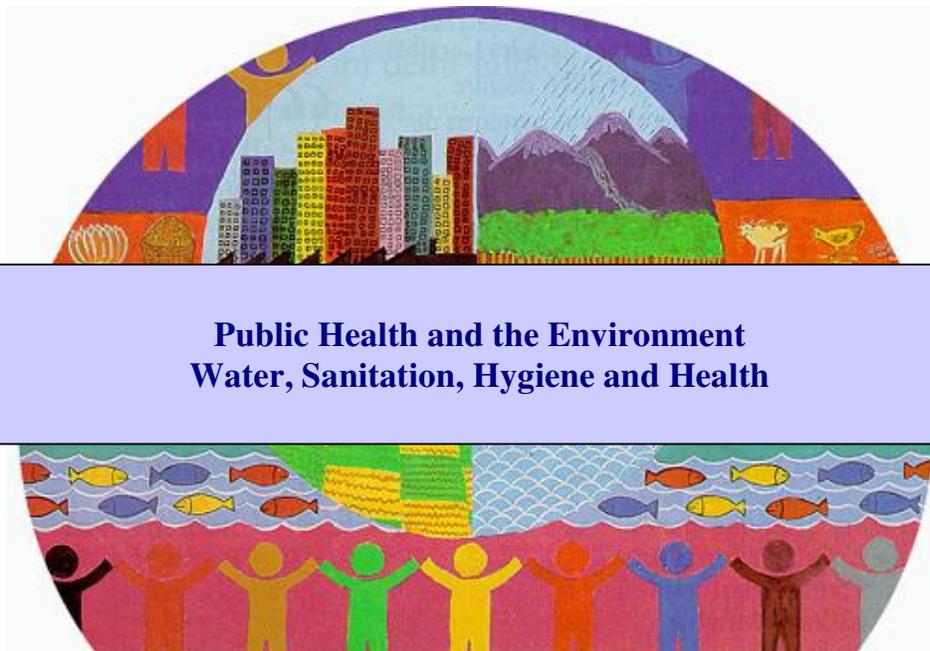




**World Health
Organization**

WHO Guidelines for Drinking-water Quality

**Policies and Procedures used in updating the
WHO Guidelines for Drinking-water Quality**



**Public Health and the Environment
Water, Sanitation, Hygiene and Health**

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**Public Health and the Environment
World Health Organization
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List of abbreviations

ADI	Acceptable Daily Intake
BMD	Benchmark Dose
BMDL	Benchmark Dose Lower Confidence Limit
CICAD	Concise International Chemical Assessment Document
CSAF	Chemical-specific Adjustment Factor
DALY	Disability Adjusted Life Year
DWQC	(WHO) Drinking Water Quality Committee
EHC	(IPCS) Environmental Health Criteria document
FAO	Food and Agriculture Organization of the United Nations
FTF	Final Task Force
GDWQ	(WHO) Guidelines for Drinking-water Quality
GV	(WHO Drinking-water Quality) Guideline Value
IARC	International Agency for Research on Cancer
IPCS	International Programme on Chemical Safety
ISO	International Organisation for Standardisation
JECFA	Joint FAO/WHO Expert Committee on Food Additives
JMPR	Joint FAO/WHO Meeting on Pesticide Residues
LOAEL	Lowest Observed Adverse Effect Level
NOAEL	No Observed Adverse Effect Level
PIC	Prior Informed Consent
POP	Persistent Organic Pollutants
TDI	Tolerable Daily Intake
UF	Uncertainty Factor
WG	Working Group
WHO (HQ, RO)	World Health Organization (Headquarters, Regional Office)
WHOPES	WHO Pesticides Evaluation Scheme

A Background

A.1 The first World Health Organization (WHO) publication dealing specifically with drinking-water quality was published in 1958 as International Standards for Drinking-water. It was subsequently revised in 1963 and in 1971 under the same title. In 1984-85, the first edition of the WHO Guidelines for Drinking-water Quality (GDWQ) was published in three volumes: Vol. 1 – Recommendations; Vol. 2 – Health Criteria and Other Supporting Information; and Vol. 3 – Surveillance and Control of Community Supplies. The second editions of the three volumes of the GDWQ were published in 1993, 1996 and 1997 respectively. Addenda to Volumes 1 and 2 were published in 1998 and 1999 (addressing selected chemicals only) and an addendum on microbiological agents in drinking-water in 2002. In 2004, the third edition of Volume 1 of the GDWQ was published, and the first addendum to this edition in 2006.

