for refurbishing and replacing the WSSC's aging water and wastewater systems.

Asset Management Plans are being developed for each of the utility's major elements: the water network, the wastewater network, buildings and grounds, and the communications systems. These plans provide the decision-making framework for investing in the right projects, at the right time. However, with a nation-wide funding gap in the hundreds of billions, prioritizing projects within the constraints of limited budgets is of utmost importance. To this end, business risk is a key function of the Asset Management Plans. These projects can then be prioritized across the whole utility with an understanding of the risks associated with each of the asset's probability of failing and the consequences of a failure.

Ms. Felicia James, P.E., is the WSSC's Asset Strategy Manager for buried water assets and has been involved in the utility's Water Reconstruction Program. She is supporting the development of WSSC's 30-year infrastructure investment plan for underground water and wastewater infrastructure. This includes tracking the performance of underground assets and the effectiveness of asset management strategies, all in an effort to improve the WSSC's level of service.

Ms. James holds a Bachelor's Degree in Civil Engineering from Stanford University and a Master's Degree in Civil Engineering from the University of Texas at Austin. She is a registered Professional Engineer in Maryland and Texas.

Please join us for Felicia James' presentation at the October National



Capital Section (NCS) meeting on **Tuesday, October 16, 2012**. The meeting will be held at our usual meeting place, **Hilton Arlington**, 950 North Stafford Street in Arlington, VA, on the second floor in the Gallery Ballrooms. Parking is available at the hotel (\$8), at the Ballston Mall garage (\$1 after 6 p.m.), and on the street (free after 6 p.m.). This location is in the same block at the Ballston Station on Metro's Orange Line. Registration and networking will be from 6 to 6:30 p.m., followed by dinner. The program will conclude by 8:30 p.m. The cost will be \$10 for students, \$40 for those who preregister, and \$50 for walk-ins. **Please RSVP by October 11, 2012**. One Professional Development Hour will be awarded to attendees. Click [HERE](#) to register. For questions, please contact Qamar Kazmi at qkazmi@schnabel-eng.com or 240-238-2218. ■

President's Corner

Welcome to another year of activities with the NCS! We started our year with our first Section meeting in September with a very informative and a very well-attended presentation by Daniel Dorman, Deputy Director for Engineering and Corporate Support in the Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission. I would like to acknowledge Rollie Berry, our Treasurer, for his efforts in arranging this great presentation. Dan's presentation, recapped later in the newsletter, was also a reminder of our responsibilities as civil engineers



towards public health and safety.

I am excited and humbled by the trust placed in me by my peers to lead the Section. I will need your help and support to make it another successful year by keeping up a long and proud tradition of engaging programs that are of interest and benefit to you, the members of the Section.

In October, we will have Ms. Felicia James, P.E., Asset Strategy Manager for WSSC, speak on the WSSC's 30-year plan for refurbishing and replacing its aging water and wastewater systems. Please be sure to attend this meeting to learn about steps being

taken to help maintain our local water infrastructure.

You will find the contact information for the officers and board members on the lower portion of this page. I encourage you to please contact any of us with questions or suggestions for improvements that you may have. We would love to hear from you and any ideas to help the Section provide better service to its members.

Take care and have a Happy Halloween!

Qamar A. O. Kazmi, PE

Motivate Future Civil Engineers

One way to be active in ASCE-NCS is to volunteer – in a pre-K to 12 environment, such as that of a son, daughter, nephew, or niece – by promoting civil engineering in the classroom. The activity can be as simple as building a bridge using toothpicks and gumballs. Help motivate our future civil engineers! ■

*Editor's note: Thanks to Fady Afif, NCS Director and past president, for supplying this example of how we can promote the profession to young people and ensure adequate civil engineering talent for our country's future. Please send examples of how **you** promote civil engineering to the editor at [Laurence.sauter@ferc.gov](mailto:laurence.sauter@ferc.gov). Submissions are always welcome!*



Adam Afif (third from left) takes this opportunity to evaluate structures constructed by his friends.

Newsletter

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Address Changes:
Call 1-800-548-ASCE, email member@asce.org, go to <http://www.asce.org>, or write: ASCE – Membership, 1801 Alexander Bell Drive, Reston, VA 20191. Remember to include your membership number.

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Please refer to the NCS website at <http://www.asce-ncs.org> for a current list of NCS committees and chairs.

