



Australian Government

MSS024021 Assist with assessing and monitoring stormwater systems

Release: 1

MSS024021 Assist with assessing and monitoring stormwater systems

Modification History

Release 1. Updated unit code. Changes to performance criteria. Range of conditions removed. Assessment requirements amended. Equivalent outcome.

Application

This unit describes the skills and knowledge to inspect and/or monitor small-scale urban or semi-urban drainage systems. Personnel will plan and conduct survey, inspection and/or audit activities; collect and interpret information about the characteristics and condition of the catchment; and identify environmental issues and possible causes. This work assists engineers and planners to develop stormwater management plans and/or assess the environmental impacts of existing conditions or activities.

This unit applies to environmental technicians working in a range of industry sectors, such as stormwater management, clean water; environmental services, environmental compliance, auditing and inspection.

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

Unit Sector

Environmental

Elements and Performance Criteria

Elements describe the essential outcomes.

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

1 Confirm details of assigned activities with supervisor

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| 1.1 | Clarify the scope and objectives of the assessment, constraints, stormwater components involved and stormwater management techniques already in use |
| 1.2 | Identify regulations, standards, guidelines and workplace procedures that apply to assigned activities |

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
		1.3	Clarify the required outputs, timeframe, available resources and stakeholder involvement
2	Source and assess available stormwater system data	2.1	Locate and obtain existing stormwater system information and review its relevance and accuracy
		2.2	Locate external sources of data sets and assess their availability, price, value and limitations
		2.3	Obtain selected data sets in accordance with workplace procedures
		2.4	Use available data to identify (sub)catchment boundaries and modifications, hydrologic range, major land use categories, areas of potential pollution and environmental issues relevant to the study
		2.5	Identify the underlying geological landforms
		2.6	Collect data on the local meteorological conditions
3	Plan and organise assigned field activities	3.1	Confirm data collection points and data quality requirements
		3.2	Analyse field activities to identify related tasks and plan efficient sequences
		3.3	Identify risks, safety and environmental requirements associated with field activities
		3.4	Assemble required field equipment and materials and check that they are fit for purpose
		3.5	Liaise with relevant personnel to explain the scope and purpose of field activities, organise site access and obtain permits
		3.6	Review work plan in response to new information, changed circumstances or instructions from relevant personnel
		3.7	Update work plan and communicate changes to relevant

Elements describe the essential outcomes.

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

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| 4 | Safely collect global positioning system (GPS) and environmental data | 4.1 | Set up and optimise GPS equipment with correct datum and projection settings |
| | | 4.2 | Set up measuring instruments on site and perform pre-use, calibration checks |
| | | 4.3 | Operate GPS equipment and measuring instruments in accordance with manufacturer specifications and workplace procedures |
| | | 4.4 | Collect point positional data and attribute environmental data for each location in accordance with data collection plan |
| | | 4.5 | Verify GPS and environmental data, identify atypical results and review procedures and troubleshoot equipment |
| 5 | Perform field work | 5.1 | Visually inspect stormwater systems to determine the degree of erosion or sediment transport along drainage channels |
| | | 5.2 | Assess the apparent effectiveness of current stormwater control devices |
| | | 5.3 | Assess the state of riparian vegetation associated with earth formed channels, ponds and basins |
| | | 5.4 | Assess the diversity of vertebrate and invertebrate fauna in stormwater channels and receiving bodies |
| | | 5.5 | Collect representative water, soil and sediment samples using specified sampling methods and equipment |
| | | 5.6 | Obtain valid and reliable in-situ measurements using specified test methods and equipment |
| | | 5.7 | Identify litter generation areas and visually inspect the effectiveness of gross pollutant traps |
| | | 5.8 | Identify and promptly report any illegal discharge to the |

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
		stormwater system	
		5.9	Inspect the condition of flood mitigating structures along drainages
6	Finalise field work	6.1	Pack and safely transport all samples, equipment and supplies back to home base
		6.2	Ensure all samples and data are stored safely
		6.3	Ensure dispatch of collected samples for subsequent analysis
		6.4	Clean and test equipment before storage
7	Report current stormwater system conditions	7.1	Review field measurements and results of laboratory analyses to identify significant trends and problems with data
		7.2	Analyse data relating to catchment characteristics, existing conditions and management values
		7.3	Identify environmental issues that may impact on current stormwater management objectives and practices
		7.4	Report findings using a format and style that suits the intended use and in accordance with workplace guidelines
		7.5	Communicate results within the specified time and in accordance with workplace confidentiality and security guidelines
8	Maintain a safe work environment	8.1	Use safe work procedures and protective equipment to ensure personal safety and that of others
		8.2	Minimise environmental impacts of testing and sampling and generation of waste
		8.3	Collect and dispose of all waste in accordance with environmental requirements and workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS024009 Assist with assessing and monitoring stormwater systems.

Links

The MSS Sustainability Companion Volume implementation Guides are available from VETNet: -

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

Assessment Requirements for MSS024021 Assist with assessing and monitoring stormwater systems

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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:

- planned and safely conducted surveys, inspections or audits of at least 2 stormwater systems and reported current system conditions.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- terminology and principles of stormwater management
- basic design of stormwater transport systems, constructed wetlands and flood mitigation structures
- sources of stormwater system information
- specific legislation, policies and guidelines relevant to stormwater survey, inspection and audit activities
- stormwater management purpose, plan and techniques
- catchment physical, social, waterway and ecological characteristics
- catchment values
- fundamental principles of ecology and assessment of site environmental indicators
- environmental factors that impact on soils, water quality, population and diversity of flora and fauna
- specified procedures, methods and equipment for collecting soil, water and (micro) biological samples
- procedures and equipment for maintaining, storing and transporting samples and specimens to ensure their wellbeing, viability and integrity
- procedures and equipment for basic water flow and quality measurements
- calculation of simple flow rates, scientific quantities, estimated uncertainties and unit conversion factors
- workplace procedures for recording field data and reporting requirements
- protocols for the confidentiality and security of information and communicating with the community and media
- hazards, health, safety and environment requirements for work role.

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 facilities, equipment and resources, including:
 - access to natural and constructed drainage systems and combinations of these
 - relevant sampling equipment, field instruments and materials
 - documentation, including stormwater system information, environmental data sets, user manuals, workplace safety procedures and test or survey methods

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

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