



DWA Set of Rules

Standard DWA-A 272E

Principles for the Planning and Implementation of New Alternative Sanitation Systems (NASS)

June 2014

**Grundsätze für die Planung und Implementierung
Neuartiger Sanitärsysteme (NASS)**

Juni 2014

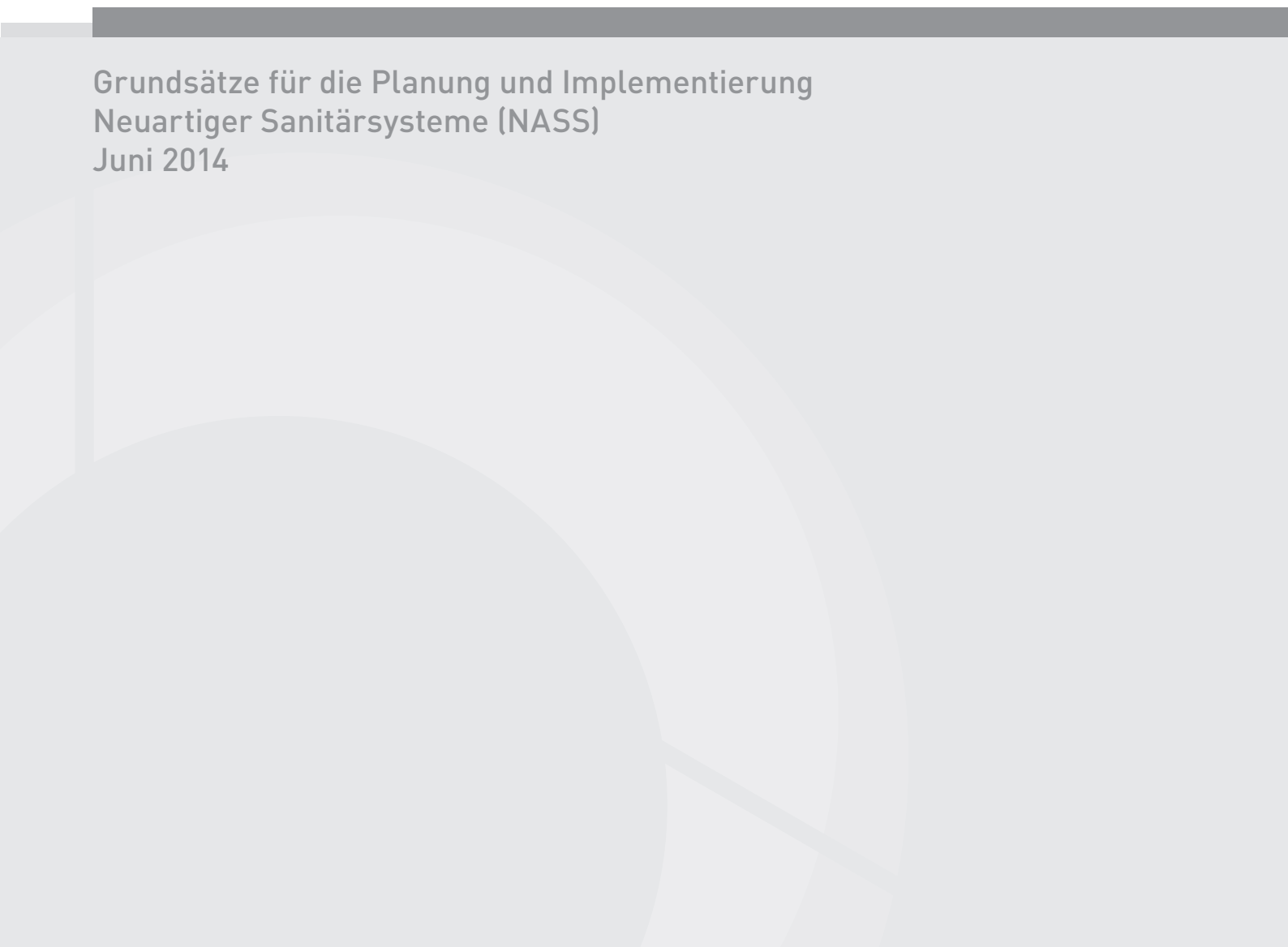
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The German Association for Water, Wastewater and Waste (DWA) is strongly committed to the development of secure and sustainable water and waste management. As a politically and economically independent organisation it is professionally active in the field of water management, wastewater, waste and soil protection.

