

# **SEQ Water Supply and Sewerage Design & Construction Code (SEQ WS&S D&C Code)**

## **DESIGN CRITERIA**

### **SCHEDULE OF AMENDMENTS**

**Amendment No.1 – February 2020**



## Schedule of Amendments to Design Criteria (Changes from July 2013 Version to February 2020 Version)

DESIGN CRITERIA	
<b>Document Structure Change</b>	
Section	Description
<b>Appendix B</b>	Added Appendix B to document to provide greater clarity regarding land considered 'urban' for the purposes of fire fighting requirements stated in Table 4.1 – Section A5.
<b>Minor Updates to Existing Text</b>	
Section	Description
<b>Referenced documents</b>	Updated referenced documents list to refer to the latest SEQ Sewerage Code.
<b>References to SEQ-SP</b>	Document updated to consistently refer to SEQ-SPs rather than Water Agency or Service Provider
<b>Clause 6.1.4 Reservoir Sizing – Staging</b>	Updated third paragraph to read: “Operational restrictions may also lead to increased storage requirements. As the required minimum operating storage rises, the available buffer storage decreases. The construction of a new reservoir or augmentation of the supply system should be triggered once the required minimum operating storage of the reservoir is around 45% of the total available storage.”
<b>Clause 6.1.5 Reservoir Sizing – Constant Flow/Trickle Top Up System</b>	Added the following sentence to the end of the Clause: “Existing trickle top up areas are not designed to provide fire flow, even in situations where the property connections branch off from water mains that have hydrants installed.”
<b>Clause 7.1 Drinking Water Quality – General</b>	Updated first bullet point (with new text shown in bold below): <ul style="list-style-type: none"> <li>Minimising storage time at reservoirs (i.e. elimination of long detention), incorporating provision to ensure stored water is well mixed. Preference is given to <b>in-line</b> reservoirs which have a separate inlet/outlet (<b>off-line reservoirs</b> as well as common inlet/outlet reservoir arrangements should be avoided)</li> </ul>
<b>Clause 13.5 Pressure Sewerage Systems</b>	Updated Clause title from ‘Low Pressure Sewer Systems’ to ‘Pressure Sewerage Systems’
	Updated Clause text as follows (with new text shown in bold below): “The design flows of <b>Pressure Sewerage Systems</b> shall be calculated using the same design criteria as a standard submersible pump station. The populations to be allowed for in the design of the system shall comply with the requirements for the design of gravity sewers. The development of <b>Pressure Sewerage Systems (PSS)</b> are not recommended by the <b>SEQ-SPs</b> . Only very limited extensions to existing systems will be considered <b>in accordance with the SEQ-SP’s policy for PSS and is subject to approval by the SEQ-SP.</b> ”
<b>Clause 13.6 Septicity and Odour Control</b>	Updated the following sentences in the clause (with new text shown in bold below): “...The <b>90th percentile</b> gaseous hydrogen sulphide concentration in the sewer headspace shall not exceed <b>10ppm anywhere in the system</b> . If modelling predicts concentrations greater than <b>10ppm</b> , then either pump station chemical dosing or headspace gas extraction/treatment will be required. Refer to the WSAA Sewerage Code <b>and the WSAA Sewage Pumping Station Code</b> (as amended) for further guidance on odour management studies.”

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## Table Updates

### Table 4.1 – Water Network Design Criteria – Single Supply (Drinking Water Only) Network

Section	Description
Section A3	Clarified in Parameter column that peaking factors do not apply to non-drinking water.
Section A5	Added clarification in Parameter column regarding areas considered ‘Rural, Small Communities and Tourist Affected Small Communities’, ‘Urban’, ‘Greenfield’ and ‘Brownfield’.
	Added Notes 1 to 5 underneath Table 4.1 which are relevant to Section A5.
	Updated Urban Utilities requirements and provided clarification regarding the number of hydrants required to provide the required fire flows.
	Updated Unitywater fire flow requirements add requirements for Attached Res ( $\leq 3$ storeys) in Urban areas.
Section B3	Added clarification note in Parameter column stating that peaking factors are not applied to NDW
Section C3	Added clarification note in Parameter column stating that peaking factors are not applied to NDW

