



<b>Unit Title</b>	Water quality management (T/506/1610)	
<b>Level</b>	4	
<b>Credit Value</b>	12	
<b>Learning Outcomes – the learner will be able to:</b>	<b>Assessment Criteria – the learner can:</b>	
1. Understand the importance of quality control in drinking water operations	1.1	explain the <b>general principles</b> of quality control.
	1.2	describe how drinking water operations are affected by <b>quality control measures</b> .
	1.3	explain the importance of quality control to the drinking water sector.
	1.4	describe how different <b>definitions of quality</b> are applied and assessed within the drinking water sector.
2. Understand legislation and controls relevant to the quality of drinking water	2.1	describe the relevant and current drinking water legislation and directives.
	2.2	describe the responsibilities imposed on water undertakers by the specific sections of current drinking water legislation and directives which relate to quality.
	2.3	describe the role and function of current control and enforcement organisations responsible for monitoring drinking water quality.
	2.4	describe how drinking water quality standards are enforced.
3. Understand the significance of quality indicators for drinking water operations	3.1	describe the main indicators of drinking water quality and the significance of the permitted values.
	3.2	explain how these indicators affect drinking water treatment processes and distribution systems.
4. Understand quality infringements of drinking water and how they are remedied	4.1	explain how common drinking water <b>quality infringements</b> can occur.
	4.2	for drinking water, describe the <b>remedies, solutions and courses of action</b> that can be applied in the event of drinking water quality infringements.
5. Understand the practical management of water resources to avoid quality infringements	5.1	explain <b>potential threats</b> to raw water quality and quantity and how they can be managed.
	5.2	identify <b>management guidelines</b> for the practical management of a water resource and its catchment area and how they are applied.
	5.3	explain how current legislation drives management practices in the protection of water resources.

<b>Additional information about the unit</b>	
<b>Unit purpose and aims</b>	<p>This unit is designed to enable the learner to develop the knowledge and understanding associated with water quality management. It provides learners with an understanding of:</p> <ul style="list-style-type: none"> <li>• how drinking water and waste water quality standards are</li> </ul>



	<p>measured</p> <ul style="list-style-type: none"><li>• how the legislative framework associated with the standards impacts on the industry as a whole</li><li>• how compliance with the standards is monitored and enforced.</li></ul> <p>On completion of the unit the learner will be able to:</p> <ul style="list-style-type: none"><li>• explain the importance of quality control in drinking water operations.</li><li>• describe legislation and controls relevant to the quality of drinking water.</li><li>• describe the significance of quality indicators for drinking water.</li><li>• describe how quality infringements of drinking water occur and how they are remedied.</li></ul>
<b>Unit expiry date</b>	31/03/2019
<b>Assessment requirements or guidance specified by a sector or regulatory body (if appropriate)</b>	<p>The assessment of this unit must cover knowledge and understanding of the following:</p> <ol style="list-style-type: none"><li>1. The explanation of the <b>general principles</b> of quality control must include:<ol style="list-style-type: none"><li>(a) one definition of quality</li><li>(b) two approaches to the measurement of quality at least four principles of quality control.</li></ol></li><li>2. The description of how drinking water operations are affected by <b>quality control measures</b> must include at least four areas affected by quality control requirements.</li><li>3. The explanation of the <b>importance</b> of quality control must include at least three reasons why water quality control is important to the water sector.</li><li>4. The description of how different <b>definitions of quality</b> are applied and assessed must include:<ol style="list-style-type: none"><li>(a) the ways in which quality may be assessed</li><li>(b) the organisations that are responsible for defining quality</li><li>(c) the organisations that are responsible for assessing quality.</li></ol></li><li>5. The description of relevant and current <b>drinking water legislation and directives</b> must include an outline of at least three pieces of legislation.</li><li>6. The description of the <b>responsibilities</b> imposed on water</li></ol>



	<p>undertakers must cover at least three different responsibilities.</p> <ol style="list-style-type: none"><li>7. The description of the main <b>indicators</b> of drinking water quality (AC 3.1 and 3.2) must include:<ol style="list-style-type: none"><li>(a) a description of four indicators, and the importance of each</li><li>(b) reasons why they are considered main indicators</li><li>(c) an identification of the permitted values for each indicator covered</li><li>(d) how the indicators identified affect the management and control of drinking water treatment processes and distribution systems.</li></ol></li><li>8. The explanation of how common drinking water <b>quality infringements</b> occur must include:<ol style="list-style-type: none"><li>(a) at least two naturally occurring for drinking water, and</li><li>(b) at least two arising from drinking water treatment operations.</li></ol></li><li>9. The <b>remedies, solutions and courses of action</b> that are applied in the event of infringements must include:<ol style="list-style-type: none"><li>(a) managerial actions</li><li>(b) staff development actions</li><li>(c) procedural actions</li><li>(d) process actions.</li></ol></li><li>10. <b>Potential threats</b> to raw water quality and quantity must include:<ol style="list-style-type: none"><li>(a) threats from natural issues</li><li>(b) threats from man-made issues</li><li>(c) suitable mitigation and control measures including drinking water safety plans.</li></ol></li><li>11. The description of <b>management guidelines</b> for the practical management of a water resource and its catchment area must include:<ol style="list-style-type: none"><li>(a) the application of the guidelines</li><li>(b) possible improvement in their application.</li></ol></li></ol> <p>The assessment of this unit will be via a combination of centre-devised assignments and tests, and will be conducted in supervised conditions. The assessment strategy for the unit has been agreed with industry stakeholders.</p>
<b>Location of the unit within the subject/sector classification system</b>	4.1 Engineering



*Level 4 Water*

<b>Name of the organisation submitting the unit</b>	CABWI Awarding Body
<b>Availability for use</b>	Shared
<b>Unit guided learning hours</b>	48