



Australian Government

Department of Education, Employment and Workplace Relations

NWP279 Demonstrate knowledge of the risk management principles of the Australian drinking water guidelines

Release: 1

NWP279 Demonstrate knowledge of the risk management principles of the Australian drinking water guidelines

Modification History

NWP279 Release 1: Primary release.

Unit Descriptor

This unit of competency covers the knowledge of risk management principles established in the Australian Drinking Water Guidelines (ADWG), which contribute to the improved management of water supply systems and minimisation of water quality risks for drinking water supplies.

Application of the Unit

This unit applies to field staff, construction workers and other operators within the water industry.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where <i>bold italicised</i> text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.
---	---

Elements and Performance Criteria

- | | |
|--|--|
| 1 Demonstrate an understanding of the Australian Drinking Water Guidelines (ADWG) | 1.1 Identify the key features of the ADWG.
1.2 Explain multiple barrier and hazard analysis and critical control points (HACCP) approaches to risk assessment.
1.3 Explain the relationship between the ADWG and state/territory drinking water legislation. |
| 2 Demonstrate an understanding of risk management principles | 2.1 Describe risk management principles.
2.2 List the requirements for risk management plans.
2.3 Undertake hazard identification and risk assessment on a <i>specific project or site</i> . |
| 3 Identify water quality hazards | 3.1 Identify the main components of an organisation's <i>water supply system</i> .
3.2 Identify <i>drinking water quality risks</i> .
3.3 Evaluate records of water quality incidents that have led to outbreaks of waterborne disease. |

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- access and interpret ADWG risk management principles
- communicate effectively with internal and external customers
- use literacy skills in regard to verbal and written communication in the workplace
- identify and assess water quality risks
- complete basic workplace records and reports

Required knowledge:

- ADWG guiding principles and the framework for the management of drinking water quality including the 12 elements
- established organisational risk management procedures
- water quality risk assessment and control procedures
- water cycle
- ecologically sustainable development
- major components of a drinking water supply system
- primary agencies involved in drinking water quality management
- water quality risk factors and performance indicators

- basic workplace reporting procedures

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

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

The candidate should:

- Perform each task outlined in the elements consistently and in a representative range of contexts.
- meet the performance criteria associated with each element by employing the techniques, procedures, information and resources available in the workplace from those listed in the range statement
- demonstrate an understanding of the underpinning knowledge and the application of skills as described in the required skills and knowledge section.

The candidate should demonstrate the ability to:

- identify the main components of a water supply system
- identify water quality risks
- identify the main parts of the ADWG
- identify risk control measures
- list the requirements of risk management plans

Context of and specific resources for assessment

Access to the workplace and resources including:

- documentation that should normally be available in a water industry organisation
- relevant codes, standards and government regulations, including the ADWG

Where applicable, physical resources should include equipment modified for people with disabilities.

Access must be provided to appropriate learning and assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice
- a decision of competence only taken at the point when the assessor has complete confidence in the person's

competence over time and in various contexts

- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence
- where assessment is for the purpose of recognition (RCC/RPL), the evidence provided will need to be authenticated and show that it represents competency demonstrated over a period of time
- assessment can be through simulated project-based activity and must include evidence relating to each of the elements in this unit

In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge. Questioning will be undertaken in a manner appropriate to the skill levels of the operator and cultural issues that may affect responses to the questions, and will reflect the requirements of the competency and the work being performed.

Method of assessment The following assessment methods are suggested:

- assessed in the workplace or in a simulated workplace and under the normal range of workplace conditions
- assessment should also be conducted in conjunction with aspects of technical competencies that are consistent with the work environment
- techniques for gathering evidence of competency may include:
 - observation of performance
 - written and/or oral questioning to assess knowledge and understanding
 - completion of workplace documents and reports produced as part of routine work activities
 - third-party reports from experienced practitioners
 - completion of performance feedback from supervisors and colleagues

For consistency of assessment

Evidence must be gathered over time in a range of contexts to ensure the person can achieve the unit outcome and apply the competency in different situations or environments

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. Add any 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.

- Specific project or site*** may include:
- water supply system case studies
 - buildings
 - water treatment plants
 - construction and maintenance sites
 - workshops
 - laboratories
 - bulk water storage sites
 - surface or groundwater supply sites
 - water supply catchments
 - waste disposal sites

- Water supply system*** may include:
- water supply catchment (including groundwater recharge areas)
 - storage reservoirs, weirs and intakes
 - water treatment plants
 - distribution systems
 - consumers

- Drinking water quality risks*** may include:
- microbiological risks
 - physiochemical risks
 - radiological risks
 - risks to the security of supply

Unit Sector(s)

Not applicable.

Competency Field

Common.