



Australian Government

Assessment Requirements for AHCNRM510 Develop a water quality monitoring program

Release: 1

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Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has, on at least one occasion, developed and implemented a water quality monitoring program according to a specific client brief and legislative and workplace policies and procedures.

There must also be evidence that the individual has:

- consulted with client and established the scope, objectives, constraints and quality monitoring requirements in a program brief
- conducted research and site analysis to select suitable monitoring sites
- developed and implemented a monitoring plan in accordance with program brief
- evaluated the program using data analysis, consultation with client and assessment against program objectives
- collected, transported and treated samples to preserve sample integrity
- analysed data according to scientific standards and workplace policies and procedures
- applied workplace health and safety practices
- incorporated sustainability practices and biosecurity procedures into monitoring program
- developed evidence-based conclusions from analysis and reasoned arguments
- produced written reports to workplace standards.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- water quality principles and factors, including:
 - hydrological cycle
 - aquatic ecology
 - water quality indicators
 - chemical principles

- catchment and coastal management issues contributing to surface and groundwater quality
- standard techniques to assess ecological health of aquatic sites
- mathematical sampling techniques
- sampling methods for maintaining accuracy and veracity of test results, including:
 - sampling techniques and range
 - storage methods and treatments to preserve sample integrity
 - statistical modelling for sampling
 - location and frequency of sampling
 - sampling methods for different analysis
- analytical techniques appropriate to water quality monitoring, including:
 - statistical analysis
 - comparative analysis
 - chemical
 - physical
 - biological
- data storage and management systems
- accepted scientific processes and standards for data collection and analysis
- health and safety legislative requirements and codes of practice, including hazard identification, assessment and control measures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in the field where water sampling requires regular monitoring, or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - sampling equipment relative to the type of study being undertaken
 - computer and software for report writing and statistical analysis
- specifications:
 - workplace policies and procedures for conducting collecting and analysing water samples and for recording results
 - client brief and specifications for water quality monitoring
- relationships:
 - client
 - stakeholders.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>