



WATER SERVICES
ASSOCIATION OF AUSTRALIA

WATER SUPPLY CODE OF AUSTRALIA

South East Queensland Service Providers Edition
Version 1.4 (March 2024)

CITY OF
GOLDCOAST.



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WATER SERVICES
ASSOCIATION OF AUSTRALIA

PART 0: GLOSSARY, ABBREVIATIONS AND REFERENCES

Water Supply Code of Australia

South East Queensland Service Providers Edition
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GLOSSARY, ABBREVIATIONS AND REFERENCES

I GLOSSARY OF TERMS

The purpose of this glossary is to assist in interpreting terminology used in the various parts of the Water Supply Code of Australia.

The terms and definitions are adopted from various sources including:

- Australian/New Zealand Standard AS/NZS 2566.1, Buried flexible pipelines Part 1: Structural design
- British Standard BS EN 805:2000, Water supply—Requirements for systems and components outside buildings
- British Standard BS EN 14040:2006, Environmental management. Life cycle assessment. Principles and framework
- Glossary of Building Terms published jointly by National Committee on Rationalised Building (NCRB), Standards Australia and Suppliers Index Pty Ltd
- Australian/New Zealand Standard AS/NZS 3500 National Plumbing and Drainage Code Part 0: Glossary of terms
- A Guide to Testing of Water Supply Pipelines and Sewer Rising Mains, 1st Edition, June 1999, WRc plc
- The Drinking Water Dictionary, 1st Edition, 2000, American Water Works Association (AWWA)
- Water Agency documentation

Term	Definition
access chamber	An in-ground structure including a cover constructed in the line of a water main to facilitate operation, testing and/or maintenance of the system. It will generally contain appurtenances such as valves
access cover	A removable cover that is installed at or above finished surface level on an access chamber to allow access to appurtenances
aggressive soil	Soil which could have a corrosive or other adverse effect on a pipeline component and which requires special consideration with respect to protective measures. See also contaminated soil
alignment of mains	Positioning of mains relative to locations such as property boundaries or the Water Agency's space allocation in the road reserve
allotment	See lot
allowable horizontal bearing pressure	The maximum permissible pressure on foundation ground that provides adequate safety against rupture of the ground mass or movement of the foundation of such magnitude as to impair the structure that imposes the pressure
allowable operating pressure, AOP	Maximum pressure at which a piping system can sustain in continuous use under given service conditions without pressure surge. For plastics piping systems the value is specified at a temperature of 20°C

Term	Definition
appurtenance	A component of a pipeline such as a fitting, valve, hydrant, etc.
Authorised	Acceptable to, authorised by or approved by the Water Agency or Owner or Regulator
Australian Height Datum, AHD	A level datum, uniform throughout Australia, derived from mean sea level observations at 30 tide gauge locations located along the Australian coastline and used as a base reference for "derived" datum levels throughout Australia; replaces "Australian Levelling Survey"
average day demand	The total water demand per year for a given area or category of development divided by 365
backfill	Material (including embedment and trench fill) and procedure used to fill an excavation. See also engineered fill
balancing storage	See operating storage
bedding	Zone between the foundation and the bottom of a pipeline. See also embedment
bend	A short length of pipe or a manufactured fitting used to make a change in direction in sewers or water mains
blue	A colour defined in accordance with RAL ¹ DESIGN colour numbers as being no darker than 200 80 25 or 210 80 25 and no lighter than 200 90 10 or 210 90 10, respectively

Notes

- (1) RAL Deutsches Institut für Gütesicherung und Kennzeichnung e.V. (RAL German Institute for Quality Assurance and Certification)
Siegburger Straße 39
D-53757 Sankt Augustin
Telephone: +49(0)2241/1605-30
Telefax: +49(0)2241/1605-16
<http://www.ral.de/farben/en/farbvorlagen/index.html?content1.shtml>
- (2) No equivalent colours can be defined in accordance with AS 2700 (NZS 7702)



WATER SERVICES
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PART 1: PLANNING AND DESIGN

Water Supply Code of Australia

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PART 1: PLANNING AND DESIGN

1 GENERAL

1.1 SCOPE

Part 1 Planning and Design describes requirements for planning and design of drinking and non-drinking water transfer, distribution and reticulation networks. It is applicable for servicing new townships, new developments and re-development areas, as well as for water main augmentations and renewals. A typical schematic of a water supply system is shown in [Figure 1.1](#).

