

# Northern Victoria Irrigation Development Guidelines

Goulburn Murray  
Water Region



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# Foreword

Irrigated agriculture accounts for around 70% of the water use in Victoria and generates substantial economic, social and regional benefits.

The Victorian Government's 2016 *Water For Victoria – Water Plan* identifies that there are opportunities for farm businesses to lift the value of Victoria's agricultural production and significant new agricultural developments are already occurring. Further irrigation development is possible, based on our understanding of water availability and climate change, but it is essential that any development takes into account and addresses a range of legislative requirements that promote sustainability and avoid impacts on other values (e.g. cultural heritage, native vegetation).

The Northern Victoria Irrigation Development Guidelines (Guidelines) were first developed in 2007, and this second edition of the Guidelines brings them in to line with a range of new legislative and procedural areas.

The Guidelines aim to minimise risk associated with applying irrigation water to land and the impact of irrigation on natural and built assets. The Guidelines will also ensure improved water-use efficiency through application of higher standards while also providing for protection and enhancement of biodiversity and heritage values.

The Guidelines primarily provide guidance for government agencies to process applications for new irrigation development and make this process as clear and streamlined as possible for the applicant. The successful delivery of the Guidelines will rely on a catchment partnership approach between key agency partners including Catchment Management Authorities, Goulburn- Murray Water, Agriculture Victoria, Department of Environment Land and Water and local government.

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# Glossary of Terms

**Annual Use Limit (AUL):** the maximum volume of water that in any 12-month period may be applied to the land specified in a water use licence or water use registration.

**Applicant:** Landholder or representative of landholder who is the proponent for new irrigation development. The terms 'applicant' and 'proponent' are interchangeable in this document.

**Basin Salinity Management 2030 (BSM2030):** a basin-wide strategy developed by the Murray-Darling Basin Authority together with Basin governments to manage salinity in the Basin over a 15-year period. The strategy builds on the successes of the Basin Salinity Management Strategy (2001-2015)

**Biodiversity:** the variety of all life forms – the different plants, animals and micro-organisms, the genes they contain, and the ecosystems of which they form a part of and are dependent on for food, shelter and breeding.

**Catchment Management Authority (CMA):** statutory body established under the Catchment and Land Protection (CaLP) Act 1994. CMAs have responsibilities under both the CaLP Act 1994 and the Water Act 1989, which include river health, regional and catchment planning and coordination, and waterway, floodplain, salinity and water quality management.

**Declared water system:** a declared water system is a water system that has been declared in accordance with Section 6A of the Water Act 1989. Water rights and Take and Use Licences (TUL) in declared water systems have been converted into unbundled entitlements.

**Delegate:** a person to whom the power is delegated under the instrument of delegations.

**Delivery share:** an entitlement to have water delivered to land in an irrigation district and a share of the available water flow in a delivery system.

**Extraction share:** A share of the total amount of water that can be drawn from regulated rivers at a certain point over a given period of time. Extraction shares are used to restrict water extraction in times of high demand. The extraction share is expressed as a condition on a works licence.

**Groundwater:** all subsurface water, generally occupying the pores and crevices of rock and soil.

**High-reliability water share:** A water share against which seasonal allocations made as a first priority. High-reliability water-shares are expected to reach 100% allocations in 95 years out of 100.

**Irrigation and drainage plan (IDP):** An application for a new water use licence or for a variation to a water use licence which must be accompanied by an irrigation and drainage plan. The IDP must provide the information necessary to demonstrate how the development meets the necessary standards to minimise the impacts of water use on other persons and the environment (in particular waterlogging, salinity and nutrient impacts).

**Maximum Application Rates (MAR):** the maximum application rates (in megalitres per hectare per year), which are to be used in conjunction with irrigated areas (in hectares) to determine annual use limits on water use licences. The MAR are defined in Schedule 2 of Standard Water Use Conditions which apply to all water-use licences.

**Megalitre (ML):** 1 million litres.

**Ministerial water use objectives:** Defines the objectives for water use licence conditions. These are a) managing groundwater infiltration, b) managing the disposal of drainage, c) minimising salinity, d) protecting biodiversity, e) minimising the cumulative effects of water use.

**Proponent:** Same as applicant for new development (see above).

**Seasonal water allocation:** The amount of water available for a water year, determined by the Water Corporation and expressed as a percentage of a water share. Sometimes this term is shortened to 'allocation'.

**Standard water use conditions:** The standard conditions that apply to all water use licences including an annual use limit to ensure irrigation is carried out in accordance with Ministerial Water Use objectives. In addition to these there can be conditions recorded on each water-use licence are specific to local areas.

**Take and Use Licence (T&UL):** A fixed term entitlement to take and use water from unregulated water systems such as: a waterway, catchment dam, spring, soak or aquifer. Each licence is subject to conditions set by the Minister and specified on the licence.

**Unbundling:** The conversion of a prior water right, or take and use licence, in a declared water system into three separate entitlements being: a water share, a delivery share or extraction share, and a water use licence. The term unbundling refers to the separation of water entitlements from land (30 June 2007).

**Water corporation:** Corporations established under the Water Act 1989 that have responsibilities to supply water for urban, irrigation, domestic, stock and commercial use in irrigation districts and water districts. Some corporations also have delegated responsibilities for controlling the diversion of water from waterways, passing flows and the extraction of groundwater. In the Northern Victoria Region, where these guidelines apply, the relevant water corporation is Goulburn Murray Water.

**Water entitlements:** A generic term that encompasses water shares and take and use licences.

**Water share:** A Water Share is a legally recognised, secure share of the water available for use in a defined water system. A water share is specified as a maximum volume of seasonal allocation that may be made against that share. Water shares may be high or low reliability.

**Water Use Licence (WUL):** A licence that authorises the use of water from a regulated system for the purposes of irrigation on the land specified under that licence. The licence sets out the conditions for use, such as how much water can be used on the specified parcel of land in a single irrigation season. A WUL is needed to irrigate the property and the licence is tied to the land.

**Works Licence (WL):** A licence that authorises the construction, alteration, operation, removal or decommissioning of: any works on a waterway, or a bore, or a dam belonging to a prescribed class of dams.

**Works Plan:** A plan prepared by the proponent outlining the location of infrastructure to service the new irrigation development. A Works Plan (WP) must clearly describe the type and location of irrigation infrastructure required to be constructed to extract water from the water source and the intended pathway to deliver it to the farm. A WP must include: Siting map of proposed works, Construction plan, Decommissioning Plan, Operation Plan. It must demonstrate how the risks associated with construction and ongoing operation of the infrastructure will be mitigated.

# 1 Introduction

## 1.1 Purpose

The Northern Victorian Irrigation Development Guidelines (Guidelines) provide guidance for government agencies to process applications for new irrigation development. This includes:

- The roles and responsibilities of agencies
- The communication protocols between agencies
- The relevant legislation that underpins the approval to issue new, planning approvals, works licences, water-use licences, or take and use licences with site specific conditions (including annual use limits) that reflect the outcomes of the approvals processes
- The approval processes used by agency staff
- The development standards required to manage impacts on the environment and other values
- Linkages to other environmental or cultural heritage protection measures and agencies.

Interagency cooperation will be integral to the assessment and approval process. This is undertaken by the New Irrigation Development Group (NIDG), which is made up of representatives from the Agriculture Victoria (AgVic), Goulburn Murray Water (GMW), Department of Environment Land Water and Planning (DELWP) and the relevant Catchment Management Authority (CMA). The NIDG is also supported by Parks Victoria (PV) and Aboriginal Victoria (AV) on matters of relevance.

An Irrigation Development Coordinator (IDC) from Agriculture Victoria coordinates the NIDG and it meets on an as needs basis to discuss new applications and relevant issues. Clear communication protocols between agencies and clarity on the GMW contact(s) for the IDGs is critical for effective operation.

These guidelines are reviewed at regular intervals, or on an as needs basis, to ensure they remain relevant to contemporary needs and legislative changes. The last guidelines were prepared in 2007.

## 1.2 Process for Endorsement and Approval

The Guidelines provide a process for the irrigation development proposal to be rejected, modified or endorsed. When the agencies are satisfied that the proposal meets the legislative requirements the NIDG endorses an application, with specified conditions, for a Works Licence (WL) and a Water Use Licence (WUL) or Take and Use Licence (T&UL).

Once a proposal has been endorsed by the NIDG, provided cultural heritage approvals are in place, GMW is then able to issue the WL or WUL/T&UL.

Approvals are required for cultural heritage prior to developmental approval by any agency. But the remaining approvals, such as native vegetation, public land manager's consent and planning permits can be finalised after the WL and WUL are issued; under the Water Act 1989, the issue of a licence does not remove the need to apply for any authorisation or permission necessary under any other Act with respect to anything authorised by the licence.

In applying conditions and endorsing irrigation development applications, agencies must take into consideration information provided by the applicant and ensure the information is adequate in demonstrating that the development complies with all relevant legislation and meeting the Ministerial Water Use Objectives for:

- Managing groundwater infiltration
- Managing disposal of drainage
- Minimising salinity
- Protecting biodiversity
- Minimising cumulative effects of water use.

The applicant must comply with the Ministerial policies for Take and Use Licences and Water Use Licences. This specifies the requirements for an Irrigation and Drainage Plan (IDP) and provides standard conditions for new or varied WULs/T&ULs.

The Guidelines assist in processing applications for new, or variations to, existing WULs, T&ULs or WLs.

## 1.3 Avoiding Loss of Biodiversity and Native Vegetation

All applicants must demonstrate that they have avoided the removal, destruction or lopping of native vegetation. They must also demonstrate that they have considered the impacts on biodiversity, including the risk of consequential or cumulative losses. For example, they should consider whether the change will result in any impact to native vegetation and habitat.

These requirements should be discussed with the proponent at an early stage of the approvals process. It is more effective for proponents to develop proposals that avoid loss if they consider that requirement from the outset and plan for it just like one would for every other factor being planned for.

The IDC and DELWP will provide guidance about avoiding the loss of trees and other native vegetation to help proponents understand these requirements at the start of the process. A loss assessment and offset is not automatically going to mean approval, whereas avoiding loss can expedite approvals and the requirements for a planning permit. However, these guidelines cannot specify everything that will need to be planned for, and instead aims to signpost to supporting information to assist the proponent and IDC in planning to avoid loss of biodiversity and native vegetation.



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## 1.4 When these Guidelines Apply

The Guidelines apply to previously unirrigated land for which there is no existing water-use licence or take and use licence, or when a redevelopment would result in a change in the conditions of the existing WUL/T&UL.

In other words, any new T&UL or WUL will trigger the guidelines.

In issuing a new licence on previously unirrigated land it is important to delineate, and to define with the use of coordinates, the approved area or "the irrigation footprint", that is, shown as the **approved polygon**, within a property title, on which water use is approved.

The Guidelines also apply to applications for expansion outside of an approved polygon on an existing WUL/T&UL.

Under the Water Act 1989, inside irrigation districts, the polygon extends to the property boundaries. Outside the irrigation districts, the polygon may be ill-defined, but where there is a reference to an "irrigated area" or a "licensed volume", a polygon may be inferred, ideally in conjunction with any available aerial or satellite imagery; this assessment is important where the irrigated area is small relative to the total area of the property.

Significant redevelopment might involve an increase in the annual use limit or licensed volume that applies within the existing irrigated polygon. In this case, the salient question to determine if the redevelopment is significant, and to determine whether the Guidelines apply, is: would the proposed volume<sup>1</sup>

have been agreed to at the time the water-use licence was originally issued without any change in other conditions?

- If "yes" then the guidelines do not apply
- If "no" or "uncertain" then the guidelines do apply (i.e. if in doubt the guidelines apply).

This is outlined in Figure 1 1.

The question regarding proposed volume being agreed to can be answered by a reference to the maximum application rates (specified in Schedule 2 of the Standard Water-Use Conditions). This should consider both WUL and T&UL volumes; noting new T&UL volumes can recognise and should not exceed the AUL held on a WUL on the same property.

The decision regarding whether the guidelines are triggered for a proposal initially rests with GMW, but if any of the NIDG members disagree with GMW's decision then this should go to NIDG for resolution. If the NIDG cannot agree on a decision then it should be referred to both the Chief Executive Officer of the relevant CMA and the Managing Director GMW for them to confer for a decision.

The IDC should be kept informed by GMW of its decisions regarding the proposals for new development.

When a change in irrigation infrastructure occurs, this may require going through the works approval process for a new or amended works licence. See next section.

## 1.5 Works Licences (WI)

The Guidelines are used to process works licence applications and consider the appropriate standard and, where appropriate, particular conditions required to authorise the take, use, conveyance, and storage of water from Victorian waterways. The Guidelines will be initiated for works licence applications if (DSE, 2010):

- New works are required to deliver water to the land specified in a new licence application (or changing conditions)
- Existing works are being modified to deliver water to land specified in a new licence application.

## 1.6 When the Guidelines do not Apply

The IDGs, and approval process will not be initiated:

- When the sale of land, **land subdivision or land consolidation** requires the issuing of a new WUL/ T&UL on land already being irrigated, provided there is no net increase in the AUL/licensed volume or change in the approved polygon that is allowed to be irrigated
- When the proposed AUL/licensed volume specified in the existing WUL/T&UL is not exceeded or increased above the maximum application rates and is within the approved polygon. Note that the approved polygon **in irrigation districts** is the property boundary.

The requirement to prepare Irrigation and Drainage Plans and meet the standard conditions for new or varied WULs/T&ULs will not apply in the following circumstances:

- Where a WUL/T&UL is cancelled because part of the land to which it refers is transferred to a different party – new licences may be issued for each part of the land without the imposition of any extra conditions, provided that each licence has an appropriate share of the previous AUL/licensed volume and the sum of the new AUL/licensed volume is no greater than the previous AUL/licensed volume.
- Where irrigation is to be intensified on some land already covered by a licence and an increase in the AUL or licensed volume on the licence is sought, but is below the maximum application rates. WULs/T&ULs will apply, but with such modifications that are judged by the Minister (or delegate<sup>2</sup>).
- With the written approval of the CMA<sup>3</sup>.

- For a T&UL a delegate may modify or waive the requirement for an IDP where: the annual use limit in the T&UL is less than 20 ML; and in the delegate's view, any adverse impact from the use of water under the licence is likely to be minor.

