Northern Victoria Irrigation Development Guidelines

AGRICULTURE VICTORIA

FACT SHEET 2 – Irrigation and Drainage Plans

An Irrigation and Drainage Plan must accompany applications for a new water-use or take and use licence or major variation to an existing licence to comply with the Northern Victorian Irrigation Development Guidelines 2020 (the Guidelines). Developers can use this factsheet to better understand the process.

WHERE TO START

All developers of new irrigation developments (and significant re-developments) within the Goulburn Murray Water (GMW) region of Northern Victoria must follow the Guidelines. The key purpose of an Irrigation and Drainage Plan (IDP) is to meet the standards necessary to minimise the impacts of water use on other persons and the environment. This must involve an assessment of local conditions and appropriate design of irrigation systems.

Contact an Irrigation Development Coordinator

Agriculture Victoria employs Irrigation Development Coordinators (IDCs) in Northern Victoria to provide information about the Guidelines and to guide developers through the approvals process, including how to develop an IDP.

The IDC service is provided at no charge and can save developers considerable time and resources.

IDC contacts:

Echuca (west of the Goulburn River to Nyah)

- Kathy Long, Agriculture Victoria, PO Box 441, Echuca, Vic. 3564, kathy.long@agriculture.vic.gov.au

Rutherglen (east of the Goulburn River and the North East.

- Dennis Watson, Agriculture Victoria, 124 Chiltern Valley Road, Rutherglen, Vic 3685, dennis.watson@agriculture.vic.gov.au

Complete an Irrigation Development Application Form

To commence the approval process, developers must obtain an Irrigation Development Application Form from the relevant IDC. Return the completed form to the IDC.

The completed Irrigation Development Application Form provides the basis for preliminary assessments. The IDC will undertake a desktop analysis to examine readily known issues which may prevent the development from going ahead and/or have a large impact upon the viability of the development. A site visit is usually required to clarify development issues that may require further investigation.

WHAT TO EXPECT

The key purpose of an IDP is to minimise the harmful side-effects of water use from a new irrigation development on other persons and the environment. The design must also meet current best practice.

The standards for an IDP are described in Schedule 1 of Ministerial Determination for Standard Water Use Conditions.

What is in an IDP?

There are six components that an IDP must include. These are:

A. A map of the proposed development
B. A topographical survey
C. A soil assessment
D. Irrigation design and management details
E. Arrangements for drainage disposal
F. Biodiversity protection arrangements

These components are described in further detail below.

A. A map of the proposed development which clearly identifies:

- Property boundaries
- Areas to be irrigated (irrigation footprint)
- Type and location of crops to be planted
- Location of existing infrastructure e.g. buildings, roads, water storages
- Location of proposed new infrastructure features
- Existing native vegetation, wetlands, and other environmental features
- Buffers to protect retained native vegetation and mapped wetlands.

B. Topographical survey

The topographical survey must include:

- Elevation data and appropriate contours[1].

C. Soil assessment

A soil assessment is required for:

1. All pressurised irrigation systems in Northern Victoria and all irrigation developments on Mallee soils (soils of aeolian origin)

and

2. Flood (surface) irrigation systems

The soil assessment requirements may vary depending on the irrigation system and crop type proposed for the development. In all cases a soil survey must be undertaken by a suitably qualified soil surveyor and a written report must be provided.

The written report must include:

- Description of topography and previous land use
- Key aspects of climate
- Soil profile descriptions
- Factors affecting potential root-zone depth
- Soil/water interactions e.g. drainage, permeability, infiltration
- Readily available water
- Land capability
- Soil amelioration proposals
- Soil chemistry
- Hydrogeology – if required by the water authority.

D. Irrigation design and management plan

All developments will require:

- Anticipated crop water requirements and proposed maximum application rates (see Schedule 2 of the standard water use conditions).
- Irrigation system specifications
- An identified supply point to the irrigated area
- Proposed irrigation scheduling arrangements.

NOTE: Horticultural properties and/or for Mallee soils, the irrigation design must be completed with the following principles:

- The irrigation system should be capable of applying an irrigation depth equivalent to, or less than, the readily available water of the soil appropriate to the crop. Areas of similar soil capability are to be grouped as irrigation management units and supplied separately based on the results of the soil survey
- Flood and furrow irrigation should not occur where the calculated minimum depth that can be applied (taking into account infiltration rates, slopes, length of irrigation runs and discharge rate) exceeds the readily available water within the estimated crop root-zone.

E. Arrangements for drainage disposal

The need for subsurface and/or surface drainage scheme and re-use system must be considered. A design is to be developed for the appropriate system(s) including the:

- Volume to be collected
- Details of any approved on-site disposal site and/or details of any off-site disposal site
- Details of approvals for any proposed re-use schemes and/or irrigation storages
- Location of pumps, discharge, or re-use points.

If the weighted soil salinity is greater than 600EC, the irrigation and drainage plan must include a preliminary sub-surface drainage plan identifying an appropriate contingency area for evaporative disposal in the event that subsurface drainage is required. Any land identified as being required for evaporative disposal must not be developed for irrigation.

F. Biodiversity protection arrangements

The IDP must identify those parts of the property and adjacent land where the use of water for irrigation on the property poses direct and ongoing risk to wetlands, native vegetation, or the habitat of native animals.

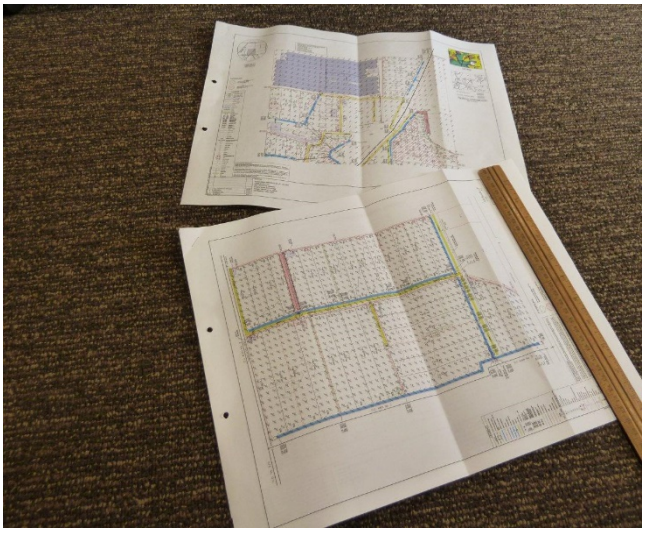
For those areas, the IDP must specify appropriate preventative measures, appropriate monitoring parameters, appropriate monitoring equipment and appropriate locations

[1] *Note: for check-bank, flood and furrow irrigation systems the maximum slope allowable is 1:50.*

for the equipment to be installed. This includes nominated water table monitoring bores or piezometers.

The plan must also specify equipment maintenance standards, data reading, recording, reporting and auditing requirements, correction action thresholds, corrective action procedures and corrective action time limits.

The granting of a water-use licence does not remove the need to apply for any authorisation or permission necessary under any other Act with respect to the development.



FURTHER INFORMATION

An information kit containing related fact sheets is available from the IDC:

- Overview of the NVIDG process
- Irrigation and drainage plan
- Protecting Aboriginal cultural heritage
- Native vegetation protection
- Buffer standards
- Applying for a works licence
- Public land managers consent application
- Siting and design guidelines
- Roles and responsibilities

ACCESSIBILITY

If you would like to receive this publication in an accessible format, please telephone Kathy Long on 03 54821922 or email irrigation@agriculture.vic.gov.au

If you are deaf, or have a hearing or speech impairment contact the **National Relay Service on 133 677**

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