Planning and design processes may overlap. The term "Planner" may be applicable to a [Designer](#). Responsibilities should be defined in Water Agency documentation for specific projects or in general.

Reader should be aware that:

- Specific design parameters relevant to this document are contained within the SEQ WS&S Design Criteria
- Specific requirements vary between [SEQ-SPs](#)
- Where there is conflict between this Code and the SEQ WS&S Design Criteria, the latter shall take precedence.

It is expected that Water Agency process documentation and contracts apply to asset creation requirements. This code has been adjusted to define the DSS for drinking water and non drinking water standards.

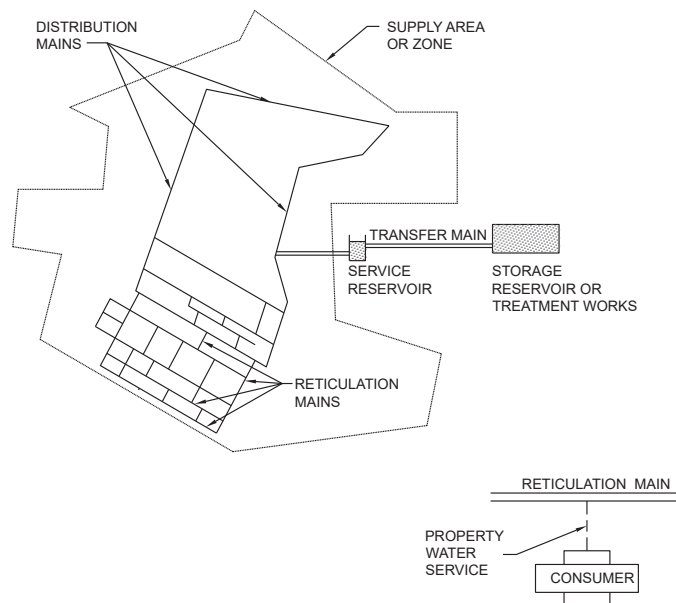


Figure 1.1 TYPICAL WATER SUPPLY SYSTEM

1.2 PLANNING AND DESIGN

1.2.1 OBJECTIVES

The overall objective of [system planning](#) and design is to provide a [water supply system](#) that meets the Water Agency's obligations under its operating licence and customer contract for water quality, continuity of supply and pressure at the draw-off point.

1.2.2 SCOPE AND REQUIREMENTS

Planning and design processes for drinking and **non-drinking water** supply systems including sources of supply, **reservoirs**, treatment plants, transfer, distribution and **reticulation mains**, pumping stations and associated control systems and **works** shall address all appropriate due diligence requirements, including obligations under operating licences, customer contracts and regulations pertaining to health, environment, security and **OH&S**.

The nominated requirements of the **SEQ-SPs** planners and designers will be in accordance with the SEQ Water Supply and Sewerage Design Criteria and the Queensland Department of Environment and resource Managements Planning Guidelines for Water Supply and Sewerage Schemes. The SEQ Water Supply and Sewerage Design Criteria take precedence over all other planning advice.

System plans and designs shall ensure that, under normal operating conditions and maintenance practices:

- (a) transfer systems, including storage **reservoirs** and pumping stations are capable of meeting peak day **demands**;
- (b) distribution systems, including service reservoirs and pumping stations, are capable of meeting a set proportion of peak day to peak hour demands;
- (c) reticulation systems are capable of meeting peak hourly demands; and
- (d) isolated portions of reticulation systems, such as pressure boosted areas or areas served by a network of small diameter mains, are capable of meeting peak demands.

Contingency plans may need to be developed to address potential failure of critical assets reflecting risk assessment relative to normal operating and maintenance practices of the Water Agency. Such plans may include provision for managing:

- (i) *customer impacts from loss of supply due to main failure, power outages etc.;*
- (ii) *water quality;*
- (iii) *alternative supplies;*
- (iv) *maintenance response;*
- (v) *adaptation responses to climate change;*
- (vi) *community and environmental impacts e.g. flooding, traffic disruption, crime and bushfires;*
- (vii) *environmental restoration; and*
- (viii) *financial impacts, third-party claims and litigation.*

*Environmental impact assessments (EIA) may be required to be undertaken before completion of the concept and system plans. EIA documentation shall address and conform to legal requirements, Water Agency guidelines and applicable **standards**.*

Where required, Development/Planning approval(s) shall be obtained from the relevant authority.

1.2.3 CONCEPT PLAN FORMAT

A **Concept plan** shall be developed for each project.

