

Title	Carry out discharge measurements using a range of platforms and methods		
Level	5	Credits	20

Purpose	<p>This unit standard is intended for people who will perform discharge measurements using a wide range of methods.</p> <p>People credited with this unit standard are able to carry out discharge measurements, and derive and file discharge gauging results.</p>
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Classification	Water Industry > Field Hydrology
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Available grade	Achieved
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Guidance Information

- 1 Legislation relevant to this unit standard includes but is not limited to:
 - Health and Safety at Work Act 2015.
- 2 Streamflow measurements in rivers and streams must be carried out in accordance with:
 - National Environmental Monitoring Standards (NEMS);
 - organisational procedures.
 The complete list of NEMS can be found on the NEMS website www.nems.org.nz.
- 3 Platforms for carrying out discharge measurements must include at least two of the following:
 - tethered or motorised boats
 - bridges
 - cableways.
- 4 Candidates must perform a total of ten discharge measurements across a range of flows using a variety of methods. Candidates must carry out at least one measurement from three of the following methods:
 - suspended current meters applying vertical and horizontal angle corrections, where required
 - moving boat ADCP
 - volumetric
 - indirect method (for example, slope-area calculation; or by application of formulae for weirs, flumes and culverts).
- 5 Hydrometric data includes water level and rainfall time-series data.

6 Definitions

Data refers to statistical measurements or observations, and the term *information* is data in context.

Metadata describes data in detail. It has information about how, when, and by whom certain data was collected and the data format.

Organisational procedures refer to the policies and procedures set out in a verbal or written form by the employer or organisation. Procedures must be consistent with current legislative requirements and manufacturer's recommendations or instructions where relevant.

Outcomes and performance criteria

Outcome 1

Carry out discharge measurements.

Performance criteria

- 1.1 Identify appropriate sites for the purpose of measurement.
- 1.2 Select appropriate equipment and carry out pre-deployment tests.
- 1.3 Set up section and decide methodology.
- 1.4 Carry out the measurement(s).
- 1.5 Carry out post deployment tests, take remedial action based on test results as required, and record results.

Outcome 2

Derive and file discharge gauging results.

Performance criteria

- 2.1 Derive each gauging result.
- 2.2 Assess each result for quality control.
- 2.3 Transfer each result and associated files following organisational procedures.
- 2.4 File metadata.

Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	21 May 2015	31 December 2022
Review	2	24 October 2019	N/A

Consent and Moderation Requirements (CMR) reference

0232

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact the Primary Industry Training Organisation standards@primaryito.ac.nz if you wish to suggest changes to the content of this unit standard.