

Title	Demonstrate knowledge of sports turf soil water management		
Level	3	Credits	5

Purpose	People credited with this unit standard are able to: demonstrate knowledge of the hydrological cycle, soil water storage and movement, and sources of water for sports turf; and describe the requirements for sports turf irrigation.
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Classification	Sports Turf > Sports Turf Management
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Available grade	Achieved
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Guidance Information

None.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the hydrological cycle, soil water storage and movement, and sources of water for sports turf.

Performance criteria

- 1.1 Describe the components of the hydrological cycle in terms of their relationship to sports turf irrigation.
 - Range evaporation, transpiration, evapotranspiration, precipitation, atmospheric water, surface run-off, infiltration, interception, soil water, groundwater, percolation.
- 1.2 Describe soil water in terms of storage and movement.
 - Range saturation, field capacity, permanent wilting point, available water, unavailable water, capillarity, infiltration rate, percolation rate.
- 1.3 Describe the physical properties of soil in terms of their influence on soil water storage and movement.
 - Range texture, structure, porosity, macropores, micropores, water table.

1.4 Identify sources of available water in terms of their suitability for sports turf irrigation.

Range rainfall, ground water, recycled water, streams, rivers, lakes, town supply.

Outcome 2

Describe the requirements for sports turf irrigation.

Performance criteria

2.1 Describe turf species in terms of their water requirements.

Range warm season grasses, cool season grasses, *Leptinella* species, starweed.

2.2 Describe the methods of collecting soil water for storage and plant rooting depth information in terms of their procedures.

Range core sampling, soil moisture meters and in-ground sensors, soil water balance.

2.3 Describe sports turf irrigation requirements as influenced by weather map and climate data analysis, soil water content measurement, and microclimate characteristics.

Range soil water – evapotranspiration, soil water storage, soil water infiltration rate, plant rooting depth;
 weather maps – current and forecast conditions; areas of high and low pressure; wind direction, strength; frontal activity, potential for rainfall;
 climate data – evapotranspiration, rainfall, temperature.

2.4 Describe irrigation scheduling techniques for sports turf.

Range soil water measuring devices, turf feel and appearance, soil feel and appearance, soil water budget.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	4 August 1995	31 December 2019
Revision	2	4 August 1995	31 December 2019
Revision	3	16 September 1996	31 December 2019
Revision	4	10 December 1997	31 December 2019
Revision	5	8 June 1999	31 December 2019
Review	6	15 December 2000	31 December 2019
Revision	7	12 January 2006	31 December 2019
Review	8	17 October 2008	31 December 2019
Review	9	25 January 2018	31 December 2023
Review	10	24 June 2021	N/A

Consent and Moderation Requirements (CMR) reference

0052

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

Comments on this unit standard

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