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at CDM Smith
and
2015 ESE Distinguished Alumnus

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1301 McGavran-Greenberg

Applying Innovation in Designing Water Treatment Systems

As water supplies become increasingly stressed due to drought, flooding, population growth, and pollution, water treatment plants in the USA are frequently challenged to deliver safe, palatable drinking water that meets water quality regulations and customer expectations. In many instances, advanced treatment processes like ozone, UV and membranes are required to augment or replace conventional treatment processes. In the face of these challenges, it is incumbent upon professional water engineers to stay on top of industry research, technology and regulatory developments, and adopt innovative design practices to apply the right combination of treatment technologies to meet water production and quality goals for improved public health protection. This presentation will present highlights from my 30-year career as a consulting engineer, focusing on innovative solutions for the design of municipal water treatment plants and household-based treatment systems in North America and developing countries.

BIO

Mr. Schulz has 30 years of experience in planning and design of drinking water treatment facilities in the United States and overseas and is a specialist in advanced disinfection and oxidation treatment processes. He is currently employed by CDM Smith, an environmental engineering consulting firm in Denver, Colorado and previously worked at the World Bank in Washington, D.C. He has a master's degree in environmental engineering from the University of North Carolina and a bachelor's degree in civil engineering from the University of Detroit. Mr. Schulz holds 11 U.S. patents which has led to development of new technologies for ozone dissolution, ozone residual monitoring, ozone disinfection of water mains, hydraulic flocculation, and household water treatment systems. He has published more than 80 papers in peer-reviewed journals and proceedings of professional engineering conferences and is co-author of a book on surface water treatment for communities in developing countries. He has served as technical director, project manager, project engineer or process design advisor on dozens of water treatment plant designs in the United States and overseas involving advanced processes (UV, ozone, advanced oxidation, biological filtration and membranes) with design capacities ranging from to 10 to 2,000 million gallons per day.