

Title	Manage water quality in a complex public pool and spa pool		
Level	4	Credits	10

Purpose	<p>This unit standard is intended for people working in a complex public pool or spa pool and who are responsible for the quality of the water.</p> <p>People credited with this unit standard are able to: monitor pool water quality, interpret the results, and identify ways to make improvements; carry out corrective procedures to ensure water quality; demonstrate knowledge of technical vocabulary and documentation for hazardous substances used to ensure water quality in a complex public pool and spa pool; describe precautions relating to the storage and handling of hazardous substances used to ensure water quality in a complex public pool and spa pool; and communicate with stakeholders regarding pool water quality, in a complex public pool and spa pool.</p>
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Classification	Recreation and Sport > Recreation and Sport - Aquatics
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Available grade	Achieved
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Guidance Information

- 1 All learning and assessment within this unit standard must be carried out in accordance with the following, as relevant to role:
 - relevant legislation including Health and Safety at Work Act 2015, Privacy Act 1993, Human Rights Act 1993, Health and Safety at Work (Hazardous Substances) Regulations 2017, Hazardous Substances and New Organisms Act 1996, Accident Compensation Act 2001, Health Act 1956, Local Government Act 2002, and any subsequent amendments;
 - industry standards, codes and good practice guidelines including: NZS 4441:2008 *Swimming pool design Standard*; and NZS 5826:2010 *Pool water quality*, available from <http://www.standards.co.nz>;
 - organisational policies and procedures including Emergency Action Plans (EAPs), Standard Operating Procedures (SOPs) or Normal Operating Procedures (NOPs), and the use of personal protective equipment (PPE).
- 2 Underpinning skills and knowledge useful for this unit standard could be evidenced by the holding of Unit 20046, *Monitor pool water quality and store pool water treatment chemicals*, and Unit 31986, *Perform calculations relevant to water quality in a public pool and spa pool*.
- 3 Definitions

Notifiable disease refers to those diseases outlined in Schedules 1 and 2 of the [Health Act 1956](#).

Organisational policies and procedures refer to the operations manual or documented normal operating procedures at an aquatic facility that set out the way in which the facility will operate on a day-to-day basis.

Pool water features refer to interactive equipment provided for water play such as hydro slide, wave machine, etc.

Public pool is defined in NZS 5826:2010 as the pool or pools, their fixtures and surrounds, shower and changing areas, fun equipment, play areas, and attached facilities where they exist. A *complex public pool* tends to have the following characteristics: high bather loads; secondary water treatment; a high level of automation; and pool water features.

Outcomes and performance criteria

Outcome 1

Monitor pool water quality, interpret the results, and identify ways to improve water quality in a complex public pool and spa pool.

Performance criteria

- 1.1 Explain the differences in testing requirements between a swimming pool or leisure pool and a spa or hydrotherapy pool in relation to NZS 5826:2010, and the reasons for these differences.
- 1.2 Carry out water quality monitoring in accordance with NZS 5826:2010.
- Range one each of – swimming pool, spa pool; monitoring for – pH, FAC, TAC, CAC, TDS, calcium hardness, alkalinity; methods may include – titration, photometer, colourimetric measurement, calculation.
- 1.3 Record results of water quality monitoring.
- Range pH, FAC, TAC, CAC, TDS, calcium hardness, alkalinity.
- 1.4 Interpret recorded water quality test results, and identify corrective actions, in accordance with NZS 5826:2010.
- Range chemical test results, microbiological test results.
- 1.5 Identify water quality trends and ways to improve the performance of water quality over time and the performance of the water treatment system, in accordance with NZS 5826:2010.

Outcome 2

Carry out corrective procedures to ensure water quality in a complex public pool and spa pool.

Performance criteria

- 2.1 Carry out corrective procedures in accordance with organisational policies and procedures.
- Range pH, FAC, CAC, total dissolved solids; may include but is not limited to – cyanuric acid, calcium hardness, alkalinity.
- 2.2 Follow procedures to deal with pool contamination and report incidents in accordance with NZS 5826:2010.
- Range may include but is not limited to – blood, vomit, faeces, notifiable disease.

Outcome 3

Demonstrate knowledge of technical vocabulary and documentation for hazardous substances used to ensure water quality in a complex public pool and spa pool.

Performance criteria

- 3.1 Identify and explain terms used in relation to hazardous substances.
- Range includes but is not limited to – hazard classification, exposure limits, risk management organisations.
- 3.2 Identify and describe marks used for identifying hazardous substances.
- Range includes but is not limited to – common name, class, United Nations number, HAZCHEM code warning statement.
- 3.3 Identify and describe documentation used for the identification of hazardous substances.
- Range includes but is not limited to – dangerous goods declarations, emergency response procedures, Material Safety Data Sheets.

Outcome 4

Describe precautions relating to the storage and handling of hazardous substances used to ensure water quality in a complex public pool and spa pool.

Performance criteria

- 4.1 Describe precautions for hazardous substances in terms of personal safety.
- Range includes but is not limited to – knowledge of substances used in the workplace, personal protective equipment, following safe operating procedures.

4.2 Describe precautions against hazardous substances in terms of organisational compliance.

Range includes but is not limited to – rules on compatibility, segregation, separation, storage, stacking height, handling, protecting staff and public from possible harm.

4.3 Describe precautions against hazardous substances in terms of environmental protection measures.

Range includes but is not limited to – protection against exposure, spill response, emergency response plans, disposal.

Outcome 5

Communicate with stakeholders regarding pool water quality.

Performance criteria

5.1 Communicate with external and internal customers regarding matters relating to pool water quality.

Range includes but is not limited to – perceived water quality and temperature issues, pool closures due to pool contamination events, equipment performance.

5.2 Communicate with staff regarding water quality issues and corrective actions.

5.3 Communicate with an external laboratory to provide pool water sampling for microbiological and chemical testing.

5.4 Communicate with contractors to complete maintenance or repairs on equipment.

Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 November 2019	N/A

Consent and Moderation Requirements (CMR) reference	0099
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Skills Active Aotearoa Limited info@skillsactive.org.nz if you wish to suggest changes to the content of this unit standard.