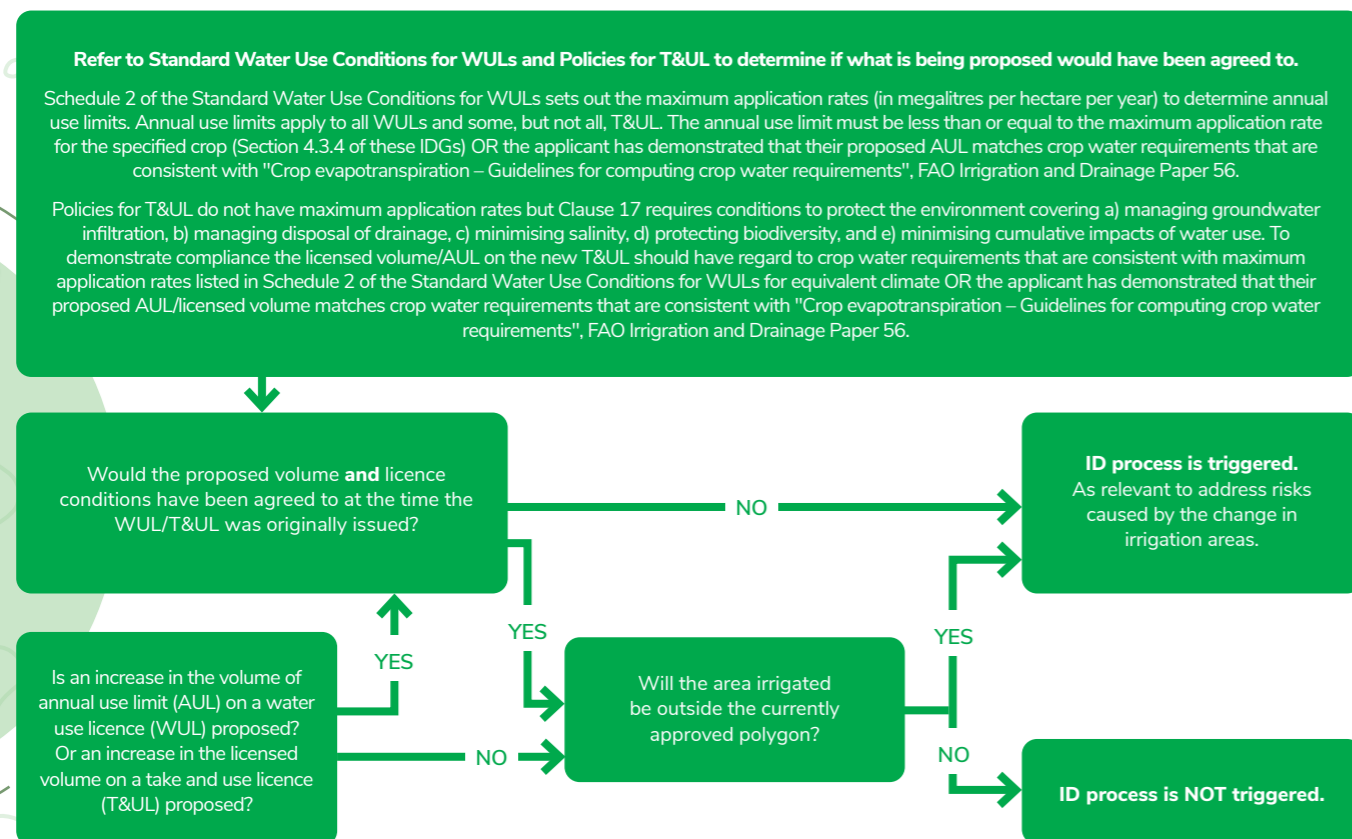
An application for a works licence being renewed, amended, or transferred may not necessitate the requirement of preparing a Works Plan if GMW deems that the works licence does not have significant deficiencies or amendments. The delegate may determine which, if any, of the standard conditions for works licences should be added to the licence.

Except for Cultural Heritage requirements, the issuing of a water use licence or a works licence cannot be withheld based on the requirements of other Acts of Parliament. However, it is important for proponents to be aware that the proposed developments may not proceed without first obtaining all necessary approvals (DSE, 2010).

## 1.7 Review and Amendments of the Guidelines

The Goulburn Broken CMA is the custodian of this Guideline document on behalf of itself, the North Central CMA and the North East CMA. It is reviewed and updated every few years, or on an as needs basis. Each review is led by the Goulburn Broken CMA, in consultation with the other CMAs and the agencies involved in their implementation, including GMW, DELWP, Agriculture Victoria, Local Government Authorities and other Community and Industry Groups. The revised document is endorsed by the Boards of directors for GMW and the CMAs, Agriculture Victoria and DELWP.

The Guidelines may be amended within this timeframe to improve clarity and accuracy if these are considered to be editorial in nature and will not require broad consultation or Board signoff, but will be endorsed by the NIDG. Further information about the application of the Guidelines or the irrigation development process can be obtained by contacting the IDC, Agriculture Victoria. This role is divided between an IDC, based at Echuca who covers the area west of the Goulburn River to Nyah and an IDC based at Rutherglen that covers the area east of the Goulburn River and the North East.



**Figure 1-1 Decision tree to determine when the Irrigation Development Guidelines are triggered for an existing WUL or T&UL**

<sup>1</sup> These are listed as the maximum application rates in Section 4.3.3.

<sup>2</sup> In northern Victorian the Minister for Water delegates licensing powers relevant for irrigation development to GMW.

<sup>3</sup> Requirements for an IDP may be waived by the Minister after consultation with and written agreement from the relevant Catchment Management Authority as per the Standard Water Use Conditions Clause 6 -Schedule 1 clause 1. This will usually occur after the IDC has undertaken a documented risk assessment to confirm risks are low.

<sup>4</sup> Under the Instrument of Delegation (2019), GMW as the Delegate responsible for issuing the licence may modify or waive the requirement.

## 1.8 Other Aspects

### 1.8.1 Future Changes

In applying licence conditions, and endorsing irrigation development applications, approval agencies, and referral agencies, must consider the information provided by applicants, and they must ensure that information adequately demonstrates that the development complies with all relevant legislation while also meeting the Minister's Water Use Objectives for:

1. Managing groundwater infiltration
2. Managing disposal of drainage
3. Minimising salinity
4. Protecting biodiversity
5. Minimising cumulative effects of water use.

Irrigation technologies, and the knowledge used to inform best management practices for irrigation, are constantly evolving in response to research, innovation, monitoring, regulation and other factors. The process for implementing the Irrigation Development Guidelines will therefore continue to be adapted to ensure irrigation is sustainable and the Water Use Objectives are met. Where necessary the Guidelines may be updated as per Section 1.7.

Within the bounds set by the Water Act 1989, the development or redevelopment of irrigation will be assessed with consideration of risk and precautionary approaches. It should be noted that a suite of tools and policies will be used alongside the guidelines, including land and water management plans and extension activities. By using a mix of these tools, agencies will be able to support irrigators in implementing best management practices for irrigation.

### 1.8.2 Risk Management Through a Collaborative Approach

Environmental risks arising from irrigation redevelopment in existing areas and irrigation development in new areas must be proactively managed. Land and water management plans and extension, as well as these Guidelines, where triggered, will be used to encourage the adoption of best management practices in order to minimise risk.

As technologies change and irrigators take more innovative approaches to enterprise management, the types of irrigation redevelopment may become more complex to assess and, as a result, require broader input in the assessment process.

Therefore, the relevant water authority (GMW), should seek advice from relevant parties where the application poses a potential risk to the achievement of the Minister's Water-Use Objectives. This will usually be via the Irrigation Development Coordinator (IDC), and the New Irrigation Development Group (NIDG). It may also include, when appropriate, regional committees, short-term working groups or similar.

The instances in which a water authority should consider obtaining advice/support/guidance include (but are not limited to):

- When uncertain about any particular environmental impact or approval process
- When an alternative water resource is proposed for use to irrigate a property that has previously been irrigated with another resource, for example when adding groundwater irrigation to a licensed area historically irrigated with surface water or vice versa
- Where there are potential cumulative impacts associated with using multiple irrigation water sources
- Where there are land use change, particularly those involving increased cultivation
- If the water requires treatment to ameliorate the effects of water quality issues, for example if salinity levels are above usual levels
- Where the proposal may trigger protection requirements for native vegetation or cultural heritage
- The authority has insufficient data/knowledge to make informed licensing decisions (for example if there is no understanding of the annual volumes of water available for extraction)

This collaborative, precautionary approach will better integrate the key tools to support sustainable irrigation redevelopment by:

- Ensuring the assessment process is consistent and transparent and commensurate with the level of risk the application poses
- Increasing landholder awareness or access to extension services and regional projects
- Promoting the adoption of best irrigation management practices and irrigation technologies
- Minimising the risk of adverse impacts to cultural heritage, the environment or third parties e.g. waterlogging, salinisation, or water quality degradation
- Meeting the Minister's Water-use Objectives

### 1.8.3 Wastewater and Industrial Water for Irrigation

Some irrigators are seeking to diversify their sources of water. Depending on location, a property may have access to recycled water or wastewater from treatment plants, large processing plants (e.g. milk factory) or other commercial enterprises.

The EPA oversees the use of wastewater and industrial water reuse. The EPA can be contacted on **1300 372 842 (1300 EPA VIC)**, and general advice is provided at <https://www.epa.vic.gov.au/about-epa/publications/168>. Specific EPA publications of relevance include:

- **Publication 464.2** (2003): Guidelines for Environmental Management: use of reclaimed water, including Addendum to Class A Information in 464.2.
- **Publication 1015.1** (2005; 2015): Guidelines for Environmental Management: dual pipe water recycling schemes – health and environmental risk management, including Addendum to 1015.1.
- **Publication 887.1** (2006): Supply of reclaimed water for drought relief.
- **Publication IWRG632.1** (2017): Industrial water reuse.

While the Irrigation Development Guidelines do not apply to in the licensing or approval of wastewater or industrial water use, the information contained in Irrigation Development Guidelines may be useful.

It is strongly recommended that the total annual volume of water use from all sources should not exceed the annual use limit on, nor go outside the polygon approved by, existing water use licences, or take and use licences, through the additional use of wastewater or industrial water reuse. And, where possible, the approval processes for irrigation with wastewater, industrial water reuse should meet or exceed the standards specified in these guidelines.

For irrigation developments where recycled water is to be used a Customer Site Management Plan, as required by the EPA, may be accepted as an Irrigation and Drainage Plan. Further information on EPA requirements for the use of reclaimed water can be found in the EPA publication Guidelines for Environmental Management – Use of Reclaimed Water (2003)

#### Using effluent for irrigation

Many dairy farmers may seek to utilise their irrigation infrastructure to apply animal effluent as a fertiliser. Further information is available at <https://www.epa.vic.gov.au/for-business/find-a-topic/about-dairy-farm-effluent>

#### On site water treatment

IDGs may be triggered if on-site water treatment changes the irrigation or drainage practices that are permitted within a WUL/T&UL where this impacts upon the Minister's Water Use Objectives. An example may be disposal of a brine stream from desalination into a drain. EPA licensing may also apply in these instances.



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# 2 Irrigation development assessment process

## 2.1 General Overview

The process for assessing Irrigation Development (ID) applications is presented in Table 2-1 and a flow chart in Figure 2-1. To facilitate the process a dedicated IDC operates as a conduit between the applicant and the government agencies from the start to the completion of the approvals process.

Agriculture Victoria employs two IDCs for northern Victoria. Staff from any of the agencies involved in administering these should direct all proponents for developments east of the Goulburn River the IDC operating out of Agriculture Victoria Rutherglen. All proponents for developments west of the Goulburn river should be directed to the IDC operating out of Agriculture Victoria Echuca in the first instance.

The level of information requested and other requirements are dependent upon the complexity and level of potential risk identified for the proposed development. A proposed development that has identified impacts on the environment such as groundwater rise/fall<sup>5</sup>, native vegetation removal, or large-scale land-use changes, for example, may be required to provide more comprehensive information and employ suitably qualified experts. While for redevelopment scenarios where the risks may be much lower, a simpler application process/less information required would apply. The level of risk is assessed early in the investigation phase to assist with determining the level and type of information required to inform the process.

While the IDC can provide some guidance on information requirements, ultimately the agencies that the proposal is referred provide the definitive advice about the information needed for their risk assessments. These guidelines do not describe internal business procedures for each agency; that is the responsibility of each respective agency.

It is important to note that, due to river capacity constraints, all proponents looking for new development that would be supplied from the Murray downstream of the Barmah Choke will be required to apply to the Minister for assessment with regard to the approval of works licences that require additional extraction shares.

## 2.2 Application Response Times

The IDC and all agencies involved in assessing applications will work together in order to ensure applications are reviewed and assessed in a timely manner. To aid the efficiency and effectiveness of the application process all agencies will apply a twenty-eight-day response time from the time they receive an application, to review, provide comment and request additional information. If further information is required the process will not proceed until the information is provided.

The IDC will also ensure that applicants are regularly updated on the progress of their application during its review.

## 2.3 Costs Associated with the Processing of Applications

There are fees and charges associated with the processing of WUL and WL forms by GMW.

Other authorities may have fees and charges associated with assessing an irrigation development application e.g. Local Planning Permit etc. These fees and charges are available from the relevant agency and are to be paid by the applicant.

Fee schedules can be obtained by contacting the relevant agencies.

## 2.4 Appeals Process

There is a three step appeals process in place for applicants that are not satisfied with how the guidelines have been implemented in relation to their irrigation development application. These steps include:

- **Step 1:** if an applicant is dissatisfied with the outcome of the application, or the process, standards, or timelines applied in this process, the applicant will first request an appointment to meet and discuss their grievance with the IDC and the relevant organisation
- **Step 2:** if Step 1 does not resolve the issue, the applicant should then write to the Chief Executive Officer, (CEO), of the relevant CMA to formally seek a review of the decision. The CEO may refer the issue to an independent arbiter
- **Step 3:** if neither Step 1 nor Step 2 have been successful in settling the dispute. Where the relevant legislation allows for an appeal to be lodged, the applicant may lodge an appeal to the Victorian Civil and Administrative Tribunal (VCAT). VCAT deals with disputes between people and Government (State/Local) bodies about planning and land valuation, licences to carry on a business and many other Government decisions.