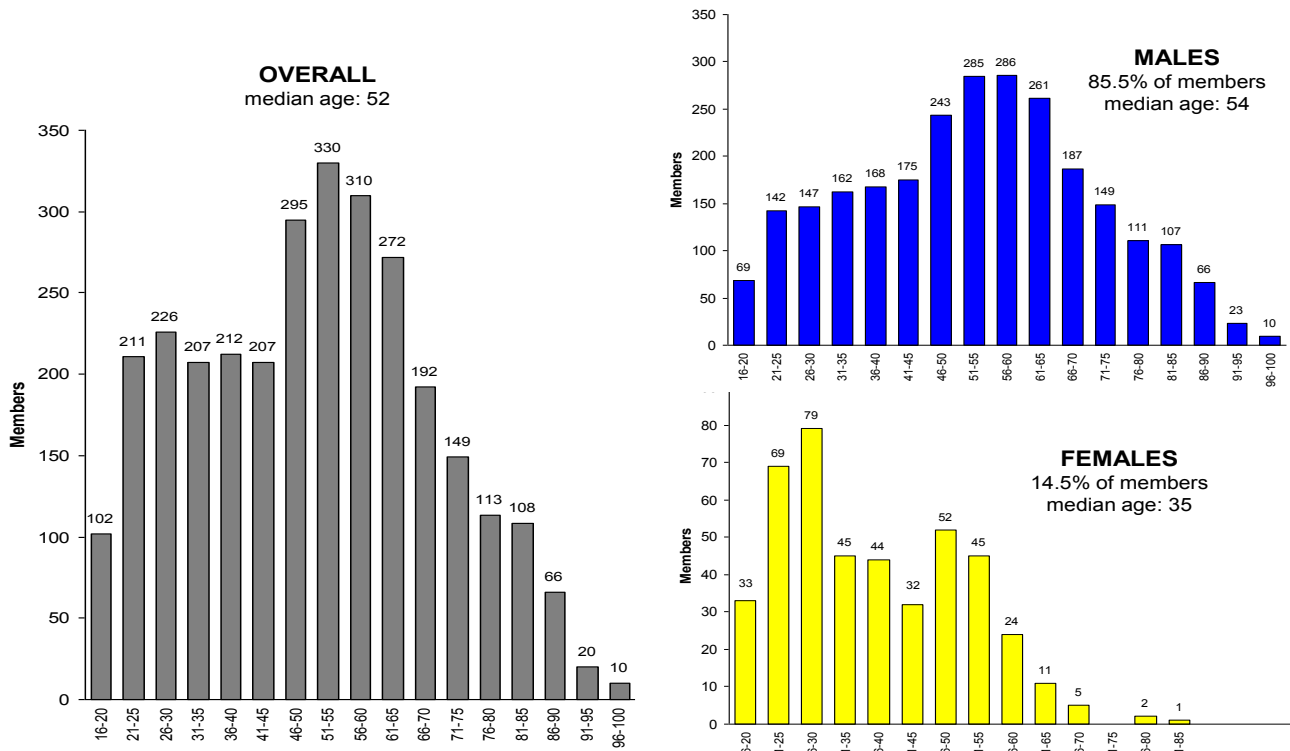
Improving the Value of ASCE-NCS Membership

In 2011, the NCS surveyed our members as part of an effort to better serve the membership. Since then, the survey results have informed several of our decisions. For example, the change to the Hilton Arlington meeting location was influenced by survey responses indicating a preference for a more “Metro-friendly” location.

In the “At a Glance” column, we’ll be sharing snapshots of the results with you. This month features a second graphic on NCS member age and gender diversity. These results influenced our 2012 outreach efforts, such as expanded YMF programs and the joint Leadership seminar with the Society of Women Engineers. We hope

you find the survey results informative. The NCS Board of Directors would like to thank Chris Manalo for coordinating the survey. Please contact Chris at manalo_christian@bah.com with survey questions or comments. ■

ASCE-NCS Membership – Age Distribution of Members (Graphic 2 of 2)



Source: Membership Analyses, ASCE-NCS Management and Best Practices Subcommittee, 2011.

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Register Now

Join attendees from these organizations and others that will be attending this year's 142nd Annual Civil Engineering Conference, October 18–20, 2012.

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John Casana, NCS Past-President, Scores Big in ASCE News! Founding Diplomat of AAWRE Recognized for Sage Advice

"Knock your first assignment out of the park. Be patient. Don't worry too much about your salary," says John Casana, P.E., LEED AP, D.WRE, M.ASCE, and past-president of the NCS, in an interview with the ASCE's American Academy of Water Resources Engineers. John, an associate at Booz Allen Hamilton in McLean, VA, shares some of the wisdom gathered from more than 30

years of environmental consulting and other engineering experiences. "Success is not measured in monetary terms only," he says. [Read his advice](#) for leaders of tomorrow.

