



Australian Government

Department of Education, Employment and Workplace Relations

NWP517B Develop and review surface water management plan

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit of competency describes the outcomes required to develop and review a surface water management plan to ensure environmental considerations are met and source of supply is maintained.

Application of the Unit

Application of the unit This unit supports the attainment of skills and knowledge required for managers in water organisations with responsibility for the management of surface water resources.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability Skills This unit of competency 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 required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

| ELEMENT | PERFORMANCE CRITERIA |
|--|--|
| 1 Plan and prepare for management of surface water flows and quality. | <p>1.1 Identify and interpret <i>surface water</i> flow requirements.</p> <p>1.2 Identify and interpret <i>water flow, quality and quantity requirements</i>, including release.</p> <p>1.3 Identify and interpret <i>historic source water flow</i> and system capacity information.</p> <p>1.4 Identify and interpret environmental flows that impact on water flows and quality.</p> <p>1.5 Identify and interpret <i>environmental factors</i> that impact on surface water.</p> <p>1.6 Identify, interpret and review the current status of resource and operational protocols.</p> |
| 2 Develop the surface water management plan. | <p>2.1 Identify and interpret surface water management requirements.</p> <p>2.2 Identify, interpret and validate stakeholder requirements that impact on surface water.</p> <p>2.3 Develop a <i>surface water management plan</i>.</p> |
| 3 Review the surface water management plan. | <p>3.1 Analyse and report deviations from planned performance measures.</p> <p>3.2 Review objectives of the management and implementation plans.</p> <p>3.3 Review parameters for water usage and quality through <i>monitoring and testing programs</i>.</p> <p>3.4 Make recommendations for changes to plan objectives and procedures, and usage and quality parameters.</p> <p>3.5 Provide advice and guidance to water <i>users and stakeholders</i>.</p> |

Required Skills and Knowledge

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
- conduct investigations
- assess environmental impact
- use data to inform planning process
- communicate and consult with stakeholders and users.

Required knowledge:

- relevant legislation
- relevant enterprise policies
- measuring and testing procedures
- investigation procedures
- risk management principles
- customer expectations and requirements
- climatic and weather characteristics and impacts
- hydraulic analysis.

Evidence Guide

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 develop and review a surface water management plan to ensure environmental considerations are met and source of supply is maintained including:

- gathering, interpreting and synthesising information (including historical data, current legislation and standards, stakeholder views and monitoring and test results) to underpin the sound development of the surface water management plan
- consulting widely and effectively
- developing effective surface water management plans that address the water organisation's objectives and requirements
- using data from testing and other monitoring arrangements to track the performance of the surface water management plan and inform the review of the plan
- preparing reports and recommendations for changes to the objectives of the management plan and its implementation.

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

EVIDENCE GUIDE

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.

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

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.

- Surface water*** sources may include:
- dams
 - reservoirs
 - weirs
 - rivers
 - lakes
 - creeks and streams
 - wetlands
 - off stream storage
 - catchment areas
 - storage tanks.
- Water flow, quality and quantity requirements*** may be influenced by factors including:
- usage and environment allocations
 - licenses
 - legislation
 - enterprise policies
 - cost benefit analysis.
- Historic source water flow*** information may include:
- hydrological information
 - previous monitoring studies
 - previous risk assessments
 - geological data
 - hydro-geological data
 - land use studies
 - environmental management studies
 - anecdotal information from land owners.
- Environmental factors*** that impact on surface water may include:
- environmental flow requirements
 - catchment usage and management
 - weather and climate
 - rainfall run-off
 - chemicals
 - salinity
 - nutrients
 - reservoir operations
 - natural events.

RANGE STATEMENT

The development of a *surface water management plan* may include:

- setting targets and objectives for quantity
- quality
- stakeholders
- future use.

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.

Users and stakeholders may include:

- water consumers
- government
- water authorities
- environmental departments
- recreational users of the area
- interest groups
- industry
- extractive industry.

Unit Sector(s)

Not applicable.

Competency field

Competency field Collection and distribution