In Europe DWA is the association with the largest number of members within this field. Therefore it takes on a unique position in connection with professional competence regarding standardisation, professional training and information. The approximately 14,000 members represent specialists and executives from municipalities, universities, engineering offices, authorities and companies.

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Foreword

In recent years, numerous national and international research and demonstration projects have been carried out in the field of new urban water infrastructure systems. This has led to new insights and new technical concepts. The background to this work is, in particular, emerging changes with regard to important boundary conditions for the water infrastructure, which include long-term ecological requirements for resource recovery and recycling. These developments were taken up by the DWA and documented in the 2008 DWA-Topics "New Alternative Sanitation Systems". The overall objective of New Alternative Sanitation Systems (NASS) is the recycling of recyclable materials as well as a comprehensive closure of material and water cycles. NASS are therefore based on the separate collection of domestic material flows directly at the point of origin.

For a further practical implementation of these findings, it is necessary that the relevant aspects are summarized in a form that is easily accessible and compact for the main groups of actors (planners, manufacturers, authorities, utilities and waste disposal companies).

An essential concern of this Standard is the systematization of the planning approach and the comparative assessment of different concepts involving NASS.

Previous issues

No predecessor document

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User Notes

This Standard has been produced by a group of technical, scientific and economic experts, working in an honorary capacity and applying the rules and procedures of the DWA and the Standard DWA-A 400. Based on judicial precedent, there exists an actual presumption that this document is textually and technically correct and also generally recognised.

Any party is free to make use of this Standard. However, the application of its contents may also be made an obligation under the terms of legal or administrative regulations, or of a contract, or for some other legal reason.

This Standard is an important, but not the sole, source of information for solutions to technical problems. Applying information given here does not relieve the user of responsibility for his own actions or for correctly applying this information in specific cases. This holds true in particular when it comes to respecting the margins laid down in this Standard.

1 Scope

This Standard describes the basic principles of New Alternative Sanitation Systems (NASS)¹⁾ and provides an overview of the current state of the art. It illustrates the boundary conditions, under which the use of NASS can be particularly advantageous and the basic procedure for conceptualization and planning. The main focus is on the special features of innovative sanitation systems, in comparison with conventional systems with regard to conception, planning, construction and operation. A comparative assessment of different concepts must take full account of the implications of all essential protection goals and criteria. The most important aspects are therefore described below.

The Standard does not provide detailed design guidelines for each of the technical components of new alternative concepts - due to the variety of possible approaches and the very dynamically evolving techniques, this would go beyond the scope of a Standard²⁾.

The target group of this Standard are stakeholders such as planners, manufacturers and builders, who are directly responsible for the implementation of water infrastructure systems, as well as environmental management companies, public authorities and urban planners, in whose areas of responsibility chances could arise for the implementation of NASS.

2 The objective of New Alternative Sanitation Systems (NASS)

Urban water management has to face new challenges which are caused by a significant change of boundary conditions as well as new requirements arising from sustainability aspects. Examples include the impact of demographic change on pipeline-bound infrastructures, changes in precipitation patterns due to climate change, and demands for improving resource efficiency. New approaches,

1) The DWA introduced the term "new alternative sanitation systems (NASS)". Other common terms are alternative water systems (AWS), sustainable sanitation (SuSan), decentralised sanitation and reuse (DeSa/R), ecological sanitation (ecosan), innovative sanitation concepts.

2) These developments will continue to be monitored by the DWA Technical Committee KA-1 and documented in supplementary documents.