



Australian Government

NWPIWS005 Maintain and repair irrigation channels and drains

Release: 1

NWPIWS005 Maintain and repair irrigation channels and drains

Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

Application

This unit involves the skills and knowledge required to maintain and repair irrigation channels and drains.

It includes preparing worksite, maintaining irrigation channels, drains and associated fittings, checking work, restoring worksite and finalising work.

This unit applies to those working as field and operational staff with responsibility for carrying out planned and reactive maintenance and repair work on rural water delivery systems. Those undertaking this unit would work under appropriate supervision using 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 this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Irrigation Water Supply

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Maintain irrigation channels and drains

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Conduct routine inspections of designated work areas according to workplace procedures

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|---------------------------|------------|--|
| | 1.2 | Identify system faults and apply corrective action according to workplace procedures |
| | 1.3 | Repair earthworks and embankments according to workplace procedures |
| | 1.4 | Calculate material requirements and perform maintenance of channels and drains |
| 2 Prepare worksite | 2.1 | Follow work requirements from plans, drawings, specifications and instructions |
| | 2.2 | Notify relevant stakeholders and customers of maintenance and repair work activities |
| | 2.3 | Make appropriate de-watering and diversion arrangements |
| | 2.4 | Complete job safety analysis and identify and control hazards |
| | 2.5 | Select and check equipment and work methods to meet safety requirements of task and site |
| 3 Finalise work | 3.1 | Check, maintain and store equipment, tools and materials |
| | 3.2 | Complete and process workplace records according to workplace procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to NWPIRR021 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 NWPIWS005 Maintain and repair irrigation channels and drains

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- completing reports
- following plans and instructions
- identifying and responding to operational problems
- inserting dewatering barrier
- inspecting irrigation drains and channels and identifying faults
- performing maintenance and repair tasks
- performing work related calculations
- planning and preparing worksite
- using tools and machinery

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- effects of weather and conditions on site or plant
- environmental aspects of maintenance
- landscape and ground structure of work area
- maintenance and repair control systems
- maintenance and repair processes
- maintenance of channels and drains includes:
 - access tracks
 - erosion repair
 - removal of blockages
 - removal of flow obstructions
 - removal of silt
 - removal of trees
 - removal of vegetation
- recording and reporting systems

- relevant legislation, regulations and workplace procedures
- repairs include:
 - erosion
 - leaks
- risk factors and potential hazards of maintenance processes
- work related calculations

Assessment Conditions

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

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