



**Australian Government**

# **NWP50118 Diploma of Water Industry Operations**

**Release 1**

# NWP50118 Diploma of Water Industry Operations

## Modification History

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

## Qualification Description

This is a qualification for those engaged in water industry operations and includes specialisations for asset management, control centre operations, hydrographic survey, hydrology, irrigation, networks, source, trade waste and treatment.

The general qualification covers skills and knowledge to obtain a broad range of skills in the water industry. It allows experienced staff to apply advanced practice and develop leadership roles.

### Group A: Specialist Elective - Asset Management

This specialisation covers the skills and knowledge required to analyse, develop and implement asset management plans to support and optimise risk, performance and life-cycle costs of water operations assets.

### Group B: Specialist Elective - Control Centre Operations

This specialisation covers the skills and knowledge required to monitor, review, diagnose, test, operate and respond to network operations using supervisory control and data acquisition (SCADA) systems to meet water quantity and quality requirements.

### Group C: Specialist Elective – Hydrographic Survey

This specialisation covers the skills and knowledge required to collect hydrographic data, determine features of marine floors, prepare and revise maps and charts and analyse, present and maintain graphical information about marine environments. Completion of this specialist grouping may lead to certification as a hydrographic surveyor.

### Group D: Specialist Elective - Hydrology

This specialisation covers the skills and knowledge required to measure, collect and analyse hydrometric information and review the accumulated data to develop water management plans for inland water systems including rivers, lakes, stormwater and sewage.

### Group E: Specialist Elective - Irrigation

This specialisation covers the skills and knowledge required to coordinate and manage the development, implementation and review of irrigation plans and systems.

### Group F: Specialist Elective - Networks

This specialisation covers the skills and knowledge required to monitor and manage network operations including collection and treatment of drinking water and wastewater.

### Group G: Specialist Elective - Source

This specialisation covers the skills and knowledge required to monitor and manage water provisioning from water sources including seawater, dams and reservoirs, rivers and bores.

### **Group H: Specialist Elective - Trade Waste**

This specialisation covers the skills and knowledge required to coordinate and manage the development, implementation and review of trade waste programs.

### **Group I: Specialist Elective - Treatment**

This specialisation covers the skills and knowledge required to manage water supply assets including storage and service reservoirs, treatment plants, pumping stations, transfer mains, pressure reducing valves and hydro generation facilities.

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

## **Entry Requirements**

There are no entry requirements for this qualification.

## **Packaging Rules**

A total of **10 units of competency** comprising:

### **General Qualification**

- **2 core units** listed below **plus**
- **4 units** selected from any of the **specialist elective group** units **plus**
- **4 units** selected from anywhere within this qualification

**or**

### **Specialisations**

- **2 core units** listed below **plus**
- **4 units** from one of the **specialist elective groups** A, B, D, E, F, G, H or I listed below **or 7 units** from **specialist elective group C** listed below **plus**
- remaining elective unit(s) to be selected from anywhere within this qualification.

Up to 2 of the elective units may be selected from any relevant nationally endorsed Training Package or accredited course. The elective units must contribute to the vocational outcomes of the qualification. Where imported units are selected, care must be taken to ensure all prerequisite units specified are complied with.

Elective units can only be counted once towards the qualification packaging rules i.e. if a unit is listed in both a specialist elective group and the general elective group, it can only be counted as one of the elected units required.

### **Core units**

NWPGEN016 Interpret and comply with regulatory requirements

TLIF4014 Develop and maintain a safe workplace

### **Group A: Asset Management**

MSS404082 Assist in implementing a proactive maintenance strategy

MSS405081 Develop a proactive maintenance strategy

NWPAMG001 Manage asset construction and maintenance

RIISAM601D Establish and maintain plant, equipment and infrastructure maintenance system