**Table 2.1: Itemised steps for the approval process. Shading of agency/proponent box indicates organisation responsible.**

Phase	Step	Agency/Proponent	Explanation of Step
Investigation Phase	1	Proponent	<b>Proponent initiates contact with agencies.</b> Initial contact can be made by a potential applicant via a number of different avenues including GMW, the relevant CMA, Local Council, AgVic etc. Agencies are required to refer the enquiry directly to the IDC by providing the potential applicant with the IDC contact details or forwarding their details to the IDC by email. All proponents for developments east of the Goulburn River should be directed to the IDC operating out of AgVic Rutherglen. All proponents for developments west of the Goulburn river should be directed to the IDC operating out of AgVic Echuca in the first instance. The IDC serves as a central contact person into the ID process, ensuring consistency in the information provided and reducing the time demands on individual agencies in fielding enquiries. The IDC can guide the applicant through the process and identify the responsible agency at each step.
	2	AgVic	<b>Initial applicant contact: applicant is referred to Irrigation Development Coordinator (IDC)</b> Initial discussion between applicant and IDC. IDC provides information including information regarding: Overview of the Irrigation Development (ID) approval process and Irrigation Development Application (IDA) form. The IDC will establish contact with the potential applicant to seek further information on the types of works, property location, scale of development, crop type and water requirement etc. The IDC will provide the potential applicant with further information about the general requirements involved in undertaking the ID process, timeframes, potential risks that need to be considered and resources available to assist in the development of their applications.
	3	Proponent	<b>Proponent completes Irrigation Development Application (IDA) form including preliminary map.</b> Irrigation development application (IDA) – the IDA form must be completed and signed by the landowner and returned to the IDC for the process to commence. Sometimes the initial enquiry is made by someone representing the landowner rather than the actual landowner. The landowner's consent by way of signature on the IDA form is a requirement for the application to be formally registered. On receipt, the IDC will: generate a project number; create a hard-copy project file; and commence the internal checklist to document and monitor the application progress. The preliminary map needs to be of sufficient detail for agency staff to identify location, proximity to public land, proposed pipeline routes, native vegetation, volume and land proposed to be irrigated.
	4	AgVic	<b>IDC consults with GMW to determine if IDG are triggered. (Note proponent may already have done this step, but it is important for IDC to confirm).</b>
	5	GMW	<b>If GMW determines the IDG are triggered then GMW advises proponent and IDC and process continues - go to next step. If not, then GMW deals with the proposal outside of IDG.</b>  <b>GMW provides IDC with information similar to a 'vendor statement' with regard to any existing T&amp;UL, WUL or works licence associated with the property in question. This is ensuring that the total volume of water proposed to be used, from all sources of water, is understood from the outset.</b>  <b>In Irrigation districts GMW also to determine if there are any Delivery Share constraints and advise proponent of delivery infrastructure requirements.</b>  <b>For applications on the Murray downstream of the Barmah Choke GMW refers assessment of application on extraction share, water availability and any other system scale constraints to the Water Minister for decision regarding availability of additional extraction shares. Minister or Minister's delegate to advise proponent of delivery infrastructure requirements. Note this may be considered at step 21.</b>

<sup>5</sup> This may impact on the Ministerial Water Use Objectives for salinity or biodiversity. The threat to GDEs from groundwater extraction is managed by assessing the potential impacts of groundwater licence applications. In considering an application to take and use groundwater, the *Water Act 1989* requires the Rural Water Corporations to consider any adverse effects that the extraction is likely to have on the environment. In order to support consistent decision making across the state, DELWP provides guidelines for assessing the potential risk to high value GDEs from groundwater licence applications. The guidelines are available at <https://waterregister.vic.gov.au/water-entitlements/about-entitlements/take-and-use-licences#Min-Policies>



Phase	Step	Agency/ Proponent	Explanation of Step
Investigation Phase	6	AgVic	<p><b>IDC organises completion of: preliminary desktop assessment, Site visit.</b></p> <p>The investigation phase marks the start of the ID process. It commences with the formal registration of the development activity and contacting the relevant government agencies.</p> <p><b>Site visit by IDC</b> – The IDC will coordinate a site visit with the applicant in order to determine/identify any early issues that may have a bearing on the type and level of information required to be presented by the applicant. Prior to undertaking the site visit the IDC will undertake a desktop review of land title information, flood inundation overlays etc. The IDC will coordinate this process and seek additional specialist/expert help if required.</p> <p><b>Preliminary Assessment</b> – A preliminary environmental assessment is required to be completed by the IDC to determine whether the area is at risk of developing a water table. This preliminary assessment is organised by the IDC but can draw upon expertise in other agencies if required. It will determine if there is sufficient existing data available to provide the evidence and certainty to categorise the level of risk. It is a quick and inexpensive approach that can easily determine the risk of water table development and whether a more detailed hydrogeological investigation is required. However, if a high risk is identified during the preliminary assessment, or if there is not enough data available to make an assessment, then a more detailed hydrogeological investigation is required to be completed by the proponent. The IDC will consult with other agencies/expertise as required.</p>
		CMA (as NIDG)	<p><b>ID Group reviews: IDA form and preliminary information, site visit; Risk Assessment to identify any pre-existing issues.</b></p> <p>The IDA and preliminary information collected during the site visit, and the outcome of the preliminary assessment, will be presented to the NIDG by the IDC either individually, during a regular meeting or one specially convened to discuss the intentions of the application. This provides an early opportunity for the NIDG to identify if there are any pre-existing or known 'showstoppers' or issues that will need to be addressed or further considered during the assessment phase. Where development activities have occurred without appropriate approvals or permits, the ID process may require the issue to be rectified /addressed before the application is progressed to the next phase of the process. In some instances, these issues may be considered to be a 'showstopper', preventing the IDA from being approved.</p>
		Other	<p><b>IDC requests advice from the relevant CMA's cultural adviser (if available) about any specific areas, or sensitive overlays, to avoid disturbing and if a CMA adviser is not available or further investigation is required asks proponent to seek advice from cultural heritage adviser.</b></p>
		Proponent	<p><b>IDC asks proponent to prepare initial map and if relevant, refer to DELWP Planning and Approvals for PLM consent and Native Vegetation pre-plan assessment.</b></p> <p>Proponent contacts DELWP Planning and Approvals to receive preliminary advice regarding whether PV or DELWP is the public land manager to issue Public Land Managers (PLM) consent to apply for planning permit and Landowners Consent (LOC) to occupy Crown Land</p>
		DELWP	<p><b>DELWP Land Planning and Approvals Officer will assist in determining the type of assessments required to gain PLM consent</b></p> <p>DELWP considers proponent's application. The type of water delivery assessments, water infrastructure installation and operation will be determined by the scope of works and how they will impact on the environment and the usability of the surrounds. In order to determine the level of environmental risk, a Siting and Design Plan must be submitted to DELWP. Where removal of native vegetation is proposed, preliminary advice will be provided regarding this.</p>

Phase	Step	Agency/ Proponent	Explanation of Step
Investigation Phase	6	Parks Victoria	<b>Public Land Manager provides preliminary advice.</b>
	7	AgVic	<b>Feedback from authorities/ agencies is fed back to IDC who organises a meeting with NIDG.</b>
		AgVic	<b>IDC undertakes a preliminary assessment and determines information and approvals required.</b>
		AgVic	<p><b>IDC provides the applicant with a letter outlining information requirements and detailed information package: water Infrastructure (Works Licence) Approval; and/or Water Use Licence/Irrigation Drainage Plan (IDP) Approval.</b></p> <p>Preliminary information requirements – The IDC uses the feedback provided by the NIDG meeting and incorporates this in a 'letter of advice' to the applicant. The letter provides an early indication of the type and level of assessment that will need to be undertaken during the Assessment. The letter provides the applicant with the opportunity to assess the level of effort and expense associated with proceeding with the irrigation development application before any expense has been incurred. This is an appropriate time to remind the applicant of "due process" and that any undertaking of development activities outside of this process is not advised and is done at their own risk/expense, including any rework required to align with the required conditions.</p> <p>It is important to note that additional information may be identified as the process progresses and as a result of more detailed assessments. The full extent of the information required by the application may not always be evident at the outset of the process. Throughout the process the onus is on the applicant to engage suitably qualified experts to undertake the necessary assessments and collect the information needed to determine if there are potential environmental risks associated with the development. It is equally important to provide the evidence required to demonstrate that the development will not pose any environmental risks both onsite and offsite. This information is compiled into plans that describe the means by which all impacts will be mitigated and demonstrate compliance with the Guidelines and Ministerial Determinations. This will include technical reports from various fields of expertise, depending on the scope of works proposed e.g. geophysical surveys, monitoring equipment, engineering reports etc. A Development Information Package, including factsheets relevant to the development is provided to the applicant. Often large scale greenfield (dryland) developments require approvals for both water use activities as well as pump and pipeline activities. Detailed plans are required to be developed and approved in order for the relevant licences to be granted.</p> <p>It is important for the applicant to fully understand the information requirements from the outset to prepare for and/or reduce the costs associated with undertaking these assessments. It must be made clear that technical assessments required for PLM consent will inform the Works Plan and the Works Plan must demonstrate how the risks associated with construction and ongoing operation of the infrastructure will be mitigated.</p> <p>It is important to explain to the proponent the sequencing of these approvals and described below.</p> <p><b>Water delivery activities: water Infrastructure (works licence).</b> Before any pump and pipeline works can commence a number of approvals must be obtained; including, in order:</p> <ol style="list-style-type: none"> <li>1. Landowners' approval to occupy the land which is likely to include public land manager (PLM) consent for works on Crown Land along waterways as well as private landowners for any proposed pipeline routes. Usually a Cultural Heritage Management Plan/permit and a native vegetation assessment and offset plan is also required across the whole of the development for obtaining PLM consent</li> <li>2. Planning permit from Local Council to use the land both for construction purposes as well as ongoing operation and maintenance</li> </ol>

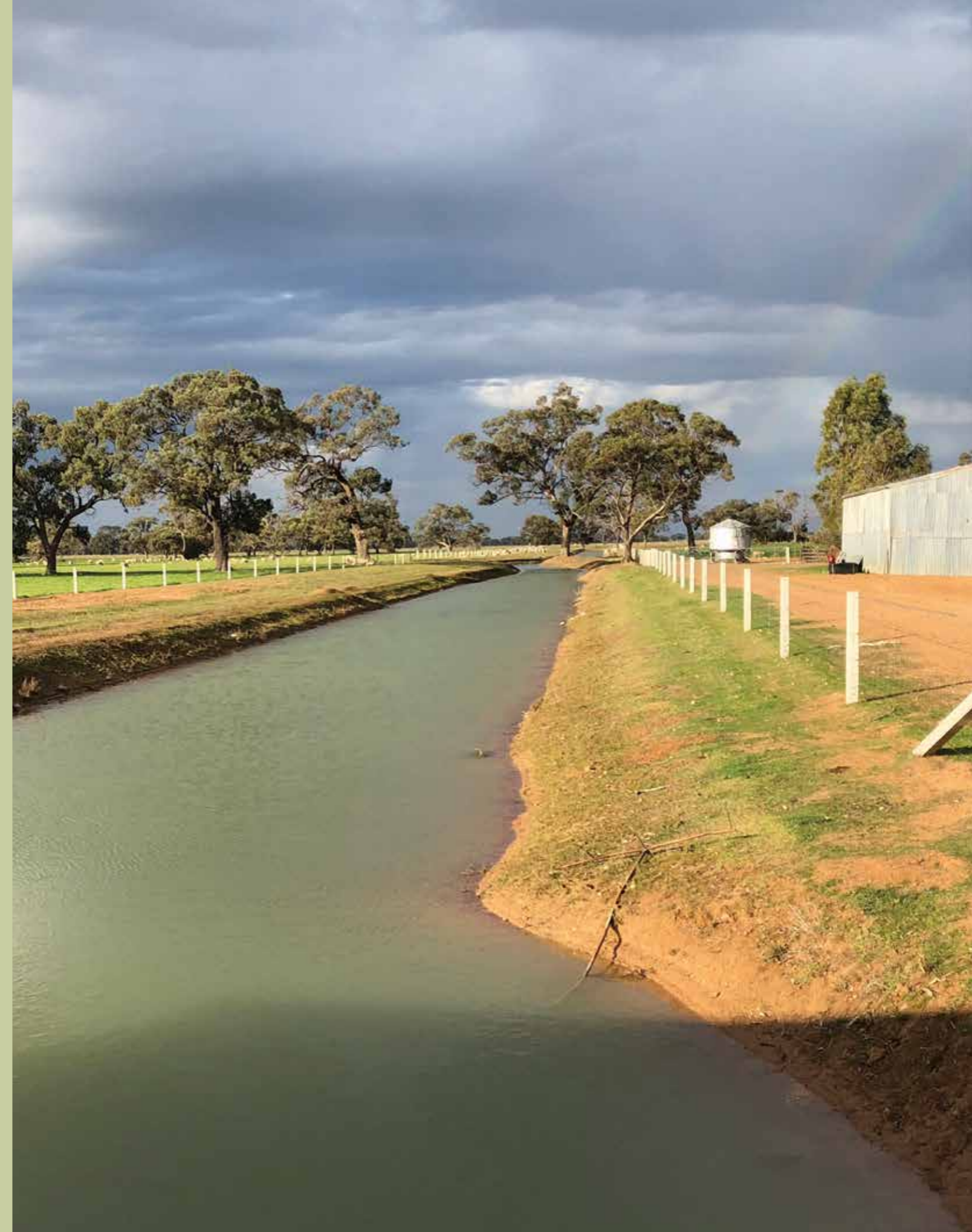
Phase	Step	Agency/ Proponent	Explanation of Step
Investigation Phase	7	AgVic	<p>3. A works licence from GMW to construct and use the water infrastructure. Types of works requiring the above approvals include: The construction of new infrastructure; The alteration of existing infrastructure including upgrades and modifications where there is a change and/or increase in the construction footprint previously approved; and Decommissioning of old infrastructure. A works licence is a pre-requisite for the approval of a WUL. Because of this, it is advised that assessments and approvals associated with the construction of water infrastructure and works licences are undertaken first as this may determine if the development is able to proceed. No works are allowed to commence prior to PLM consent, planning permission or works licences have been obtained. This also applies to the storage of construction materials in the construction area.</p> <p><b>Water use activities: Irrigation Drainage Plan (IDP for a WUL).</b> Before water is able to be delivered to the property a WUL associated with the land parcel must be approved by GMW. In accordance with s64N of the Water Act 1989, this will not be granted "if there are no works or systems in place or likely to be installed in the near future for delivering water to the land". And under s69 of the Act, regarding applications for works licences, "the Minister [or the Minister's delegate] must defer consideration of the application pending the determination of any related application" for a WUL or a T&amp;UL. Applicants are therefore strongly encouraged to commence the necessary approvals processes for a WL to ensure works like pump and/or pipeline installations can be completed before commencing any water use activities on the property. Any works undertaken before the WUL/T&amp;UL is approved is not recommended and is at the risk of the applicant/ landowner. The information requirements for an IDP may include:</p> <ul style="list-style-type: none"> <li>• Soil survey. This may include an onsite inspection of soil pits and review of the completed soil survey maps (usually by IDC)</li> <li>• Irrigation design</li> <li>• Surface and sub-surface drainage design</li> <li>• Hydrogeological investigation</li> <li>• Protection of biodiversity.</li> </ul> <p>As part of the assessment process the IDC together with the soil surveyor, irrigation designer and hydrogeologist will review the following: soil survey information, irrigation and drainage designs, and hydrogeological assessment. This review will assist in identifying areas at risk of developing perched water tables, lateral movement of irrigation drainage, and surface pooling that may affect crop productivity and/or the health of native vegetation. This group will recommend changes to irrigation and drainage designs to align with best practice, where to locate shallow groundwater table monitoring bores, where required and nominate a monitoring frequency for early detection of rising ground water tables. Additional recommendations may be made about soil amelioration or intersecting surface drainage to protect environmental values including stands of native vegetation. The water use assessments will be used to inform the development of an irrigation and drainage plan (IDP) providing the evidence to demonstrate how the risks associated with the farm activities will be minimised.</p> <p>If the use of water poses an ongoing risk to native vegetation, then in keeping with Minister's Water Use Objectives, the IDP can specify buffers between the approved irrigated polygon and the native vegetation. The WUL can then include conditions regarding monitoring requirements to determine whether corrective thresholds have been reached, and it can include conditions regarding corrective action procedures.</p> <p>The applicant needs to be aware that other assessments and approvals or permits/ licences may be required for various aspects of the irrigation development activity. Examples of these may include but are not limited to: NSW Government regulations for water supply infrastructure on the Murray River, which often requires sign off from Maritime Services and Fisheries, Planning Permits managed by local councils for native vegetation removal (including lopping) and works on the Murray River (generally Public Conservation and Resource Zone), Cultural Heritage approvals etc. It is not easy to generalise about when planning permits are or are not required. This will differ between municipalities and will depend on the land in question and the activity proposed. Each Zone, Overlay and Particular Provision will require different information to be submitted with a planning application. Prospective developers having identified a parcel of land should in the first instance contact the local planning department or ask the IDC about specific requirements.</p>

