



**Australian Government**

# **NWPNET004 Monitor and operate network systems**

**Release: 1**

# NWPNET004 Monitor and operate network systems

## Modification History

| Release | Comments                                                                                                                                                                                                                                                   |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | <p>This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages.</p> <ul style="list-style-type: none"><li>• New unit, created drawing upon information from deleted units NWP232B and NWP256B</li></ul> |

## Application

This unit describes the skills required to monitor and operate network systems including planning and preparing work site and monitoring performance and usage of distribution.

This unit applies to those working as field and operational staff with responsibility for the water distribution systems and practical delivery, monitoring and regulation of reticulated water distribution services.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work under indirect supervision, while performing routine tasks, in a familiar context, ensuring minimum damage to the environment.

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

## Competency Field

Networks

## Elements and Performance Criteria

| ELEMENTS                                                    | PERFORMANCE CRITERIA                                                                                                                                                                                    |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Elements describe the essential outcomes                    | Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section. |
| <b>1. Establish system constraints and plan and prepare</b> | <p>1.1 Conduct risk assessment for environmental, safety and water quality factors.</p> <p>1.2 Determine system layout and operational problem areas from</p>                                           |

|                                                                 |                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>work site</b>                                                | <p>specifications or instructions.</p> <p>1.3 Plan work required to operate and adjust water reticulation system.</p> <p>1.4 Select and check equipment and personal protective equipment to meet safety requirements of task and site.</p> <p>1.5 Identify and locate isolation valves and hydrants.</p> <p>1.6 Collect and report data on system performance and usage.</p> |
| <b>2. Operate pump station</b>                                  | <p>2.1 Identify and set or adjust pump station components.</p> <p>2.2 Check and report on reservoir.</p> <p>2.3 Identify system faults and adjust as required.</p>                                                                                                                                                                                                            |
| <b>3. Monitor performance and usage of distribution systems</b> | <p>3.1 Identify fluctuations in supply, system changes, community demands and water quality complaints.</p> <p>3.2 Collect and report data on system performance and usage.</p> <p>3.3 Collect and record water samples and monitor water quality.</p>                                                                                                                        |
| <b>4. Regulate flow and pressure and identify issues</b>        | <p>4.1 Inspect flow regulating systems and adjust to meet demand requirements.</p> <p>4.2 Regulate and divert flows to facilitate repair or emergency activities.</p> <p>4.3 Monitor and adjust pressure to meet optimum delivery.</p> <p>4.4 Investigate and report pressure fluctuations.</p> <p>4.5 Document and report reticulation and distribution information.</p>     |

## Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

|          |   |   |   |   |         |   |   |   |   |         |   |   |   |   |                    |   |   |   |   |          |   |   |   |   |
|----------|---|---|---|---|---------|---|---|---|---|---------|---|---|---|---|--------------------|---|---|---|---|----------|---|---|---|---|
| 1        | 2 | 3 | 4 | 5 | 1       | 2 | 3 | 4 | 5 | 1       | 2 | 3 | 4 | 5 | 1                  | 2 | 3 | 4 | 5 | 1        | 2 | 3 | 4 | 5 |
| Learning |   |   |   |   | Reading |   |   |   |   | Writing |   |   |   |   | Oral communication |   |   |   |   | Numeracy |   |   |   |   |

Performance variables:

|         |   |   |   |   |         |   |   |   |   |                 |   |   |   |   |                 |   |   |   |   |
|---------|---|---|---|---|---------|---|---|---|---|-----------------|---|---|---|---|-----------------|---|---|---|---|
| 1       | 2 | 3 | 4 | 5 | 1       | 2 | 3 | 4 | 5 | 1               | 2 | 3 | 4 | 5 | 1               | 2 | 3 | 4 | 5 |
| Support |   |   |   |   | Context |   |   |   |   | Text complexity |   |   |   |   | Task complexity |   |   |   |   |

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

## Unit Mapping Information

No equivalent unit.

## Links

Companion Volume implementation guides are found in VETNet -

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

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# Assessment Requirements for NWPNET004 Monitor and operate network systems

## Modification History

| Release | Comments                                                                                                                            |
|---------|-------------------------------------------------------------------------------------------------------------------------------------|
| 1       | These Assessment Requirements were released in NWP Water Training Package release 1.0 and meet the Standards for Training Packages. |

## Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- identifying and responding to operational problems
- collecting data
- producing reports and logs
- using tools and machinery
- following plans, charts and instructions
- performing work-related calculations
- installing and operating a stand pipe or fire plug
- recording water losses
- identifying system faults
- identifying hazards
- implementing remedial action to maintain supply
- operating reticulation and distribution systems
- identifying conditions of system
- preparing work site
- monitoring system performance and usage
- monitoring and diverting flow
- monitoring and regulating pressure
- collecting samples

## Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- impact of the principles of hydraulics on the operation of flows

- system layout and performance
- standard operating procedures
- water hammer
- water quality and disinfection requirements
- environmental aspects of operation
- electrical safety for disconnecting and changing meters and fittings
- lock out procedures for mechanical and electrical installations
- risk factors and potential hazards of operating water distribution systems
- conditions for connection to live water mains
- equipment operation, capacity and limitations
- effects of weather and conditions on systems, site or plant
- control systems
- water pumping stations and reservoirs

## Assessment Conditions

Competency should be assessed in an actual workplace or in a simulated environment, with access to equipment and infrastructure appropriate to the outcome. Competency should be demonstrated over time to ensure the candidate is assessed across a variety of situations.

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

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