

# NEV Water

## Recycled Water Plumbing Guide

### Document Control

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### History of Revisions

Version	Revised By	Date	Nature of Changes
1.0	G Cameron	03/04/2018	First Draft
1.1	J Ellis		Review and additional information

The supply of high quality recycled water sourced from NEVs wastewater treatment plant is being made available to all new dwellings in the NEV subdivision. The recycled water will be supplied via a separate reticulation network, for non drinking purposes, for use in homes, businesses and for irrigation of NEV parks and gardens.

This guide provides important information for licensed plumbers installing recycled water services to new dwellings and also includes information for homeowners on the use of recycled water. It aims to ensure the proper installation of the recycled water service to homes and provide a clear guide for the safe use of recycled water in new dwellings.

Copies of this guide can be downloaded from [www.nararaecovillage.com](http://www.nararaecovillage.com)

### Recycled Water Information

Recycled water is water which has been sourced from the NEV wastewater treatment plant and has been treated to a level suitable for its intended use. Recycled water is now commonly used for a number of non drinking purposes across Australia and is recognised as an important alternative source of water.

NEV recycled water, as specified in the *Australian Guidelines for Water Recycling*, is the highest quality of recycled water that can be used for non-drinking purposes. NEV recycled water will be made available to all NEV dwellings where properties will be supplied, via a dual reticulation system, with one water main for drinking water and one water main for recycled water. The recycled water is used in the home for toilet flushing and for outdoor use.

### **Recycled water must be managed differently from drinking water**

The recycled water system must have very distinctive features to make it easy to identify and be easily distinguishable from the drinking water system. This guide outlines those distinctive features to ensure recycled water services are correctly installed. The main objective is to ensure the recycled water service cannot be accidentally ingested or interconnected to the drinking water supply within the property.

On completion of plumbing work on a new or existing dwelling, the plumber will be required to notify NEV Water and an inspection will be undertaken before commissioning the recycled water service to:

- Ensure there is no interconnection between the recycled water and drinking water systems
- Ensure recycled water is only supplied to toilets and garden taps
- Ensure the recycled water pipes and fittings are easily distinguishable

### **NEV Recycled Water - What can it be used for?**

Recycled water supplied by NEV is approved for the following uses:

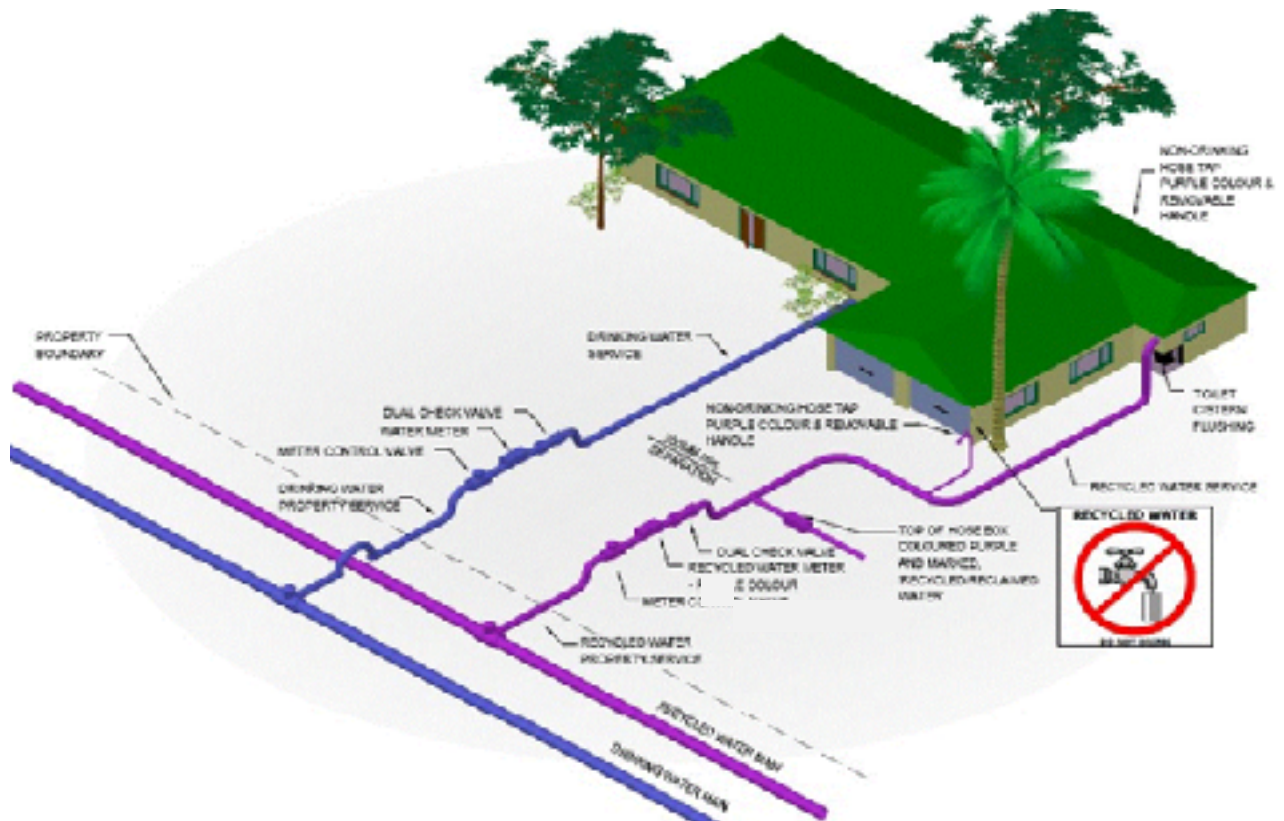
- Watering gardens
- Toilet flushing

### **Recycled water supplied by NEV MUST NOT be used for the following:**

- Drinking (human or animal consumption)
- Cooking or other kitchen purposes
- Personal washing such as baths, hand basins, showers or bidets
- Evaporative coolers
- Indoor household cleaning
- Swimming pools and spas
- Recreational activities involving water contact e.g. playing under sprinklers

If you do accidentally drink recycled water, there is no cause for alarm. It is treated to a high standard, meaning the likelihood of falling ill is low. However, if you feel unwell you should consult your doctor immediately.

