

DIN ISO 24516-2:2021-08 (E)

Guidelines for the management of assets of water supply and wastewater systems - Part 2: Waterworks (ISO 24516-2 :2019)

Contents	Page
National foreword	4
National Annex NA (informative) Terms and definitions	6
National Annex NA (informative) Bibliography	15
DIN ISO 24516-2:2021-08 Foreword	18
Introduction	19
1 Scope	21
2 Normative references	21
3 Termsanddefinitions	21
4 Principle aspects of the management of assets	22
4.1 Objectives and requirements	22
4.1.1 Objectives	22
4.1.2 Functional requirements	22
4.1.3 Performance requirements	23
4.2 General aspects	24
4.2.1 General	24
4.2.2 Principal aspects -- Drinking water utilities	24
4.2.3 Principal aspects -- Drinking water systems	25
4.2.4 Integrating the principal aspects	26
4.3 Risks and life cycle aspects	26
4.3.1 Risk	26
4.3.2 Life cycle	27
4.4 Structuring the process for the management of assets	28
4.4.1 General	28
4.4.2 Strategies for the management of assets	29
4.4.3 Periods of planning	30
4.4.4 Strategic-level activities	31
4.4.5 Tactical-level activities	31
4.4.6 Operational-level activities	31
5 Investigation	32
5.1 General	32
5.2 Purpose of investigation	32
5.3 Determine the scope of the investigation	33
5.4 Types of investigation	33
5.4.1 Hydraulic investigation	33
5.4.2 Investigation of the process technique	33
5.4.3 Structural investigation	33
5.4.4 Operational investigation	33
5.5 Data collection	35
5.5.1 General	35
5.5.2 Data requirements	35
5.5.3 Inventory data	35
5.5.4 Condition data	35

5.5.5	Operational data	36
5.6	Data registering and data assignment	36
5.6.1	Data registering	36
5.6.2	Data assignment	37
5.6.3	Locational referencing	37
5.7	Review existing information	37
5.8	Inventory update	37
5.9	Review of performance information	38
5.10	Planning of investigation	38
5.11	Performance testing	38
 6	 Assessment	 39
6.1	Process	39
6.2	Assessment of hydraulic and drinking water quality performance	39
6.3	Assessment of process performance	40
6.4	Assessment of structural condition	40
6.5	Assessment of operational performance	40
6.6	Comparison with performance requirements	40
6.7	Identification of unacceptable impacts	40
6.8	Identification of causes of performance deficiencies	40
 7	 Planning	 41
7.1	General	41
7.2	Develop integrated solutions	41
7.3	Assess solutions	42
7.4	Prepare action plan	43
 8	 Implementation	 43
8.1	Introduction	43
8.2	Create/update plan	44
8.3	Carry out work	44
8.4	Monitor performance	44
8.5	Review performance	45
 9	 Operation and maintenance	 45
9.1	General	45
9.2	Operation	46
9.3	Maintenance	46
 10	 Rehabilitation	 48
10.1	General	48
10.2	Strategic plan for rehabilitation of physical infrastructure (long-term planning)	49
10.2.1	General	49
10.2.2	Strategic approaches	50
10.2.3	Determining the need for rehabilitation of physical infrastructure	52
10.2.4	Budgeting	53
10.3	Tactical plan for rehabilitation of physical infrastructure (mid-term planning)	53
10.3.1	Risk-based approach to evaluation of priorities	53
10.3.2	Evaluation of individual risks and prioritising for risk control	55
10.4	Operational plan -- Implementation of rehabilitation measures (short-term planning)	55
 11	 Documentation and performance review	 55
 Annex A (informative)	 Further information on objectives in the management of assets of waterworks	 57
 Annex B (informative)	 Outline of the content of a drinking water master plan	 59
 Annex C (informative)	 Examples of data relevant to the management of assets of waterworks	 60
 Annex D (informative)	 Risk-based assessment for rehabilitation	 63
 Bibliography	 64	