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

Part 2: Management of a centralized water reuse system

*Réutilisation d'eau dans les zones urbaines — Lignes directrices
concernant les systèmes de réutilisation de l'eau —*

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



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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

A list of all parts in the ISO 20760 series can be found on the ISO website.

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Introduction

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 car 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 wastewater treatment facility, 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 system in urban areas. It considers and addresses the critical issues or factors during management, which will facilitate water authorities and reclaimed water providers 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.