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| <b>Title</b> | <b>Demonstrate knowledge of stormwater systems and their maintenance, management and treatment options</b> |                |          |
| <b>Level</b> | <b>4</b>   | <b>Credits</b> | <b>5</b> |

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| <b>Purpose</b> | People credited with this unit standard are able to demonstrate knowledge of: the components of stormwater systems, their function and maintenance; stormwater flows and their management; and stormwater quality and treatment options. |
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| <b>Classification</b> | Water Industry > Water Reticulation |
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| <b>Available grade</b> | Achieved |
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### Guidance Information

- 1 Legislation and references relevant to this unit standard include: Resource Management Act 1991, Health and Safety at Work Act 2015, and subsequent amendments;  
 NZS 4404:2010 *Land Development and Subdivision Infrastructure*, available from <http://www.standards.govt.nz>;  
 Local authority hygiene codes.
- 2 Definitions  
*Organisational procedures* – instructions to staff, and procedures which are documented in memo or manual format and are available in the workplace. These requirements include but are not limited to – site specific requirements, manufacturers' specifications, product quality specifications, and legislative or regulatory requirements.  
*Stormwater system* – in this context refers to all pipe systems, pumping systems, and components that contribute to the collection and disposal of stormwater.

### Outcomes and performance criteria

#### Outcome 1

Demonstrate knowledge of the components of stormwater systems, their function and maintenance.

#### Performance criteria

- 1.1 Components of stormwater systems are described in terms of their features and function.

- 1.2 Stormwater pipes are described in terms of their design features and capacity.  
 Range inlet and outlet structures.
- 1.3 Stormwater system maintenance is described in terms of local government requirements or organisational procedures.

**Outcome 2**

Demonstrate knowledge of stormwater flows and their management.

**Performance criteria**

- 2.1 Stormwater flows are described and differentiated in terms of causes and effects of variations of flow.
- 2.2 Stormwater flows are described in terms of their management.  
 Range includes but is not limited to – retention ponds, secondary flow paths.

**Outcome 3**

Demonstrate knowledge of stormwater quality and treatment options.

**Performance criteria**

- 3.1 Stormwater pollutants are described in terms of their effects on water quality.
- 3.2 Stormwater treatment options are described for specified situations.  
 Range evidence is required for four situations.

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| <b>Replacement information</b> | This unit standard, unit standard 11312, and unit standard 24923 were replaced by unit standard 31451. |
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**This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.**

**Status information and last date for assessment for superseded versions**

| Process      | Version | Date              | Last Date for Assessment |
|--------------|---------|-------------------|--------------------------|
| Registration | 1       | 26 October 2005   | 31 December 2016         |
| Rollover     | 2       | 20 February 2009  | 31 December 2016         |
| Rollover     | 3       | 21 July 2011      | 31 December 2018         |
| Review       | 4       | 16 March 2017     | 31 December 2021         |
| Review       | 5       | 27 September 2018 | 31 December 2021         |

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

This unit standard is Expiring