

CODE OF PRACTICE FOR WATER SERVICES

AMENDMENT NO. 2

June 2009

1. **Page 9, New subclause 1.2.24**

Add new subclause as follows:

1.2.24 Private water meter

A water meter belonging to any person other than the Authority.

2. **Page 13, New subclause 2.3.5**

i) *Add new subclause as follows:*

2.3.5 Covers for valve chambers and chambers for other water appurtenances shall be suitably designed to prevent mosquito breeding through the ingress of water into the chamber.

ii) *Renumber the original subclauses from 2.3.5 – 2.3.10 to 2.3.6 – 2.3.11.*

3. **Page 21, New subclause 3.1.23**

Add new subclause as follows:

3.1.23 Water storage tanks which are equipped with water level sensing devices with control circuits that regulate the water level inside the tanks and activate / deactivate the electric water pump(s) shall use extra low voltage (e.g. d.c. voltage source at 36 volts or a.c. voltage source at 24 volts) for the water level control circuits. Power supply to the water level sensing devices shall be independent of each other, i.e. the power supply to any one individual water level sensing device must be able to be shut off without affecting the power supply to the other water level sensing devices.

4. **Page 22, Clause 4 Fitting appliances**

Replace Clause 4.1 as follows:

4.1 Water efficiency

4.1.1 Rates of flow

The actual rate of flow of water available at fittings and appliances will depend upon the water head available and the design of the water service. Table 1 sets out the maximum allowable flow rates at fittings and appliances for which the design should provide. In designing, it is necessary to make some assumptions as to the number of fittings which may be called upon to discharge water simultaneously. Table 1 also sets out the recommended best water conservation flow rates at fittings and appliances which designers are encouraged to use to achieve best water conservation results.

4.1.2 Efficiency rating

The Authority requires water fittings, apparatus, appliances and products to be labelled for water efficiency under its Mandatory Water Efficiency Labelling Scheme. Only those that are labelled under the Authority's Mandatory Water Efficiency Labelling Scheme shall be installed and used. Under the Mandatory Water Efficiency Labelling Scheme, the water fittings, apparatus, appliances or products are labelled with ticks according to its water efficiency (i.e. those which are more water efficient are labelled with more ticks). Where zero-tick taps and mixers are to be installed, they shall be installed with the appropriate constant flow regulators to achieve the flow rates in Table 1.

For all new developments and premises undergoing renovations, only water fittings, apparatus, appliances and products that are labelled with at least a 1-tick water efficiency rating and above shall be installed and used. Designers are encouraged to use those that are labelled with more ticks for best water conservation results."

5. **Page 23, Table 1**

Replace with the following table:

Table 1 – Flow rates at various fittings or appliances

Fitting or appliance	Maximum flow rate (cold water or hot water) litres per minute	Best water conservation flow rate litres per minute
Wash basin tap	6	2
Shower (Hotel)	12	5
Shower (Others)	9	5
Sink / Kitchen and other taps (except bathtub taps)	8	4
Bib tap	8	4

6. **Page 24, 4.2.4 Constant flow regulators**

Replace the existing text as follows:

4.2.4 Constant flow regulators

Constant flow regulators or water fittings with built-in constant flow regulators shall be installed to achieve the flow rates shown in Table 1 for all premises.

7. **Page 25, 4.3.3 Flushing cisterns**

Replace Sentence 1 as follows:

Every flushing cistern serving a water closet pan shall be of such a design as to give a dual-flush of 2 different volumes such that the volume of the full flush does not exceed 4.5 litres and the volume of the reduced flush does not exceed 3.0 litres.

8. **Page 27, New subclause 4.3.10**

Add new subclause as follows:

4.3.10 High pressure washers

The pump for cold and hot water high pressure washers shall be fitted with ON/OFF control to automatically turn off the machine as well as the immediate flow of water when the machine is not in use. The spray lance used with the machine shall be compatible with the automatic ON/OFF control at the pump which automatically turns off the machine as well as the immediate flow of water when the machine is not in use. The lance must be equipped with a spring-loaded ON/OFF control to ensure that the pump and flow of water is immediately turned off when the spring-loaded control on the lance is released.

9. **Page 36, 7.2 Water conservation measures**

i) *Insert new item (a) as follows:*

- (a) All new domestic and non-domestic developments, existing domestic and non-domestic premises undergoing renovations

Only water fittings, apparatus, appliances and products that are labelled with at least a 1-tick water efficiency rating and above under the Authority's Mandatory Water Efficiency Labelling Scheme shall be installed and used.

ii) *Rename the original items from (a) – (h) to (b) – (i)*

iii) *Replace the new item (b) as follows:*

- (b) Toilets/washrooms in all domestic and non-domestic premises

All new premises and premises undergoing renovations which involve the replacement of water closets shall only be installed with dual-flush low capacity flushing cisterns. This is applicable to all domestic premises. For non-domestic premises such as commercial/industrial premises, this is only applicable if flushing cisterns are to be used. Public toilets shall as required by the National Environment Agency (NEA) be fitted with sensor-operated flush valves.

iv) *Replace the new item (g) as follows:*

- (g) Vehicle washing areas

- Construct earth removal platforms and water recovery systems for washing of vehicles at construction sites
- Construct water recovery systems or adopt other water conservation measures as prescribed by the Authority at vehicle washing point for other premises where washing of vehicles are required.

v) *Add a new point under the new item (i) Other areas in domestic (where applicable) and non-domestic premises as follows:*

- Install private water meters to measure water consumption at various areas such as cooling towers, swimming pools, kitchens, guestrooms, gardens, landscaped areas, toilets, boilers, etc and to monitor and track the water consumption at these areas for water usage and leakage control management.

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10. **Page 37, NOTES**

- i) *Replace* NOTE 1 as follows:

NOTE 1 – Constant flow regulators are not required where:

- (i) the water pressure at the fittings is less than 1 bar; or
- (ii) the water fitting is labelled with at least a 1-tick water efficiency rating and above.

- ii) *Replace* NOTE 3 as follows:

NOTE 3 – All allowable flowrates and timings for constant flow regulators, self-closing delayed-action taps and other water fittings and appliances are given in Tables 1 and 2.

11. **Page 38, New subclause A.1.1.3**

- i) *Insert* new subclause as follows:

A.1.1.3 Before the commencement of any inspection or cleaning and sterilisation work on the water storage tank, the owner or his authorised representative shall turn off power supply to the water tank. The licensed water service plumber shall place a log-out/tag out card at the switch board after the power supply to the tank has been switched off. The licensed water service plumber shall use a contactless voltage meter to test the exposed areas on the water tank to confirm that it is safe to inspect and work on and in the tank before he proceeds with his inspection/work. All persons involved in the inspection and cleaning and sterilisation work shall use proper rubber gloves and safety shoes. On completion of inspection and cleaning and sterilisation work, the licensed water service plumber shall remove the log-out/tag out card at the switch board and the owner or his authorised representative shall then turn on power supply to the water tank. The licensed water service plumber shall use a contactless voltage meter to again test the exposed areas on the water tank to confirm that it is safe electrically.

- ii) *Renumber* the original subclauses from A.1.1.3 – A.1.1.16 to A.1.1.4 – A.1.1.17.