



Australian Government

Department of Education, Employment and Workplace Relations

NWP220B Collect and control drainage run-off

Revision Number: 2

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Modification History

NWP220B Release 2: Layout adjusted. No changes to content.

NWP220B Release 1: Primary release.

Unit Descriptor

This unit of competency describes the outcomes required to collect, monitor, manage and re-use drainage run-off surplus water.

Application of the Unit

This unit supports the attainment of skills and knowledge required for field and operational staff with specific responsibility for collecting, monitoring and managing stormwater drainage run-off.

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 Plan and prepare work.	1.1 Program work requirements for collecting and controlling drainage assets according to <i>relevant legislation and organisational procedures</i>. 1.2 Select and check <i>equipment and tools</i> required to meet safety requirements of task and site. 1.3 Select, fit and use personal protective equipment.
2 Monitor drainage assets.	2.1 Identify and define designated work areas to be inspected using organisational plans and data. 2.2 Conduct and report routine inspections of <i>drainage networks and storage facilities</i> according to organisational requirements.
3 Monitor quality and flow.	3.1 Collect water samples and record and report according to organisational requirements. 3.2 Operate flow regulation devices to achieve discharge and diversion of drainage waters to meet customer and organisational requirements. 3.3 Inspect and test flow regulation devices and report operational condition according to legislative and organisational requirements.
4 Manage and re-use drainage water.	4.1 Produce data relating to system adjustment according to organisational policies and statutory requirements. 4.2 Manage drainage storage facilities according to customer and organisational requirements. 4.3 Implement drainage re-use and report according to organisational requirements.

Required Skills and Knowledge

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

Required skills:

- identify and respond to operational problems
- collect and analyse data
- produce reports and logs
- use safety equipment and personal protective equipment
- use tools and machinery
- interpret plans, charts, diagrams and instructions
- perform work-related calculations
- apply procedures and standards
- communicate with employees and customers
- work effectively as part of a team
- use communication equipment
- use literacy skills in regard to verbal and written communication in the workplace
- give and receive instructions

Required knowledge

- use of sediment and erosion control devices
- impact of principles of hydraulics on operation of flows
- organisation's system layout
- environmental aspects of maintenance
- construction processes
- sampling and testing procedures
- relevant utilities and service providers
- communication systems
- hazardous materials handling
- landscape and ground structure of work area
- risk factors and potential hazards of construction and maintenance processes
- equipment operation, capacity and limitations
- effects of weather and conditions on construction site or plant
- organisation's control systems
- pre-cast components
- pipes and fittings
- chemical usage

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 collect, monitor, manage and re-use drainage run-off surplus water including:

- planning and preparing for monitoring, collecting, controlling and re-using drainage run-off
- inspecting drainage assets
- monitoring and adjusting flows
- managing drainage water re-use
- completing 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 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

Questioning will be appropriate to the skill levels of the operator and cultural issues that may affect responses to the questions, and will reflect 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.

Relevant legislation and organisational procedures may include:

- relevant federal and state or territory legislation and regulations
- codes of practice, associated standards and guidance material
- documented organisational policies, manuals and induction programs
- relevant community planning and development agreements, such as land care agreements

Equipment and tools may include:

- hand and power tools
- on- and off-road vehicles
- lifting and winching equipment
- mechanical excavation equipment
- compressors
- pneumatic spaders and attachments
- motorised cutting equipment
- chemical spraying apparatus
- small marine craft
- trenching systems
- portable pumps
- communication equipment
- breathing apparatus
- gas detection equipment
- rescue equipment
- appropriate personal protective equipment

Drainage networks and storage facilities include infrastructure, such as:

- structures, including:
 - channels
 - drains
 - meter pits
 - access chambers
 - collection chambers
 - drop structures
 - regulators
 - erosion barriers
 - anti-pollution devices
 - grates

- head walls
- pipes, including:
 - vitrified clay
 - polyvinyl chloride (PVC)
 - polyethylene
 - reinforced concrete
 - ductile iron cement lined
 - cast iron cement lined
 - glass reinforced piping
- prefabricated sections, including:
 - drainage sections
 - drainage pits
 - culverts
 - under road crossovers
 - person access pits
 - siphons
 - meter outlets
- fittings, including:
 - jointing systems for pipe types and prefabricated sections, e.g. gibault and tension bands
 - solvent cement joints
 - compression rings
 - bolted flanges
 - malleable jointing materials
 - electrofusion
 - butt welding

Unit Sector(s)

Not applicable.

Competency field

Collection and distribution