



**Australian Government**

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

**Release: 1**

# NWPHYD006 Measure discharge and process discharge data using a range of methods and equipment

## Modification History

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

## Application

This unit involves the skills and knowledge required to measure discharge and process discharge data using a range of methods and equipment.

It includes collecting data using a range of discharge measuring methods and equipment, to measure and calculate readings and to interpret and report data to clients and stakeholders.

This unit applies to hydrographers and water operators involved in the monitoring of all the elements of the water cycle and their impact on the related environment. Those undertaking this unit would work autonomously, usually with supervisory responsibilities, while performing complex tasks in a range of contexts.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

## Pre-requisite Unit

Not applicable.

## Competency Field

Hydrometric Monitoring

## Unit Sector

Not applicable.

## 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 to undertake

#### 1.1 Identify the monitoring objective of the site and gauging

- flow gauging**
  - requirements
  - 1.2 Identify appropriate methods based on site conditions for measuring discharge
  - 1.3 Select appropriate equipment and instruments to meet site conditions
  - 1.4 Identify stream conditions and factors affecting gauging accuracy
  - 1.5 Identify hazards, assess risks and implement control measures according to workplace procedures
- 2 Collect depth and velocity data**
  - 2.1 Perform a pre-discharge measurement check on equipment and ensure it is working within specifications
  - 2.2 Prepare the gauging site according to workplace procedures
  - 2.3 Calculate the equipment configuration settings
  - 2.4 Securely position equipment on mounting device
  - 2.5 Take measurements during gauging and review data for abnormalities
  - 2.6 Pack and store equipment safely for transport
- 3 Calculate discharge**
  - 3.1 Apply corrections to data where required
  - 3.2 Perform calculations of mean velocity, area and discharge according to workplace procedures
  - 3.3 Calculate and record the mean stage and rate of change
- 4 Report discharge readings**
  - 4.1 Compare the discharge measurements with the current rating and record deviation
  - 4.2 Grade and record the gauging quality with interpretation comments
  - 4.3 Gather and document supporting information from the site and update gauging database
  - 4.4 Report site issues or significant deviations from ratings to relevant personnel and stakeholders

## **Foundation Skills**

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

## **Range of Conditions**

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

## **Unit Mapping Information**

This unit supersedes and is equivalent to NWPHYD014 Measure and process medium and high flows using a range of methods and equipment.

## **Links**

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>