Phase	Step	Agency/ Proponent	Explanation of Step
Investigation Phase	7	AgVic	<p>Given the primacy of Cultural Heritage approvals, after receiving an application, the IDC will request advice from the relevant CMA's cultural adviser about any specific areas, or sensitive overlays, to avoid disturbing.</p> <p>All applicants need to be aware that if they propose to remove native vegetation they will need to demonstrate they have followed the three-step approach:</p> <ol style="list-style-type: none"> <li>1. Avoid the removal, destruction or lopping of native vegetation</li> <li>2. Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided</li> <li>3. Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation.</li> </ol> <p>The application must demonstrate how the proposed use or development has been sited or designed to avoid and minimise impacts on native vegetation, and that no feasible opportunities exist to further avoid and minimise impacts on native vegetation without undermining the key objectives of the proposal.</p> <p>It is the applicant's responsibility to ensure all other approval requirements are addressed. These approvals are required to be included in the package of information presented to the NIDG and will be considered during the process of endorsement by the NIDG.</p>
	8	Proponent	<b>Proponent collects requested information to prepare IDP and Works Plan.</b>
Assessment Phase	9	Proponent	<b>Proponent completes Draft IDP and provides to IDC to distribute to relevant agencies.</b>
		Proponent	<b>Proponent completes Draft Works Plan and provides to the IDC to distribute to relevant agencies.</b>
		Proponent	<b>Proponent completes CHMP and provides to IDC to distribute to relevant agencies.</b>
		Proponent	<b>Proponent contacts local Government for information needed for a planning permit.</b>
	10	GMW	<b>GMW Checks designs are completed by suitable qualified and experienced designers.</b>
		CMA	<b>Checks watertable/flooding risk is completed by suitable qualified and experienced person – depending on risk.</b>
		DELWP/ PV	<b>DELWP Checks: native vegetation investigation and offset plan, biodiversity buffers and Public Land Manager / Landowner consent.</b>  The Works Plan must demonstrate how the risks associated with construction and ongoing operation of the infrastructure will be mitigated.
	Other	<b>Relevant party checks: Cultural Heritage Management Plan.</b>	
	Other	<b>Relevant authorities check - overarching approvals related to property developments.</b>  Other assessments required and checked: - Cultural Heritage and Native Title - Cultural Heritage Management Plan or Cultural Heritage permit. Other environmental legislation ( <i>Environment Effects Act, Environment Protection and Biodiversity Conservation Act and Flora and Fauna Guarantee Act 1988 and FFG Amendment Act 2019 (impacts on protected flora).</i>  <i>Parks Victoria Act. Power. Road crossings. River Murray and NSW.</i>	

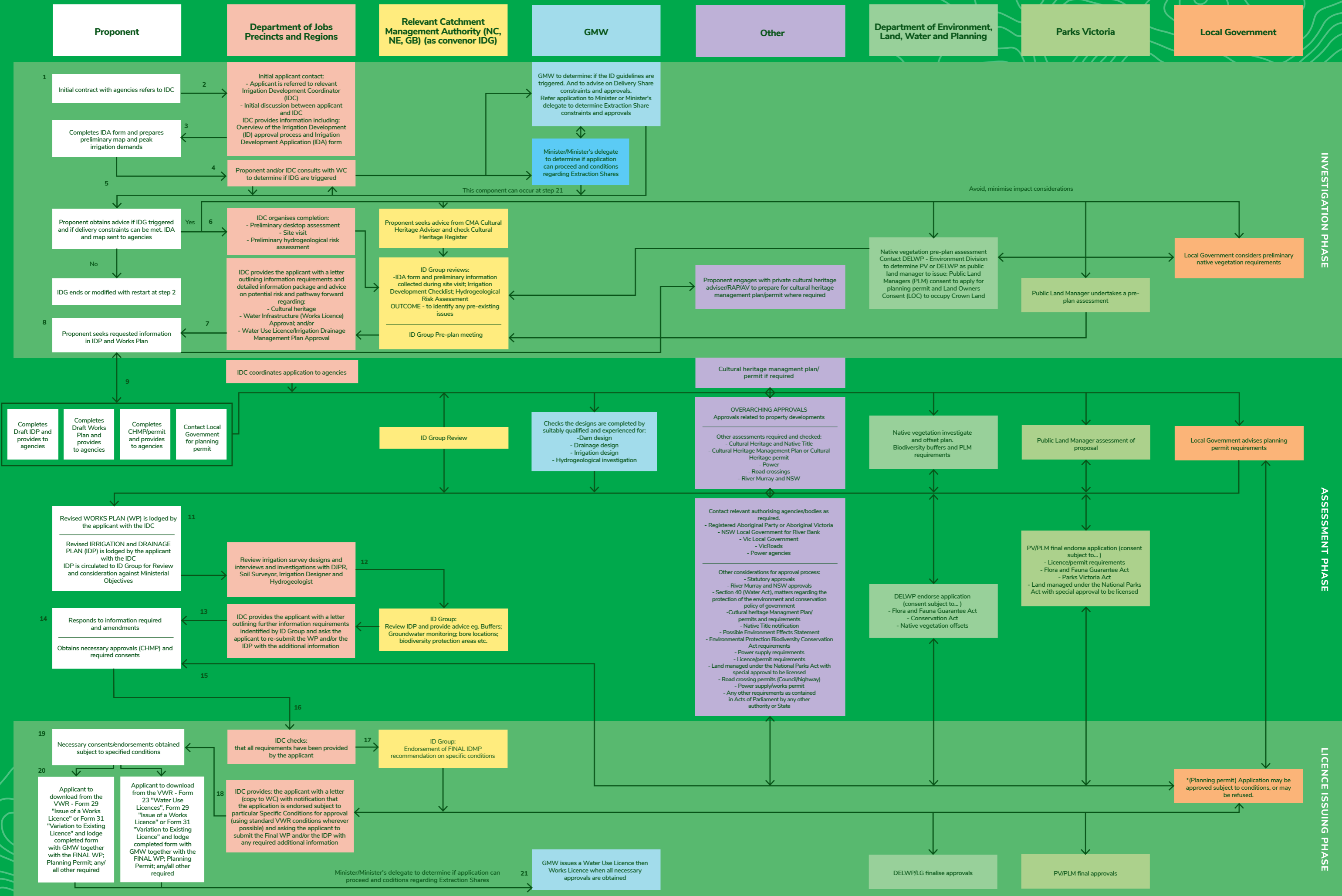
Phase	Step	Agency/ Proponent	Explanation of Step
Assessment Phase	10	Local Government	<b>Local Government planning permit requirements are considered.</b> Local Government issue permits in accordance with the <i>Planning and Environment Act 1987</i> and have responsibility for a range of other land use planning functions. Each Council has a local planning scheme which includes state planning policy framework and a local planning policy framework, as well as zones and overlays that control the use and development of land.
		AgVic	<b>Review irrigation survey design and investigations with AgVic, Soil Surveyor, Irrigation Designer and Hydrogeologist.</b>
	11	Proponent	<b>Develops Revised Works Plan (WP), which is lodged by the applicant with the IDC.</b>
		Proponent	<b>Develops Revised Irrigation and Drainage Plan (IDP), which is lodged by the applicant to the IDC.</b>
	12	AgVic	<b>Revised IDP is circulated to NIDG for Review and consideration against Ministerial Objectives.</b>
		CMA (as NIDG)	<p><b>ID Group: IDC and NIDG review revised IDP and provide feedback if necessary e.g. Buffers; Groundwater monitoring; bore locations; biodiversity protection areas etc.</b></p> <p>Once the assessment phase has been completed, the water delivery and water use technical assessments and related information are finalised in a Works Plan (WP) and/or an Irrigation Drainage Plan (IDP). These 'Plans' are submitted by the applicant to the IDC and then circulated to the NIDG for endorsement. Endorsement by the NIDG is required before a licence can be issued by GMW. The process for reviewing these Plans is outlined below:</p> <ol style="list-style-type: none"> <li>1. The WP and/or IDP is submitted by the applicant to the IDC and then circulated to the NIDG for review</li> <li>2. The NIDG will review the information presented in the WP and/or IDP to determine if there is adequate information that clearly describes the risks at the site, as well as the impacts on other water users. The assessments should also demonstrate that the planned development and future operations have been suitably designed to address any risks and adequately protect and preserve the environment. This includes other approvals and assessments that may be required from other government agencies e.g. Cultural Heritage Approval; NSW Government and NSW Maritime; Local Planning etc. or other permits/approvals as required e.g. power, hydrogeological plans etc</li> <li>3. If the level of information is not sufficient or further information is requested by the NIDG, the IDC will write to the applicant listing any missing or additional information requirements</li> <li>4. When the additional information has been provided by the applicant, and the NIDG is satisfied that the information provided meets the requirements of this Guidelines, the application can proceed to next steps</li> <li>5. If the risks identified by the assessments are deemed too great and therefore are not supported by the NIDG, the IDC will write to the applicant detailing why the application has not been endorsed.</li> </ol>
	13	AgVic	<b>IDC provides the applicant with a letter outlining further information requirements identified by NIDG and asks the applicant to re-submit the WP and/or the IDP with the additional information or endorses the WP and/or IDP.</b>
	14	Proponent	<b>Proponent responds to other agencies information requirements and amendments and obtains necessary consents and approvals (for CHMP).</b>

Phase	Step	Agency/ Proponent	Explanation of Step
Assessment Phase	15	Other	<b>Overarching approval processes related to property developments all in place.</b> Other assessments are submitted: - Cultural Heritage and Native Title - Cultural Heritage Management Plan or Cultural Heritage Permit. <i>Flora and Fauna Guarantee Act 1988</i> and <i>FFG Amendment Act 2019</i> permit for protected flora. Planning Permit for works and/or removal of native vegetation <i>Parks Victoria Act</i> . Power. Road crossings. River Murray and NSW.
		DELWP & PV	<b>PLM assesses application for consent to occupy land.</b> Once DELWP is satisfied that all risks have been adequately addressed by the applicant, PLM consent to occupy the land is issued and the applicant has three weeks to apply for a Planning Permit from local council to use the land for construction purposes. On receipt of a Planning Permit the applicant may then apply for a works licence from GMW.
		Proponent	<b>Proponent</b> obtains necessary approvals for checking and submits to IDC.
	16	Local Government	<b>Local Government</b> planning permit requirements are assessed and considered for approval.
		AgVic	<b>When the NIDG is satisfied that the information meets the requirement the application can proceed to the licence issuing phase.</b>
		AgVic	<b>IDC checks that all required information has been provided by the applicant.</b>
Licensing Phase	17	CMA (As NIDG)	<p><b>ID Group: Endorsement of FINAL IDP recommendation on particular conditions.</b></p> <p>GMW in consultation with the NIDG determine the particular conditions that are appropriate for each works licence or water use licence based on the information provided by the applicant and as a result of the investigation and assessment phase. The particular conditions set out the specific parameters within which the applicant must operate when irrigating under the works licence and /or WUL/T&amp;UL. At times the NIDG may seek expert advice external to the NIDG in order to formulate suitable recommendations for licence conditions.</p> <p><b>Works Licence Conditions.</b></p> <p>Works licences to construct, operate, alter, decommission or remove works associated with the extraction of water (i.e. bores, pumps and dams) are subject to conditions set by the Minister and are specified on the licence (Refer to Appendix 1 7.3.5 – Policies for Managing Works Licences). These conditions must be consistent with and refer to the contents of the works plan, management plan, dam safety surveillance plan, dam safety emergency management plan or other relevant (and referenced) document. The conditions on a works licence will address:</p> <ul style="list-style-type: none"> <li>• The scope of works covered under the licence</li> <li>• The responsible entity for the licence</li> <li>• The terms and conditions of the licence (this may include fish strainers on suction pumps for North East CMA)</li> <li>• Considerations for licence renewals and amendments</li> <li>• Specification around extraction limits</li> <li>• Water meter installation and use</li> <li>• Site specific information (such as management plans).</li> </ul> <p>Water Register standard conditions are provided in Appendix 5, 6 &amp; 7. This should provide guidance to the IDC and NIDG on what can be recommended.</p>

