



Australian Government

NWPHYD009 Undertake surveying of monitoring sites

Release: 1

NWPHYD009 Undertake surveying of monitoring sites

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 undertake surveying of monitoring sites. It includes using appropriate survey equipment to collect survey data at monitoring sites and to process and manage the data for hydrometric purposes.

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

Elements describe the essential outcomes.

1 Plan and assess survey requirements

PERFORMANCE CRITERIA

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

1.1 Identify survey objectives according to workplace procedures

1.2 Identify the location and value of survey reference

- marks from maps and plans
- 1.3** Choose and justify appropriate survey techniques for hydrometric purposes
 - 1.4** Identify and evaluate the source of levelling errors and misclosures
 - 1.5** Plan and manage the logistics and personnel to ensure effective outcomes and resource management
 - 1.6** Apply correct care procedure for storage, transport and use of survey equipment
 - 1.7** Assess and address WHS issues encountered during the surveying exercise, taking appropriate risk management strategies
- 2 Operate survey equipment**
- 2.1** Select, set up and prepare survey equipment and check level of accuracy according to workplace procedures
 - 2.2** Use mathematical techniques to check for correct operation of surveying equipment
 - 2.3** Use and select appropriate survey equipment according to site conditions
- 3 Select and survey monitoring sites**
- 3.1** Identify required survey reference benchmarks according to workplace procedures
 - 3.2** Identify and survey high-flow measurement cross-section, control section and cease-to-flow
 - 3.3** Survey cross sections of the channel to determine the profile of the channel in the gauging station reach including the use of stadia methods
 - 3.4** Identify and assess monitoring site survey reference points according to workplace procedures
 - 3.5** Establish benchmark and survey to Australian Height Datum according to workplace procedures
- 4 Document survey and data results**
- 4.1** Verify, document, store and archive results according to workplace procedures
 - 4.2** Produce a site layout plan of survey reference points
 - 4.3** Produce a plot of survey cross section

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 NWPHYD015 Undertake surveying of monitoring sites.

Links

Companion Volume implementation guides are found in VETNet -

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