



Australian Government

MSS027020 Coordinate water quality management activities

Release: 1

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Modification History

Release 1. Unit code changed. Application changed. Elements and performance criteria changed. Range of conditions removed. Foundation skills information added. Assessment requirements changed. Supersedes and is equivalent to MSS027006 Coordinate water quality management activities.

Application

This unit describes the skills and knowledge required to oversee the day-to-day water quality management activities for a site, project or an ongoing program. Personnel are required to interpret and implement a water quality management plan, organise specified management activities, verify the quality of monitoring data and investigate and rectify unexpected or unacceptable results, monitor compliance with relevant water quality objectives or standards and provide reports. They work under the supervision of an environmental scientist or engineer, site manager or workplace environmental manager.

This unit applies to environmental site coordinators, environmental managers and senior environmental officers working in a range of industry sectors, including environmental services involved with sampling, monitoring and/or management of surface water, groundwater, stormwater or wetlands; and environmental compliance, auditing and inspection. The term 'manager' is used to refer to management of a function, project and/or program and does not necessarily imply line management.

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

MSS024018 Perform sampling and testing of water

Competency Field

Environmental management

Unit Sector

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. Confirm scope of water	1.1	Read and interpret legislative, regulatory and licensing

quality management for a site or project or program		requirements and approvals that apply to site or project or program
	1.2	Read current water quality management plan to identify objectives, known issues, specified management activities and required changes
	1.3	Read and review previous water quality records and reports
	1.4	Confirm that water quality monitoring sites, sampling and measurement methods, instrumentation and workplace procedures are in accordance with standards and guidelines
	1.5	Clarify own scope of responsibility for achieving outcomes and the roles of key personnel
	1.6	Identify resources available to conduct water quality management activities
2. Plan water quality management activities	2.1	Develop a consolidated schedule to ensure all activities can be conducted efficiently with the available resources
	2.2	Develop checklists and clear work instructions to enable personnel to perform assigned tasks efficiently and with minimal errors
	2.3	Check that personnel are competent to conduct monitoring or collect water samples
	2.4	Check water quality monitoring equipment is regularly calibrated and maintained and that adequate stocks of consumables are available
	2.5	Check water samples are handled in accordance with the sampling method and chain of custody requirements and dispatched promptly for analysis
	2.6	Conduct, or arrange for, regular site inspections to monitor the effectiveness of water quality management actions
	2.7	Advise relevant personnel when specified water quality management actions are not being implemented effectively
	2.8	Conduct, or arrange for, additional monitoring and inspections after atypical events, legitimate complaints or government requests
3. Verify water quality data	3.1	Read and interpret job instructions, data and technical records in workplace information management system

	3.2	Confirm that technical records provide sufficient information to ensure traceability and chain of custody for the monitoring activities
	3.3	Read and compare monitoring data with expected values and identify outliers
	3.4	Read and interpret data records to identify gaps and to check the integrity of data entry, transfers, alterations and calculations
	3.6	Notify manager when data is incomplete or contains significant errors and clarify what action to take
4. Check if results are acceptable and within expectation	4.1	Compare results with expected values and guidelines and identify significant differences or trends
	4.2	Check the reliability of results by examining data or results from repeat measurements or tests of duplicate samples or other monitoring stations
	4.3	Assess the significance of recorded observations of atypical environmental or meteorological conditions
	4.4	Check calculations to ensure there are no errors
	4.5	Check that estimations of uncertainty are reasonable and consistent with the sampling method and guidelines
	4.6	Report results that meet workplace data quality standards and are consistent with expectations
5. Investigate and rectify unexpected or unacceptable results	5.1	Read and interpret records of pre-use checks and calibration performance to ensure that the sampling equipment or monitoring or test instruments used meet specifications and workplace requirements
	5.2	Establish whether human, environmental or meteorological factors could have affected the reliability of results
	5.3	Check for obvious sources of interference that occurred during measurements or analysis of samples
	5.4	Retrieve stored samples and assess whether they are atypical or contaminated
	5.5	Arrange for control tests using the same or new samples to check unexpected results

	5.6	Report unexpected results that meet workplace data quality standards
	5.7	Identify root causes of unacceptable results and preventative or corrective actions
	5.8	Report investigation outcomes and recommendations for improvements in accordance with workplace procedures
	5.9	Seek manager's advice when challenges are beyond own technical competence or when input from environmental specialists may be required
6. Keep management informed about water quality performance	6.1	Provide regular reports about water quality, including instances of potential and actual non-conformance, incidents and the actions taken in each case
	6.2	Report opportunities and recommendations for improvements in water quality monitoring or management in accordance with workplace procedures
7. Maintain water quality records	7.1	Write legible and accurate water quality records in accordance with workplace and legislative requirements
	7.2	Store water quality records in accordance with workplace procedures
	7.3	Regularly read and review water quality records to identify significant trends and impacts
	7.4	Identify problems with the maintenance and security of water quality records and resolve them promptly

Foundation Skills

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

- Oral communication to liaise with other personnel.

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

Range of Conditions

Unit Mapping Information

Supersedes and is equivalent to MSS027006 Coordinate water quality management activities.

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 MSS027020 Coordinate water quality management activities

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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 implemented the day-to-day water quality management activities for at least 1 site, project or ongoing program.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- water quality management terminology, concepts and principles used in job role
- legislative, regulatory requirements, standards, codes and guidelines dealing with water quality
- expected values for water quality parameters, Australian and New Zealand Environment and Conservation Council (ANZECC) guidelines or current equivalent, and statutory environmental quality concentration limits
- workplace water quality management plans and procedures, common water quality issues, control measures, mitigation and management actions
- measurement parameters for waters, sediments or biota relevant to site, project or program
- samples, sampling, monitoring methods, equipment, materials and instrumentation used to generate the water quality data, including calibration, fault-finding and troubleshooting
- impacts of common human, environmental and meteorological factors on data quality
- sources of interference, uncertainty, limitations of methods and sources of variability
- workplace procedures for identifying and assessing environmental risks and impacts, responding to complaints and environmental incidents, and record management and reporting water quality data
- problem-solving techniques and cause analysis
- interpersonal communication, negotiation and conflict resolution techniques
- impact of activities on community and corporate social responsibilities
- water quality management hazards, health, safety and workplace emergency response procedures.

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:
 - site or project or program history
 - legislation, codes and standards; workplace environmental management policies, plans, actions, procedures, checklists and equipment manuals; sampling methods and description of monitoring set-up
 - water quality data sets, records and reports, computer and relevant software or workplace information management system
 - water sampling and testing equipment.

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

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