

Water Research Webinar Series

A bimonthly webinar series focused on EPA's water research

Fit-for-Purpose Water Updates and Life Cycle Comparisons of Non- Potable Water Reuse Scenarios

Wednesday, February 24, 2021 from 2:00 to 3:00 pm ET

Registration: attendee.gotowebinar.com/register/8734674715161901325

A certificate of
attendance will be
offered for
this webinar

Onsite non-potable water reuse is a transformative approach that collects locally available water sources, such as wastewater, graywater, stormwater, and rainwater, for decentralized treatment and use in low-exposure applications, such as irrigation and toilet flushing, reducing stress on both potable water supplies and municipal wastewater collection systems. However, care must be taken to manage microbial risks and to avoid burden-shifting with respect to environmental and economic impacts.

This webinar will present updated fit-for-purpose risk assessments and life cycle comparisons of non-potable reuse scenarios comprising different water sources collection scales and onsite end uses, with recent developments including new water quality datasets for rainwater and onsite graywater/wastewater; exposure sensitivity analyses examining model applicability to additional end uses; and integrated assessment of building-scale reuse options. In addition, presenters will share a new EPA tool, NEWR (Non-potable Environmental and Economic Water Reuse Calculator), which is an explicit web-based tool for zip code-based available water quantity estimation and life cycle evaluation of reuse configuration options.

About the Presenters



Jay Garland, Ph.D.

Jay is a senior scientist with EPA's Office of Research and Development (ORD), Center for Environmental Solutions and Emergency Response (CESER). His current efforts focus on advancing innovative approaches to water infrastructure, including mitigating risks associated with antimicrobial resistance in the water cycle. Jay received his Ph.D. in environmental science from the University of Virginia.



Cissy Ma, Ph.D., P.E.

Cissy is a research engineer with EPA/ORD/CESER. Her primary research focuses on applying new sustainability metrics to evaluate environmental impacts, cost, and sustainability in different environmental systems. Cissy holds a Ph.D. in civil engineering from the University of Minnesota.



Michael Jahne, Ph.D.

Michael is an environmental engineer with EPA/ORD/CESER, where he specializes in quantitative microbial risk assessment. Michael developed pathogen log-reduction targets that have been used to provide risk-based treatment guidance for onsite non-potable water systems. He holds a Ph.D. in environmental science and engineering from Clarkson University.