TLIL4059 Implement asset management systems

TLIX4027 Assess maintenance spares and manage repairable items

### **Group B: Control Centre Operations**

NWPCCO001 Analyse and implement network data

NWPCCO002 Use control centre systems to monitor and control water

UEPOPS347B Operate and monitor supervisory, control and data acquisition systems

UEPOPS423B Plan a scheduled outage

PMAOPS330 Communicate and monitor pipeline activities

### **Group C: Hydrographic Survey**

NWPHYS001 Identify and analyse information technology for hydrographic surveys

NWPHYS002 Interpret and analyse science principles for hydrographic surveying

NWPHYS003 Manage and analyse water levels and flows

NWPHYS004 Manage hydrographic surveying projects

NWPHYS005 Use alternate positioning systems to gather data

NWPHYS006 Use remote sensing for hydrographic surveying

NWPHYS007 Use underwater acoustics to map waterways

### **Group D: Hydrology**

MSS024007 Collect and evaluate meteorological data

NWPHYD002 Apply principles of open channel hydraulics

NWPHYD003	Develop and maintain ratings
NWPHYD004	Plan water resource management
NWPHYD005	Process and report hydrographic time series data
NWPHYD011	Measure and process low and medium flows using area velocity methods
NWPHYD015	Undertake surveying of monitoring sites

**Group E: Irrigation**

NWPIRR004	Develop and review a groundwater plan
NWPIRR005	Develop and review a surface water plan
NWPIRR006	Develop and review an irrigation system plan
NWPIRR007	Implement and coordinate a surface water plan
NWPIRR008	Implement and coordinate an irrigation delivery system plan

**Group F: Networks**

LGAWORK501A	Prepare preliminary design for operational works
NWPAMG001	Manage asset construction and maintenance
NWPNET006	Apply construction principles to civil works in the water industry
NWPNET007	Conduct commissioning and post-commissioning activities
NWPNET008	Develop and manage a drinking water system plan
NWPNET009	Develop and manage a wastewater collection plan
NWPNET010	Develop and manage an alternate water supply plan

**Group G: Source**

NWPSOU004	Develop and manage a catchment plan
NWPSOU005	Develop and manage a dam safety inspection plan
NWPSOU006	Develop and manage a flood plan
NWPSOU007	Implement and coordinate a catchment plan
NWPSOU008	Implement and coordinate a groundwater plan

**Group H: Trade Waste**

NWPGEN014	Sample and test trade wastewater
NWPTRD003	Evaluate, implement and monitor high risk trade waste discharge approvals
NWPTRD004	Implement and manage trade waste policies and plans
NWPTRD005	Develop and modify trade waste policies and plans

**Group I: Treatment**

MSL976005	Evaluate and select appropriate test methods and/or procedures
NWPTRT002	Develop and manage a treatment process monitoring program
NWPTRT003	Develop and manage a wastewater treatment plan
NWPTRT004	Develop and manage a water treatment plan
NWPTRT011	Assess and improve chemical dosing process
NWPTRT085	Assess and improve wastewater processes to control microbial impacts

**General elective units**

AHCLPW306	Undertake sampling and testing of water
BSBFIM501	Manage budgets and financial plans
BSBLED401	Develop teams and individuals
BSBMGT502	Manage people performance
BSBMGT516	Facilitate continuous improvement
BSBMGT517	Manage operational plan
BSBPMG522	Undertake project work
BSBSMB407	Manage a small team
BSBWHS501	Ensure a safe workplace
BSBWHS502	Manage effective WHS consultation and participation processes
BSBWHS503	Contribute to the systematic management of WHS risk
BSBWHS504	Manage WHS risks
BSBWHS505	Investigate WHS incidents

BSBWRT401	Write complex documents
CHCCOM003	Develop workplace communication strategies
CPPSIS4022	Store and retrieve spatial data
CPPSIS5032	Capture new spatial data
CPPSIS5040	Interpret and collate spatial data
FSKNUM27	Collect, organise and interpret statistical data for work
LGAWORK502A	Prepare detailed works project documentation
LGAWORK503A	Undertake project investigation
MSL936004	Conduct an internal audit of the quality system
MSS025006	Collect and evaluate groundwater data
NWPGEN002	Ensure compliance with water industry standards, guidelines and legislation
NWPGEN006	Implement and manage environmental management policies
NWPSOU053	Coordinate and monitor groundwater system usage
NWPTRD024	Establish connections of water and wastewater systems
PMAOMIR512	Establish incident response preparedness and response systems
PSPPCM011	Plan to manage a contract
PUAEMR028	Develop emergency management plans
TAEASS301	Contribute to assessment
TAEDEL402	Plan, organise and facilitate learning in the workplace
TAEDEL404	Mentor in the workplace
TLIR5005	Manage a contract

## Qualification Mapping Information

This qualification replaces but is not equivalent to NWP50715 Diploma of Water Industry Operations

## Links

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