



Australian Government

NWPCAD019 Monitor and operate groundwater extraction

Release: 1

NWPCAD019 Monitor and operate groundwater extraction

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 monitor and operate groundwater extraction.

It includes monitoring the extraction of water from waterways and water bodies and reporting risks, compliance and complaints. It also includes operating pumps and meters, monitoring availability and quality of supply, controlling water flows from the source and applying legislative and workplace requirements.

This unit applies to field staff with responsibility for ensuring water extraction complies with water use legislation. Those undertaking this unit would work under appropriate supervision, while performing routine tasks in 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

Catchment and Dams

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for work

PERFORMANCE CRITERIA

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

1.1 Interpret relevant legislation, workplace procedures and requirements

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| | 1.2 | Locate bore sites from plans and job specifications |
| | 1.3 | Schedule and plan inspection of bore asset and communicate with appropriate personnel |
| | 1.4 | Select, check and prepare equipment to monitor water extraction |
| | 1.5 | Conduct a risk assessment of bore operations and determine control measures |
| 2 | Monitor and operate groundwater extraction systems | |
| | 2.1 | Monitor designated locations within groundwater source area according to agreed schedule |
| | 2.2 | Conduct inspection of bore assets, take meter readings and for water depth |
| | 2.3 | Calculate recharge and extraction rates |
| | 2.4 | Collect samples and conduct standard tests according to workplace procedures |
| | 2.5 | Adjust pump flows to meet customer orders |
| | 2.6 | Identify breaches according to legislation and workplace procedures |
| 3 | Identify and report risks, breaches and complaints | |
| | 3.1 | Identify risks to stakeholders and environment |
| | 3.2 | Identify and report breaches according to workplace procedures |
| | 3.3 | Investigate and report complaints from the stakeholders regarding water allocation and quality |

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 NWPSOU051 Monitor and operate groundwater extraction.

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 NWPCAD019 Monitor and operate groundwater extraction

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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:

- adjusting pump flows
- calculating recharge and extraction rates
- collecting samples
- conducting risk assessment
- identifying and preventing well contamination
- inspecting bore assets
- interpreting plans, instructions and standard operating procedures
- reading levels and meters

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:

- characteristics of groundwater and aquifer
- characteristics of groundwater systems
- effects of weather and conditions on operation of site or plant
- methods for investigating and reporting complaints
- risk factors and potential hazards of groundwater source systems
- relevant legislation, regulations and workplace procedures
- system hydraulics and flushing
- system layout
- types of bore construction and principles
- water extraction equipment including operation, capacity and limitations
- well contaminants

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 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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