



Australian Government

Department of Education, Employment and Workplace Relations

SISCAQU414A Develop pool water maintenance procedures

Release: 2

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Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to develop and implement systems and procedures for the maintenance of quality pool water at an aquatic recreation facility.

Application of the Unit

This unit applies to those working autonomously at aquatic leisure centres or community pools in roles such as program coordinators, swim school coordinators, recreation coordinators or duty managers.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

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| <p>1. Develop procedures for water treatment processes.</p> | <p>1.1. Access and analyse <i>pool water quality maintenance requirements</i>.</p> <p>1.2. Assess <i>pool water treatment needs</i> of the aquatic facility according to <i>relevant legislation</i> and <i>organisational policies and procedures</i>.</p> <p>1.3. Develop and document systems for <i>water treatment processes</i> in consultation with appropriate personnel and according to organisational policies and procedures and relevant legislation.</p> <p>1.4. Identify staff training needs and any gaps to be addressed.</p> <p>1.5. Develop <i>staff training programs</i> according to identified needs and organisational policies and procedures.</p> |
| <p>2. Implement procedures for water treatment processes.</p> | <p>2.1. Explain provisions of relevant legislation to affected staff using appropriate communication strategies.</p> <p>2.2. Provide training opportunities to address training needs in consultation with relevant parties.</p> <p>2.3. Monitor effectiveness of training programs and modify as required.</p> <p>2.4. Implement and monitor water treatment processes to maintain pool water quality according to relevant legislation and organisational policies and procedures.</p> |
| <p>3. Evaluate procedures for water treatment processes.</p> | <p>3.1. Assess the effectiveness of pool water treatment processes according to relevant legislation and organisational policies and procedures.</p> <p>3.2. Document and communicate improvements and changes to pool water treatment processes according to relevant legislation and organisational policies and procedures.</p> |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
 - elicit information from staff to assess training needs
 - convey relevant information about pool water treatment procedures
 - liaise with designated personnel to develop systems for water treatment processes
- problem-solving skills to:
 - develop systems to maintain water quality and meet regulatory requirements
 - assess factors affecting the maintenance of pool water quality
 - determine and implement corrective action
 - assess the effectiveness of pool water treatment procedures
- language and literacy skills to:
 - read and analyse legislation in relation to maintenance of pool water quality
 - document the development of maintenance system
 - use maintenance documentation to identify problems.

Required knowledge

- legislation and organisational policies and procedures that enable the:
 - development and monitoring of safe and legally compliant systems for water treatment processes
 - documentation of pool water treatment processes
- characteristics of water quality such as pH, alkalinity, hardness and temperature
- waterborne bacteria such as pseudomonas aeruginosa, legionella, staphylococcus and cryptosporidium to enable these to be monitored and controlled safely
- consultative and communication mechanisms to develop and implement procedural systems
- safe chemical-handling procedures to enable safe work practices and public safety
- chemical emergency response plans to respond promptly and appropriately to emergency situations
- plant and equipment manufacturer's specifications to enable appropriate operation and servicing procedures
- training providers who provide appropriate training in pool water management
- products related to pool water quality maintenance to enable appropriate selection of required products.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, Range Statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- works effectively within organisational management systems to develop, implement and evaluate pool water maintenance systems, and makes ongoing improvements in line with regulatory requirements and organisational policies and procedures
- proposes recommendations to address inadequacies in pool water quality systems and applies effective contingency management techniques to respond to and correct problems with pool water quality and maintenance procedures
- identifies the interrelationship between all aspects of organisational safety systems and effectively implements emergency procedures and evacuation plans in the event of a chemical emergency to maintain the safety of facility, staff and patrons
- assesses staff training needs to effectively implement water treatment procedures and develops, implements and evaluates staff training programs to meet organisational and regulatory requirements.

Context of and specific resources for assessment

Assessment must ensure:

- development, implementation and evaluation of pool water maintenance procedures consistent with legislative and organisational requirements
- access to a fully operational aquatic facility or pool environment
- access to plant and equipment of an aquatic facility
- access to comprehensive information about pool water quality maintenance to allow the candidate to develop a tailored system
- access to legislation and organisational policies and procedures that are relevant to the development of pool water maintenance procedures.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- portfolio that documents the development of a pool

water maintenance system for an organisation, including policies, procedures and staff needs analysis and training plans

- reports prepared by the candidate detailing how the maintenance of pool water quality policies, systems and procedures were established for a given project or work activity
- project or work activities conducted in conjunction with an industry operator to allow the candidate to develop systems for a specific workplace
- third-party reports from key stakeholders or review of reports of the implementation and review processes
- case studies and problem-solving exercises to establish systems, policies and procedures for different workplace sizes and types
- written or oral questioning or interview to assess knowledge of the legislative requirements of water quality.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SISCAQU415A Develop aquatic facility maintenance procedures

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Pool water quality maintenance requirements must include:

- microbiological levels
- disinfectant levels
- pH levels
- clarity levels.

Pool water treatment needs may include:

- condition of aquatic facility
- location
- size
- nature of services provided
- availability of resources.

Relevant legislation may include:

- occupational health and safety
- duty of care
- infectious diseases regulations
- dangerous goods act and regulations
- poisons act
- metropolitan water supply, sewerage and drainage by-laws
- environment legislation
- local government regulations.

Organisational policies and procedures may include:

- occupational health and safety
- incident and accident management and notification
- risk assessment and control
- handling of hazardous substances
- security
- emergency evacuation.

Water treatment processes may include:

- routine pool water tests
- pool water microbiological tests
- superchlorination
- shock dosing
- dechlorination
- chlorine stabilisation with cyanuric acid
- control of algae
- ozonisation
- alkalinity adjustments

Staff training programs may include:

- calcium and total hardness adjustments
- lowering total dissolved solids
- pool water filtration and recirculation
- backwashing
- manual removal of visible contaminants.
- on-the-job training
- refresher courses
- specialist training with external agencies
- pre-season training.

Unit Sector(s)

Community Recreation

Competency Field

Aquatics