The Potomac Water Supply Program
Ryan Bucceri, P.E., Water Supply Program Manager for Loudoun Water, to present at September Section Meeting

As Loudoun County’s population and businesses have grown, so has the demand for safe, clean drinking water. By 2040, Loudoun Water’s customers are expected to require up to 90 million gallons of drinking water every day. This represents a 40-million-gallon-per-day (MGD) increase from today’s customer demand. To meet customers’ needs, Loudoun County has developed the Potomac Water Supply Program (the Program) to sustainably expand the water supply capacity and protect the county’s quality of life for future generations. The innovative approach to water supply management is the culmination of years of planning and includes:

- performing a cost-benefit analysis of alternatives;
- developing a strong public-private partnership;
- engaging government permitting and regulatory bodies;
- coordinating with regional drinking water providers; and
- conducting outreach activities to customers, community organizations, and local government leaders.

The result is a world-class program that is pioneering in scope, original in design, and sustainable in execution. The $459 million Program incorporates the following five elements.

1. Potomac River Intake and Pumping Station
The Program will be designing and constructing a 40 MGD raw-water intake on the Potomac River. The intake will be a submerged configuration of fine wire passive screens and piping leading to the Potomac Raw Water Pumping Station. Raw water withdrawn from the intake is to be conveyed to the pumping station through two 42-inch-diameter conduits installed in a 200-foot-long tunnel. The pumping station is planned to be set high on a 100-foot bluff on the bank of the river and will house four vertical turbine pumps set over 125 feet vertically above the river bottom.

2. Raw Water Transmission Pipeline
The Program will be installing 29,000 linear feet of raw water transmission (RWT) pipeline to transport raw water from the Raw Water Pumping Station to the Water Treatment Plant via a Flow Control Vault. This will allow flows to be diverted to a retired quarry (see element 3) when it is brought online. The RWT pipeline is designed to be a single pipe varying in diameter from 36 inches to 48 inches that follows existing utility corridors. This is expected to minimize costs, as well as impacts on communities and the natural environment. The design capacity of the pipeline will also allow for phased growth consistent with projected community growth.

3. Quarry Water Storage
The Program will be taking an innovative approach to water storage by using a retired stone quarry (owned by Luck Stone) as a water storage facility. Loudoun Water and Luck Stone have put in place partnership agreements

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Greetings!

It has been a year since I took office as the President of the ASCE’s National Capital Section (NCS). It goes without saying that it was a rewarding experience. I learned some new things about the ASCE and a lot about teamwork. In any volunteer effort, it is the dedication and selfless efforts by the volunteers that makes things happen. You are very fortunate to have some excellent and sincere volunteers that help with the activities of the NCS. We can always use more help and would welcome any volunteer who would be interested in lending a hand.

I want to take this opportunity to thank and acknowledge individually the support of the whole team of volunteers who have been helping the NCS this past year – some who serve the board or committees in some capacity and some who do not, but still help. These include (in alphabetical order): Fady Afif, Rollie Berry, Jeff Bugno, John Casana, Kelly Cronin, Emily Dean, Bernie Dennis, Dave Djac, Joe Doane, Robert Efimba, Sara Guerrero, Mark Leeman, Chris Manalo, Ed O’Malley, Jay Padgett, Tim Park, Jordan Pitt, Stephen Powers, Alex Rosenberg, Ranjit Sahai, L.J. Sauter, Pravin Sheladia, Adam Stewart, Dean Westman, and Scott Wolf. I offer my sincere thanks and gratitude to all of them. If you see them at the next meeting, please thank them for their service to the NCS.

That brings me to the topic of the next meeting. Maybe it’s just me, but it seems that most of the presentations in our Section meetings have dealt, in one way or another, with sustainability! This month’s meeting, featuring Mr. Ryan Bucceri of Loudoun Water, is no exception. Mr. Bucceri’s presentation will be about how a public agency foresees an issue that the community it serves will face in the future and takes steps today to meet the challenge of tomorrow. I am sure you will find this presentation very informative. The details of our September 17 meeting are covered in the lead article (page 1).

I also thank all of the NCS members for having given me the opportunity to serve as your president this year. It was a humbling but satisfying experience. Humbled to get all the support I did from the team mentioned above and satisfying to know that together, we have served our profession.

Lastly, I would like to offer my best wishes to Ranji Sahai, the incoming President of the ASCE-NCS, and the new team, for a successful year ahead.