Phase	Step	Agency/ Proponent	Explanation of Step
Licensing Phase	17	CMA (as NIDG)	<p><b>Water Use Licence Conditions.</b></p> <p>Standard and particular conditions for the WUL may be applied to a WUL to meet the Ministerial Water Use Objectives that are consistent with, and in reference to, the contents of the IDP.</p> <p>The Standard Conditions on a WUL will address:</p> <ul style="list-style-type: none"> <li>• Managing groundwater infiltration – required metering of water delivery to the specified area of land under licence.</li> <li>• Managing disposal of drainage – surface and subsurface drainage strategy within the property boundary.</li> <li>• Minimising salinity – irrigation design and irrigation water salinity concentration that meets the soil characteristics.</li> <li>• Protecting biodiversity – installing, maintaining and monitoring groundwater bores including reporting requirements to observe any impact of the irrigation activity on native vegetation, the habitat of native animals or wetlands as well as corrective actions where there is a breach.</li> </ul> <p>Particular or special conditions include: The annual water use limit (AUL) for any season; and requirements that govern the use of ponded irrigation. For more information, refer to Standard Water Use Conditions. The Victorian Water Register (VWR) has been set up so that water corporations can select suitable conditions from dropdown menus, when they are issuing, renewing, or varying licences under the Water Act 1989. The aim in building this functionality into the register was to help ensure that conditions were written in consistent, enforceable language that was drawn from Ministerial policies and determinations. The full range of possible conditions available in the water register is reproduced in the Appendices. The Appendices show that parts of the text in these condition sets are editable. This provides scope to translate NIDG recommendations into particular conditions on licences.</p>
	18	AgVic	<p><b>IDC provides: the applicant with a letter (copy to GMW) with notification that the application is endorsed subject to particular conditions for approval (using standard VWR conditions wherever possible).</b></p>
	19	Proponent	<p><b>Proponent has in place all necessary endorsements and consents subject to specified conditions.</b></p>
	20	Proponent	<p><b>Applicant to download from the VWR.</b></p> <ul style="list-style-type: none"> <li>• Form 29 "Issue of a Works Licence" or Form 31 "Variation to Existing Licence" and lodge completed form with Water Corporation together with the FINAL WP; Planning Permit; any/all other required .</li> <li>• Form 23 "Water Use Licences"; Form 29 "Issue of a Works Licence" or Form 31 "Variation to Existing Licence" and lodge completed form with Water Corporation together with the Final WP; Planning Permit; any/all other required.</li> </ul> <p>When the WP and/or IDP are complete, the proponent is required to formally lodge an application form with GMW. This information is used by GMW to officially register and approve all water use licence and works licence information, including conditions, in the Victorian Water Register. GMW notifies the IDC via email when the application has been approved, and supplies the licence numbers as recorded in the VWR. The IDC completes the checklist for the IDA and closes the project file.</p>
	21	GMW	<p><b>GMW issues a works licence and water use licence when all necessary approvals are obtained, including Minister's/ Minister's delegate consideration of extraction share flagged at step 5.</b></p> <p><b>GMW notifies the IDC via email when the application has been approved, and supplies the licence number as recorded in the VWR. The IDC completes the checklist for the IDA and closes the project file.</b></p>



**Figure 2 1: Irrigation Development Assessment Process**



# 3 Roles and responsibilities

## 3.1 The Applicant

The onus is on the applicant to provide the evidence that demonstrates: the impacts of the proposed development on the environment, the means by which any impacts are to be avoided or mitigated, and compliance with the Guidelines. The applicant:

- Is defined in these Guidelines as the owner of the land on which the proposed development is to occur and to whom the licence is granted, or a person/s who has been authorised by the landowner to undertake the development on the owner's behalf
- Completes and forwards all necessary documentation in relation to the proposed development as outlined in the Development Information Package
- Ensures that the legal responsibilities under all relevant acts of Parliament and legislation such as the *Aboriginal Heritage Act 2006*, *Planning and Environment Act 1987*, *Environment Protection and Biodiversity Conservation Act 1999*, *Flora and Fauna Guarantee Act 1988* and *FFG Amendment Act 2019* and *Wildlife Act 1975* are complied with.

There are various fees and charges associated with the processing of forms by GMW and other government agencies. These fees and charges are available from the relevant organisations and are to be paid by the applicant.

## 3.2 New Irrigation Development Group

Interagency cooperation is an integral part and requirement of the irrigation development application review process. The NIDG provides a forum to collaborate, evaluate and work through complex irrigation development proposals. To ensure consistency only one NIDG will exist for the Region.

The NIDG:

- Meets at least once each year to review the IDG process. It also meets on an 'as needs' basis (as advised by the IDC via email) to review applications. Meetings can be face-to-face, by phone or by video conference
- Provides guidance and advice to the IDC in regard to irrigation development matters
- Provides agency support and advice on the aspects of the Northern Victorian irrigation development approval process to ensure regional compliance with the Water Act 1989

- Assists irrigation developers and participating agencies to adhere to the Northern Victorian irrigation development approval process as documented in these guidelines
- Ensures irrigation development applications are processed in a timely manner and cost-effectively
- Endorses IDPs as part of the approvals process
- Provides advice to Water Corporations in formulating conditions on WUL, works licences and T&UL
- Ensures the statutory requirements for each agency within the NIDG are fully considered and addressed, and provides advice and guidance to the relevant CMA on any reviews of these guidelines with the aim of keeping the document up to date with current legislative requirements and government policies and strategies.

The NIDG is coordinated by the IDC and meets at least annually, or as required to address issues that arise. The NIDG is made up of a number of key government agencies for which there is a core working group comprised of:

- IDC (Agriculture Victoria)
- GMW
- Planning and Approvals (DELWP)
- The appropriate officer from the relevant CMA.

At times, the NIDG may need to consult further with the following government agencies:

- Parks Victoria
- DELWP Water and Catchments
- Aboriginal Victoria
- Registered Aboriginal Party
- DELWP Natural Environment Program
- DELWP Public Land Administration
- DELWP Planning
- Local Governments.

These agencies may attend meetings less frequently or on an as needed basis.

## 3.3 Irrigation Development Coordinator (IDC)

The IDC plays a crucial role in the implementation of the guidelines. This includes:

- Providing private landowners and referral authorities with a preliminary assessment of potential environmental issues and offsite impacts of water use and irrigation of the proposed development through the irrigation development process
- Collecting and recording data associated with irrigation developments in accordance with agreed standards as documented in the NIDG Terms of Reference (See Section 1)
- Providing a single point of contact for all irrigation development related matters for applicants and partner agencies
- Providing advice to partner organisations on whether the guidelines are being adhered to by applicants and partner agencies
- Ensuring applicants are guided through the irrigation development approvals process as per the Guidelines in a timely manner
- Convening and chairing the interagency NIDG meetings in order to ensure that all matters relevant to new irrigation development are being efficiently and effectively addressed
- Documenting discussion for each NIDG meeting as minute taker
- Tracking and reporting IDA progress to the NIDG and applicant by maintaining the ID Checklist (See Development Information Packages).

## 3.4 Water Corporations

The Minister for Water or the Minister's delegates are responsible for the issue of WULs, works licences and T&ULs in accordance with the Victorian Water Act 1989 and associated Ministerial Determinations. A Water Corporation, in this case GMW, may not approve the issue of a works licence, WUL and or the T&UL to new developments unless the statutory requirements of the Water Corporations, and other stakeholder organisations, have been documented, evaluated and approved. Agencies and authorities with statutory responsibility have agreed to work with the water corporations in applying these Guidelines.

In issuing relevant licences, the relevant authority must:

- Be satisfied with the standard of the IDP and/or WP accompanying the application

- Assess applications against, and enforce compliance with, the standard water use conditions as outlined in the Ministerial Determinations; the Water Corporations consider in granting a WUL whether or not the proposed use of water is consistent with the Water Use Objectives
- Follow the requirements outlined under the 'Policies for Managing Take and Use Licences' and the 'Ministerial Guidelines For Groundwater Licensing And Protection Of High Value Groundwater Dependent Ecosystems' when issuing a T&UL,
- Consult with the Minister or Minister's delegate in determining if extraction share is available to service the proposed development,
- Formulate suitable conditions for the works licence or WUL after consultation with the required agencies: the relevant CMA, DELWP, Agriculture Victoria, Parks Victoria and other agencies as required. Suitable conditions will be discussed and specified by the NIDG meeting. The standard conditions will be included as conditions on all licences. Particular conditions identified during the application process must be included on the licence following NIDG consideration.

After licences have been issued the authority is responsible for compliance with, and enforcement of, licence conditions. For example, meeting specified buffers, monitoring corrective action thresholds, and implementing corrective action procedures – where they are a condition of the WUL or T&UL.

### 3.5 Department Of Environment, Land, Water and Planning (DELWP)

#### 3.5.1 Planning and Approvals

DELWP – Planning & Approvals (P&A) is a referral authority for advising Local Government on native vegetation and Crown Land issues through the planning permit application process. DELWP P&A seeks advice from DELWP Natural Environment Program in assessing impacts on biodiversity including native vegetation removal, and buffers.

They also manage licensing and authorise the use of or activities on Crown Land and are responsible for issuing public land manager's consent to allow applicants to apply for a planning permit. They have a role in identifying the appropriate public land manager (PV or DELWP) and coordinating a joint response to proponents on behalf of PV and DELWP as public land managers. The DELWP Planning and Approvals can:

- Assess and if appropriate, provide public land manager consent to apply for a planning permit and works licences on Public Land as delegate of the Landowner
- In consultation with DELWP Natural Environment Programs, provide advice on any relevant biodiversity impacts, protection arrangements and native vegetation offset requirements (Should removal of native vegetation be permitted)
- DELWP Planning and Approvals may refuse consent to works on Crown land or may object to planning permits.

#### 3.5.2 Water and Catchments Group

DELWP – Water and Catchments Group:

- Provides high level policy advice to the CMAs and other agencies on the preparation and endorsement of the Guidelines through the Irrigation Development Guidelines Advisory Note
- Provides an oversight role and funding to support implementation of the guidelines and to support Agriculture Victoria in the undertaking of the IDC role
- Provides specialist assistance, advice and guidance on water availability and system-scale constraints
- Is a signatory to the authorisation of a works licence
- Provides advice and interpretation of Ministerial policies and administrative requirements.

### 3.6 Agriculture Victoria (AgVic)

The Agriculture Victoria IDC provides advice to GMW on the technical aspect of IDPs, including:

- Reviews independent soil survey results from applicants. This may include an onsite inspection of soil pits and review of the completed soil survey maps. As part of the assessment process the Agriculture Victoria IDC may make environmental based recommendations mainly concerning drainage issues and the placement of shallow groundwater monitoring sites to detect any potential lateral movement of irrigation drainage from the site and/or detection of perched water tables that may threaten remnant native vegetation
- Provides, where relevant, information on irrigation best management practices and soil amelioration strategies.

### 3.7 The Catchment Management Authorities (CMAs)

- Is the lead agency for ensuring the Guidelines are up to date with current legislation and are consistent with the RCS and the LWMP as well as any other government policy directive
- Provides advice to the CMA Boards, DELWP and MDBA on salinity impacts
- Is a referral authority for advising agencies, Local Government and individuals on rivers, wetlands and floodplain issues and matters, particularly as part of the planning permit approval process undertaken by statutory authorities.

### 3.8 Local Government

Issue planning permits in accordance with the Planning and Environment Act 1987 such as applications relating to land development, drainage, flooding, native vegetation, waterways, cultural heritage and earthworks, and:

- Is responsible for the application of the Victorian Planning Provisions locally where each Council has a local planning scheme which includes state planning policy framework and a local planning policy framework, as well as zones and overlays that control the use and development of land.
- Enforces compliance of planning permit conditions.
- Are the responsible authority for the Guidelines for the removal, destruction or lopping of native vegetation (2017).

### 3.9 Parks Victoria

Parks Victoria:

- Under the Parks Victoria Act 2018, Parks Victoria has primary responsibility for the protection, conservation, and enhancement of Parks Victoria managed land
- Is a land manager of Crown Land administered under the National Parks Act 1975 and the Crown Land Reserves Act 1978
- Provides land managers advice to DELWP in its role as a referral authority in dealing with Planning Permit applications, Public Land Manager's Consent and Planning Scheme Amendments in accordance with the Planning and Environmental Act 1987
- Is responsible for the issue of Section 27 consent, under the National Parks Act 1975
- Operates under Parks Victoria Act 2018.

### 3.10 Registered Aboriginal Parties and Aboriginal Victoria (AV)

Cultural Heritage Management Approvals must be in place before any other approval process can be completed. As discussed in more detail in Section 5.1, this typically takes the form of a cultural heritage management plan (CHMP). A Registered Aboriginal Party (RAP) may elect to approve a CHMP. Where the RAP declines to do so, or where there is no appointed RAP, then the DELWP Secretary (that is, Aboriginal Victoria) will assess an application for approval of a CHMP.

### 3.11 Environment Protection Authority (EPA)

EPA develops and reviews environmental policies and regulations. This is done with the Department of Environment, Land, Water and Planning (DELWP). In particular:

- The regulations under the State Environment Protection Policy (Waters), also known as SEPP (Waters), as they apply to the Northern Victorian waterways and lakes
- A new legal framework will come into effect on 1 July 2021. The Environment Protection Amendment Act 2018 (the Act) is the general environmental duty (GED), which requires Victorians to understand and minimise their risks of harm to human health and the environment, from pollution and waste. EPA will work with industry to help them understand how to fulfil their obligations, by providing guidance, advice and other support. Complying with the GED is about taking reasonable proactive steps and employing good environmental work practices. The GED is defined as:

*"A person who is engaging in an activity that may give rise to risks of harm to human health or the environment from pollution or waste must minimise those risks, so far as reasonably practicable." Where reasonably practicable means putting in controls that are proportionate to the risk. It relates to the chance of harm occurring and potential impacts on the environment. It also relates to what controls are available, their cost, and considers what an industry generally knows about the risk and control options."*



Pipe and riser and curious cows.