Members of the NCS are very familiar with John's leadership and his



commitment to the NCS and the civil engineering profession. And we couldn't be prouder of John. *Congratulations from the NCS Board of Directors and the entire membership!* ■

2013 | IPWE
6TH INTERNATIONAL PERSPECTIVE ON WATER RESOURCES & THE ENVIRONMENT
 January 7-9, 2013 | Izmir, Turkey

REGISTRATION OPEN!

Take advantage of discounted pricing through October 1, 2012!

Join ASCE-EWRI in Izmir, Turkey, for the sixth installment of the [International Perspective on Water Resources & the Environment](#) (IPWE) conference series, January 7-9, 2013! The Organizing Committee of IPWE 2013 looks forward to a fantastic collection of technical sessions, panel discussions, social events, and networking opportunities with water resource professionals from across the globe.

Don't miss out on the discounted pricing available through October 1, 2012! Visit the [website](#) to secure your participation in the conference, or review the registration pricing.

EWRI hopes to see you in Turkey!



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NCS Committee News and Updates

Sustainability Committee – Upcoming Site Visit and Planning Meeting

The NCS Sustainability Committee has arranged for a tour of the Net Zero Energy Residential Test Facility, located at the National Institute of Standards and Technology (NIST) at 100 Bureau Drive in Gaithersburg, MD, on Thursday, November 1, 2012, at 6:00 p.m. Dr. A. Hunter Fanney, the Technical Director of the project, has graciously volunteered to guide us through this exciting endeavor.

The Net Zero Energy Residential Test Facility will enable the development and demonstration of measurement science needed to achieve net zero energy residential homes. The facility will initially be used to demonstrate that a residence, typical in size/features of homes in the metropolitan DC area, can produce as much energy from renewable energy resources as it consumes on an annual basis. It will subsequently be used to provide “real world” field data to validate and improve energy models and to improve laboratory-based measurements of systems and components to better represent field performance.

The tour will be followed by an informal dinner planning meeting at the Dogfish Head Alehouse, 800 West Diamond Avenue, Gaithersburg, MD 20878. We expect to arrive at Dogfish at about 7:30 p.m. The Sustainability Committee will be providing appetizers and soft-drinks.

We will need to provide names to NIST of the expected attendees at least **1 week prior to the tour**. If you are not a U.S. Citizen or Permanent Resident (with a green card), we will need to



The NIST Net Zero Energy Residential Test Facility.

supply some additional information at least **2 weeks prior to our visit** (please contact Mr. Rosenheim directly for details). To attend, please respond to the upcoming CVENT invitation or contact Alex Rosenheim directly at alex.rosenheim@gmail.com or 202-412-3090. If you just plan to attend the dinner planning meeting, please let us know so we can arrange for sufficient space to accommodate everyone.

If you would like to be part of the Sustainability Committee and/or provide some ideas for committee activities/pursuits, please contact the committee Chairman, Alex Rosenheim, by any of the above contact methods.

Engineering Management Committee

The Engineering Management Committee is looking for volunteers to design another great Engineering Management Seminar. We are seeking individuals to be a part of the Committee and soliciting any ideas

and suggestions for topics to address in a seminar (date to be determined) to help engineering professionals develop into managers. Our *Bridging Skills from Engineer to Leader*, conducted jointly last March with the Baltimore-Washington Section of the Society of Women Engineers, was very well attended and demonstrated that young and mid-career managers have more than a passing interest in enhancing their leadership skills. If you would like to be part of this Committee and/or provide some ideas, please contact Thomas Lanyon, Chairman, at tlanyon@myrapidsys.com.

NCS Younger Members – Who We Are and How to Get Involved!

The NCS Younger Members Group (officially known as the Younger Member Forum or YMF) is a group within the NCS of ASCE that provides opportunities for younger members to network and gain knowledge of the civil engineering industry through social events, volunteering activities, and professional development meetings. The majority of YMF events are held in downtown Washington, DC, or in the Clarendon & Courthouse neighborhoods of Arlington, VA, and are accessible via Metro. Whether you are a designer or a builder, work in the office or out in the field, we love meeting new people from all branches of civil engineering!

Happy-hour social events are typically held the first Wednesday of every month from 6–8 p.m. The most recent YMF happy hour was held on September 12th at Whitlow’s Bar & Grill in Arlington, VA. Snacks and appetizers are provided at no charge,

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Attendees at the March 2012 Professional Development Seminar.

