

This document is a preview generated by EVS

Water reuse — Vocabulary

Réutilisation de l'eau — Vocabulaire



This document is a preview generated by EMS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword.....	iv
Introduction.....	v
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
Bibliography.....	12

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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 282, *Water reuse*.

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.

Introduction

Water reuse is the use of treated wastewater which, in turn, can have as sources surface water, groundwater, desalinated brackish water, desalinated seawater and reuse water which can include treated wastewater, greywater, rainwater and stormwater.

With economic development, climate change, 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. Although conservation can reduce per capita demand, the remaining supplies may be insufficient to meet overall water demand needs. To address these shortages, reclaimed water is increasingly being considered for use to satisfy water demands that don't require potable water quality, and this strategy has proven useful in increasing the reliability of long-term water supplies in many water-scarce areas of the world.

Reclaimed water is used to satisfy a significant proportion of the water demands in rural and urban areas in many countries including: agricultural irrigation, landscape irrigation, industrial reuse, groundwater recharge, toilet and urinal flushing, firefighting and fire suppression, ornamental water features and other various urban uses including direct and indirect potable reuse.

There is a rapidly growing market on a global scale for water reuse which inevitably demands International Standards applicable world-wide. Today, water shortage is faced in many regions of the world. The reality of water reuse and the lack of uniform and consistent water quality standards are raising concerns for human health, environmental and societal implications of water reuse across the world. Consequently there are growing needs for international standardization from supplier, user, regulator and all stakeholders. Standardization of water reuse of any kind and for any purpose will be very useful around the globe, and a coherent approach to the description of water reuse activities and the use of water reuse terminology from this document will be of benefit to all users and stakeholders.

This document provides an overview of terms and definitions relating to water reuse. The objective of this document is to ensure a coherent approach to the description of water reuse activities and the use of water reuse terminology. It is applicable to all types and sizes of water reuse facilities and systems to all types of stakeholders involved in water reuse. Its purpose is to foster mutual understanding common to the different stakeholders.

An important new concept in water reuse is the “fit for purpose” approach, which entails the production of reclaimed water to a quality that meets the needs of the intended end-uses.

This document presents terms and definitions in the following areas:

- water reuse of any kind and for any purpose;
- treated wastewater use for irrigation purposes;
- water reuse in urban areas;
- risk and performance evaluation of water reuse systems;
- water reuse for industrial purpose.

Water reuse — Vocabulary

1 Scope

This document defines terms and definitions commonly used in water reuse standards.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

advanced treatment

treatment for the removal of total dissolved solids and/or trace *constituents* (3.14) as required for specific water reuse applications (e.g. activated carbon adsorption, reverse osmosis, and advanced oxidation processes)

[SOURCE: ASANO et al., *Water Reuse: Issues, Technologies, and Applications*, McGraw-Hill, Metcalf & Eddy, New York, 2007 and US EPA, *Guidelines for Water Reuse*, 2012]

3.2

agriculture

science or practice of farming, including cultivation of the soil for the growing of crops and the rearing of animals to provide food or other products

3.3

aquifer

subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater

[SOURCE: Directive 2000/60/EC, Article 2, 11]

3.4

augmentation

process of using *reclaimed water* (3.63) to increase the amount of water flowing through a surface body of water or *aquifer* (3.3) (i.e. reservoir, lake, river, stream, wetland, and/or groundwater basin), for beneficial purposes

3.5

background water

freshwater (3.30) supplied for domestic, institutional, commercial and industrial use, from which *wastewater* (3.80) is generated

3.6

barrier

means that reduces or prevents the health and environmental *risks* (3.64), by preventing contact with the treated *wastewater* (3.80) and/or by improving its quality