

## **Water Reuse to Enhance Water Security and Sustainability and reduce impacts of Climate Change**

**Dr. Saad Y. Jasim**

*SJ Environmental Consultants (Windsor) Inc.*

*Past President of the International Ozone Association (IOA), 2020-2022*

### **Summary:**

Facing Climate Change challenges, Water Reuse, utilizing advanced technologies, is an ultimate choice to enhance water security, sustainability, and resilience. Climate change induced water scarcity and environmental sustainability are some of the main drivers for augmenting supply through treated water reuse. The water industry is facing new challenges such as “Cyanotoxins”, “chemical of emerging concern” (pharmaceuticals, personal care products and endocrine disrupting chemicals), “antibiotic resistant bacteria, antibiotic resistance genes”, etc. The successful and efficient reuse of treated wastewater using advanced technologies, would provide a safe application particularly for agriculture will involve multitude strategies, which include increasing the reliability of reclaimed water as an alternative source to groundwater in irrigation, improving public awareness and attitudes towards reclaimed water, setting national public health and environmental standards for reuse, and implementing effective utilization plans in terms of increasing crop value and groundwater conservation.