

# Water Efficient Technology

## Develop Water Efficient Technology Measures

This unit specifies the competency required to develop skills and knowledge in alternative water sources for urban applications.

Plumbers are in *direct contact with end users on a daily basis*. A clear understanding of existing water efficient products, emerging technologies, best management practices and existing conservation programs is essential in fostering conservation, developing partnerships with local water utilities and authorities, and increasing business opportunities.

Work associated with this unit is undertaken within the plumbing and services sector in accordance with relevant US Standards.

It is a pre-requisite that all participants seeking *accreditation* in any 'Course in GreenPlumbers Environmental Solutions' are required to be licensed and or recognized as a plumber by the Authority Having Jurisdiction.

**Nominal Hours – 8**

## Performance Criteria

Performance criteria specify the level of performance required to demonstrate achievement of the element

### 1. Identify alternative water sources for urban re-use

- 1.1 Select *different sources of water* fit for different purposes.
- 1.2 Identify potential hazards associated with alternative water sources.

### 2. Outline rainwater harvesting and re-use.

- 2.1 Describe the effective installation and use of rainwater.
- 2.2 Describe the harvesting of rain water.
- 2.3 Calculate rainwater quantities and potential harvesting.
- 2.4 Identify the factors, which determine the appropriate use of rain water tanks.
- 2.5 Identify possible urban rainwater applications.
- 2.6 Determine the problems of rain water quality with all harvesting applications.
- 2.7 Select a range of rainwater utilization

### 3. Provide advice on graywater use

- 3.1 Specify *suitable sources of graywater for urban re-use*.
- 3.2 Outline *the potential risks associated with graywater*.
- 3.3 Differentiate suitable product installations for different graywater re-use applications.
- 3.4 Identify the installation guidelines and ongoing use of graywater products.

#### **4. Provide advice on HVAC recovery (condensate)**

- 4.1 Specify *suitable sources of HVAC recovery for urban re-use*.
- 4.2 Outline *the potential risks associated with HVAC recovery*.
- 4.3 Differentiate suitable product installations for different *HVAC recovery re-use applications*.
- 4.4 Determine potential collection volume.
- 4.5 Identify the installation guidelines and ongoing use of *HVAC recovery products*.

#### **5. Identify on-site urban waste water treatment systems**

- 5.1 Determine *the key indicators of choice in selecting an on-site system*.
- 5.2 Determine *the on-site conditions and suitability for on-site treatment systems*.
- 5.3 Identify design requirements for installation and approval.
- 5.3 Identify alternate on-site waste water treatment packages.
- 5.4 Identify site plans and existing soil conditions and capability.
- 5.5 Describe the *permit and compliance*

#### **6. Compile information on water treatment products**

- 6.1 Identify treatment products and their application with different sources of water.
- 6.2 Select *waste water dispersal systems*.

#### **7. Provide comprehensive advice to customers on water treatment product selection**

- 7.1 Identify decision making processes of customers including environmental and financial benefits.
- 7.2 Adapt appropriate customer services strategies.