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NCS Committee News and Updates

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and both members and non-members are welcome, so feel free to invite co-workers and former classmates to join the fun. This spring, the Younger Members plan to hold a special happy hour at Nationals Park for a Washington Nationals baseball game (exact date is to be determined). Keep an eye out for e-mail announcements about upcoming happy hour locations, and for more information contact Sonja Hinish at shinish@wje.com.

Professional development meetings are held at restaurants in Washington, DC, or Arlington, VA, and PDH credits are provided to all registered professionals in attendance. Attendees are encouraged to network before sitting down to dinner and a presentation of a prominent civil engineering project or topic that is usually local to the Northern Virginia, DC, & Maryland area. Past presentation topics and presenters have included:

- construction of the Coast Guard Headquarters, presented by Clark Construction;
- post-earthquake evaluation of the Washington Monument and National Cathedral, presented by Wiss, Janney, Elstner Associates;

- investigation of the Minneapolis I-35 bridge collapse, presented by the Federal Highway Administration; and
- LEED accreditation basics, presented by Facility Engineering Associates.

For more information or to suggest a presentation topic, please contact Paul Parfitt at pparfitt@wje.com.

The Younger Members Group recently held elections for the 2012–2013 year, and the following are the new YMF committee members:

- President – Jordan Pitt
- Past President – Adam Stewart
- Vice President – Kelly Cronin
- Secretary – Eric Kenney
- Webmaster – Sara Guerrero
- Social Event Co-Chairs – Sonja Hinish/Sara Degroot
- Professional Development Co-Chairs – Paul Parfitt / Kelly Cronin
- Community Service Chair – Jordan Pitt

If you would like receive e-mail updates about YMF events, please contact the Younger Member President at ncsymfpresident@gmail.com so you can be added to the mailing list and stay up-to-date on all YMF activities. We look forward to seeing you at the next Younger Member event! ■

November NCS Meeting – Bridge Maintenance and Asset Management at DDOT

Please join us on the evening of Tuesday, November 13, for a presentation by **Ronaldo T. “Nick” Nicholson, P.E., District of Columbia Department of Transportation (DDOT)**. The meeting will focus on bridge maintenance/asset management and the new South Capitol Street Bridge project in Washington, DC. Mr. Nicholson, DDOT’s Chief Engineer, will describe how his agency deals with bridge maintenance and repairs in an environment of scarce resources. He will also summarize the status of the South Capitol Street Bridge and update us on this significant project for DDOT. We expect this to be an especially interesting presentation, and pertinent to all of us who use the South Capitol Street Bridge. ■



Engineer Volunteers Needed for Girl Scout Day at the National Building Museum

The NCS will be participating in Girl Scout Day at the National Building Museum (NBM) from 10 a.m. to 4 p.m. on **Saturday, October 20, 2012**. NCS volunteers will be helping Daisies, Brownies, and Girls Scouts build bridges from drinking straws and cardboard. Scouts will test their bridge creations after construction. In the last few years, NCS volunteers have taught various scout organizations about truss bridges and suspension bridges. This year we will focus on arch bridges.

For many Scouts, ASCE-NCS activities are their first experience with engineering and their first chance to talk to engineers about the profession. Help

show the next generation of engineers how much fun they can have!

Volunteers are needed for 2 shifts: 10 a.m. to 12:30 p.m. and 1:30 p.m. to 4 p.m. All project materials are provided by the NCS. A pizza lunch is provided by the NBM.

The NBM is located at 401 F Street NW, Washington, DC, on Metro’s Red Line at the Judiciary Square Station. Parking is available at the NBM lot (free), on streets in the neighborhood, and at public parking garages.

Contact Dean Westman at dwestman@wrallp.com or at 703-293-7402 to volunteer or for more information. ■

September Meeting Recap – The Great East Japan Earthquake and Tsunami

The kick-off meeting of the fall 2012–13 season featured a fascinating presentation by Dan Dorman, Deputy Director of the Office of Nuclear Reactor Regulation at the U.S. Nuclear Regulatory Commission, on the earthquake and subsequent tsunami which damaged the Fukushima Dai-ichi nuclear reactor complex in Japan. Mr. Dorman briefed nearly 75 professionals on the events which followed the disaster of March 2011. The extent of the damage was almost incomprehensible in every aspect. Some of the facts presented by Mr. Dorman included:



- This was the most expensive natural disaster in history, costing approximately \$300 Billion.
- In Natori, Japan, over 125,000 buildings were damaged or destroyed.
- In Rikuzentakata, over 15,000 were killed and over 300,000 displaced.
- In Yamada, 4,400,000 were without power and another 1,500,000 were without water.

