



Australian Government

MSS024029 Collect spatial and discrete environmental data

Release: 1

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Modification History

Release 1. Unit code changed. Application changed. Performance Criteria changed. Foundation Skills populated. Assessment Requirements changed. Supersedes and is equivalent to MSS024017 Collect spatial and discrete environmental data.

Application

This unit describes the skills and knowledge required to obtain and store spatial and discrete environmental data using handheld global positioning system (GPS) equipment.

This unit applies to environmental technicians and similar roles who are required to interpret specifications, plan data collection, set up and operate GPS equipment, process and store data and complete documentation.

This unit applies in a range of industry sectors including but not limited to environmental monitoring, sampling and field testing; geotechnical services; natural resource management; occupational hygiene monitoring; groundwater and clean water; water treatment, storm and wastewater management; site remediation and rehabilitation.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil

Competency Field

Environmental monitoring and technology

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare for data collection	1.1 Read and interpret legislative and regulatory requirements, workplace requirements and background information relevant to site or project 1.2 Locate, read and interpret specifications for spatial and environmental data collection 1.3 Write a data collection plan in accordance with specifications

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	1.4 Establish codes for environmental attributes 1.5 Assemble equipment and check that it is fit for purpose 1.6 Clarify and/or confirm plan with supervisor
2. Safely collect GPS and environmental data	2.1 Set up environmental measuring instruments on site and perform pre-use or calibration checks 2.2 Set up GPS equipment with correct datum and projection settings 2.3 Operate instruments and equipment in accordance with manufacturer specifications and workplace procedures 2.4 Determine conditions for obtaining optimum GPS positions 2.5 Collect point positional data in accordance with data collection plan 2.6 Attribute environmental data for each location 2.7 'Ground truth' GPS data using maps, aerial photos or satellite imagery 2.8 Verify environmental data, identify atypical results and review procedures and troubleshoot equipment 2.9 Apply hazard identification and risk control measures relevant to identified risks
3. Report data and finalise documentation	3.1 Use GPS software to download and process GPS and environmental data and extract required information 3.2 Use specified quality tests and workplace procedures to check acceptability of environmental data 3.3 Complete required documentation according to procedures 3.4 Maintain the security and confidentiality of data and documentation in accordance with workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Reading skills to interpret workplace requirements and work specifications
- Writing skills to complete documentation and/or reports
- Oral communication skills to liaise with and take feedback from supervisor

- Numeracy skills to take readings and measurements and verify data.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS024017 Collect spatial and discrete environmental data.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>

Assessment Requirements for MSS024029 Collect spatial and discrete environmental data

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- plan, collect and process global positioning system (GPS) and environmental data to meet at least 2 sets of specifications
- complete documentation and/or reporting requirements for each set of specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- functions and operating principles of GPS equipment and software
- environmental terms, concepts and principles relevant to data collection
- environmental data verification including comparison with expected or reference values, conducting repeat tests, and using duplicate samples or locations
- legislative requirements, standard methods and/or workplace procedures relevant to site or project and data collection, processing and reporting
- sources of background information
- uncertainty, accuracy and precision of measurements and data quality requirements
- common data formats for spatial data
- methods for data processing, manipulation and management
- common site hazards and control measures
- health, safety and environment requirements, including field safety and survival principles.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - maps and photos of site/s
 - site reports/history
 - environmental management plan and related procedures and test methods

- sampling or monitoring equipment and instruments, GPS receivers and related GPS software, camera
- modelling of industry operating conditions, including:
 - access to site/s.

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

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