### Table 10 – Sewerage Network Design Criteria

Section	Description
Section D2	Updated SEQ-SP requirements to read: For RIGSS: 200 L/EP/d (including for Vacuum and Pressure Sewer systems in RIGSS areas) For NuSewer: 180 L/EP/d (including for Vacuum and Pressure Sewer systems in NuSewer areas) For “baseline” calculations for existing Conventional Sewer 210L/EP/d
Section D3	Updated Urban Utilities Peak Dry Weather Flow (PDWF) requirements to clarify PDWF calculation, as well as provide greater clarity regarding GWI infiltration values for NuSewers & conventional sewers.
Section D6	Updated Parameter column (with new text in bold) to read “ <b>Vacuum Sewer / Pressure Sewer Flow</b> ”
	Updated Vacuum Sewer / Pressure Sewer Flow applicable to all SEQ-SPs to read: “Discharge for system = 4 x ADWF”
Section D8	Updated Parameter column (with new text in bold) to read: “Minimum pipe grades ( <b>Trunk sewers are subject to minimum velocity requirements contained further within this table</b> )”
	Removed Minimum Sewer Grades for trunk sewers and updated Note 1 contained within the Minimum Sewer Grades Table
	For minimum pipe grades, the following note applicable to all SEQ-SPs has been added: “Note: Pipe size selection shall use the minimum size pipe to convey the design PWWF. Pipe size shall not be increased to achieve minimum pipe grade requirements.”
	For maximum velocity, updated the SEQ Code reference to refer to the current SEQ Sewerage Code.
	Updated Parameter column (with new text in bold) to read: “Minimum velocity <b>for trunk sewers</b> ”
Section D9	Updated City of Gold Coast average dry weather flow for treatment plants to read:

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	“As per network flows”
<b>Appendix A – Demand (by Landuse) Tables</b>	
<b>Section</b>	<b>Description</b>
<b>Appendix A – EP/ET Conversion Factors for single residential family households</b>	Updated City of Gold Coast EP/ET Conversion Rate to read: “As per Appendix A1”
<b>Appendix A1 – City of Gold Coast</b>	Removed previous Demand Tables
	Updated City of Gold Coast’s requirements to read: “Refer to the City of Gold Coast’s Water and Sewage Land Use Category Demand Table as published on the website: <a href="https://www.goldcoast.qld.gov.au/water-and-sewage-land-use-category-demand-table-8502.html">https://www.goldcoast.qld.gov.au/water-and-sewage-land-use-category-demand-table-8502.html</a> ”
<b>Appendix A2 – Logan City Council</b>	Remove previous Demand Table
	Updated Logan City Council’s requirements to read: “Refer to the Logan Planning Scheme 2015 V6.0, Section 4.2.2 (Development) available online at <a href="https://logan.isoplan.com.au/eplan/">https://logan.isoplan.com.au/eplan/</a> .”
<b>Appendix A3 – Redland City Council</b>	Removed previous Demand Tables
	Updated Redland City Council’s requirements to read: “Refer to Redland City Council’s current published Redland City Plan ( <a href="https://www.redland.qld.gov.au/info/20292/redland_city_plan">https://www.redland.qld.gov.au/info/20292/redland_city_plan</a> ) and contact Redland City Council for development density details if required.”
<b>Appendix A4 – Urban Utilities</b>	Updated Demand Tables across all of Urban Utilities service area to align with latest Local Government Planning Schemes
<b>Appendix A5 – Unitywater</b>	Removed previous Demand Tables
	Updated Unitywater’s requirements to read: “Refer to the Water Netserv Plan Part A Schedule of Works Attachment 1 (Sunshine Coast Council area), Attachment 2 (Noosa Shire Council area) and Attachment 3 (Morton Bay Regional Council area) available online at: <a href="https://www.unitywater.com/building-and-developing/reference-library/water-netserv-plan">https://www.unitywater.com/building-and-developing/reference-library/water-netserv-plan</a> ”
<b>Appendix B – Urban Zoning Tables (new)</b>	
<b>Section</b>	<b>Description</b>
<b>Appendix B1 – City of Gold Coast</b>	City of Gold Coast’s requirements added, which read: “Refer to Section 3.2.2 City Shape and Urban Transformation of the City Plan and/or the Strategic Framework Map 1 – Designated Urban Areas of the Interactive Mapping of the City of Gold Coast: <a href="https://www.goldcoast.qld.gov.au/planning-and-building/city-plan-2015-19859.html">https://www.goldcoast.qld.gov.au/planning-and-building/city-plan-2015-19859.html</a> ”
<b>Appendix B2 – Logan City Council</b>	Tables B2.1 added, which tabulates land zonings for each Local Council area that is considered ‘Urban’ for the purposes of fire fighting requirements in Table 4.1 – Section A5.
<b>Appendix B3 – Redland City</b>	Redland City Council’s requirements added, which read:

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<b>Council</b>	“Refer to Appendix F of the current published Redland Water Water Supply Master Plan ( <a href="https://www.redland.qld.gov.au/info/20292/redland_city_plan/895/local_government_infrastructure_plan">https://www.redland.qld.gov.au/info/20292/redland_city_plan/895/local_government_infrastructure_plan</a> ) and contact Redland City Council for urban zoning details if required.”
<b>Appendix B4 – Urban Utilities</b>	Tables B4.1, B4.2, B4.3, B4.4 and B4.5 added, which tabulates land zonings for each Local Council area that is considered ‘Urban’ for the purposes of fire fighting requirements in Table 4.1 – Section A5.
<b>Appendix B5 – Unitywater</b>	Tables B5.1, B5.2, and B5.3 added, which tabulates land zonings for each Local Council area that is considered ‘Urban’ for the purposes of fire fighting requirements in Table 4.1 – Section A5.