Depending on a Water Agency's requirements and/or scope of a project, the plan format may vary from a layout sketch to a complete system specification. For example, a plan for a reticulation system may simply require notification of the point of connection, service pressure and any special system requirements.

The **Concept plan** shall:

- (a) satisfy requirements of relevant OH&S, environmental and security Legislation/Act and/or Regulations;



WATER SERVICES
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PART 2: CONSTRUCTION

Water Supply Code of Australia

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PART 2: CONSTRUCTION

10 GENERAL

10.1 SCOPE

This Part of the Code provides default requirements for the construction of water mains and associated components and structures.

This document should be read in conjunction with relevant Water Agency supplementary manuals, development agreements, specific project contract documents, general conditions of contract (e.g. AS 2124) and other documents nominated by the Water Agency.

10.2 INTERPRETATION

For the purposes of this Part the following interpretations shall be applied:

"**authorised**" means acceptable to, authorised by or approved by the [Water Agency](#) or [Owner](#) or [Regulator](#).

"**Constructor**" means the individual, corporation or legal entity including any contractors and sub-contractors that is accountable at law for delivery of [Works](#) under a specific contract or development agreement.

"**Design Drawings**" are deemed to be plans and drawings, developed and endorsed by a [designer\(s\)](#); they are an integral part of job/project instructions/[specifications](#) to a competent [constructor](#), exercising duty of care. [Design Drawings](#) typically show details determined by calculation, or otherwise, that satisfy relevant specifications, codes, [standards](#), regulations, geotechnical and site constraints. As appropriate, Design Drawings show the location of proposed [works](#), existing and/or proposed roads, water and sewer mains, [property services](#), site plans including lots, boundaries and/or other relevant information.

"**improvements**" are deemed to include but not be limited to pavements, shrubs, gardens, retaining walls, fences and all other structures.

"**Owner**" means the Agency, Authority, Board, Company, Controlling Authority, Corporation, Council, Department, Individual, [Regulator](#), Utility or other legal entity who is the owner of the asset and/or who has responsibility for the asset.

"**Part**" means the Water Supply Code of Australia Part 2: Construction.

"**Product Specification**" means the WSAA Product Specification detailing the requirements for the supply of a product or material (Refer to www.wsaa.asn.au).

"**Recognised Testing Laboratory**" means a laboratory competent to conduct applicable product tests and –

- (i) accredited by the National Association of Testing Authorities (NATA) having a scope of accreditation covering the testing requirements of the applicable specification(s);

or

- (ii) accredited by an International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) signatory and having a scope of accreditation covering the testing requirements of the applicable specification(s);

or

- (iii) recognised by the Water Agency following evaluation of the laboratory's compliance with the applicable requirements of ISO/IEC 17025.

"Regulator" means a Regulator who has the power to enforce Regulations related to the activities and responsibilities of a Commonwealth, state, territory or local government. It applies to environmental management and protection, occupational health and safety and the like.

"Specification" means the Specification detailing the work involved in the particular project in hand.

"Specified" means as specified in the [Specification](#), [Design Drawings](#), Product Specifications and/or by the [Superintendent](#).

"Superintendent" means the individual appointed by the contract principal as an independent arbiter of contract directions, issues, claims and variations.

"Tester" means an individual, corporation or legal entity that is accountable at law for delivery of testing services under a specific contract with the [Constructor](#).

"Water Agency" means an authority, board, business, corporation, council or local government body with the responsibility for planning or defining planning requirements, for defining and authorising design requirements, for defining and authorising construction requirements and for operating and maintaining or defining operation and maintenance requirements for a water supply and/or sewerage system or systems.

"Works" means the physical assets being constructed as part of the particular project in hand.

Headings are for the convenience of the reader and shall not be used in the interpretation of this Part. *Italicised text is commentary to default requirements.*



WATER SERVICES
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PART 3: DRAWINGS

Water Supply Code of Australia

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PART 3: DRAWINGS

SEQ Drinking Water Supply Drawings

SEQ-WAT-1100 SERIES - PIPELINE LAYOUT

SEQ-WAT-1111 SET - LARGE METER ARRANGEMENT

SEQ-WAT-1200 SERIES - EMBEDMENT / TRENCH AND RESTRAINTS

SEQ-WAT-1300 SERIES - INSTALLATION PRACTICES / STRUCTURES

SEQ-WAT-1400 SERIES - FABRICATION DETAILS

SEQ Non-Drinking Water Drawings

SEQ General Legend Drawing