

## Rocky Mountain AIChE News

February 2013

Volume 22 Number 5

### February Section Meeting: Denver Water Recycling Plant Tour

Denver Water has been involved in reuse research and implementation since the 1960s. A pilot plant was operated which culminated into the Potable Reuse Demonstration Project that examined the feasibility of producing drinking water from a treated wastewater source. This plant operated from about 1985 through 1991. During this time, Denver Water also researched non-potable reuse water treatment methods and service to potential customers. In the 1990's, Denver Water conducted studies to determine the customer base and the area for building a non-potable reuse project. The timing of these studies coincided with the closing of Lowry Air Force Base and Stapleton Airport. These locations were to undergo residential and commercial redevelopment. In these areas, numerous parks, schools, and other irrigable land were developed that could use a non-potable water supply. When the Denver International Airport (DIA) was built, reuse pipe was installed that could take reuse water when it became available at that location.

In 2004, Denver Water started operation of the non-potable recycled water system. The state of the art plant was built to a capacity of 30 mgd. The plant influent comes from the Metro Reclamation plant located about one mile away. The treatment includes biological aeration containing bacteria that consumes ammonia, flocculation, sedimentation, filtration, and disinfection. The finished water is stored in a tank for distribution to customers.

The plant currently serves a number of Denver parks, golf courses and schools for irrigation needs, as well as the Xcel Energy Power Plant for cooling water, and the Denver Zoo for operations. Some of the irrigation areas include City Park, Washington Park, Park Hill Golf Course, Common Ground Golf Course, Bruce Randolph

### February Section Meeting

<b>Topic:</b>	Denver Water Recycling Plant Tour
<b>Speakers:</b>	Jenny Murray, Russell Plakke and Myron Nealy
<b>Date:</b>	Tuesday, February 19 <sup>th</sup>
<b>Time:</b>	6:00 Check in and Networking 6:30 Plant Tour 7:30 Dinner 8:00 Discussion
<b>Location:</b>	Denver Water Recycling Plant 5650 York St, Denver (photo id required to enter)
<b>Dinner:</b>	BBQ with side dishes
<b>Cost:</b>	Members: \$20 (w/RSVP)* Non-Members: \$25 Students & Unemployed: \$10

Please RSVP by **TUESDAY, February 12<sup>th</sup>**,  
**Non-US Citizens required to RSVP by Feb 8<sup>th</sup>**  
(early RSVPs are greatly appreciated!) indicating  
your name, phone number, and number of  
attendees. Please RSVP at  
[rockyaiche@yahoo.com](mailto:rockyaiche@yahoo.com).

\*Must pre-register (RSVP) to attend.

Middle School, Denver School of Science and Technology, the sports complex at Lowry, and Jackie Robinson Field. The project is currently expanding to serve the Green Valley Ranch Golf Course, Congress Park, Cheesman Park and a numbers of parks and schools in the Montbello area. Future customers include portions

of the Stapleton redevelopment, the Rocky Mountain Arsenal, and DIA for irrigation, the central cooling plant, and rental agency car washes. There are other parts of the Metro area that are being examined for possible service.

The month's meeting will be held at Denver Water's Recycling Plant where Jenny Murray, Russell Plakke and Myron Nealey will describe the plant design and operation and host a tour of the facility.

Jenny Murray is Denver Water's Recycled Water Program Manager. She has B.S. degrees in Water Resources and Watershed Science and nearly 10 years previous work experience, managing a recycled water system for another local utility. She has been involved with a variety of local recycled water stakeholder groups, and served on the Board of Directors for the WaterReuse Association, an international organization that advocates "the right water for the right use" and whose mission is "To advance the beneficial and efficient uses of high-quality, locally produced, sustainable water sources."

