



Australian Government

**Assessment Requirements for
NWPHYD006 Measure discharge and
process discharge data using a range of
methods and equipment**

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

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 corrections to measurements
- assembling and testing metering equipment
- assessing risks and applying precautions and action
- checking and preparing gauging section
- confirming and recording the percentage deviation from the rating determined by checking:
 - calculations
 - equipment
 - gauging station control
 - recording equipment
 - repeat measurement
- estimating and explaining the anticipated vertical distribution
- gathering and documenting supporting information relevant to the discharge measurement
- gathering, analysing, verifying, interpreting, storing, archiving and reporting data for a range of clients and stakeholders
- identifying, reporting and solving potential issues in relation to discharge measurement
- making calculations on depth and velocity
- measuring and calculating readings
- plotting discharge measurements on organisation's preferred scale
- selecting appropriate equipment and techniques relevant to site conditions transferring data to database
- using a range of suitable techniques to determine mean stage in rapidly changing situations
- using area velocity methods
- using formulae for determining the percentage deviation

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 include knowledge of:

- client service agreements
- correction procedures for horizontal angles and suspension measurements
- discharge and mean stage adjustment
- equipment and required techniques including:
 - Acoustic Doppler Current Profiler (ADCP)
 - area slope method
 - area velocity method
 - dilution gauging
 - Doppler velocity meter
 - electromagnetic current meter
 - float gauging
 - mechanical current meter
- factors impacting on discharge measurements and the quality of the discharge
- impacts of site conditions, gauging techniques or equipment on discharge accuracy
- mathematical principles for area and velocity measurements
- methods for calculating mean velocity in a vertical
- methods for determining the cross-sectional area at a site
- principles and alternative methods of discharge measurement
- relevant legislation, industry standards, workplace policies and procedures including:
 - Bureau of Meteorology
 - international and national standards
 - work health and safety
 - World Meteorological Organisation
- requirements for surface velocity float measurements
- technical components in calculating discharge
- techniques for monitoring stage changes during discharge measurement
- weighted mean stage calculations

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.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>