



Australian Government

NWPTRT048 Monitor and operate reclaimed water irrigation

Release: 1

NWPTRT048 Monitor and operate reclaimed water irrigation

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 reclaimed water irrigation.

It includes monitoring sites for irrigation needs, applying reclaimed water for irrigation and determining the quality of reclaimed water and impacts of use. It also includes compiling reclaimed water irrigation records and reporting conditions outside of defined parameters.

This unit applies to staff members with a specific responsibility for applying reclaimed water to a site. Those undertaking this unit would work under appropriate supervision, performing routine tasks in a familiar context, and ensuring minimum damage to the environment.

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

Pre-requisite Unit

Not applicable.

Competency Field

Treatment

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to irrigate reclaimed water

PERFORMANCE CRITERIA

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

1.1 Identify reclaimed water guidelines and apply reclaimed water according to workplace procedures

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|-----------------------------------|------------|--|
| | 1.2 | Perform tests on samples of reclaimed water to determine composition and suitability for identified crops |
| | 1.3 | Determine volume of reclaimed water to be applied according to crop requirements and watering schedule |
| | 1.4 | Identify potential environmental impacts and problems from using reclaimed water |
| 2 Irrigate reclaimed water | 2.1 | Apply and monitor reclaimed water to an area according to workplace procedures |
| | 2.2 | Monitor, operate and maintain irrigation equipment according to manufacturer guidelines and workplace procedures |
| | 2.3 | Monitor volume of reclaimed water applied and tailwater or runoff |
| | 2.4 | Adjust reclaimed water irrigation application system output to ensure optimal conditions for crops |
| 3 Complete documentation | 3.1 | Collect, record and report reclaimed water usage according to workplace procedures |
| | 3.2 | Identify and report observations outside defined parameters to relevant personnel for further action |

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 is a new unit.

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 NWPTRT048 Monitor and operate reclaimed water irrigation

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:

- applying reclaimed water irrigation according to workplace procedures
- monitoring, operating and maintaining equipment and systems for irrigating reclaimed water
- monitoring, recording and reporting reclaimed water usage and runoff volumes
- reporting data outside of specified parameters to relevant personnel
- sampling and testing of reclaimed water and determining composition

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:

- components of irrigation systems
- composition of reclaimed water and impacts of levels of the following including:
 - algae
 - nutrients
 - other solids
 - pH
 - salt
- crop watering requirements
- impacts of over irrigation including environmental issues
- irrigation systems infrastructure
- potential environmental impacts from using reclaimed water
- principles of irrigation scheduling
- relevant legislation, regulations and workplace procedures
- water recycling guidelines

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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