

Title	Demonstrate knowledge of pumping systems in wastewater treatment		
Level	3	Credits	6

Purpose	People credited with this unit standard are able to demonstrate knowledge of: pumps, and the control of pumps, used in wastewater operations.
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Classification	Water Industry > Wastewater Treatment
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Available grade	Achieved
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Guidance Information

- Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable legislative and industry requirements.
- Legislation relevant to this unit standard includes: Health and Safety at Work Act 2015, Water Services Act 2021, Resource Management Act 1991, Hazardous Substances and New Organisms Act 1996, Health and Safety at Work (Hazardous Substances) Regulations 2017, and subsequent amendments.
- Definitions
Industry requirements include manufacturers' specifications; and enterprise requirements which may include documented workplace policies, procedures, specifications, business, and quality management requirements relevant to the workplace in which assessment is carried out.
Wastewater may include stormwater and sewage systems.
- Learning and assessment activities for this unit standard must be informed by Te Mana o te Wai (refer to [Taumata Arowai](#)) and the *National Policy Statement for Freshwater Management 2020* available from <https://environment.govt.nz/>.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of pumps used in wastewater operations.

Range centrifugal, positive displacement, air operated.

Performance criteria

- 1.1 Pumps are described in terms of their uses and operation.

- 1.2 Pumps are described in terms of their maintenance and repair.
- 1.3 Pumps are described in terms of their advantages and disadvantages.
 Range evidence is required for two advantages and two disadvantages for each type of pump.
- 1.4 Pumps are described in terms of their characteristics.
 Range includes but is not limited to – application, capacity, limitations, power, pump head discharge, curves; evidence is required for three types of pumps.
- 1.5 Pumps are described in terms of their mechanical components.

Outcome 2

Describe the control of pumps used in wastewater operations.

Range centrifugal, positive displacement, air operated.

Performance criteria

- 2.1 Normal pump operation is described in terms of operating levels and controls.
 Range includes but is not limited to – duty, standby, alarm, overflow.

Replacement information	This unit standard replaced unit standard 17888.
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Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 September 2008	31 December 2018
Review	2	16 March 2017	31 December 2024
Review	3	24 February 2022	N/A

Consent and Moderation Requirements (CMR) reference	0101
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihanga.nz if you wish to suggest changes to the content of this unit standard.