Adieu,

Qamar A. O. Kazmi, P.E.
President, ASCE-NCS

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**NCS to Transition from CVent to Constant Contact**

**We’re giving our e-mails a make-over!**

The NCS is transitioning from our current e-mail contract system (CVent) to the Constant Contact system, which will be used for all ASCE-NCS e-mail communication and event registration in the future. In order to receive future NCS e-mails, please be sure to add asce-ncs@asce-ncs.org to your address book to ensure that ASCE-NCS e-mails will be delivered to your Inbox and not to the Spam/Junk folder. The Younger Members Group has already successfully transitioned to this new e-mail system. This (September 2013) issue of the ASCE-NCS E-Update (also known as “the newsletter”) will be the first to use the new Constant Contact system.

We greatly appreciate your patience during this transition, and hope to see you at an NCS event soon!

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**Newsletter**

L.J. Sauter, Jr., Editor
Telephone: 703-243-5298

October 2013 Issue Deadline: September 16, 2013

To Submit Articles: newsletter@asce-ncs.org

Address Changes:
Call 1-800-548-ASCE, e-mail 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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**Committee Chairs**

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

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**Committee Chairs**

Please refer to the NCS website at http://www.asce-ncs.org for a current list of NCS committees and chairs.
for an easement to convert the first of four quarries into a 1-billion-gallon storage reservoir by June 2017. A raw water pumping station will be constructed to allow raw water to be piped from the quarry to the Water Treatment Plant. The approach will initially allow Loudoun Water to store at least one billion gallons of water. As additional quarries are acquired, Loudoun Water has plans to store more than 8 billion gallons of water in retired stone quarries. In addition to providing storage capacity, the approach will allow Loudon Water to better manage water intake from the Potomac River by minimizing or even suspending direct water withdrawals during low-flow periods.

4. Water Treatment Plant
The Program will be designing and constructing a 20 MGD water treatment plant (expandable to 40 MGD) on a Loudoun Water parcel located west of Goose Creek Reservoir and north of State Route 267. The treatment process design will include pre-ozonation, flocculation, sedimentation, intermediate ozonation, bio-filtration, ultra-violet disinfection, and chlorination. The plant site will include a residuals handling area, administration building, maintenance facilities, and an access road to service the water treatment plant.

Beyond providing safe, clean drinking water, the plant will feature attractive architecture and will be constructed using low-impact development principles. It will use sustainable materials, technologies, and management practices in the design of the administration building to achieve LEED Gold certification. This includes taking a low-impact development approach to building and construction by utilizing recycled building materials, establishing rain gardens to capture stormwater, and incorporating an ultra-efficient HVAC system.

5. Regional Collaboration
Lastly, the Program will be using a collaborative approach to the management and use of the Potomac River. With the river being the primary source of drinking water for the Washington DC region affecting multiple jurisdictions, collaboration and coordination are critical to the long-term sustainability of the natural resource. As a major regional utility, Loudon Water is committed to serve the region’s customers while maintaining the long-term viability of the Potomac River.

Our distinguished speaker, Mr. Ryan Bucceri, P.E., BCEE, Water Supply Program Manager for Loudoun Water, will provide an overview of the Potomac Water Supply Program. Prior to his current position, he spent most of his career as a consulting engineer focused on the design and management of drinking water supply, treatment, and distribution capital projects. He worked for CDM Smith for 14 years as a Program Manager and Client Service Manager. Mr. Bucceri is active at both the state and national level for the American Water Works Association. He currently resides in Alexandria, VA, with his wife Kelly and his three children (10, 8 and 3). Mr. Bucceri is also an avid sailor, spending most of his free time sailing on the Chesapeake Bay.

The presentation will be held on Tuesday, September 17, at the Hilton Arlington, 950 North Stafford Street, 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 as the Ballston Station on Metro’s Orange Line. Registration and networking will be from 6 p.m. to 6:45 p.m., followed by dinner. The program will conclude by 8:30 p.m. The cost will be $10 for students, $45 for those preregistering, and $55 for walk-ins as space allows. Please RSVP by September 11. 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.

