

# ISO 24511:2024-02 (E)

## Activities relating to drinking water and wastewater services - Guidelines for the management of wastewater utilities and for the assessment of wastewater services

---

<b>Contents</b>		<b>Page</b>
Foreword .....		v
Introduction .....		vi
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	2
4	Components of wastewater systems .....	4
4.1	General .....	4
4.2	Types of wastewater systems .....	5
4.3	Centralized systems .....	5
4.3.1	Wastewater source .....	5
4.3.2	Transport from source to treatment .....	5
4.3.3	Treatment .....	6
4.3.4	Storage, transport and distribution .....	7
4.3.5	Disposal of residues .....	7
4.4	On-site systems .....	7
4.4.1	Wastewater source .....	7
4.4.2	Collection and transport .....	7
4.4.3	Treatment .....	8
4.4.4	Storage, transport and distribution .....	8
4.5	Disposal or reuse of residues .....	8
5	Objectives for the wastewater utility .....	9
5.1	General .....	9
5.2	Protection of public health .....	10
5.3	Meeting users' needs and expectations .....	11
5.4	Provision of services under normal and emergency situations .....	11
5.5	Sustainability of the wastewater utility .....	11
5.6	Promotion of sustainable development of the community .....	11
5.7	Protection of the environment .....	12
5.7.1	Protection of the natural environment .....	12
5.7.2	Protection of the built or public environment .....	12
5.8	Climate change .....	12
5.9	Higher user and service demands .....	13
5.10	Available technologies .....	13
6	Management components of a wastewater utility .....	13
6.1	General .....	13
6.2	Activities and process management .....	14
6.3	Resources management .....	14
6.4	Asset management .....	14
6.5	Customer relations management .....	15
6.6	Information management .....	15
6.7	Environmental management .....	15
6.8	Risk management .....	15
7	Guidelines for the management of wastewater utilities .....	16

7.1	General .....	16
7.2	Organization .....	17
7.2.1	General .....	17
7.2.2	Organizational structure and responsibilities .....	17
7.2.3	Organization of work flow .....	17
7.2.4	Operational documents and records .....	17
7.3	Planning and construction .....	18
7.4	Operations and maintenance .....	19
7.4.1	General .....	19
7.4.2	Technical activities .....	19
7.4.3	Support activities .....	20
8	Assessment of wastewater services .....	22
8.1	General .....	22
8.2	Assessment policy .....	23
8.3	Goal and scope of the assessment .....	23
8.4	Parties involved in the assessment .....	23
8.5	Methodology of assessment .....	24
8.6	Service assessment criteria .....	24
8.7	Resources to conduct the assessment .....	25
8.8	The production of output and recommendations for the use of the output .....	25
9	Performance indicators .....	25
9.1	General .....	25
9.2	Performance indicator systems .....	25
9.2.1	Key components of a performance indicator system .....	25
9.2.2	Performance indicators .....	26
9.2.3	Variables .....	26
9.2.4	Context information .....	27
9.3	Quality of the information .....	27
9.4	Example of a performance indicator .....	27
Annex A (informative) Schematics of wastewater systems .....		29
Annex B (informative) Possible actions to achieve the objectives of the wastewater utility .....		31
Annex C (informative) Possible actions related to the management of the wastewater utility .....		37
Annex D (informative) Example of an assessment methodology for deciding on the implementation and calculation of performance indicators for wastewater utilities .....		40
Annex E (informative) Examples of service assessment criteria related to the wastewater utility objectives, performance indicators related to assessment criteria, and service assessment criteria related to components of a wastewater system .....		43
Annex F (informative) Example of confidence-grading scheme for performance indicator systems .....		54
Bibliography .....		56