

ONSITE WASTEWATER TREATMENT SYSTEMS FOR THE FUTURE

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ABSTRACT

In trying to predict potential future trends in onsite systems of the future, a number of critical factors must be considered, including, population growth and distribution patterns, changing weather patterns and water shortages, aging onsite infrastructure, and changing views of wastewater. The impact of each of these factors is examined in this presentation. To ensure that the use of onsite systems in rural, peri-urban, and urban areas will be an important part of the overall water resources management portfolio, new treatment and reuse concepts will need to be implemented. At the present time, a wide variety of new treatment concepts are under development. For example, new membrane technologies have made indoor water reuse viable for decentralized systems. Techniques for drying the membrane brine using low-grade heat recovered from domestic wastewater are under investigation. Improved systems for source separation have also proven to be readily adaptable to onsite systems. Some questions remain on the most effective management scheme for decentralized systems, logistics of utilization of source-separated products, and integration of decentralized wastewater systems into urban areas. These and other issues are addressed in the presentation.