



Western Region Water Corporation

Dual Water System Schemes

Design and Construction Standards

March 2011

This requirement guide is for all consultants, contractors and Western Water staff engaged in the design, construction and maintenance of dual water supply systems within the Western Water region.

Changes may be made periodically to this guide as inclusions or withdrawals. For current information, designers and contractors should contact Western Water.

*This guide will be available on Western Water's website:
www.westernwater.com.au*

Western Water assumes no responsibility for any damages arising out of the misuse or inability to follow this guide.

These standards are to be applied to Dual Water Supply Systems within the Western Water jurisdiction. These standards should be read in conjunction with the “*Water Services Association of Australia (WSA) Dual Water Supply Systems First Edition Version 1.2*” that Western Water departs from and are to be complied with as additional requirements within the Western Water jurisdiction.

The “*WSAA Dual Water Supply Systems First Edition Version 1.2*” is required to be read in conjunction with the “*WSAA 03-2003 2.3 MRWA Edition*”. The “*WSA Dual Water Supply Systems First Edition Version 1.2*” is available as a free download at <http://www.wsaa.asn.au>. The “*Western Water Design and Construction Procedures for Subdivisional Water and Sewerage Works*” are applicable to Dual Water Supply Systems within the Western Water region.

NDW 2.3 WATER SUPPLY MAINS – NON DRINKING WATER

Purple striped pipe is not acceptable. All other aspects of this section are relevant.

NDW 2.5 PROPERTY SERVICES – NON DRINKING WATER

Purple striped pipe is not acceptable. All other aspects of this section are relevant.

NDW 2.6 MARKER TAPES

Marker tape is mandatory over all drinking water and non-drinking water mains and property services as specified in this section.

NDW 3.10 PROPERTY SERVICES

Drinking and non-drinking water property services should be constructed as single services. The property services should be located at the centre of each lot. Split property service arrangements are not permitted. The recycled water property service should be on the left hand side of the potable water property service. The services should be located in the centre of the block.

NDW 3.17 SURFACE FITTINGS

The shape and colour of surface fitting surrounds are required to satisfy the following;

- Non-drinking water surface fitting surrounds should be concrete, round and coloured purple unless otherwise approved in writing by Western Water
- Drinking water surface fittings should be concrete, square and plain concrete in colour unless otherwise approved in writing by Western Water

NDW 3.18 IDENTIFICATION OF MARKERS AND MARKER POSTS

All recycled water hydrant marker posts should be coloured purple with a red top. The remaining posts should be all purple. All other requirements specified in this section are relevant.

DUAL WATER SUPPLY SYSTEMS TESTING PROCEDURES

In addition to the standard water reticulation testing carried out the following process should be carried out specifically for Dual Water Supply Systems. On completion of the reticulated mains and property service connections the following tests must be applied;

Step 1

- Turn on the recycled water supply main
- Shut down the drinking water reticulated main, turn on all drinking water property service connection valves at each lot
- The drinking water property service valves should empty the main
- If water continues to run a cross connection is likely. Locate and rectify
- Repeat Step 1 until no cross connections remain

Step 2

- Turn on the drinking water supply main
- Shut down the recycled water reticulated main, turn on all recycled water property service connections to each lot.
- The recycled water property services valves should empty the main.
- If water continues to run a cross connection has been made. Locate and rectify.
- Repeat Step 2 until no cross connections remain

The list below highlights some important requirements that are contained within the WSA dual water supply system standards.

- Non drinking water hydrants identification post should be coloured purple and in accordance with the standard drawings
- Marker tape is required over all property services within the footway. See drawing WAT-1807 for details
- Where both drinking and non-drinking water mains are located in the footway on the same side of the road carriageway the non-drinking water main shall be located closest to the property boundary
- Property service dry tapings terminate within the property boundary at a distance of 300mm apart with the non drinking water service located on the left hand side as when facing the lot from the road reserve

CONTRACTORS CHECKLIST

Contractor.....

Supervisors Name.....

Subdivision Name and Stage
.....

Street Name.....

- Has solid purple pipe been used for all recycled water reticulation mains and property service connections? Y / N

- If purple sleeving used please note location and/or provide details on a drawing.
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- Has the correct labelling been used on all recycled water pipes, marker tapes and surface covers? Y / N

- Has purple detectable marker tape been installed over all recycled water reticulated mains and property service connections? Y / N

- Are all recycled water buried valves and fittings that form the property service connections coloured purple? Y / N

- Are property service connections located as close as possible to the centre of the lot being served? Y / N

- Are recycled water and drinking water property services dry tapping connections 300mm apart with the recycled water on the left and the drinking water on the right taken as facing the block from the road reserve? Y / N

- Are all surface covers for drinking water square? Y / N

- Are all surface covers for recycled water round, coloured purple and marked "Recycled Water" Y / N

- Are Recycled Water fire hydrant marker posts coloured purple with a red top Y / N

Signed Date