A.2 The main reason for promoting the adoption of guidelines, rather than international standards for drinking-water quality, is the advantage provided by the adoption of a risk-benefit approach whether quantitative or qualitative and of preventive management operating from catchment to consumer.

A.3 In developing standards and regulations, care should be taken to ensure that scarce resources are not unnecessarily diverted to the development of standards and the monitoring of substances of relatively minor importance. This approach should lead to standards and regulations that can be readily implemented and enforced and are protective of public health

Purpose and content of the GDWQ

A.4 The primary purpose of the GDWQ is the protection of public health. It is intended that the GDWQ be used as guidance to countries and to others as to what constitutes safe drinking-water and safe water supply.

A.5 The GDWQ are intended to be used in the development of risk management strategies. These may include national or regional standards developed from the scientific basis provided in the GDWQ, adapted to take account of local or national environmental, socio-cultural (including dietary) and economic conditions.

A.6 The GDWQ provide the scientific point of departure for standard setting and regulation. They may describe evidence-based guidance on reasonable minimum requirements of safe-practice to protect the health of consumers and progress towards improving water safety. They may also derive numerical “guidelines values” for constituents of water or indicators of water quality.

A.7 The GDWQ include an assessment of the health risk presented by the various microbial, chemical, radiological and physical constituents that may be present in drinking-water. The GDWQ define the criteria used to select the various constituents addressed.

A.8 The GDWQ describe the approaches used in deriving guidelines, including numerical “guideline values”, and explain how guidelines for drinking-water quality are intended to be used.

A.9 The GDWQ themselves may be accompanied by separate texts that provide background information substantiating or elaborating on the recommendations included in the GDWQ. A current list of such documents is in Annex A.

A.10 The GDWQ themselves may also be accompanied by separate texts providing guidance on good practice towards effective implementation of the guidelines. A list of such documents is in Annex A.

Development of the GDWQ

A.11 The GDWQ are kept up-to-date through an ongoing “rolling revision” process.

A.12 Guidelines are based upon the best available evidence and scientific consensus.¹

A.13 The GDWQ are derived so as to take account of the needs of an individual through a normal lifetime, including changes in sensitivity that may occur between life stages. Those at greatest risk of waterborne disease are infants and young children, people who are debilitated or living under unsanitary conditions and the elderly. Exclusions, such as particularly sensitive sub-populations (including the sick and immunocompromised) may be specifically defined.

A.14 Exposure assumptions are adapted from those in the Environmental Health Criteria (EHC) monograph 170. . A daily per capita consumption figure of two litres of drinking-water for adults weighing 60 kg is used in the calculation. A 10 kg child is assumed to drink one litre of water per day and a 5 kg infant is assumed to consume 0.75 litres per day. The difference between boiled and unboiled water consumption may be important for some hazards especially microbial agents. It is assumed, where appropriate, that 50% of water consumed has been boiled, for example in food and beverage preparation.

A.15 The GDWQ *per se* are the collective product of many experts and of extensive recovered experience. While contributions are acknowledged, WHO is identified as the “author” of the GDWQ. For some technical substantiation and guidance on good practice published outside the GDWQ themselves, it is often appropriate to attribute authorship and/or editorship of contributions. This should not be allowed to detract from the pursuit of wide and balanced contribution.

Application of the GDWQ

A.16 The GDWQ are intended to be applicable to water used for all usual domestic

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