World Congress on Ozone & Ultraviolet Technologies

The World Congress on Ozone and Ultraviolet Technologies (Aug. 27 to 29, 2007 in Los Angeles, Calif.) promises to be an important conference. The two most progressive technologies in disinfection and water treatment are coming together in an historic event. The International Ozone Association (IOA) and International Ultraviolet Association (IUVA) are hosting the first joint world congress on these synergistic, cutting-edge technologies that are benefiting public health and the water industry.

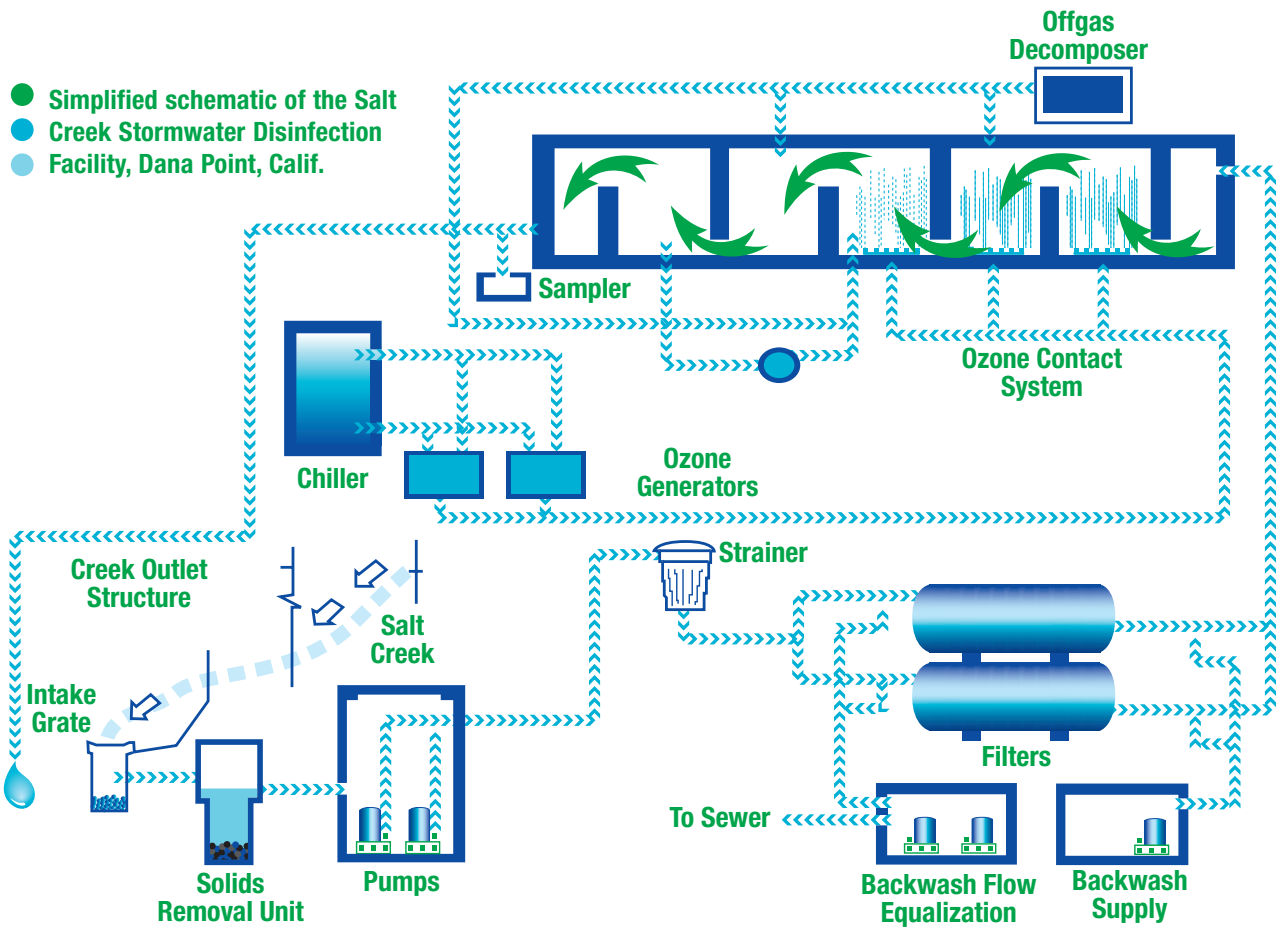
By Bob Smith-McCollum

Joint technical conference to report on advances and synergies of ozone and UV technologies

The technical congress will showcase the multiple benefits that ozone and UV bring to water, wastewater, air treatment and industrial processes. The U.S. Environmental Protection Agency (EPA) and World Health Organization have recognized ozone and UV as "best available technologies" for meeting the world's most demanding public health issues.

An International Event

To date, nearly 300 papers have been submitted for presentation at the congress. A quick scan of the list of submissions reveals the international importance of ozone and UV technologies. Papers have been submitted from 31 countries and six continents. Many participants will be traveling great distances to share their knowledge of ozone and UV technologies and applications and gain new insights from their global colleagues. Currently more than 100 papers have been submitted from the U.S. Submissions have been made from 26 states with one-third of the U.S. papers submitted from California.



