



**Technical  
Specification**

**ISO/TS 24593**

**Establishment of a master plan for  
water supply — Evaluation of water  
demand**

*Élaboration d'un plan directeur pour l'alimentation en eau —  
Évaluation de la demande en 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](http://www.iso.org/directives)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

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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](http://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](http://www.iso.org/members.html).

## Introduction

The purpose of this document is to define a methodology to evaluate water demand in the context of influencing factors such as climate change and other structural alterations. The water demand is a key input to develop a masterplan for water supply, consisting in a long-term planning document providing overall guidance for future growth and development.

Changing conditions due to climate change, such as warmer temperatures, drought periods or the decrease of groundwater, are important factors for water supply and demand. On the one hand these changes lead to a scarcity in water resources, on the other hand more water demand is expected. The rise in demand in households is accompanied by rising demands in agriculture for irrigation or industries for process and cooling water.

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# Establishment of a master plan for water supply — Evaluation of water demand

## 1 Scope

This document provides a methodology to evaluate the water demand to develop a master plan for water supply. This document establishes general principles to consider relevant data of existing and future systems in the context of climate change and other structural factors, such as social behaviour and urban or industrial developments. It reviews the following:

- description of the water supply system;
- water balance regarding resources and demand;
- change of resource and demand in future (e.g. impact of climate change);
- water loss situation;
- maximum peak factors in present and future;
- emergency supply;
- conditions of infrastructure;
- digitalisation of infrastructure;
- recommendation for optimization.

## 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, *Service activities relating to drinking water supply, wastewater and stormwater systems — Vocabulary*

ISO 24528, *Service activities relating to drinking water supply, wastewater and stormwater systems — Guideline for a water loss investigation of drinking water distribution networks*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 24528, ISO 24513 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/>