



Australian Government

NWPSOU023 Monitor and implement dam maintenance

Release: 1

NWPSOU023 Monitor and implement dam maintenance

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 NWP320B Monitor and implement dam maintenance. • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • PC 1.1, 1.2 and 2.1 removed • Two new PC added to Elements 1 and 2

Application

This unit describes the skills required to implement dam maintenance programs, including maintenance of dam safety mechanisms. The ability to interpret technical documentation, investigate and resolve maintenance problems and to collect and analyse technical information is essential to performance.

This unit applies to those working as field and operational staff with a specific responsibility for the maintenance of ungated dams.

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 manufacturer's specifications.

Those undertaking this unit would work under supervision while performing routine tasks in a limited 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 for dam maintenance	1.1 Plan and prepare for dam maintenance according to management plans and relevant documentation. 1.2 Undertake inspection procedures. 1.3 Develop a maintenance plan.
2. Implement dam maintenance plans	2.1 Schedule dam maintenance works. 2.2 Maintain and repair civil and mechanical dam assets. 2.3 Operate and test equipment including winches, valves and gates.
3. Compile maintenance and inspection reports	3.1 Collect required data from inspections, measurement instruments and delegated personnel. 3.2 Collate, process, evaluate, validate, record and store data. 3.3 Record and report structural, material and/or equipment problems. 3.4 Recommend remedial action.

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.

Range of Conditions

Dam types include:	• concrete • embankment
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Unit Mapping Information

This unit supersedes and is equivalent to NWP320B Monitor and implement dam maintenance.

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 NWPSOU023 Monitor and implement dam maintenance

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. The candidate must be assessed in at least one type of dam listed in the Range of Conditions. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- identifying and correcting maintenance problems
- identifying security and access maintenance issues
- conducting inspections
- coordinating maintenance activities
- interpreting plans, drawings, instructions, standard operating procedures, policies and standards
- using safety, rescue and personal protective equipment
- using relevant tools and machinery
- identifying safety hazards
- carrying out maintenance of specified assets
- proposing and justifying maintenance activities
- analysing and processing data
- inspecting and operating relevant equipment and instruments
- monitoring and implementing dam maintenance
- interpreting technical documentation
- collecting and evaluating 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.

- dam design principles
- risks to dams
- historic dam information
- potential earthquake effects
- properties of stored water
- dam maintenance principles and practices
- basic materials science
- basic principles of hydraulics
- system layout
- environmental aspects of 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
- basic principles of soil mechanics
- basic concrete structure, strengths and deterioration
- basic dam construction procedures
- dam failure mechanisms
- risk management techniques
- WHS
- risk factors and potential hazards of maintenance of dam assets
- maintenance standard operating procedures
- 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.

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