Important Topics

The conference will cover a broad range of important topics. The sections Agriculture, Food and Beverage Applications, Emerging Contaminants, and Advanced Oxidation Technologies have attracted the largest numbers of submissions and promise to be very enlightening. A number of other interesting topics will also be addressed, including water treatment, ozone and UV technology, industrial applications, soil and groundwater treatment, and ozone and UV plant operations.

Here's an in-depth look at some of the important sections:

Agriculture, Food and Beverage Applications. Food safety and security have become increasingly important as all types of food products are routinely produced and shipped internationally to meet growing consumer demands. As per capita consumption of vegetables and fruits increases, so does the risk of microbial contamination, as witnessed by food borne *E. coli* outbreaks in the U.S. over the last year. Congress participants will present their insights and research on the application of ozone and UV technologies to these pressing challenges.

Emerging Contaminants. Chemical and pharmaceutical water contaminants are growing concerns worldwide. The disposal of expired pharmaceuticals in household drains and toilets has created a burden of biologically active compounds. Of special concern are compounds that disrupt endocrine function, as well as pesticides and veterinary antibiotics from farm and dairy runoff. Participants in this section will share their research and experience in neutralizing these emerging contaminants with ozone and UV.

Advanced Oxidation Technologies. Many of the submissions in this section will report on the characteristics and utility of hydrogen peroxide (H_2O_2) in combination with ozone or UV. The photocatalytic properties of titanium dioxide (TiO_2) and other methodologies will also be discussed in this section.

Water Treatment. This section will cover municipal water and wastewater treatment, including preoxidation of municipal water. A session chronicling 20 years of successful water treatment in Los Angeles will also be presented. This session will be augmented by optional

technical tours of various Los Angeles water treatment facilities (see Technical Tours section).

Ozone and UV Technology. Ozone technology will be discussed in sessions like Ozone Generation, Chemistry and Solubility, Ozone Contacting and Ozone System Design. Sessions on UV disinfection, adenovirus inactivation, UV chemistry and biochemistry, and UV air and surface treatment will discuss important fundamentals of UV technology.

Industrial Applications. A broad range of uses for ozone and UV will be detailed in this section, including industrial wastewater treatment, chamois and leather making, biofilm removal, and pulp and paper wastewater processing.

Plenary Addresses

Several leading speakers from academia, government and industry will provide their perspectives on current needs and future directions in water and wastewater treatment to protect public health domestically and globally. Some of the confirmed speakers include the following:

- Sally C. Gutierrez, director of the National Risk Management Research Laboratory, Office of Research and Development, EPA. The laboratory is responsible for conducting engineering and environmental technology research to support the agency in development of policy, regulations and guidance to further environmental protection in the U.S.

- J. Alan Roberson, PE, director of Security and Regulatory Affairs, American Water Works Association (AWWA). Robeson is responsible for implementing the AWWA's overall regulatory program with all federal agencies. He and his technical staff work closely with EPA staff on the development of national drinking water regulations and with the Department of Homeland Security on the development of national water security policy.

- Richard H. Sakaji, PhD, PE, member of advisory committees and work groups of the National Academy of Sciences, National Water Research Institute, the American Water Works Association Research Foundation (AwwaRF), EPA and the EPA Science Advisory Board's Drinking Water Committee. Most recently Dr. Sakaji has worked with the National Water Research Institute/AwwaRF Research Foundation in developing UV disinfection guidelines.

Technical Tours

More than 8 billion gal of drinking water per day is treated with ozone and UV in communities within a 400-mile radius of Los Angeles, Calif. Ozone and UV technologies are also utilized in municipal wastewater treatment and water reclamation and reuse.

The World Congress on Ozone and Ultraviolet Technologies Local Organizing Committee has arranged three optional technical tours for Congress delegates:

- Los Angeles Department of Water and Power (LADWP), Los Angeles Aqueduct Filtration Plant, Sylmar (an ozonation system and filtration plant in its 20th year of operation that has treated about 2.7 trillion gal of water with an estimated 30 million lb of ozone) and Metropolitan Water District of Southern California, Jensen Filtration Plant, Granada Hills;
- Metropolitan Water District of Southern California, Mills Filtration Plant, Riverside; Eastern Municipal Water District, Perris Water Filtration Plant, Perris; and West Valley Water District Oliver P. Roemer Water Treatment Plant, Rialto; and
- City of Dana Point, Salt Creek Stormwater Disinfection Facility, Dana Point and Orange County Water District Facility, Fountain Valley.

Each tour will provide a unique first-hand look at the application of ozone and UV technology in municipal water treatment and storm water disinfection.

If you are not able to attend the congress, all is not lost. The proceedings and other post-conference materials will be available for purchase through the websites of IOA and IUVA. *wqp*

For more information on the congress or the hosting organizations, please visit the following websites:

- World Congress on Ozone and Ultraviolet Technologies: www.ioa-iuva-wchollywood.org
- IOA: www.io3a.org
- IUVA: www.iuva.org

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