



Australian Government

Department of Education, Employment and Workplace Relations

NWP415B Coordinate and monitor surface water systems

Revision Number: 2

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Modification History

NWP415B Release 2: Layout adjusted. No changes to content.

NWP415B Release 1: Primary release.

Unit Descriptor

This unit of competency describes the outcomes required to coordinate and monitor the operation of surface water systems, ensuring that Surface Water Management Plan (SWMP) performance measures are met, environmental issues are addressed and a source of supply is maintained.

Application of the Unit

This unit supports the attainment of skills and knowledge required for staff with a specific responsibility for ensuring that the operation of surface water systems complies with the requirements of the organisation's Surface Water Management Plan and with relevant organisational and statutory requirements. The level of responsibility may vary according to the size, scope and complexity of the surface water system.

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 ***bold italicised*** 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

ELEMENT	PERFORMANCE CRITERIA
1 Confirm SWMP performance measures.	1.1 Identify <i>water flow requirements</i> in <i>surface water sources</i>. 1.2 Identify water quality and quantity requirements, including release rates. 1.3 Identify <i>environmental factors</i> that may impact on water flows and quality. 1.4 Identify <i>performance measures</i> for the resource and operations. 1.5 Access <i>historic information</i> and consult <i>stakeholders</i> as required.
2 Monitor the performance of assets.	2.1 Carry out <i>monitoring and testing programs</i>. 2.2 Correctly select, fit and use personal protective equipment. 2.3 Monitor assets to ensure performance meets specifications in the SWMP. 2.4 Schedule maintenance programs to meet current and potential problems.
3 Monitor and coordinate processes.	3.1 Test and monitor water usage and quality according to the SWMP. 3.2 Coordinate processes to meet SWMP requirements and targets. 3.3 Take action to optimise system performance.
4 Report the outcomes of testing and monitoring.	4.1 Analyse, record and report coordination and monitoring data according to organisational procedures and statutory requirements. 4.2 Identify and report current or potential problems.

Required Skills and Knowledge

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

Required skills:

- interpret and apply legislation and policies
- coordinate measuring and testing activities
- consult with customers and stakeholders
- conduct site inspections
- lead work teams
- assess personal and team performance
- perform system calculations
- conduct investigations
- identify problems
- assess environmental impact
- use personal protective equipment

Required knowledge:

- relevant legislation
- relevant enterprise policies
- measuring and testing procedures
- investigation procedures
- surface water system
- customer expectations and requirements
- climatic and weather characteristics and impacts
- hydraulic analysis

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 demonstrate the ability to coordinate and monitor the operation of surface water systems including:

- identifying water flow, quality and quantity requirements and any environmental factors that may affect these
- identifying surface water system performance measures from the SWMP
- accessing historic information
- consulting stakeholders
- conducting or supervising asset monitoring and testing programs
- scheduling asset maintenance programs
- conducting or supervising testing and monitoring of water usage and water quality
- coordinating processes to meet targets and optimise system performance
- analysing data, completing records and producing reports
- identifying and reporting current and potential problems

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

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

Access must be provided to appropriate learning and/or 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 should only be made 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, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

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.

- Water flow requirements*** may include:
- usage and environment allocations
 - licenses
 - legislation
 - enterprise policies
- Surface water sources*** may include:
- dams
 - reservoirs
 - weirs
 - rivers
 - lakes
 - creeks and streams
 - wetlands
 - off stream storage
 - catchment areas
 - storage tanks
- Environmental factors*** may include:
- environmental flow requirements
 - catchment usage and management
 - weather and climate
 - rainfall run-off
 - chemicals
 - salinity
 - nutrients
 - reservoir operations
 - natural events
- Performance measures*** may include:
- setting targets and objectives for quantity
 - quality
 - stakeholders
 - future use
- Historic information*** may include:
- hydrological information
 - previous monitoring studies
 - geological data
 - hydro-geological data
 - land use studies
 - environmental management studies
 - anecdotal information from land owners

Stakeholders may include:

- water consumers
- government
- water authorities
- environmental departments
- general public
- interest groups
- industry
- extractive industry

Monitoring and testing programs may include:

- resource yields
- resource status
- flow rates
- testing procedures
- testing medium
- testing frequency
- sampling locations
- testing variables
- land use changes

Unit Sector(s)

Not applicable.

Competency field

Collection and distribution.