# 4 Information requirements and technical assessments

## 4.1 Public Land Manager Consent

Privately owned river pumps and associated infrastructure are commonly located within the Public Conservation and Resource Zone and Public Park and Recreation Zone along the length of rivers.

In order to construct, alter, operate, remove or decommission any works from Victorian water systems, consent from the public land manager is required first and before an application is made for a planning permit or a works licence.

## 4.2 Works Plan to Inform the Works Licence

The purpose of a Works Plan is to protect the aesthetic, archaeological, cultural and conservation values of the riverine and riparian environment and public land areas and associated private land.

Pumps, pump houses, pipelines, access tracks and associated water diversion works must meet the standards necessary to avoid or minimise their impacts on other persons and the environment. This must involve an assessment of local conditions and the appropriate siting, construction, operation, and maintenance of water diversion works.

The works licence for private diverters also employs strategies to minimise impacts on other water users by placing limitations on an extraction share and extraction rates during periods of rationing or other restriction, required to be specified as part of the works plan.

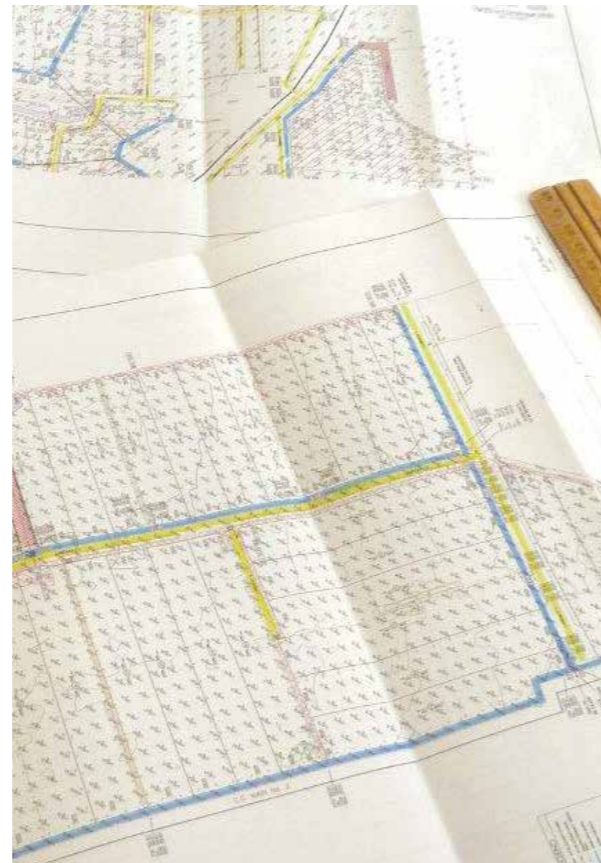
Parks Victoria's policy is that Crown Land access should only occur if there are no other existing water supply options. Sometimes there are existing water supply channels that Parks Victoria would prefer to be used first. Parks Victoria also may suggest alternative supply routes to minimise impacts to Park values.

- All permanent pipelines must be underground, and Parks Victoria must be advised whether the proposal is for the pipeline to be buried in a trench or under bored
- No overhead powerlines are allowed
- Proponents must advise Parks Victoria how they plan to meet the pump shed, and access track, requirements and how they plan to minimise any impacts on natural values
- Proponents must also outline their basic rehabilitation plan once construction is complete.

A Works Plan (WP) must clearly describe the type and location of irrigation infrastructure required to be constructed to extract water from the supply point and the intended pathway to deliver it to the farm. A WP must include:

- Siting map of proposed works
- Construction plan
- Decommissioning Plan
- Operation Plan.

Consideration must be given to what mechanisms will be undertaken to meet the standards necessary and to minimise the impacts on other persons and the environment during construction as well as ongoing operation of the water delivery infrastructure into the future. For further details on the information requirements refer to <https://www.water.vic.gov.au/managing-dams-and-water-emergencies/dams/guidance-notes><sup>7</sup>.



Whole Farm Plan.

## 4.3 Irrigation Drainage Plan that Informs the WUL/T&UL

### 4.3.1 IDP Requirement

Under the Ministerial Determination (2007) Schedule 1 of the Standard Water Use Conditions an application for a new or varied WUL must be accompanied by an IDP for the area of land being developed or expanded<sup>8</sup>.

Similarly, Schedule 3 of the Minister's Policies for Managing Take and Use Licences (2014) calls for an IDP to accompany applications for a new or varied T&UL<sup>9</sup>.

The IDP must provide the information necessary to demonstrate how the development meets the necessary standards to minimise the impacts of water use on other persons and the environment (in particular water logging, salinity, sediments and nutrient impacts). The IDP must involve an assessment of local conditions and appropriate design of irrigation systems. The key purpose of an irrigation and drainage plan is to match the way land is irrigated and drainage is managed and disposed of, with the characteristics of the land and soil, in order to efficiently meet the objective of minimising harmful side effects of irrigation.

For the new or varied water use licence to be granted, the irrigation and drainage plan must be endorsed by the NIDG and a reference to the IDP, including the polygon approved for irrigation, recorded as part of the water use licence.

If the proponent is within areas covered by a Land and Water Management Plan, approved by the Minister, then, an appropriate overlay from a certified whole farm plan may be accepted as an IDP. This includes Loddon Campaspe Irrigation Region, Shepparton Irrigation Region and the North East Land and Water Management Plan Region.

### 4.3.2 Assessments that Inform the IDP

#### A. Map

A map of the proposed development is to be prepared which clearly identifies:

- a) Property boundaries
- b) Areas to be irrigated
- c) Type and location of crops to be planted
- d) Location of existing features e.g. buildings, roads, channels, drains, fences, water storages, reuse systems
- e) Location of water resources (including depth to groundwater)
- f) Location of proposed features
- g) Existing native vegetation, including trees, wetlands, watercourses and grasslands, and other environmental features.
- h) A range of planning overlays such as cultural heritage sensitivity areas, floodway overlays etc.

#### B. Topographical survey, including elevation data and suitable contours is to be prepared

For surface irrigation i.e. check-bank, flood and furrow irrigation systems, the maximum slope allowable is 1:50.

#### C. Soil assessment

There are different requirements for pressurised and surface irrigation systems.

#### Pressurised irrigation systems and any system on Mallee<sup>10</sup> soils.

A soil survey is undertaken to provide information to assist the developer/proponent in the preparation of an efficient irrigation design. This means the irrigation system is capable of applying accurate and uniform irrigation volumes to match the volume of readily available water that can be held in the soil. This helps to maximise productivity whilst minimising the risk of offsite impacts.

Information required for the area proposed to be irrigated is provided by a suitably qualified soil surveyor on an overlay of a map of the property and soil data sheets, and includes physical and chemical soil characteristics.

Spacing for the soil sampling for pressurised irrigation is undertaken on a 75 by 75 metre grid however broader spacing may apply for less intensive agriculture after a risk assessment demonstrating that this is justified.

The soil sampling can be undertaken in a minimum pit depth of 1.5 m or soil core to 1.8 m. Measurements of pH and soil salinity (ECe) to be obtained at representative soil types. Soil salinities should be measured for each distinctive horizon to 1.5 m.

The soil survey information is provided in a written report that includes:

- Clear property identification/identifiers (Crown Allotment etc.)
- Description of topography, hydrogeology and previous land use
- Key aspects of climate
- Soil profile descriptions - soil texture of each layer, depth of each layer, depth of potential rootzone, readily available water, soil colour, mottling, pedality, dispersion index and coarse fragments
- Factors affecting potential root zone depth
- Soil/water interactions e.g. drainage, permeability, infiltration
- Readily available water
- At least 10% of the pits are to be characterised for soil chemistry (including EC, pH and Boron)
- Land capability
- Amelioration recommendations.

<sup>7</sup> Accessed 12/9/19.

<sup>8</sup> [https://waterregister.vic.gov.au/images/documents/consolidated\\_standard\\_water\\_use\\_conditions.pdf](https://waterregister.vic.gov.au/images/documents/consolidated_standard_water_use_conditions.pdf) (Accessed 2/10/19).

<sup>9</sup> <https://waterregister.vic.gov.au/images/documents/Policies%20for%20Managing%20Take%20and%20Use%20Licenses%20-%20Approved%20by%20Water%20Min%2002.02.2014.pdf> (Accessed 16/12/19).

<sup>10</sup> Mallee soils exist in the Northern Victorian Region eg. Swan Hill and West of Loddon.



An Agriculture Victoria IDC undertakes an independent assessment of all irrigation development soil surveys conducted in the region; this may include an onsite inspection of soil pits and review of the completed soil survey maps. As part of the assessment process the IDC together with the soil surveyor, irrigation designer and where required a hydrogeologist<sup>11</sup>, will review the soil survey information and identify areas at risk of developing: perched water tables, lateral movement of irrigation drainage, and surface pooling that may affect crop productivity and/or the health of native vegetation. This group will recommend where shallow groundwater table monitoring bores should be located and nominate a monitoring frequency for early detection of groundwater table build up.

These recommendations will in part be based on the recorded depth to water-impeding layers, including depth to clay and/or hardpans which may be a potential risk. The preliminary assessment will be considered to ensure groundwater monitoring bores are installed in areas that will assist in early detection of water table development before impact upon native vegetation. Additional recommendations may be made about soil amelioration or intersecting surface drainage to protect environmental values including stands of native vegetation. The recommendations are forwarded to the NIDG in an assessment report. The IDC will include the recommendations (in whole or part) as conditions on the WUL.

#### Surface irrigation systems on non-Mallee soils.

An understanding of soil variability in the region from previous soil maps can be used to determine the required intensity of soil sampling. The required information includes:

- The area proposed to be irrigated is to be provided on an overlay of the base map of the property and on soil data sheets
- Soil samples are to be taken from cores dug every 150 metres by 150 metres or data from previously published soil maps that show:
  - a. Soil salinity for the subsoil (60–90 cm depth) in dS/m ECe (maximum threshold of 4dS/m ECe)
  - b. Soil permeability (infiltration rates) based on texture determinations (with a minimum requirement of a >30 cm thick layer of >40 % clay within the top 90 cm of the soil surface).

#### D. Irrigation design and management All developments.

The irrigation design must be completed by a suitably qualified irrigation designer to industry standards and provide information on anticipated crop water requirements and proposed maximum application rates, irrigation system specifications, and a map identifying delivery supply point and the area to be irrigated. Irrigation design will need to consider buffer requirements from waterways (including wetlands) and retained native vegetation.

The proposed irrigation scheduling arrangements should be specified.

#### Additional requirements for horticultural developments and for all developments on Mallee soils.

The general principle in the design is that 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 readily available water 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.

#### Management and monitoring of irrigation.

Performance standards for irrigation management, monitoring and reporting is required to be included as part of the IDP. These standards provide managers of the irrigation system and regulators with information that allows routine assessment of environmental risk.

The proponent is responsible for implementing the monitoring plan and reporting results to GMW. If these requirements are adequately translated into conditions on the WUL/T&UL a graduated enforcement process is available under the Water Act 1989 Section 64 AF. That process can ultimately lead to WUL/T&UL revocation in the event of repeated failure to comply with conditions.

Shallow groundwater monitoring bores may be required to monitor water tables between the proposed irrigation development and sensitive sites. Normally these will only be required if the sensitive site is downslope of the irrigation area.

Monitoring of shallow groundwater monitoring bores will provide an early indication of perched groundwater tables and the need for a drainage system to be installed.

#### E. Arrangements for drainage disposal

Developers are responsible for their own drainage disposal. The IDP must therefore include an appropriate contingency drainage design.

The need for a subsurface and/or surface drainage scheme and reuse system must be considered. A design is to be developed for the appropriate system, and it must include:

- Details on the volume of water 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.

Upstream of the Nyah Pumps if the weighted soil salinity is greater than 600 EC the IDP 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 poses direct and ongoing risks to wetlands, native vegetation, or the habitat of native animals. Depending on the NIDG's assessment of the risks involved, this assessment may need to be done by a suitably qualified person/consultant.

For those areas, the IDP must specify mitigating measures and suitable monitoring parameters, as well as appropriate monitoring equipment and locations for the equipment to be installed. The IDP must also specify equipment maintenance standards, data reading, recording, reporting and auditing requirements, corrective action thresholds, corrective action procedures, and corrective action time limits.

*Note: 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 anything authorised by the licence.*

It should be noted that the State Planning Policy Framework (SPPF) outlines Victoria's policy objectives and strategies relating to the protection and management of native vegetation. This is covered in Section 4.3.4.

#### 4.3.3 Maximum Application Rates

Schedule 2 of the standard water use conditions sets out the maximum application rates (in megalitres per hectare per year), which are to be used in conjunction with irrigated areas (in hectares) to determine annual use limits.

Annual use limits apply to all WULs and some, but not all T&UL. The annual use limit must be less than the maximum application rate for the specified crop, where crop water requirements are consistent with "Crop evapotranspiration – Guidelines for computing crop water requirements", FAO Irrigation and Drainage Paper 56.

The maximum application rates account for:

- a) All sources of water used on the property (including groundwater and surface water)
- b) Annual crop irrigation requirements (including evapotranspiration and leaching)
- c) Soil hydraulic conductivity
- d) Uniformity of water application/irrigation system efficiency.

The maximum application rates take into account some regional considerations, notably variations in evapotranspiration and rainfall.

However, where the proponent can show, using the principles and methodology set out in the above publication, that – because of local conditions, special crops, or an individual irrigation and drainage system – the application rate can safely be higher than the relevant one set out here, then the Minister may employ such higher application rate in determining the annual use limit.

#### Goulburn Broken and North Central Region (applies to the Goulburn Murray Irrigation District<sup>12</sup>).

The maximum application rates are:

- 11 ML/ha in the Loddon Murray Area north of Kangaroo Lake with off farm drainage and drainage<sup>13</sup> reuse
- 10 ML/ha for areas south of Kangaroo Lake with off farm drainage and drainage reuse
- 7.2 ML/ha for all areas with either off farm drainage or a drainage reuse system
- 5 ML/ha for all areas with neither off farm drainage or a drainage reuse system.

