



Australian Government

Department of Education, Employment and Workplace Relations

NWP537B Develop and review wastewater collection management plan

Revision Number: 2

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Modification History

NWP537B Release 2: Layout adjusted. No changes to content.

NWP537B Release 1: Primary release.

Unit Descriptor

This unit of competency describes the outcomes required to develop and review of the management plan for the operation and maintenance of wastewater collection networks and 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 wastewater collection 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 ***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 Plan and prepare for the development of a wastewater collection management plan.	1.1 Identify and interpret <i>wastewater collection and transport system</i> requirements, including <i>legislative</i> and enterprise policies. 1.2 Access and interpret <i>historic wastewater collection system information</i> relevant to the management process. 1.3 Identify issues that impact on the collection and transport of wastewater. 1.4 Identify users' (generators and processors) and <i>stakeholders'</i> requirements that impact on the wastewater collection system.
2 Develop a wastewater collection management plan.	2.1 Determine and apply system performance requirements according to legislative and enterprise procedures. 2.2 Identify and quantify environmental and community factors that impact on the wastewater collection system. 2.3 Monitor <i>information</i> that impacts on the planning process according to enterprise procedures. 2.4 Identify, quantify and define available resources. 2.5 Prepare and present the wastewater collection management plan.
3 Review and refine the wastewater collection management plan.	3.1 Identify deviations from the wastewater collection management plan. 3.2 Identify and evaluate changes required to meet the wastewater collection management plan. 3.3 Identify and evaluate changes to the wastewater collection management plan as a result of changes in legislative, enterprise, community, user and stakeholder requirements. 3.4 Report and recommend changes to the wastewater collection management plan according to legislative and enterprise requirements. 3.5 Modify and update the wastewater collection management plan, incorporating accepted recommendations. 3.6 Implement changes to the wastewater collection 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 policies
- coordinate measuring and testing activities
- use mathematical and scientific techniques to interpret test results
- conduct investigations
- assess environmental impact
- solve problems

Required knowledge:

- relevant legislation
- relevant enterprise policies
- range of appropriate measuring and testing procedures
- investigation procedures
- customer expectations and requirements
- environmental legislation
- 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 of the management plan for the operation and maintenance of wastewater collection networks and 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 wastewater collection management plan
- consulting widely and effectively
- developing effective wastewater collection management plans that address the water organisation's objectives and requirements
- using data from monitoring arrangements to track the performance of the wastewater collection 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 ***wastewater collection and transport system*** may include:

- gravity pipe systems
- pressure pipe systems
- pump stations and pumping systems
- odour control systems
- gully traps, manholes and valve pits
- overflow storage and treatment systems
- stormwater infiltration control systems
- trade waste
- domestic connections and drains

Legislative policies may include:

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

Historic wastewater collection system information may include:

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

Stakeholders may include:

- conservation groups
- community action groups
- general community
- industry groups and companies
- catchment users
- government (all levels) and quasi government organisations
- treatment plant operator enterprises
- chemical suppliers
- consultants
- equipment suppliers

Information may be gathered through monitoring and testing

- physical analysis of water:
 - pH
 - conductivity

including:

- colour
- turbidity
- chemical analysis of water:
 - chlorine
 - alkalinity
 - chemical oxygen demand
 - heavy metals
 - sulphides
- microbiological analyses:
 - coliforms
 - plate counts
- physical measures:
 - power
 - chemicals
 - water flows
 - sludge volumes
- mechanical testing:
 - vibration
 - noise
 - temperature
- fauna and flora surveys
- gas detection and testing
- odour testing
- stakeholder surveys

Unit Sector(s)

Not applicable.

Competency field

Collection and distribution.