Please note that because the NCS is charged for each meal guaranteed, those who register but are unable to attend will be charged the full registration fee. We welcome “walk-up” attendees, including any registrations made after the guarantee is given to the hotel. However, the cost for “walk-ups” is higher because the Section is charged accordingly by the hotel for late registrations.
NCS Committee News and Updates

Sustainability Committee


Energy-from-Waste (EfW, or waste-to-energy) facilities offer a means of waste disposal while also generating renewable energy, reducing greenhouse gas emissions, and supporting recycling through the recovery of metals.

The events included an information session and presentation followed by a hands-on guided tour. Covanta operates two more plants in the Washington, DC, area (Fairfax County in Lorton, VA and Montgomery County in Dickerson, MD). Covanta operates and/or has ownership positions in over 40 EfW facilities (primarily in North America) and over 20 additional energy generation facilities, including other renewable energy production facilities in North and South America, Europe, and Asia.

The Alexandria facility began commercial operation in February 1988 and serves about 300,000 residents of the County of Arlington and the City of Alexandria, which jointly own the site. The facility’s three, 325 ton-per-day furnaces process 975 tons of solid waste and generate up to 23 megawatts of renewable energy that is sold to Dominion Virginia Power Company. The facility is located on the smallest site of any of the EfW facilities operated by Covanta Energy.

The June 4th tour was followed by an informal happy hour/dinner meeting of the Sustainability Committee at Thai Lemon Grass, also in Alexandria, VA.

If you would like to become involved with the Sustainability Committee or would like more information on its events, please contact its Chairman, Alex Rosenheim, at tcc-sus@asce-ncs.org (or alex.rosenheim@gmail.com) or 202-412-3090.

How EfW Works
1. Municipal waste is delivered to the facility and stored in a bunker.
2. The waste is transferred to a combustion chamber where self-sustaining combustion is maintained at extremely high temperatures. The building is maintained under negative pressure around the tipping and bunker area; this air is used in the combustion process to control odor.
3. The heat from the combustion process boils water.
4. & 5. The steam from the boiling water is used directly, or more frequently, the steam drives a turbine that generates electricity.
6. Electricity is distributed to the local grid.
7. Ash from combustion is processed to extract metal for recycling. It is then combined with residue from the air pollution control process (see items 9 and 10).
8. The combined ash is either disposed of in a monofill (where only ash is stored) that receives only that waste, used as cover material at a conventional landfill, or landfilled with other waste.
9. All gases are collected, filtered and cleaned before being emitted into the atmosphere. The gas from the combustion process is managed with air pollution control technology that operates to state and Federal standards.

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10. The emissions of particulate matter are controlled primarily through a baghouse (fabric filter).
11. Pollutants and operating parameters are monitored to ensure compliance with permit conditions.

Younger Members Group

 Nationals Game with ASCE Rochester. In June 2013, the Younger Members Group of ASCE Rochester (New York) took a field trip to Washington, DC, to partake in a presentation on the new Silver Line Dulles Corridor Metro Extension Project. Of course, the NCS Younger Members Group had to make our visitors feel welcome! So... we hosted a Happy Hour at the Bullpen across from National Stadium followed by the baseball game between the Nationals and the Colorado Rockies. Despite the heat, the Nationals beat the Rockies 2–1.

Monthly Happy Hours. The NCS Younger Members Forum (YMF) holds monthly Happy Hours either in Arlington, VA, or Washington, DC. Happy Hours are typically held the first Wednesday of each month unless a holiday falls during that week. For the August happy hour, YMF members enjoyed the pleasant weather along with pizza and drinks with fellow engineers on the rooftop at Local 16 in Washington, DC.

Our next Happy Hour will be held at Whittows on Wilson (Arlington, VA) on Wednesday, September 11, from 6 to 8 p.m. Join younger members from the area for free appetizers and drink specials. For additional information, contact Sonja Hinish at Shinish@wje.com.

If you would like to become more active with the YMF or would like more information on our events, please contact the YMF President, Jordan Pitt, at wjpitt@mbakercorp.com or ncsymfpresident@gmail.com.

Younger Member Professional Development Meeting. On July 24, the NCS Younger Members held a Professional Development Meeting at Sixth Engine Restaurant in Washington, DC. The meeting featured a presentation on Blast Design: Past, Present, and Future. The speaker, Mark Gardner, P.E., of Hinman Consulting Engineers, presented an overview of blast analysis structural design, progressive collapse analysis, as well as physical security design. At the end of the night, the attendees had a basic understanding of the history of blast design criteria and design approaches. Case study vignettes were presented to highlight key points.

