



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **NWP535B Develop and review drainage system management plan**

**Revision Number: 2**

## NWP535B Develop and review drainage system management plan

### Modification History

NWP535B Release 2: Layout adjusted. No changes to content.

NWP535B Release 1: Primary release.

### Unit Descriptor

This unit of competency describes the outcomes required to develop and review the management plan for the operation and maintenance of drainage systems.

### 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 the drainage management 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 <b>bold italicised</b> text is used, further information is detailed in the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Plan and prepare for the development of a drainage management plan.</b>	1.1 Identify and interpret <i>drainage collection, transport, treatment and disposal system</i> requirements, including legislative and enterprise policies. 1.2 Access and interpret <i>historic drainage system information</i> relevant to the management process. 1.3 Identify issues that impact on the collection, transport, treatment and disposal of drainage. 1.4 Identify <i>stakeholder</i> and customer requirements that impact on the drainage system. 1.5 Identify and quantify <i>legislative</i> , organisational and environmental requirements that impact on the drainage system.
<b>2 Develop a drainage management plan.</b>	2.1 Determine and apply drainage performance requirements according to legislative and enterprise requirements. 2.2 Include <i>information</i> that impacts on the planning process according to enterprise procedures. 2.3 Identify, quantify and define available resources. 2.4 Prepare and present the drainage management plan.
<b>3 Review and refine drainage management policies and plans.</b>	3.1 Review management policies against established objectives. 3.2 Review management plans against established management policies and plans. 3.3 Review policies and plans, through consultation, against prevailing stakeholder expectations. 3.4 Modify policies and plans to include identified and required changes. 3.5 Implement modified policies and plans.
<b>4 Review and refine the drainage management plan.</b>	4.1 Identify deviations in the drainage management plan. 4.2 Identify and evaluate system changes to meet the requirements of the drainage management plan. 4.3 Identify and evaluate changes to the drainage management plan, required due to different legislative, enterprise, community, user or stakeholder requirements. 4.4 Report and recommend changes to the drainage management plan according to legislative and organisational requirements. 4.5 Include accepted recommendations into the updated and modified drainage management plan. 4.6 Implement changes to the drainage management plan.

## Required Skills and Knowledge

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

### Required skills:

- communicate effectively
- plan effectively
- prepare reports
- interpret and apply legislation and enterprise policies
- coordinate measuring and testing activities
- use mathematical and scientific techniques to interpret test results
- conduct investigations
- interpret and apply environmental legislation
- apply consultation and communication skills
- assess environmental impacts

### Required knowledge:

- relevant legislation
- relevant enterprise policies
- range of appropriate measuring and testing procedures
- investigation procedures
- customer expectations and requirements
- enterprise financial systems and key performance indicators
- occupational health and safety legislation

## 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 the management plan for the operation and maintenance of drainage systems including:

- gathering, interpreting and synthesising information (including historical system data, current legislation and standards, stakeholder views and monitoring results) to underpin the sound development of the drainage system management plan
- consulting widely and effectively
- developing effective drainage system management plans that address the water organisation's objectives and requirements
- using data from monitoring arrangements to track the performance of the drainage system 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 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.

The ***drainage collection, transport, treatment and disposal system*** may include:

- pipe and pumping systems
- open drains and natural water courses
- gross pollution traps
- wetland treatment systems
- stormwater outfalls
- surface water run-off:
  - roads
  - pavements
  - roofs
  - parks
- stormwater flow attenuation structures

***Historic drainage system information*** may include:

- previous studies
- impact of weather
- relevant hydrological information
- system models

***Stakeholder*** may include:

- conservation groups
- land care groups
- general community
- farming groups and individuals
- mining groups and companies
- catchment users
- government (all levels)
- quasi government organisations

***Legislative*** requirements may include:

- relevant federal legislation
- relevant state or territory legislation
- relevant local government by-laws
- relevant land care group agreements
- relevant government and quasi government authorities' rules (e.g. Great Barrier Reef Marine Park Authority, Environment Protection Authority)

***Information*** gathered by monitoring and testing may include:

- physical analysis of water:
  - pH
  - conductivity
  - colour
  - turbidity

- chemical analysis of water:
  - chlorine
  - alkalinity
  - biochemical oxygen demand
  - heavy metals
  - iron
  - manganese
- microbiological analyses:
  - coliforms
  - plate counts
  - algae identification and counts
- physical measures:
  - power
  - chemicals
  - water flows
  - sludge volumes
- mechanical testing:
  - vibration
  - noise
  - temperature
- fauna and flora surveys
- stakeholder surveys

## **Unit Sector(s)**

Not applicable.

## **Competency field**

Water systems.