International

ISO 20760-2

Water reuse in urban areas — Guidelines for centralized water reuse system —

Part 2: Management of a centralized water reuse system

Réutilisation de l'eau en milieu urbain — Lignes directrices concernant les systèmes centralisés de réutilisation de l'eau —

Partie 2: Gestion d'un système centralisé de réutilisation de l'eau

Second edition
2025-11

Reference number
ISO 20760-2:2025(en)

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Published in Switzerland

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This document was prepared by Technical Committee ISO/TC 282, *Water reuse*, Subcommittee SC 2, *Water reuse in urban areas*.

This second edition cancels and replaces the first edition (ISO 20760-2:2017), which has been technically revised.

The main changes are as follows:

— updated example regarding water reuse management initiatives in the European Union;

— updated information on the typical disinfection techniques;

— added information on the key performance indicators for typical treatment processes;

— added information regarding online data management.

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With economic development, climate change and increases in population and rapid urbanization, water has become a strategic resource especially in arid and semi-arid regions. Water shortages are considered as one of the most serious threats to sustainable development of society. To address these shortages, reclaimed water is increasingly being used to satisfy water demands and this strategy has proven useful in increasing the reliability of long-term water supplies in many water-scarce areas.

The role of water reuse is growing for urban areas in many countries including landscape irrigation, industrial uses, toilet and urinal flushing, firefighting and fire suppression, street cleaning, environmental and recreational uses (ornamental water features, water bodies' replenishment, etc.) and vehicle washing. These centralized water reuse systems have been developed to the degree that they are now considered as an effective component of urban water management and are used in many cities and countries.

The essential components of a centralized water reuse system include wastewater collection systems (sewers and pumping stations), water source, a reclaimed water treatment system, reclaimed water storage, a reclaimed water distribution system, and a water quality monitoring system. The management concepts and principles are suggested to be implemented throughout the whole system, from the source water to the end users. Each component should be characterized and managed with appropriate strategies.

This document provides management concepts and principles for centralized water reuse systems in urban areas. It considers and addresses the critical issues or factors during management, which will facilitate water authorities and reclaimed water providers or practitioners, or both, to conduct cost-effective approaches for safe and reliable fit-for-purpose water reuse. For details on the design of a centralized water reuse system, see ISO 20760-1. Additionally, for details on the design and management of decentralized or onsite water reuse systems in urban areas, see ISO 23056.