The next NCS Younger Members Professional Development Meeting will likely be held in October 2013. More details will be provided closer to the event date.

For more information about the ASCE-NCS Younger Member Professional Development Meetings or if you would like to suggest a presentation topic, please contact Paul Parfitt at pparfitt@wje.com.

Editor’s Note: The Younger Member portion of the Committee News and Updates was submitted by Kelly Cronin, YMF Vice President. For further information on any Younger Member event, Kelly can be contacted at kcronin@wje.com.

ASCE-NCS Newsletter Patrons
**Volunteer Opportunity – Become Part of the Senior Scientists and Engineers Program!**

The American Association for the Advancement of Science needs scientists, engineers and physicians to assist K-12 STEM (Science, Technology, Engineering, Mathematics) teachers in the District of Columbia and adjacent Maryland and Virginia counties during the 2013–14 school year. The details of the collaboration are worked out between the teacher and the volunteer, and may involve giving demonstrations, assisting in lab experiments, lecturing on special topics, assisting with homework, etc. The hours are flexible, and volunteers attend a 1-day orientation session before being assigned to schools. Go to this Voice of America classroom interview (www.youtube.com/watch?v=_2RlvYKbck) to see how volunteers are assisting teachers, or see the video clips at www.seniorscientist.org. If you care about K-12 STEM education and have time to share your knowledge with students and teachers, please send a note to bcalinge@aaas.org with your home address, or call 202-326-6629.

Participants from the Scavenger Hunt meet at the National Air & Space Museum

museums as the Museum of Natural History, Air and Space Museum, and Museum of American History. With scavenger hunt answers in hand, the participants returned around 3:00 p.m. for a late lunch at the Air and Space Museum to review the answers from the day’s events. During the lunch, David spent time talking about engineering, answering questions, and had many other interesting discussions with the participants. Both the Littles and Bigs said they had a ton of fun visiting the museums while trying to find the answers to the scavenger hunt questions.

To learn more about the Big Brothers Big Sisters program, please contact David Smith at dsmith@amtengineering.com. For questions regarding other Pre-College Outreach opportunities within the ASCE-NCS, please contact Emily Dean at edean@amtengineering.com.

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**October NCS Meeting – East House Office Building Garage Restoration Project**

Please join us on Tuesday, October 15, for a presentation by Scott Harrison, P.E., from Restoration East, LLC. Scott will discuss the challenges of renovating the Architect of the Capitol’s East House Office Building Garage. The project included restoration of concrete elements, waterproofing repairs, mechanical and electrical upgrades, and fire protection system repairs. This project received a LEED Gold certification from the U.S. Green Building Council and received the ASCE-NCS’s Sustainability Award in 2012. We look forward to seeing you there!
Great Companies are Made, Not Born

by Ranjit S. Sahai, P.E., F.ASCE

A great company delivers a deep sense of satisfaction to each of its stakeholders: customers, vendors, employees, and investors. Should any one of the stakeholders become dissatisfied, the business will not work over the long run.

Building a great company is not an art that only some are born with; it is a learned skill that anyone with the necessary drive can master. What is the secret?

The principles are well-known and time-tested. Many who have built or focused on great companies have shared their insights through books, articles, blogs, and similar means. Books on tape have been around for a long time. They are now readily available in a format you can play on MP3 players in cars and on smartphones. The audio-book format makes it easier than ever to consume knowledge contained in books. Best of all, time you already spend exercising or driving a car may be better used when multitasked with a business-building audiobook. Audiobooks can help you explore great ideas far more quickly than the time it takes to read a book.

To build a great company, take advantage of modern audiobook technology to quicken your pace for exploring ideas that build great companies.


Did you find this information helpful? If so, make a point to watch for similar information that will come your way monthly in the NCS’ Computer Corner. If you simply can’t wait for the monthly installments and wish to get your hands on all the tips at one time, ask for the booklet “Timeless Ways to Grow Business with Technology.” To request a copy of this valuable, no-cost resource, go to http://www.rcare-solutions.com.

About the Author

Ranjit has been writing on and teaching computer topics since 1987 and has authored several books on CAD. His next book, The Silent Motor (www.thesilentmotor.com), is on success in life and business. He is the founder of RAM Corporation and the President-elect of the ASCE-NCS. He welcomes comments and feedback via e-mail. To e-mail Ranjit, visit the Contact Us>Committee Chairs page at www.asce-ncs.org or the Contact Us page at www.rcare-solutions.com.

