



Australian Government

NWPIRR004 Develop and review a groundwater plan

Release: 1

NWPIRR004 Develop and review a groundwater plan

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 develop and review a groundwater plan.

It includes analysing system performance, liaising with stakeholders and reviewing and refining the groundwater plan. It also includes applying and adhering to relevant legislation, industry regulations and workplace procedures.

This unit applies to leaders working in organisations with responsibility for the development and review of plans for management of groundwater resources. Those undertaking this unit would work autonomously, lead personnel and review and analyse information and data about aquifers whilst performing sophisticated tasks in a range of contexts.

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

Pre-requisite Unit

Not applicable.

Competency Field

Irrigation

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for groundwater management

PERFORMANCE CRITERIA

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

1.1 Gather historical groundwater data and evaluate as input to the planning process

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| | 1.2 | Identify, analyse and interpret relevant data to monitor and test water quality and quantity requirements |
| | 1.3 | Identify and interpret relevant legislation, industry standards and workplace procedures impacting groundwater catchment |
| | 1.4 | Identify and interpret environmental, hydraulic and development factors and determine system constraints impacting on the aquifer recharge and use of groundwater |
| 2 Develop the groundwater plan | 2.1 | Identify and interpret groundwater management requirements |
| | 2.2 | Identify, interpret and validate stakeholder requirements impacting groundwater usage |
| | 2.3 | Develop a groundwater plan according to relevant legislation, industry standards and workplace procedures |
| | 2.4 | Identify, investigate and report breaches of usage provisions and changes to quality parameters to relevant persons |
| 3 Review and refine the groundwater plan | 3.1 | Evaluate data from the ongoing implementation and monitoring of the groundwater plan and use to inform the review of the plan |
| | 3.2 | Review objectives of the management and implementation plans |
| | 3.3 | Recommend changes to plan objectives and implementation procedures |
| | 3.4 | Provide advice and guidance to groundwater stakeholders |

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.

Unit Mapping Information

This unit replaces and is equivalent to NWPIRR061 Develop and review groundwater management plan.

Links

Companion Volume Implementation Guides are found in VETNet -

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

Assessment Requirements for NWPIRR004 Develop and review a groundwater plan

Modification History

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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:

- developing effective groundwater plans addressing organisational objectives and requirements
- gathering, interpreting and synthesising data to underpin the sound development of the groundwater plan including:
 - aquifer hydraulics and changes in potentiometric surface
 - historical data
 - recharge and usage
 - relevant legislation, industry standards and workplace procedures
 - stakeholder requirements
 - water quality test results
 - water table changes
- identifying, investigating and reporting breaches
- managing groundwater as a resource to be used for water supply
- preparing reports and recommending changes to the objectives of the management plan and its implementation
- providing advice and guidance to stakeholders and users
- reading and interpreting data to inform groundwater management
- using data from testing and monitoring arrangements to track performance of the groundwater plan and inform the review of the plan

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:

- aquifer recharge related to usage
- changes in potentiometric surfaces
- environmental factors
- groundwater conservation zones
- groundwater hydraulics

- monitoring and testing procedures
- numerical data interpretations
- plan requirements and specifications
- relevant legislation, industry standards and workplace procedures
- salinity and pollution intrusion
- stakeholder expectations and requirements
- usage licensing and controls
- usage provision breaches
- water table monitoring practices

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

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 suitable workplace operational situations. Where this is not appropriate, assessment must occur in suitable simulated workplace operational situations reflecting actual 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:

- aquifer and groundwater monitoring and their application to management planning
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment currently used in industry
- applicable relevant documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

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