#### North eastern Victoria (North East CMA Region) and other areas outside the Goulburn Murray Irrigation District.

In north eastern Victoria irrigation is used primarily to supplement rainfall. Both evaporation and rainfall vary significantly across these regions. Therefore, maximum application rates, in ML/ha, will vary. Maximum application rates are calculated using the following formula:

- a) Subtract average rainfall in the period October to April inclusive (measured in millimetres) from average evapotranspiration in the same period (as calculated excluding the highest 10% of years)
  - b) Multiply the difference by a crop coefficient for the specified crop (either the crop coefficient set out in FAO Irrigation and Drainage Paper 56 or another reasonable coefficient approved by the Minister)
  - c) Divide the product by 100 (to express the result in ML/ha).
- Or as modified<sup>14</sup> by the IDC using the same principles.

<sup>11</sup> This is expected to be the proponent's hydrogeologist, but in sensitive or high risk sites GMW may nominate a hydrogeologist.

<sup>12</sup> Items in italics have been added to the text from the Standard Water Use Conditions – Schedule 2 to reflect how NIDG processes applications

<sup>13</sup> Noting there is unlikely to be off farm drainage (GMW drains or Community Surface Drains) servicing new irrigation development.

<sup>14</sup> Modification may be necessary in high rainfall areas where use of Oct-April total average rainfall does not reflect irrigation demand.

### 4.3.4 Vegetation Protection and Buffers

#### General

It should be noted that the State Planning Policy Framework (SPPF) outlines Victoria's policy objectives and strategies relating to the protection and management of native vegetation. Specifically, the following clauses give policy context and inform decision making:

- 12.01 Biodiversity
- 12.04 Significant environment and landscapes
- 13.03 Soil degradation
- 13.05 Bushfire
- 14.02 Water
- 15.03 Heritage (includes Aboriginal cultural heritage).

Clause 12.01 Biodiversity provides specific direction regarding the protection and management of biodiversity and native vegetation in Victoria. A key strategy identified in Clause 12.01 is to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation.

This is achieved through the following three-step approach, in accordance with the Guidelines (DELWP 2017).

1. Avoid the removal, destruction or lopping of native vegetation
2. Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided
3. Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation.

Clause 12.01 references the Guidelines (DELWP 2017) and the following key policy documents which planning and responsible authorities must consider as appropriate:

- Protecting Victoria's Environment – Biodiversity 2037 (Department of Environment, Land, Water and Planning, 2017).
- Any applicable biodiversity strategies, including the relevant Regional Catchment Strategy prepared under Part 4 of the Catchment and Land Protection Act 1994.
- Statewide biodiversity information maintained by DELWP.

The requirement for a planning permit to remove native vegetation is detailed in the following two Particular Provisions:

- Clause 52.16 Native vegetation precinct plan
- Clause 52.17 Native vegetation - This clause outlines the requirement for a permit to remove, destroy or lop native vegetation, including dead native vegetation.

In addition to the requirements set out in the Guidelines (DELWP 2017), other legislation may apply when native vegetation is removed. This could include:

- Flora and Fauna Guarantee Act 1988 and FFG Amendment 2019
- Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth).

Note: The above information has been sourced directly from the Guidelines for removal, lopping or destruction of native vegetation (DELWP 2017 p4-5) which can be found at: [https://www.environment.vic.gov.au/\\_data/assets/pdf\\_file/0021/91146/Guidelines-for-the-removal,-destruction-or-lopping-of-native-vegetation,-2017.pdf](https://www.environment.vic.gov.au/_data/assets/pdf_file/0021/91146/Guidelines-for-the-removal,-destruction-or-lopping-of-native-vegetation,-2017.pdf)

Further information on the regulations can be found in Section 5.4.3. It is noted that the Guidelines (DELWP 2017) may be reviewed and updated during the life of the Northern Victoria Irrigation Development Guidelines and therefore proponents and staff are advised to contact DELWP and Council early in the planning stage, to ensure up to date information for your application.

#### What does this mean for New Irrigation Developments?

A new irrigation development application must consider all of the above biodiversity (and habitat) protection requirements through liaison with the project officer (Agriculture Victoria) and the responsible authorities. For example, the application must demonstrate how the proposed use or development has been sited or designed to ensure the three step approach (e.g. avoid, minimise, offset).

It is the applicant's responsibility to ensure all approval requirements are addressed. For example, the IDP must identify those parts of the property and adjacent land where the use of water for irrigation poses direct and ongoing risks to all native vegetation as defined in the Guidelines (DELWP 2017). Depending on the NIDG's assessment of the risks involved, this assessment may need to be done by a suitably qualified person/consultant as outlined in the Guidelines (DELWP 2017).

Relevant approvals are required to be included in the package of information presented to the NIDG and will be considered during the process of endorsement by the NIDG. Conditions on the WUL/ T&UL (and the planning scheme approval) provide the vehicle for compliance for protecting against "direct and ongoing risks" to biodiversity from "the use of water for irrigation". For example, for areas identified as a risk to biodiversity, the IDP must specify mitigating measures and suitable monitoring parameters, including (where applicable) appropriate monitoring equipment and locations for the equipment to be installed. Where the latter is required, the IDP must also specify equipment maintenance standards, data reading, recording, reporting, and auditing requirements, corrective action thresholds, corrective action procedures, and corrective action time limits.

#### Buffers

When planning a new irrigation development, the plan can demonstrate best practice by incorporating design buffers (vegetated or non-vegetated) as a mitigating measure, for the protection of biodiversity and waterway health. The adoption of buffers reduces potential impacts from:

- Water tables
- Surface runoff quality (e.g. nutrients and suspended solids) into waterways
- Spray drift
- Encroachment and damage caused by operating machinery
- Soil erosion and surface water movement
- Weed invasion.

Buffers must be managed for the benefit of biodiversity in a farming system, which will include various management requirements (e.g. stock management, ecosystem services, species selection). Advice should be sought prior to approval of the new irrigation development where it includes buffers, to ensure long-term management. Responsible / referral authorities may specify conditions in any applicable planning permits.

For areas with Mallee soils where there is an identified risk from groundwater movement to native vegetation, plans must adhere to State and National legislation, as well as incorporating a specific set of buffers between irrigated areas and ecological assets. The buffers for non-Mallee and Mallee soils are specified in:

- Table 4-1 for further information regarding vegetation requirements when planning new irrigation developments for non-Mallee soils.
- Table 4-2 for further information regarding vegetation requirements when planning new irrigation developments for Mallee soils.

**Table 4 1: Vegetation requirements for irrigation developments (non-Mallee soils)**

Environmental Asset/Value	Requirements (e.g. Buffers)
Land administered under the National Parks Act 1975 and significant reserves under the Crown Land (Reserves) Act 1978	Up to 200 m or as advised by Parks Victoria
Waterways including mapped wetlands	30 metres (State Planning Policy Framework Clause 14.02)
Any vegetation which meets the definition of native vegetation as per 52.17	Tree Protection Zone (For example, 12x diameter at breast height at 1.3m) (up to 15 m maximum) which will be determined by the responsible authority on a case by case basis as per DELWP Guidelines 2017

Due to hydrogeological requirements for Mallee soils, specific buffer distances are determined depending on two main factors, as shown below:

- The assessed level of risk a proposed irrigation development is likely to have on native vegetation
- The value and condition of the native vegetation or waterway on which the proposed irrigation development is likely to impact.

The level of risk above can only be determined through obtaining data specific to the site (e.g., consultant assessment), so in most instances conservative buffer distances are adopted as a guide, as per the standards in Table 4-2. The onus is on the applicant to demonstrate the potential level of impact, and following this assessment and collaboration with applicable agencies, the buffer guide may be either increased or reduced.

For example, if there are any further risks identified on a site-by-site basis, then the buffers should be modified accordingly (e.g. increased) to minimise the risk to native vegetation. Buffer distances should only be reduced where the applicant can demonstrate that biodiversity values will not be affected. This can be done by providing further evidence e.g. the development is downslope of vegetation and may require investigations or mitigating works.

The proposed buffers must be described in the IDP and included with the supporting investigations or studies. These may be independently reviewed by the licensing authority prior to approval of the final irrigation development application and conditions. A review will not be undertaken until the irrigation design has been completed as the design will influence the decision process.

Conditions on the WUL/ T&UL provide the vehicle for compliance for protecting against “direct and ongoing risks” to biodiversity from “the use of water for irrigation”.

#### 4.4 Further Information

There are a number of resources that can be used to guide delegates and applicants through the renewal, amendment or transfer of a works, or water use licence, including:

- Development Information Packages; (available from IDC)
- Guidance document (DELWP 2017) – Exemptions from requiring panning permit to remove, destroy or lop native vegetation [https://www.environment.vic.gov.au/\\_data/assets/pdf\\_file/0018/91251/Exemptions-from-requiring-a-planning-permit-to-remove,-destroy-or-lop-native-vegetation-Guidance.pdf](https://www.environment.vic.gov.au/_data/assets/pdf_file/0018/91251/Exemptions-from-requiring-a-planning-permit-to-remove,-destroy-or-lop-native-vegetation-Guidance.pdf)
- Clause 14.02-1S of the VPP (Catchment Planning and Management) and associated policy documents as listed therein. See: [https://planningschemes.dpcd.vic.gov.au/schemes/vpps/14\\_02-1S.pdf](https://planningschemes.dpcd.vic.gov.au/schemes/vpps/14_02-1S.pdf)
- Clause 14.02-2S of the VPP (Water Quality) and associated policy documents as listed therein. See [https://planningschemes.dpcd.vic.gov.au/schemes/vpps/14\\_02-2S.pdf](https://planningschemes.dpcd.vic.gov.au/schemes/vpps/14_02-2S.pdf)

- Dam information available from DELWP. See <https://www.water.vic.gov.au/managing-dams-and-water-emergencies/dams/guidance-notes>.
- Further information on buffer management in areas of Mallee Soils can be found at <https://mk0malleecmacomvmcpd.kinstacdn.com/wp-content/uploads/2019/07/Victorian-mallee-irrigation-development-guidelines.pdf>

**Table 4 2: Standard hydrogeological buffers for irrigation developments in areas of Mallee Soils**

Environmental Asset/Value	Hydrogeological Buffers for Areas of Mallee Soils
Land administered under the National Parks Act 1975 and significant reserves under the Crown Land (Reserves) Act 1978	200m or as advised by Parks Victoria
Native vegetation stand of significance (e.g. State Park, mapped wetland etc.) Including rivers and watercourses (measured from top of bank of waterway)	30m
Roadside vegetation or vegetation corridor (if buffer is un-vegetated)	50m
Roadside vegetation or vegetation corridor (if buffer is re-vegetated)	25m
Remnant patch within property (if buffer is un-vegetated)	50m
Remnant patch within property (if buffer is vegetated)	25m
Scattered vegetation (including single paddock trees) within property	Tree Protection Zone (For example, 12x diameter at breast height at 1.3m) (up to 15 m maximum) which will be determined by the responsible authority on a case by case basis (as per DELWP Guidelines 2017)



Goulburn River.

# 5 Other approvals required for irrigation development

## 5.1 Aboriginal Heritage

With the exception of the *Aboriginal Heritage Act 2006* and the *Aboriginal Heritage Regulations 2018*, the issuing of a water use licence or a works licence cannot be withheld based on the requirements of other Acts of Parliament; however, it is important for proponents to be aware that the proposed development may not proceed without first obtaining all necessary approvals.

*Aboriginal Heritage Act 2006* and the *Aboriginal Heritage Regulations 2018* provides for the protection and management of Victoria's Aboriginal heritage (e.g. Aboriginal places, objects and human remains etc.) on private land as well as public land.

Irrigation development activities (e.g. construction of river pumps, pipeline and channel routes), in culturally sensitive landscapes can cause significant harm to Aboriginal cultural heritage. Given the primacy of these approvals, after receiving an application, the IDC will request advice from the relevant CMA's cultural adviser about any specific areas, or sensitive overlays, to avoid disturbing.

The approval agencies/decision makers that are issuing statutory authorisations for works are responsible for ensuring that the proponent is complying with the Act. This may mean having an approved CHMP lodged with the planning application. A Cultural Heritage Permit (CHP) may be required where an exempt activity or a low impact activity may be planned that will or is likely to harm an Aboriginal place. The CHMP must cover the entire development proposal at the outset – even if the development will be carried out incrementally.

The requirements for a CHMP are defined by the Act. Under regulation 7 of the Regulations, a cultural heritage management plan is required for an activity if all or part of the activity area is an area of cultural heritage sensitivity and if all or part of the activity is a high impact activity.

In that context, Irrigation developments will be 'high impact activities' if "the works are a linear project that is the construction of a pipeline with a length exceeding 500 metres; or the works are a linear project with a length exceeding 100 metres (other than the construction of an overhead power line or a pipeline with a pipe diameter not exceeding 150 millimetres); or the works affect an area exceeding 25 square metres".

If the proposed development meets any of these criteria it will require a CHMP.

