



DIALOGUE WITH MS PAULA KEYHOE ON DECENTRALISED WATER AND SANITATION MANAGEMENT

Tuesday 18 March 2025, 10.00 to 11.00 hrs

South Africa is a water scarce country and several cities have experienced water shortages due to a number of factors. Climate shifts and its impacts will further exacerbate service delivery in municipalities. Decentralised water reuse is increasingly being seen globally as a viable option for water security in cities. The WRC has a number of innovations to support decentralised reuse but uptake has been slow. Without regulatory support, water reuse remains ad hoc and underutilized, failing to achieve its full potential as a sustainable solution. This is due to the lack of enabling environment within municipalities due to:

- **The Current Landscape :** While formal regulations for decentralized water reuse are still evolving, the practice often emerges informally during times of water scarcity. Communities and businesses instinctively adopt reuse measures when faced with severe droughts or water restrictions. These grassroots actions demonstrate the feasibility and necessity of water reuse but often lack the oversight, risk and safety protocols, and scalability that formal regulations provide.
- **The Challenges of Informal Practices:** Without clear guidelines, informal water reuse practices can pose public health risks if untreated or improperly treated water is reused.
- **Inefficiency:** The absence of standardized approaches can lead to inconsistent practices that fail to maximize water savings or optimize resource use.

Thus, there is a need for formal regulations to be developed to transition from reactive, crisis-driven water reuse to a proactive, systematic approach that ensures safety, efficiency, and long-term sustainability. These regulations can set safety standards, streamline approvals, build public confidence, encourage investment, and provides an opportunity for learning from crisis practices.

To our benefit we have invited Ms Paula Keyhoe, from San Francisco Public Utilities Commission. Currently, she serves as the Director of Water Resources and is responsible for diversifying San Francisco's water supply portfolio through the implementation of water conservation, groundwater, recycled water, onsite water reuse, and innovation programs. She has been championing San Francisco's water and sanitation decentralization strategy right down to a household level and has now institutionalized the process, which is busy scaling.

The San Francisco Public Utility (SFPU) based in USA has implemented decentralised water reuse as part the city strategy for water security. SFPU created one of the first comprehensive programs in the United States to support decentralised/onsite water reuse for new practice and technology adoption. This program enables buildings and districts to collect, treat, and reuse alternative water sources, such as greywater, blackwater, stormwater and rainwater. The treated water is reused for non-potable applications like toilet flushing, irrigation, cooling, and reducing the demand on potable water supplies.

SFPU developed a groundbreaking regulatory framework for onsite water reuse systems in collaboration with the San Francisco Department of Public Health. This framework sets clear water quality standards and monitoring requirements, establishes permitting processes to ensure system safety and reliability, and provides a model for other municipalities and states to develop their own decentralised water reuse policies. By promoting decentralised water reuse, SFPU has:

- Reduced potable water consumption in participating buildings by up to 75%.
- Enhanced urban water resilience in the face of droughts and climate change.
- Deferred costly infrastructure upgrades by reducing pressure on centralized water systems.
- Supported the city's ambitious climate goals, including achieving net-zero water use in new developments.

This special event is a great opportunity to engage with Ms Keyhoe and ask the difficult questions we grapple on a daily basis with as Municipalities and entities, such that from the learning we can unlock this future opportunity and pathway.