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PRESIDENT'S MESSAGE

By Steven F. Wilson, PE, FCC President



FCC/OSPE provided another opportunity to obtain CPD hours on April 26 at the La Scala Restaurant. As can sometimes happen, our scheduled speaker was unable to

attend but alternate programs were available and attendees were able to obtain a one hour certificate thanks to presentations by William Lhota, P.E., on "Ethics – Code Discussion & Managing Conflicts" and by James Arnold, P.E., on "ASHRE – Regional Organization/Responsibilities; HVAC Basics".

State Science Day will be held on Saturday, May 16, and volunteers may still be needed to assist with the judging.

On May 21, the Franklin County Chapter of Professional Engineers will be meeting at the La Scala Restaurant, 4199 W. Dublin Granville Rd., Dublin,

for lunch and for the installation of new officers and trustees for 2015 – 2016. Please register and support your chapter officers and trustees.

FCC/OSPE is ending another very successful year, and I take this opportunity to extend my appreciation to all of the members who have contributed to that success by volunteering and giving their time to chapter activities, as well as to my fellow officers and trustees.

Last month, the Columbus Engineer featured the names and drawing of the Franklin County Chapter's winners of the Imagine Engineering coloring contest. It was my pleasure to present the chapter awards to two of those winners, one of whom (Addy Tracy of Carlisle Delaware Elementary School) went on to win 3rd place in the state judging as well:

(See pictures of two of the winners on page 3)

OSPE-FCC May Luncheon Program

Date: Thursday, May 21, 2015

Place: La Scala Restaurant
4199 W. Dublin Granville Rd., Dublin

Registration: 11:30 am

Lunch: 11:50 am Speaker: 12:00 pm
Closing Remarks: 1:00 pm

Cost: Members: \$20.00 & Non-Members: \$30.00.

Registration: Visit fccospe.com. Pay at door or online at (www.fccospe.org). No access to computer contact JimArnold, 614-299-2133, to help with registration.

Program: Joe Cherry, P.E. will speak on OSPE and install chapter officers for 2015-2016.

2015 FCC-OSPE Meritorious Service Award Recipient: William (Bill) J. Lhota, P.E., P.S.



The 2015 FCC-OSPE Meritorious Service award recipient is William J. Lhota, P.E., P.S.. Bill has chaired the NSPE Board of Ethical Review for 2 years and has served on the NSPE Board for several years. Bill has served as a panel Subject Matter Expert (SME) on the NSPE Ethical Webinars that are held six times a year for about ten years. Bill is currently serving on the OSPE Ethics Committee and continues to make contributions in the ethics area at both, the Chapter and State level. Bill has also been a popular presenter at many of the annual EFO sponsored CPD conferences. Bill has achieved outstanding contributions at all levels (Chapter, State and National) of NSPE and is an extremely worthy recipient for the 2015 Meritorious Service award.

Bill retired in December 2001 as President-Energy Delivery, American Electric Power (AEP) and Executive Vice President, American Electric Power Service Corporation. He held numerous management positions throughout his career and was responsible for the power transmission and distribution systems located in 11 states. Following retirement from American Electric Power (AEP) in December 2001, as a Senior Executive, he focused on arbitration, mediation, energy consulting, as well as consulting, teaching and lecturing on business

and engineering ethics prior to joining COTA in 2004. Bill was elected President and Chief Executive Officer of the Central Ohio Transit Authority (COTA) in September 2004 and retired as at the end of February 2012. While at COTA, he lead a major turnaround in this Central Ohio public transportation provider.

Bill earned his Bachelor's degree in Civil Engineering from The Ohio State University and a Master's Degree in Management at the Massachusetts Institute of Technology. He also was awarded an honorary Doctorate in Community Leadership degree from Franklin University. Bill is a registered Professional Engineer and Professional Surveyor in the State of Ohio.



