



## ***Developments in Advanced Filtration***

**Dr. Jon McClean**  
**Evoqua Water Technologies**

Filtration is a core competence in water treatment and critically enables other treatment processes to perform optimally. The use of filters in water treatment has advanced dramatically since the days of early slow sand filters. Three of the most critical agents of change have been membranes, wastewater recycling and sea water desalination. Advances in ceramic membranes has caused disruption in the traditional replacement cycle to reduce operating costs. The shortage of water will drive more seawater desalination and pose challenges the traditional SWRO practices, to say nothing of the warming oceans causing more red-tide events. In this session, Evoqua Chief Technology Officer, Dr. Jon McClean, will discuss current filtration trends and challenges facing the water technology world. He will briefly discuss the early filtration methods and how the industry evolved to the dynamic technologies of today. The environmental challenges of SWRO call for even more start-ups and more innovation, which means lower cost and greater choice. Dr. McClean will address: what he's seeing with products that offer rigidity and attractive Total Water Cost, the advantages of cost-out thinking in pushing innovation, and why wastewater treatment processes should embrace anaerobic technologies to drastically save cost and provide a cleaner solution for the broader environment.