

For the protection of biodiversity within irrigation developments in the Victorian Mallee.

Introduction

Buffers are a standard planning tool for irrigation developments within the Mallee region and are used to protect biodiversity within and around irrigation developments.

Standard hydrogeological buffers are required between retained native vegetation and irrigated horticulture to reduce the impact on native vegetation and biodiversity values caused by groundwater movement (perched and regional) that can result from irrigation development. The adoption of buffers also reduces potential impacts from:

- Spray drift
- · Soil erosion and surface water movement.
- Weed invasion.
- Encroachment and damage caused by operating machinery and vehicular traffic.

What is a buffer?

A buffer is an area of land set aside between irrigation developments and retained native vegetation to ensure water use and management practices do not impact upon biodiversity values.

What vegetation is protected?

For the consistent application of standard buffer requirements, categories of vegetation are identified in the table on the following page and are further defined as follows.

Scattered trees and vegetation

For scattered trees and native vegetation patches (<0.1 hectares), a 15m buffer should be applied. A 15m buffer is based on the maximum recommended TPZ, as outlined in the Australian standard AS 4970-2025 Protection of trees on development sites and provides a consistent methodology for calculating the buffer.

For scattered trees the buffer should be calculated from the centre of the tree, and for native vegetation patches <0.1ha it should be calculated from the outer drip line (canopy edge) of the patch.

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Buffer Standards

Retained native vegetation patches >0.1 hectare in size must be protected by either:

- a 25m revegetated buffer, or
- a 50m unvegetated buffer.

An exception may be applied if an accredited native vegetation site assessor determines that the patch lacks significant natural structural characteristics – specifically, where the patch comprises of a naturally treed EVC, but trees or long-lived shrubs are absent from the retained patch.

In such cases, a reduced buffer of 15m may be applied, consistent with the buffer requirements for scattered trees and native vegetation patches <0.1 hectares in size.

Naturally treeless patches >0.1ha are not eligible to have buffers reduced and must be protected by a 25m or 50m buffer"

Native vegetation stands of significance

Habitat Zones must be assessed in accordance with DSE (2004) Vegetation Quality Assessment Manual (VQAM), as amended by DELWP (2018) Assessor's Handbook.

"Trees and/or long lived shrubs" includes canopy trees, understory trees and long-lived medium shrubs such as (such as Cattlebush *Alectryon oleifolius*, Hakea spp., *Acacia oswaldii*, *Pittosporum angustifolium*, *Myoporum platycarpum*).

Wetland native vegetation stand of significance include but aren't limited to wetlands mapped as Current Wetlands in the Native Vegetation Offset Tool (https://mapshare.vic.gov.au/nvr/select Native vegetation offset tool).

How are buffers managed?

25m vegetated buffers must be managed as follows:

- Vegetation must be established within 12 months of planting the adjoining horticultural crop.
- Species used in revegetation works must be based on the benchmark adjoining Ecological Vegetation Class species list for that area. https://www.environment.vic.gov.au/biodiversity/ bioregions-and-evc-benchmarks
- A minimum of 4 rows with plant spacing at 4 metre intervals in the buffer area is required and must achieve an average vegetation density of at least 400 plants per hectare.
- If livestock grazing is to remain a component of the development enterprise, stock proof fencing is to be erected to exclude livestock from any vegetated buffer area.

Both Vegetated and Unvegetated buffers must be managed as follows:

- Buffers must not be used for works or development including vehicular transport, laydown areas, machinery storage or other farm operation activities without the permission of DEECA.
- Appropriate measures must be in place to maintain separation between irrigation activities and the buffer area and prevent encroachment.
- Buffers to be marked on ground by posts and appropriate signage. Posts shall not be less than 1m above ground level, painted white and situated so each post is clearly visible from posts on each side.

#	Environmental Asset/Value	Standard Hydrogeological Buffer
1	National Park or other conservation reserve as advised by DEECA ^{1,2}	200m
2	Other Crown Land Reserves e.g. State Park, bushland reserve	50m
3	Wetlands included in the Victorian Wetland inventory or other wetlands on private and crown as advised by DEECA ³	30m
4	Patch of native vegetation (< 0.1 hectares) within property or on neighbouring property or roadside reserve (if buffer is unvegetated).	50m
5	Patch of native vegetation (< 0.1 hectares) within property or on neighbouring property or roadside reserve (if buffer is revegetated).	25m
7	Scattered trees or patch of native vegetation (< 0.1 hectares) within property or on neighbouring property ⁴	15m

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