After presenting the physical phenomena, Dan moved into the response and lessons learned in both countries as well as by the international community. Some of the main takeaways were related to communications through the response. Others involved preplanning and prestaging of contingencies at nearsite locations. Plants have redundant backups, but one of the places our countries differ is the placement of

additional near-site resources. These contingencies can aid in expanding the coping time during an incident at a plant. Hopefully, the events of this tragedy can help us better learn how to plan for the future.

The September meeting also provided a format for the new NCS President and Board of Directors to be inducted and introduced to the membership. We were fortunate and honored to have Rob Victor, the ASCE Region 2 Director, on hand to conduct the induction. ■



The NCR's Dan Dorman.



Incoming NCS President Qamar Kazmi accepts the gavel from outgoing President John Casana.



The new NCS Board of Directors for 2012–13 (from left): Mark Leeman, Past President; Christian Manalo, Director; Fady Afif, Director; L.J. Sauter, Newsletter Editor; Jordan Pitt, YMF President; Rollie Berry, Treasurer; Scott Wolf, Secretary; Qamar Kazmi, President; and John Casana, Past President. Not pictured: Ranjit Sahai, Vice President; David Dajc, Director; and Stephen Powers, Director.



2012 ASCE SECTION RENEWAL

The Race Is On.

Fast Track Our Section to Win \$1,000!

The three Sections with the highest percentage of renewed members by December 14, 2012, will win a cash prize of \$1,000!

Get into the Renewal Race today, pay your National and Section dues, and keep our Section on pace to win \$1,000. Your renewal supports valuable local programs and is always appreciated!

Renew your ASCE membership by December 14, 2012 — and encourage fellow Section members to do the same!



Go to www.asce.org/finishline.

For contest rules, go to www.asce.org/finishline/rules.

To pay for your office, agency, or company with a single invoice/payment, contact memapp@asce.org.

Upcoming Events *(Also available on the NCS website under the Events tab)*

October 9–12

14th Annual Lean Construction Institute Congress will be held in Arlington, VA. Learn about lean construction and how it is “Improving the Way We Work” through education, implementation, execution, and results. For further information or to register, click [HERE](#).

October 16

NCS monthly meeting at the Hilton Arlington. The featured speaker will be Ms. Felicia James, Principal Civil Engineer with the Washington Suburban Sanitary Commission. Ms. James will speak on the renewal of the WSSC’s water distribution system infrastructure. (See newsletter lead article.)

October 18–20

Civil Engineering in the New Global Economy is the theme for the ASCE’s 142nd Annual Conference in Montreal, Quebec, Canada. Visit the [ASCE Conference Website](#) for further information. (See newsletter flier.)

October 20

Girl Scout Day at the National Building Museum in Washington, DC. Volunteers are needed to help staff this event. Help inspire the next generation of civil engineers! Contact Dean Westman to volunteer or for additional information at dwestman@wrallp.com. (See newsletter brief.)

November 7–9

ASCE Continuing Education Seminar “Streambank Stabilization for Restoration and Flood Control Projects” to be held at the Sheraton Suites Old Town Alexandria. Earn 2.1 Continuing Education Units (CEU). For more information, click [HERE](#).

November 29–30

ASCE Continuing Education Seminar “Structural Condition Assessment of Existing Structures” to be held at the Holiday Inn Central, 1501 Rhode Island Avenue, Washington, DC. Earn 1.4 CEUs. For more information, click [HERE](#).

December 6–7

ASCE Continuing Education Seminar “Seismic Loads for Buildings and Other Structures” to be held at the Holiday Inn Central, 1501 Rhode Island Avenue, Washington, DC. Earn 1.4 CEUs. For more information, click [HERE](#).

January 15, 2013

NCS monthly meeting at the Hilton Arlington. The featured speaker will be Eric Sohn, P.E., Senior Associate at Wiss, Janney, Elstner Associates. Mr. Sohn will speak on his participation in the assessments of seismic damage conducted at the Washington Monument and Washington National Cathedral following last year’s earthquake. (See the November newsletter for additional information.)

January 24–25, 2013

ASCE Continuing Education Seminar “Project Management” to be held at the Embassy Suites Philadelphia, Philadelphia, PA. Earn 1.5 CEUs. For more information, click [HERE](#).

Employment Clearinghouse

Then ASCE-NCS provides the Employment Clearinghouse as a free service to its membership. The Clearinghouse allows members to post short notices for available positions or candidates seeking employment. All employers listed herein are equal opportunity employers.

If you have questions or would like to post a position, please contact the Employment Conditions Committee, National Capital Section ASCE, 8502 Buckhannon Drive, Rockville, MD 20854-3503; phone: 301-983-9777; fax: 301-983-1953; or e-mail sassi22@verizon.net.

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