For the last eight years, Russell Plakke has been the Recycling Plant Supervisor for Denver Water. He has more than 30 years of experience in treatment plant operations and maintenance including potable water, wastewater and industrial facilities incorporating military, private, and public sectors. During the construction of the Denver Water Recycling Plant, Russell was the Assistant Supervisor for this state-of-the-art treatment facility. He helped manage activities for this facility from ground-breaking through completion of the construction phase and during its last eight years of operations.

Myron Nealey has a B.S. degree in chemical engineering from the Colorado School of Mines. He is a registered P.E. in Colorado. He is currently a hydraulic engineer at Denver Water where he has 27 years of experience in reuse related activities. These include research at the Denver Water Potable Reuse Demonstration Plant, and distribution system planning, customer identification and demand planning for the non-potable recycled water system.

***NOTE:*** *RSVP by Feb 12 and photo identification is required to enter the facility.*

### **Judges Needed for Colorado School of Mine's Chemical and Biological Engineering Poster Contest**

Colorado School of Mines' Department of Chemical and Biological Engineering hosts a summer

undergraduate research program each year. We will have a poster session in August and would like to have local professionals as judges and attendees. Please take one minute to fill out the survey at the link below if you are interested in attending and/or judging the posters.

<https://docs.google.com/forms/d/1xZudUdM4dL2hODqR8UUFRIOLK-DzkY3I3aYtlhfeuac/viewform>

## **STATE SCIENCE FAIR**

State Science Fair time is fast approaching. Judging will occur at CSU on April 10, 2013. If you aspire to participate in the next "America's Got Science Talent", this is the job for you. Contact Michael Mutnan at [mmutnan@juno.com](mailto:mmutnan@juno.com) for more information.

We are classified as "Special Judges" since we focus on Chemical Engineering related projects. Awards (monetary and certificates) are given to 1st and 2nd Place in the Senior and Junior High Divisions. We also invite the winners to be our guests at one of our meetings.

The science fair group must be informed who our judges are by March 1 for inclusion into a "Judges Database". Once on the list, you will receive a packet with particulars, and more importantly, a badge that gets you into the judging area.

Michael can access the database for late inclusions. Last year badges were issued to judges not on our list, so a last minute decision seems to be acceptable.

In the past parking was available at the CSU Equestrian Center. This includes bus service to campus. Judging is held 12:15 p. m. to 5:00 p. m. A short meeting occurs at around 11:00 a. m. with lunch (pizza and drinks).

A very intense, but very rewarding day awaits you. PARTICIPATE!!!!

# AIChE Meetings

## 2013

Feb 24-26	SBE's Int'l Conf. on Accelerating Biopharmaceutical Development Coronado Isl., CA
Mar 19-20	SPE/AIChE Workshop on Flow Assurance Austin, Texas
Apr 5-7	2013 Rocky Mountain Student Regional Conference New Mexico State University
Apr 28-May 2	AIChE 2013 Spring Meeting and 9th Global Congress on Process Safety San Antonio, TX
May 1-2	Industrial Water Use and Reuse Workshop San Antonio, Texas
June 11-13	2013 Process Development Symposium Oak Brook, IL

### National AIChE Contact Info

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The objectives of AIChE are to advance chemical engineering in theory and practice, to maintain a high professional standard among its members, and to serve society, particularly where chemical, engineering can contribute to the public interest.

AIChE Rocky Mountain is a public non-profit 501(c)(3) organizations and thus any and all donations are tax deductible.

