



Australian Government

Department of Education, Employment and Workplace Relations

NWP333B Monitor and control rural water distribution operations

Revision Number: 2

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Modification History

NWP333B Release 2: Layout adjusted. No changes to content.

NWP333B Release 1: Primary release.

Unit Descriptor

This unit of competency describes the outcomes required to monitor, control and coordinate rural water flow, scheduling and delivery and to report on rural water distribution, including irrigation, domestic and stock supply systems. The ability to identify faults, gather data, interpret technical information and operate technical equipment are essential to performance.

Application of the Unit

This unit supports the attainment of skills and knowledge required for field staff with a responsibility for monitoring and operating rural water distribution systems.

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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Monitor water delivery system.	1.1 Perform <i>routine inspections</i> of channel flow rates, regulations and delivery according to demand and <i>organisational and statutory requirements</i>. 1.2 Gather and record system performance data according to organisational requirements. 1.3 Identify and correct system faults according to plans and service standards. 1.4 Correctly select, fit and use required safety equipment, including personal protective equipment.
2 Control processes.	2.1 Determine and apply system adjustments required to meet demands. 2.2 Initiate and coordinate system adjustments required for delivery or channel flow rates according to organisational and demand requirements. 2.3 Integrate processes to improve the delivery network performance according to organisational requirements.
3 Analyse data and compile reports.	3.1 Conduct analysis of actual against planned system performance using system data and records. 3.2 Compile reports from system performance data according to organisational requirements.

Required Skills and Knowledge

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

Required skills:

- solve operational problems
- produce reports and logs
- interpret plans and instructions
- communicate with employees and customers
- control system operations and processes
- use communication equipment
- calculate water flows
- identify control system faults
- lay and join pipes
- install associated fittings and components
- identify and respond to operational problems
- interpret plans, instructions and standard operating procedures
- follow procedures and standards
- use safety equipment and personal protective equipment
- use tools and machinery
- identify hazards
- give and receive instructions

Required knowledge:

- inspection of rural distribution systems
- coordination processes
- system layout
- system processes
- environmental aspects of rural distribution systems
- safety procedures
- lock out procedures for mechanical and electrical installations
- policies and standard operating procedures
- procedures and legislation
- relevant utilities and service bodies
- communication systems
- risk factors and potential hazards
- equipment operation, capacity and limitations
- effects of weather and conditions on operation of rural water distribution systems
- pipes and fittings
- pumping and valving systems
- gravity systems
- control systems

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 monitor, control and coordinate rural water flow, scheduling and delivery including:

- conducting system inspections
- gathering and recording system performance data
- identifying and correcting system faults
- adjusting system to meet demand
- integrating processes
- analysing system performance
- completing required documentation

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 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, 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.

Routine inspections may include:

- distribution systems, including:
 - water mains
 - services
 - valves
 - meters
 - associated structures and fittings
- pipes, including:
 - polyvinyl chloride (PVC)
 - polyethylene
 - mild steel cement lined
 - ductile iron cement lined
 - cast iron
 - copper
 - glass reinforced piping
- structures, including:
 - meter pits
 - person access pits
 - regulators
 - erosion barriers
 - head walls
 - thrust blocks
- fittings, including:
 - jointing systems for pipe types e.g. gibault
 - tapping band
 - tension bands
 - solvent joins
 - compression ring joints
 - bolted flanges
 - cathodic protection

Organisational and statutory requirements may include:

- by-laws and organisational policies
- standard operating procedures covering working with:
 - lifts and cranes
 - mines

- road signage code
- electrical sources
- dangerous goods
- environment protection
- occupational health and safety, including the use of personal protective equipment

Unit Sector(s)

Not applicable.

Competency field

Collection and distribution.