D. Scott Wolf Recognized as 2013 Young Engineer of the Year by the NSPE!

At the 2013 National Society of Professional Engineers (NSPE) Leader Conference and Annual Meeting held this summer in Minneapolis, the NSPE presented a number of awards to outstanding engineers in recognition of their professional and volunteer efforts. Among those was the 2013 Young Engineer Award, which was presented to our very own Scott Wolf, NCS Board member and current Section Secretary. Scott also joined the NSPE Board of Directors as the Young Engineers Director for the 2013–14 term and will chair the NSPE Professional Engineers in Government interest group.

For those who don’t know, Scott is currently the Safety & Geometric Design Engineer for the Federal Highway Administration’s (FHWA) Resource Center in Baltimore. From here, he serves as a national expert in the areas of geometric design, freeway and interchange design and evaluation, and highway intersection safety and design. Scott’s previous positions have included program manager for consultant services in the FHWA’s Office of Infrastructure in Washington, DC, and transportation engineer with the Kentucky Division Office of the FHWA. Before joining the FHWA, Scott worked for consulting engineering firms as project manager and senior transportation engineer on multiple highway projects throughout Kentucky and Ohio.

Scott receives the NSPE 2013 Young Engineers Award from NSPE Executive Director Mark J. Golden (left) and NSPE Immediate Past President Dan J. Wittliff (right).

We couldn’t be prouder of Scott and his many contributions to both the NCS and the civil engineering profession. Congratulations from the NCS Board of Directors and the entire membership!
Upcoming Events (Also available on the NCS website under the Events tab)

September 5
NCS Younger Members Group Planning & Development Meeting from 6:30 to 8:30 p.m. at Lyon Hall, 3100 Washington Boulevard in Arlington, VA. Event planning and officer elections for the 2013–14 term will be held. For more information, contact the ASCE-NCS YMF Vice President, Kelly Cronin, at kcronin@wje.com. Please RSVP as space will be very limited.

September 11
NCS Younger Members Forum sponsors its monthly Happy Hour from 6 to 8 p.m. at Whitlows on Wilson in Arlington, VA. Join younger members from the area for free appetizers and drink specials. For information, contact Sonja Hinish at SHinish@wje.com.

September 11–14
ASCE’s Construction Institute and the ASCE Texas Section host the CI Summit/Fall Conference/Centennial Celebration in Dallas, TX, with the theme Sparkling Innovation for the Next Century. For additional information or to register, click HERE.

September 17
NCS monthly meeting at the Hilton Arlington. The program will feature a presentation by Ryan Bucceri, Water Supply Program Manager for Loudoun Water, on the Potomac Water Supply Program. (See newsletter lead article.)

October 15
NCS monthly meeting at the Hilton Arlington. The program will feature a presentation by Scott Harrison, on the East House Office Building Garage Restoration Project. (See newsletter brief.)

January 6–10, 2014
The National Institute of Building Sciences hosts the second annual conference and expo, Building Innovation 2014: Advancing Life-Cycle Performance, in Washington, DC. The conference agenda will highlight NIBS activities and programs for developing innovative solutions for the built environment. For additional information or to register, click HERE.

February 22
Discover Engineering Family Day at the National Building Museum in Washington, DC. Contact Dean Westman (dwestman@wrallp.com) or Emily Dean (dean.emilyanne@gmail.com) for further information or to volunteer.

June 1–5
ASCE’s Environmental & Water Resources Institute hosts the World Environmental & Water Resources Congress 2014: Water Without Boarders, in Portland, OR. Abstracts are due by September 20, 2013, with student competition abstracts by October 11, 2013. For additional information or to register, click HERE. Registration opens in December 2013.

July 21–23
ASCE’s Energy Division will host the Shale Energy Engineering Conference in Pittsburgh, PA, as a resource to present unbiased material to an informed group of industry professionals. Abstracts are due by September 11, 2013. For additional information or to register, click HERE.

August 3–6
ASCE will sponsor the Pipelines 2014 Conference in Portland, OR, with the theme From Underground to the Forefront of Innovation and Sustainability. Abstracts are due by September 10, 2013. For additional information, click HERE. Registration opens in February 2013.

Employment Clearinghouse

The 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, are seeking employment, or would like to post a position, please contact the newsletter editor at newsletter@asce-ncs.org or phone 703-243-5298.

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