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# Service activities relating to drinking water supply, wastewater and stormwater systems — Water and wastewater services for temporary settlements for displaced persons

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# National foreword

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TECHNICAL SPECIFICATION

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# Service activities relating to drinking water supply, wastewater and stormwater systems — Water and wastewater services for temporary settlements for displaced persons

*Activités de service relatives aux systèmes d'alimentation en eau potable, aux systèmes d'assainissement et aux systèmes de gestion des eaux pluviales — Services d'eau et d'assainissement pour les installations provisoires pour les personnes déplacées*

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 224, *Drinking water, wastewater and stormwater systems and services.*

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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# Introduction

Natural disasters, climate change and wars resulting in the mass migration of populations fleeing their homes to temporary settlements such as refugee/internally displaced persons (IDP) camps has become a reality in many parts of the world. Temporary settlements are planned or spontaneous places where refugees or IDPs can reside and benefit from welfare provision, safety and protection, and other assistance from host governments and humanitarian actors. Reliable and good quality water supply for purposes such as drinking, sanitation, hygiene, e.g., WASH (water, sanitation and hygiene) is critical for the survival of the population in temporary settlements. Risks due to natural disasters also require consideration. For instance, earthquakes can cause damage to electricity and/or transportation infrastructure, which are relied on for the construction and operation of the drinking water supply network and wastewater treatment system.

In order to establish a reliable drinking water supply to temporary settlements, it is desirable to have a regular drinking water supply system based on a water source connection through fixed or temporary piping. If this is not possible, water tankers can be used to supply the required quantity of drinking water to the temporary settlement on a regular basis. The water sources used for this purpose should be suitable for drinking purposes. Where water sources that are suitable for drinking purposes are limited, water sources of lower quality can be used for sanitation and other non-potable use purposes only, and cannot be used as drinking water.

Dealing with the adequate disposal of wastewater produced in a temporary settlement is also of critical importance. Neglecting proper disposal of wastewater can seriously harm public health and the environment. It is desirable that the wastewater from temporary settlements will be conveyed by means of fixed or temporary pipeline infrastructure that will enable its removal from the area of the temporary settlement and treated by adequate installations outside the settlement. If this is not possible, portable wastewater tankers can be used to transfer the wastewater to another location outside the temporary settlement for proper treatment.

There are different types of temporary settlements e.g. emergency and/or transition camps. In most cases, drinking water and wastewater provisions can differ or need to evolve according to spatial and temporal factors.

An international guideline can provide information on the different possibilities for providing alternative water services (AWS) and alternative wastewater services (AWWS) to temporary settlements of displaced persons, the methods that can be used to implement such possibilities and the technical aspects that have to be accounted for when considering the implementation of different solutions to resolve the problems of AWS and AWWS that arise in such settlements.

The purpose of this document is to serve as a guideline for planning and setting up appropriate water and wastewater services for temporary settlements.

A guideline for drinking water service provision to temporary settlements can also facilitate communication between relevant parties, coordinate activities and contribute to cost saving. It can be used by relevant industry and stakeholders wishing to be prepared to cope with the issues of drinking water supply and wastewater disposal in temporary settlements.


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# Service activities relating to drinking water supply, wastewater and stormwater systems — Water and wastewater services for temporary settlements for displaced persons

## 1 Scope

This document provides guidelines for alternative water services (AWS) and alternative wastewater services (AWWS) to temporary settlements for displaced persons e.g. refugee/internally displaced persons (IDP) camps, for drinking, sanitation and hygiene purposes. It addresses AWS and AWWS principles and methods, operational planning and implementation.

This document provides guidelines for drinking water supply to temporary settlements, and the disposal of wastewater, by implementation of different methods; it does not deal with the ways of using water inside the temporary settlements. This document deals with drinking water quantity but does not provide methods for quality testing. Water quality test methods are included in the scope of ISO TC 147.

The document does make recommendations regarding public safety with respect to the location of distribution and collection points. On-site treatments are not discussed in this document but, depending on circumstances, they can be suitable. In such case, helpful technical guidelines are provided in the bibliography of this document.

This document complements ISO 24527, whose scope excludes drinking water supplied to temporary settlements. It also complements other ISO TC 224's documents such as ISO 24518 and ISO/TS 24520.

This document is intended to be used by the responsible body for the provision of the water service. It can be used by interested parties such as water utilities, governments and governmental organizations, security bodies, international refugee agencies, related NGOs and relevant industry stakeholders.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 24513:2019, *Service activities relating to drinking water supply, wastewater and stormwater systems — Vocabulary*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 24513:2019 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

**3.1**
**displaced person**
a person who is forced to leave without their will their home or country

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