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Client Development Manager
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FCC Auxiliary May Meeting

The Auxiliary to the Franklin Co. Chapter of the OSPE will finish the season with a buffet luncheon at noon on Tuesday, May 19, at Scioto Country Club, 2196 Riverside Drive.

Ed Lentz, a historical consultant and author of a column in the This Week newspapers, will present the program.

Officers for 2015-2016 are to be installed. Sharon Eifert will give the invocation and lead the pledge of allegiance. Barb Fuller is to be hostess. Guests are welcome. For reservations call Jean Mitchell at 262-7071.

FCC Imagine Engineering Coloring Contest Winners

Joy Wolfel, Josh's teacher, arranged for the presentation at a school assembly and notified Josh's parents.



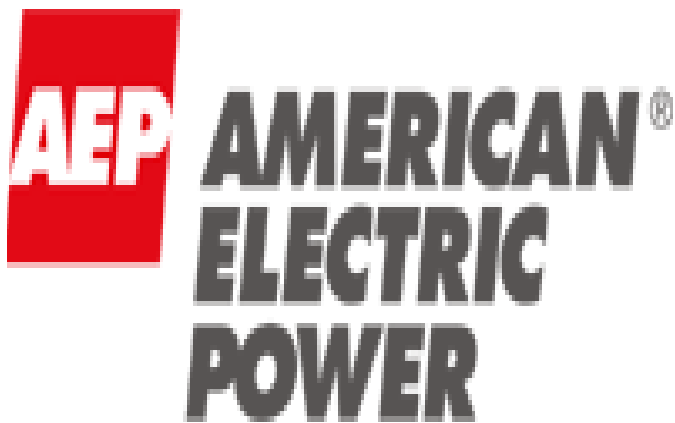
Pictured left to right: Joy Wolfel, Josh's teacher; Josh; Glenn Deal in the back; and Josh's parents



Addy Tracy of Delaware Carlisle Elementary School receives FCC's 1st Place Award.



Kael Howard, Delaware Christian School receives FCC's 2nd place prize



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2015 FCC-OSPE Outstanding Engineering Achievement Award

This year's 2015 FCC-OSPE Outstanding Engineering Achievement Award recipient is ms consultants, inc. on the John R. Doult Upground Reservoir project. Due to anticipated water demands greater than the area's supply, the City of Columbus embarked on a project to provide Central Ohio residents with an adequate water supply well into the future. After more than 20 years of planning and work, the John R. Doult Upground Reservoir has been constructed as the initial phase of a long-term plan to serve more than 1.5 million consumers. This 850-acre reservoir is the largest geomembrane-lined reservoir in the nation, providing 9.3 billion gallons of water to the City of Columbus and neighboring Delaware County consumers. The project also includes a raw water line and a raw water pump station that utilizes an inflatable dam, saving the city \$1 million in energy costs.



Site before construction

Completed site as of November 2014

The city commissioned the ms consultants, inc. team in 2005 to first perform the preliminary design, environmental studies and impact assessment which were then followed by designing, securing permits, and the bidding of three individual projects. Initially, the project presented two specialized challenges.

The 850-acre John R. Doult Upground Reservoir is the longest Class I Dam structure in Ohio with a 5-mile perimeter between 35-45 feet high, and this reservoir is the largest geomembrane-lined reservoir in the nation. ms consultants, inc. collaborated with The Beaver Excavating Company as the general contractor for this portion of the project. Project details include:

- Excavation, placement, and compaction of approximately 8.5 million cubic yards of soil to form the reservoir bottom and earthen embankments.
- Installation of nearly 37 million square feet of geomembrane liner at the reservoir bottom to minimize seepage into the underlying karst geology.
- Placement of 1,226 individual liner panels atop 18 inches of compacted clay liner.

