



Australian Government

NWPIRR021 Maintain and repair irrigation channels and drains

Release: 1

NWPIRR021 Maintain and repair irrigation channels and drains

Modification History

Release	Comments
1	This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages. This unit supersedes and is equivalent to NWP230B Maintain and repair irrigation channels and drains. • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • One new PC added to Element 1

Application

This unit describes the skills required to maintain and repair irrigation or stock and domestic supply channels and drains.

This unit applies to those working as field and operational staff with responsibility for carrying out planned and emergency maintenance and repair work on raw water delivery systems.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to, particularly those related to environmental requirements and WHS.

Those undertaking this unit would work independently or in a team under direct supervision using own familiar resources as required. They will perform routine tasks, ensuring minimum damage to the environment, in a range of familiar contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Irrigation

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Plan and prepare work site	1.1 Determine work requirements from plans, drawings, specifications or instructions. 1.2 Notify relevant stakeholders and customers of maintenance work. 1.3 Make appropriate drainage, de-watering and inflow diversion arrangements. 1.4 Select and check equipment and work methods to meet safety requirements of task and site.
2. Maintain irrigation channels, drains and associated fittings	2.1 Conduct routine inspections of designated work areas according to maintenance schedules. 2.2 Identify system faults and apply corrective action according to structure type, location, specification. 2.3 Identify, select, place and join components and associated fittings. 2.4 Construct components on-site. 2.5 Repair earthworks and embankments.
3. Check work and restore work site	3.1 Check repaired or replaced components to ensure that specifications have been met. 3.2 Backfill, compact, restore work site and refill the system.
4. Finalise work	4.1 Check, maintain and store equipment, tools and materials. 4.2 Complete and process workplace records.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning					Reading					Writing					Oral communication					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website

Unit Mapping Information

This unit supersedes and is equivalent to NWP230B Maintain and repair irrigation channels and drains.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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Assessment Requirements for NWPIRR021 Maintain and repair irrigation channels and drains

Modification History

Release	Comments
1	These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages. • Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- identifying and responding to operational problems
- laying concrete
- inserting water stop or seal
- producing reports and logs
- using tools and machinery
- interpreting plans, charts and instructions
- performing work related calculations
- planning and preparing work site
- inspecting irrigation drains and channels and identifying faults
- performing maintenance and repair tasks according to manufacturer specifications and organisational requirements

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- environmental aspects of maintenance
- construction processes
- concrete placement techniques, including compaction
- water to cement ratio of concrete
- work related calculations

- hazardous materials handling
- landscape and ground structure of work area
- backfilling and compaction requirements
- risk factors and potential hazards of maintenance processes
- effects of weather and conditions on construction site or plant
- control systems
- recording and reporting systems
- pre-cast components
- pipes and fittings
- chemical usage

Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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