



Australian Government

NWPSOU031 Operate and maintain locks and weirs

Release: 1

NWPSOU031 Operate and maintain locks and weirs

Modification History

Release	Comments
1	This unit was released in NWP Water Training Package release 1.0 and meets the Standards for Training Packages.

Application

This unit describes the skills required to regulate flows through the weir and operate the lock gates.

This unit applies to those working as field staff with the responsibility for operating locks and weirs in remote locations.

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 will work independently under indirect supervision while performing routine tasks in a range of familiar contexts.

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. Plan and prepare work	1.1 Assess upstream flow and establish pool demand. 1.2 Carry out inflow calculations. 1.3 Determine discharge flows. 1.4 Develop operation and maintenance plan.
2. Operate locks and weirs	2.1 Operate the weir gates to control river flows and pool levels. 2.2 Store water in the weir pool and regulate river flow downstream. 2.3 Raise river level upstream of the weir to improve navigability of

	the river. 2.4 Operate the lock to allow river vessels to navigate through the weir.
3. Maintain locks and weirs	3.1 Inspect the equipment of the locks, weirs and navigational aids to identify maintenance needs. 3.2 Schedule maintenance tasks.
4. Finalise work	4.1 Collect data from monitoring points. 4.2 Compile reports from monitoring point data. 4.3 Identify and report current or potential problems.

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

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 NWPSOU031 Operate and maintain locks and weirs

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.

- installing stop logs, bulk heads and winch operations
- identifying and investigating operational problems
- regulating flows through the weir
- operating the lock gates
- operating lock levels
- calculating inflows and discharge rates
- undertaking maintenance including at least one of:
 - removing debris
 - oiling hydraulics
 - repairing concrete
 - painting metal work
 - greasing bearings

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.

- environmental considerations
- river hydraulics
- navigational rules
- legislation relating to vessels within locks
- materials characteristics including:
 - concrete

- steel
- hydraulic systems

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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