## Rocky Mountain AIChE News Publication Schedule

### March 2013 issue

Articles due Wednesday, March 6<sup>th</sup>

Publish on Friday, March 8<sup>th</sup>

Meeting on Tuesday, March 19<sup>th</sup>

## MEETING SCHEDULE

*The Rocky Mountain District of AIChE generally meets the third Tuesday of every month, September through November and January through May.*

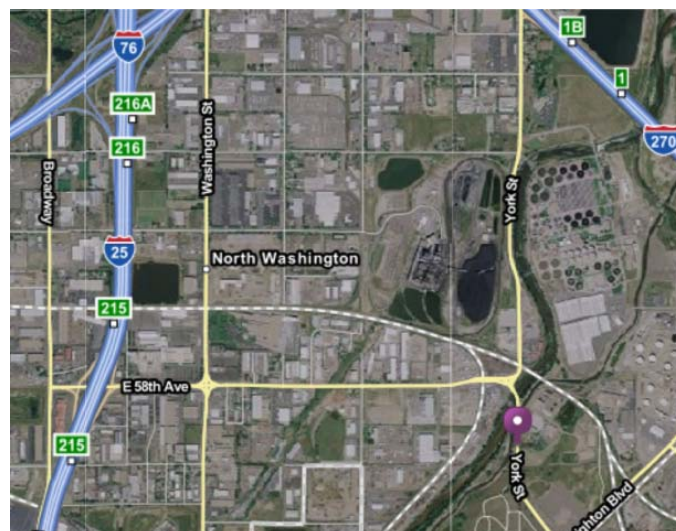
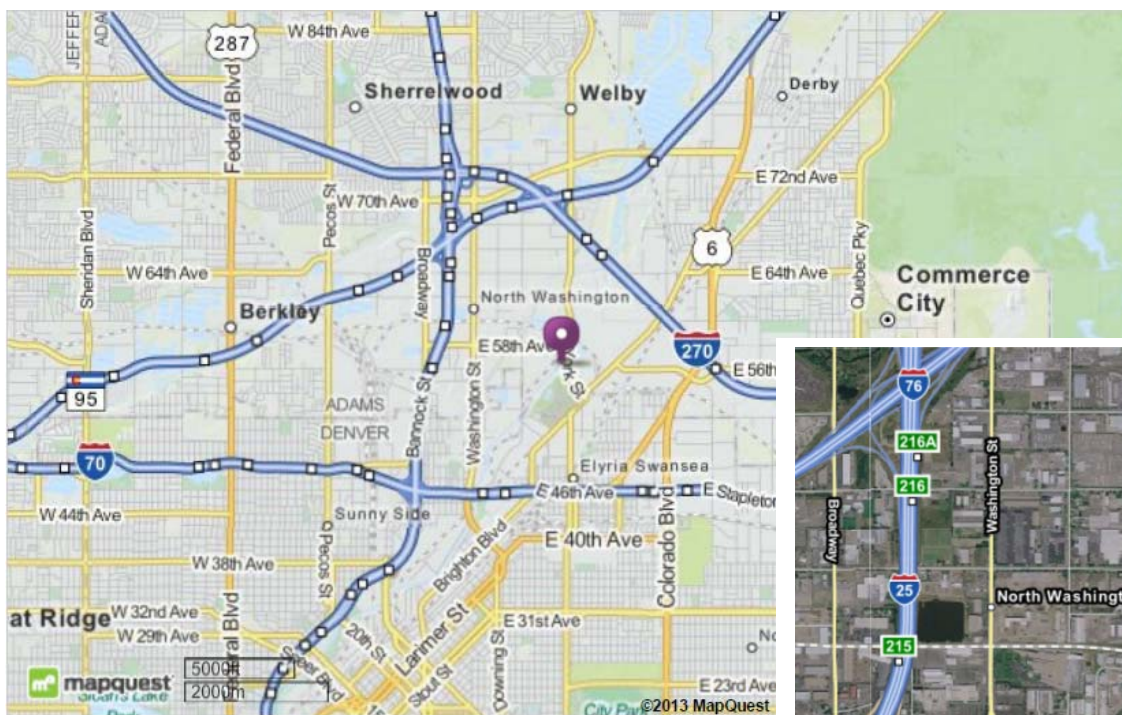


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From I-25, exit at 58<sup>th</sup> Ave and drive east.  
Turn right onto York St and look for 5650  
York St, Denver Water Treatment