- 72-inch inlet piping and inlet structure with a 30-foot wide cast-in-place concrete channel with chute blocks to direct flow down the inboard slope.
- Outlet structure equipped with multi-level draw-off gates and 72-inch outlet piping.
- Two stage ditches around the perimeter of the reservoir to intercept field tile drainage and surface runoff.
- The usage of a geoelectric leak location survey with GPS to locate any liner damage or hole as small as 1/8-inch, with damaged areas averaging less than one per acre.

The reservoir is an off-stream reservoir where the city will temporarily impound the Scioto River and can pump up to 160 million gallons a day to fill. ms consultants, inc. is saving the client approximately \$1 million dollars in reservoir filling cost by using an inflatable dam. The City considered building the pump station at a reservoir 19 miles away, but ms consultants, inc. provided this cost-saving solution versus a permanent structure.

The Raw Water Intake/Pump Station is designed for use under a wide range of Scioto River stream flow conditions to fill the reservoirs. The pump station general contractor was The Kokosing Construction Company. Pump station components include:

- 150 foot pneumatic weir gate system in the Scioto River. When raised during periods of elevated stream flow, this weir creates a 6-foot deep temporary impoundment pool and directs river flows to the adjacent pump station. When the diversion pump station is not in use, the weir can be completely lowered, allowing the river to flow as normal and permit fish migration.



- Upstream shore intake structure consisting of an open concrete channel section that transitions to a 108-inch buried pipeline to the pump station.
- Four 40-MGD vertical turbine pumps with 4,160 volt, 1,000 HP motors, and solid state reduced voltage soft starters. Integrated 36-inch discharge cone valves are used to control pumping rates.
- Radio telemetry (SCADA) system including Remote Telemetry Units (RTUs) at the reservoir, the intake/pump station, and at transmission main pipeline isolation valve locations to allow city operational staff to remotely monitor and control facility operations from the city's Dublin Road Water Plant 40 miles away. The overall system included the installation of RTUs at the city's two on-stream reservoirs/dams.



Raw water pump station located by the Scioto River

Lastly, the Phase 1 Raw Water Line was designed to link the pumping facility with all three planned reservoirs. This pipeline can direct flow into the reservoir to fill it, or by reversing the flow, can return water stored in the reservoir back to the pump station for release into the Scioto River drought conditions. ms consultants, inc. worked with S.J. Louis Construction, Inc as the general contractor for water line construction. Additional pipeline details include:

- 20,000 linear feet of 72-inch steel pipe. Specifications and design details were developed for both AWWA C301 pre-stressed concrete cylinder pipe and AWWA C200 steel pipe with interior mortar lining and tape wrap exterior coating.
- A site-specific corrosion study was performed and the design included corrosion monitoring and cathodic protection system requirements for both pipe materials.
- Air/vacuum release valves and vaults at nine locations along the alignment were installed based on hydraulic surge analysis.

ms consultants, inc. also collaborated with the City of Columbus, Del-Co Water Company, and the program management team, led by URS Corporation, during construction. Work on John R. Doutt Upground Reservoir, Raw Water Pump Station



Construction of the raw water line with 72-inch steel pipe

and Phase 1 Raw Water Line began in 2011. The project was substantially complete in November 2013, ahead of the anticipated January 2014 completion date, and the reservoir was filled in May 2014. The first reservoir was dedicated to the former Columbus Water Administrator on September 30, 2014. The John R. Doutt Upground Reservoir was also distinguished with a National Recognition Award from American Council of Engineering Companies (ACEC) National and an Outstanding Achievement Award from American Council of Engineering Companies (ACEC) of Ohio.



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2015 CALENDAR

May 12	5:30 p.m.	FCC Board Meeting @ Korda Nemeth
May 16	5:00 p.m.	Deadline for June Columbus Engineer
May 21	12:00 p.m.	Officer Installation at La Scala
June 11-13		Annual Meeting at the Holiday Inn & Suites (Cincinnati Eastgate)
July (TBA)		FCC Budget Meeting Location to be announced



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