## Typical Recycled Water Plan



## NEV Owned and Operated Systems

### Recycled Water Main:

- Recycled water will be delivered to properties by a system of dedicated mains

### From main to meter:

Two water service pipes will enter the property:

- The service pipe for recycled water will be a purple colour in accordance with AS 2700 (being no darker than P24 jacaranda or P12 purple and no lighter than P23 lilac)
- The service pipe for drinking water supply will not be coloured lilac/purple

### Water meter assemblies:

The recycled water supply is not metered.

### New Water Supply Connections:

To connect to the recycled and potable (drinking) water mains, an application for connection is required. Once the appropriate fee and forms have been lodged NEV Water will supply the potable (drinking) water meter for installation by your plumber.

Water pressure in the recycled water main will be slightly less than the pressure in the drinking water main. The recycled water meter assembly may include a 350kPa pressure limiting device if required. This may impact on the pressure of water for irrigation systems connected to the recycled water system. Irrigation systems need to be designed for the

pressure in the recycled water system. NEV Water guarantees a minimum water pressure at the property boundary of 220kPa.

### On the Property

- All plumbing work within the property, including recycled water plumbing, is to be undertaken by a licensed plumber
- All pipe work and products used in the installation of recycled water services shall comply with AS/NZS 3500.1:2003. The service pipe for recycled water will be a purple colour
- Under no circumstances is there to be interconnection between the recycled water service and the drinking water service
- All recycled water pipes and outlets must be coloured purple, in accordance with AS 2700, and be marked with the following - "RECYCLED WATER - DO NOT DRINK"
- All buried pipes must have identification tape installed on top of the recycled water pipe, running longitudinally and fastened to the pipe at no more than 3 metre intervals for the full length of the pipe. The identification tape must be purple in colour and marked: "RECYCLED WATER - DO NOT DRINK"
- For pipes below ground there must be a 300mm minimum separation between the recycled water pipe and the potable water pipe
- For pipes above ground there must be a minimum separation of 100mm between the recycled water pipe and the potable water pipe



### Hose taps and other outlets

All recycled water hose taps must comply with the following:

- They shall have a 5/8th inlet and a normal outlet
- They shall be coloured purple and have a removable handle
- At rough-in stage, the provision for recycled water hose taps shall be a 5/8th thread to allow installation of the 5/8th inlet recycled water hose taps at fit off time
- They shall be clearly marked with either a 'warning sign' or 'prohibition sign' in accordance with AS3500.1 section 9.5.2.3
- All other recycled water outlets must be clearly marked with either a 'warning sign' or 'prohibition sign; sign in accordance to AS 3500 sections 9.5.2.3 and 9.5.2.4
- Recycled water must be connected to a minimum of two hose taps, one at the front of the dwelling and one at the rear.
- We recommend all dwellings should also install at least one potable hose tap.
- All other installation requirements of AS/NZS 3500.1: 2003 section 5, installation of Cold Water Services also apply
- Upon completion of the work the plumber is to request a final plumbing inspection by NEV Water. The plumbing contractor is to be present at the time of the final inspection. A compliance certificate will be issued on request



- Alteration to the existing recycled/drinking water connection including the water meter will require an application to NEV Water

## Checking for cross connections

The following steps must be undertaken to ensure that the plumbing has been connected properly and that there is no cross connection between the recycled water service and the drinking water service.

1. Turn off the drinking water supply to the property at the drinking water meter. The recycled water supply is to remain on
2. Turn on all sink, laundry trough, bath and shower taps (both hot and cold) one by one. All taps should run dry after a short period of time
3. After taps have run dry, flush all toilets. The toilets should refill as normal, provided they are connected to the recycled water service
4. Turn on all outside taps. The external drinking water tap should run dry. Taps that continue to run are connected to the recycled water service and should be clearly identified with appropriate warning signs
5. To check appliances in the home such as dishwashers and washing machines, turn off the recycled water service and turn the drinking water supply back on. Run the recycled water service dry via the outside taps or toilet flushing
6. Turn on the internal appliances. If the appliances do not fill, they are connected to the incorrect supply
7. Turn the recycled water service back on at the meter. Turn on the tap connected to the recycled water service that is located furthest away from the meter
8. Turn the tap back on slowly so that all air will be purged from the pipeline while it is being charged

This procedure should be repeated any time plumbing work is carried out on your house or lot or any time you install or replace a water-connected appliance such as a dishwasher or washing machine.

For more information and fact sheets on recycled water refer to our web site at [www.nararaecovillage.com](http://www.nararaecovillage.com) or email NEV Water at: [water@nararaecovillage.com](mailto:water@nararaecovillage.com)