



Australian Government

NWPSOU027 Route floods through storages

Release: 1

NWPSOU027 Route floods through storages

Modification History

Release	Comments
1	This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages. This unit supersedes and is equivalent to NWP318A Monitor and operate gated spillways. • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • Unit title changed to better reflect unit outcomes • PC 2.1 and 2.2 removed • Two new PC added to Element 2 • one new PC added to Element 4

Application

This unit of competency describes the skills required to manage and conduct surveillance of catchment run-off through dams and other water storage assets with gated spillways for dam/storage operations and flood routing.

This unit applies to those working as field and operational staff with a specific responsibility for the operation of dams and other water storage assets with gated spillways.

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, particularly those related to WHS and manufacturer guidelines.

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

Source

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.
1. Monitor flow and flood routing	1.1 Monitor catchment behaviour during normal and flood conditions. 1.2 Determine outflow using standard flow rate calculations. 1.3 Determine flow control settings.
2. Plan and prepare for dam or storage operation	2.1 Plan and prepare for dam or storage operations. 2.2 Conduct inspections. 2.3 Develop hydrograph template.
3. Implement dam/water storage operation plans	3.1 Apply operation plans. 3.2 Inspect and test plant and equipment. 3.3 Test, assess and document safety mechanisms.
4. Regulate flows	4.1 Plot flood data on hydrograph. 4.2 Regulate flow control mechanisms to maintain safety of asset and required system supply and flood routing. 4.3 Produce data relating to flood performance.

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 NA					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

This unit supersedes and is equivalent to NWP318A Monitor and operate gated spillways.

Links

Companion Volume implementation guides are found in VETNet -

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

Companion Volume implementation guides are found in VETNet -

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

Companion Volume implementation guides are found in VETNet -

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

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for NWPSOU027 Route floods through storages

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. • Assessment Requirements created drawing upon specified assessment information from superseded unit

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.

- calculating inflow and outflow rates
- interpreting and plotting graphs
- operating controls and ancillary equipment
- conducting inspections
- interpreting plans, drawings, instructions, standard operating procedures, policies and standards
- using safety equipment and personal protective equipment
- identifying hazards
- using equipment and instruments
- managing and conducting surveillance of catchment run-off through dams and other water storage assets
- operating gated spillways
- identifying and investigating operational problems
- collecting and analysing technical information
- preparing required reports

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.

- properties of stored water
- system hydraulics

- effects of water and catchment conditions on flow expectations
- interrogation of catchment monitoring equipment
- water flow measurement
- operation of flood gates or plant
- control systems
- dam operation principles
- materials science
- communication systems
- principles of hydraulics
- system layout
- environmental aspects of operation and maintenance
- lock out procedures for mechanical and electrical installations
- control systems
- equipment operation
- relevant utilities and service bodies
- hazardous materials handling
- effects of weather and conditions on bulkwater assets
- principles of dam inspection
- risk management techniques
- WHS
- organisational and statutory requirements

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.

Links

Companion Volume implementation guides are found in VETNet -

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

Companion Volume implementation guides are found in VETNet -

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

Companion Volume implementation guides are found in VETNet -

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

Companion Volume implementation guides are found in VETNet -

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