The following points apply to CHMPs:

- A proponent can use a cultural heritage advisor to undertake due diligence with regard to the need for a CHMP, but this does not provide certainty. Where it is unclear whether an approved CHMP is required a Preliminary Aboriginal Heritage Test (PAHT)<sup>15</sup> may be undertaken. The PAHT is a voluntary process, which allows for the Secretary to the Department of Premier and Cabinet (Secretary) to certify whether a CHMP is required for the proposed activity. This provides certainty about whether a CHMP is required
- For new irrigation development a CHMP can be triggered by earthworks that are defined as a utility installation. This can include land new pipelines or channels
- New irrigation development will be in an area of cultural sensitivity where it is on sand dunes, ancient lakes, sand sheets, lunettes and/or within 200 m of a named waterway or across Parks Victoria land
- A CHMP or cultural heritage permit for the planned development is only required within Victorian jurisdiction and is relative to the lip of the bank of the Murray, which is the borderline. The border is difficult to define and there may be a need to investigate where the Victorian boundary applies to. This is an issue for proponents and agencies to resolve
- Other triggers for a CHMP (where a high impact activity is proposed) include activity areas that include areas within 50 m to of known or registered Aboriginal places, such as scarred trees, shell middens and artefact scatters. Also, part or all of an activity area that falls within a park (as defined, for e.g. in the National Parks Act 1975)
- A Registered Aboriginal Party (RAP) may elect to approve a CHMP. Where the RAP declines to do so, or where there is no appointed RAP, then the DELWP Secretary (that is, Aboriginal Victoria) will assess an application for approval of a CHMP. Maps of RAP areas are included in Appendix 1 - Figure 9-1 and Figure 9-2
- A CHMP is prepared by a heritage advisor who is engaged by the proponent
- A voluntary CHMP can put a worthwhile risk management process in place

- There are exemptions under the Act to doing a CHMP. For example, where all of the land for the proposed activity has been subject to 'significant ground disturbance' an exemption may apply. If there is part of an area of cultural heritage sensitivity (other than a cave) that has been subject to 'significant ground disturbance' that part is no longer an area of cultural heritage sensitivity. 'Significant ground disturbance' is defined as disturbance of:
  - a. The topsoil or surface rock layer of the ground
  - b. A waterway.
  - c. By machinery in the course of grading, excavating, digging, dredging or deep ripping, but does not include ploughing other than deep ripping.
  - Ploughing (other than deep ripping) to any depth is not significant ground disturbance. The types of machinery referred to does not include most historic machinery, but is intended to refer to machinery used in the modern-day sense.
  - Deep ripping is defined in the regulations to mean 'ploughing of soil using a ripper or subsoil cultivation tool to a depth of 60 centimetres or more'. The burden of proving that an area has been subject to significant ground disturbance rests with the applicant for a statutory authorisation for the activity. The responsible authority may assist by providing the applicant access to any relevant records it has about past land use and development.

Note: even where significant ground disturbance has affected the land, if Aboriginal cultural heritage is present, it is protected by the Act. A proponent must then apply for a CHP or prepare a voluntary CHMP, where harm to Aboriginal cultural heritage cannot be avoided.

An application for a cultural heritage permit (CHP) may be required if a proposed activity or works will harm or is likely to harm Aboriginal cultural heritage (Aboriginal place or object). A Heritage Advisor can prepare and apply for a CHP on the proponent's behalf. This is usually for individual Aboriginal places.

For all activities there are reporting and compliance requirements that need to be met when undertaking works. This includes:

- Stopping work immediately and contacting the Victorian police and State Coroner's Office if suspected human remains are discovered. Human remains should not be touched or removed
- If suspected Aboriginal cultural heritage place or objects on any public or private land in Victoria are found they must be reported promptly to Aboriginal Victoria under the *Aboriginal Heritage Act 2006*
- Notify Aboriginal Victoria of a discovery by completing a Preliminary Report form

- Avoid harm to any suspected Aboriginal place or objects
- Do not remove any Aboriginal cultural heritage
- Contact Aboriginal Victoria regarding management and protection of Aboriginal places.

Further information is available at:

- *Aboriginal Heritage Act 2006*: <https://www.vic.gov.au/aboriginalvictoria/heritage/aboriginal-heritage-act-2006-and-the-aboriginal-heritage-regulations-2018.html>
- *Aboriginal Heritage Regulations 2018*: <https://www.vic.gov.au/aboriginalvictoria/heritage/heritage-tools-and-publications/guides-forms-and-practice-notes-for-aboriginal-heritage-management.html>
- Aboriginal Affairs Victoria (<http://www.vic.gov.au/aboriginalvictoria>)
- General enquiries – 1800 762 003
- Information Victoria Call Centre – 1300 366 356
- Email: [Aboriginalaffairs@dpc.vic.gov.au](mailto:Aboriginalaffairs@dpc.vic.gov.au)
- Heritage Division, Department of the Environment, Water, Heritage and the Arts <http://www.environment.gov.au/heritage/about/indigenous/index.html>
- *Aboriginal Heritage Act 2006* (amended 2016) (<http://www.vic.gov.au/aboriginalvictoria/heritage/aboriginal-heritage-act-2006-and-2016-amendment.html>)
- *Aboriginal Heritage Act 2006* – Information sheets
- *Aboriginal Heritage Regulation 2007*
- Guide to Preparing Aboriginal Cultural Heritage Management Plans
- Cultural Heritage Management Plan Tool
- *The Aboriginal Heritage Act 2006* - Advisory note – June 2007
- *Aboriginal and Torres Islander Heritage Protection Act 1984*
- Local Governments planning and building permits and Cultural Heritage Management Plan.
- Cultural heritage guide for volunteer groups developed by Landcare: <https://www.landcarevic.org.au/assets/Uploads/Aboriginal-Cultural-Heritage-Guide-Oct-2019-compressed.pdf>

<sup>15</sup> <https://www.aboriginalvictoria.vic.gov.au/preliminary-aboriginal-heritage-test>

## 5.2 Public Land Manager Consent

Works within the Public Conservation and Resource Zone and Public Park and Recreation Zone require consent from the public land manager prior to applying for a planning permit.

Further information is available at Siting and Design Guidelines for Water Diversion Works across Crown Land (NRE, 2001).

## 5.3 Local Council Requirements

Land use and development are controlled by "responsible authorities", usually local government authorities, under planning schemes. Planning schemes set out policies and requirements for the use, development and protection of land. There is a planning scheme for every municipality in Victoria. Planning schemes throughout Victoria consist of:

- A State Planning Policy Framework
- A Local Planning Policy Framework (containing a Municipal Strategic Statement)
- Zone and overlay provisions
- Particular provisions
- General provisions
- Definitions.

The State Planning Policy Framework covers very broad issues/policies that affect the whole of the State, such as housing. The Local Planning Policy Framework contains a Municipal Strategic Statement and local planning policies. This section provides the long-term directions for land use and development in the local municipality.

The Zone, Overlay and Particular Provision requirements provide the controls over the type of use and development allowed in each zone. This is primarily the information with which new irrigation developers will be concerned.

There may also be local laws that could affect a development; for example, a local law may prohibit the discharge of water on to Council land, such as roadsides.

## 5.4 Planning Permits

It is not easy to make generalisations about when planning permits are required and when they are not. This will differ between municipalities and will depend on the land in question and the activity proposed. Each Zone, Overlay and Particular Provision will require different information to be submitted with a planning application.

For example, a parcel of land may be zoned Farming, allowing general agricultural pursuits while requiring a permit for more intense uses such as a piggery or rice growing. The parcel may also be subject to a Salinity Management Overlay that may require a permit for earthworks, and a Rural Floodway Overlay, which may require a permit to construct or carry out any works. The proposed development may also be subject to a particular provision relating to, for example, signage or a local law may apply.

There are requirements in all planning schemes, both in farming zone and flood overlays, regarding earthworks and the impact on flooding and drainage. For example, in the Rural City of Wodonga, even outside the flood overlays a permit is required for "Earthworks which change the rate of flow or the discharge point of water across a property boundary."

In the Shepparton Irrigation Region, there are floodplain management guidelines for whole farm plans to meet the drainage and flooding requirements. These are available at:

[https://www.gbcma.vic.gov.au/downloads/FloodplainManagement/Mar2003\\_FinalWFPGuidelines.pdf](https://www.gbcma.vic.gov.au/downloads/FloodplainManagement/Mar2003_FinalWFPGuidelines.pdf)

They assist landholders in ensuring that the proposed works comply with the relevant sections of the Water Act, 1989. In particular, proposed works must not:

- cause or interfere with a reasonable flow (s 16 & 20);
- affect flood behaviour in areas declared as liable to flooding, or for which flood levels, flood fringe areas or building lines have been declared (s 203 - 210); or
- obstruct or interfere with flows in Declared Drainage Schemes (s 218).

Prospective developers having identified a parcel of land, should in the first instance contact the local planning department or ask the IDC about specific requirements.

The planning approval process can vary in time depending on the complexity of the development and the level of referral required. Local Council may need to refer the application on to another agency, such as DELWP, the relevant CMA, GMW, or VicRoads. In some cases, the agency must be given twenty-eight days to respond, before Local Council can make a decision.

Most new irrigation developments will occur within existing Farming Zones and pump/pipeline infrastructure from rivers may or may not occur within the Public Conservation and Resource Zone. The type of activities controlled in Zones throughout the State will vary depending on the applicable overlays. Overlays contain special planning controls that protect special features of land covered by the overlay. There are a number of types of Planning Scheme Overlays that are likely to affect rural land:

- Environmental Significance
- Vegetation Protection
- Significant Landscape
- Erosion Management
- Salinity Management
- Floodway
- Land Subject to Inundation
- Special Building
- Bushfire Management
- Heritage.

### 5.4.1 Uses and Developments Which May Require a Planning Permit

This is a list of examples only and may not be complete. Please contact your relevant Local Council for advice:

- Rice growing or other ponded irrigation
- Cattle Feedlots
- Native Vegetation Removal (including limb lopping and impacts to the Tree Protection Zone (root system) of trees)
- Pump and/or pipelines on or across Crown Land
- Earthworks (including laser grading)
- Road crossings or under boring
- Timber production
- Intensive animal husbandry
- Subdivision
- Constructing a building or other construction or carrying out works.

Where the removal of native vegetation is proposed to facilitate an irrigation development, any planning permit issued granting approval to remove native vegetation may be conditioned to require evidence that the requirements of the Water Act have been met. For example:

**"No removal of native vegetation is to occur until evidence of a [Water Use Licence] and/or [a Works Licence] having been issued under the Water Act 1989 in relation to the [proposed irrigation development] and/or [proposed works to construct a pump and pipeline to extract water from a regulated waterway] is provided to the responsible authority and/or [DELWP region]."**



Reedy Swamp - White Ibis and Royal Spoonbills nesting.

### 5.4.2 Local Council Planning Approval

Application may be approved subject to conditions, or may be refused. If refused, an applicant may appeal the decision to VCAT.

### 5.4.3 Native Vegetation Regulations

A planning permit is required to remove, lop or destroy native vegetation under Clause 52.17 of all planning schemes in Victoria. All applications to remove native vegetation must demonstrate they have followed the three-step approach:

1. Avoid the removal, destruction or lopping of native vegetation
2. Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided
3. Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation.

The application must demonstrate how the proposed use or development has been sited or designed to avoid and minimise impacts on native vegetation, and that no feasible opportunities exist to further avoid and minimise impacts on native vegetation without undermining the key objectives of the proposal.

Biodiversity offsets compensate for the loss in biodiversity value when native vegetation is removed. An offset is delivered by protecting and managing native vegetation at an offset site. This protection and management improves the security and condition of the native vegetation, resulting in 'gain'. This gain is used to meet the offset requirements when native vegetation is removed<sup>16</sup>.

There are three types of offsets:

- A species offset (Species Habitat Unit) is required when the removal of native vegetation has a significant impact on habitat for a rare or threatened species
- A general offset (General Habitat Unit) is required when the removal of native vegetation does not have a significant impact on habitat for a rare or threatened species
- Large tree attribute – offsets must include one large tree for every large tree to be removed.

Following approval of a planning permit, required offsets must be secured prior to the removal of any native vegetation. As part of the planning permit application, evidence must be provided that the required offset is available:

- For purchase from a third party
- Will be established as a new third party offset site
- Can be met by a first party offset.

First party offset sites are on land owned by the holder of a permit to remove native vegetation. They are used to meet landowners' own offset requirements.

First party offset sites must have a ten-year management plan and must be secured in perpetuity with either:

- An agreement with the Secretary to DELWP under section 69 of the Conservation, Forests and Lands Act 1987
- An agreement with a responsible authority under section 173 of the Planning and Environment Act 1987
- An agreement with Trust for Nature to register an offset covenant under the Victorian Conservation Trust Act 1972.

Prior to progressing First party offset sites, applicants must receive the written agreement from the statutory body that they will enter into a security agreement.

Third party offsets are established on land not owned by the permit holder. Third party offsets are purchased as a single, once-off transaction through a vegetation broker. Evidence that a third-party offset has been secured is a credit extract allocated to the permit from the Native Vegetation Credit Register. Further information is available at: <https://www.environment.vic.gov.au/native-vegetation/native-vegetation> and [https://www.environment.vic.gov.au/\\_data/assets/pdf\\_file/0018/90360/Permitted-clearing-of-native-vegation-Biodiversity-assessment-guidelines.pdf](https://www.environment.vic.gov.au/_data/assets/pdf_file/0018/90360/Permitted-clearing-of-native-vegation-Biodiversity-assessment-guidelines.pdf).

### 5.5 River Murray and Nsw Approvals

Developments on the Murray River may require a NSW Development Application or other approval from the relevant NSW municipality and/or authorities (e.g. fisheries, maritime). Applicants are advised to contact the relevant Local NSW Council for advice on approvals.

### 5.6 Environmental Protection and Biodiversity Conservation

The *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* is the Australian Government's central piece of environmental legislation and is administered by the Commonwealth Government's Department of the Environment and Energy. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places defined in the Act as matters of national environmental significance.

If a proposed project could impact on any matters of national environmental significance, it must be referred to the Commonwealth Government under the EPBC Act. The Significant Impact Guidelines outline a self-assessment process to determine if a referral is required. If a project is referred, the Commonwealth will advise if the project is a Controlled Action requiring assessment against the requirements of the EPBC Act.

It is the applicant's responsibility to ensure their actions will not impact on a matter of national environmental significance and to ensure they have all necessary approvals before taking an action.

Further information is available at:

- Department of the Environment and Energy: 1800 803 772
- *Environment Protection and Biodiversity Conservation Act (EPBC) 1999 and Regulations 2000*
- Significant Impact Guidelines: <http://www.environment.gov.au/epbc/publications/significant-impact-guidelines-11-matters-national-environmental-significance>.

### 5.7 Flora and Fauna Conservation

The *Flora and Fauna Guarantee Act (FFG) 1988* and *FFG Amendment Act 2019* is the key piece of Victorian legislation for the conservation of threatened species and communities and for the management of potentially threatening processes.

A Protected Flora Permit for works on public land must be obtained if the works may affect plants or communities listed in the Protected Flora List (DELWP 2017).

### 5.8 Environment Effects Act 1978

If the proposed project could have a significant effect on the environment, it must be referred to the Victorian Minister for Planning for a decision on whether an Environmental Effects Statement is required. The criteria for referral include clearing 10 hectares or more of native vegetation, potential impacts on threatened species, important wetlands, and/or Aboriginal cultural heritage.

Pre-referral consultation with the DELWP Referrals Coordinator (03) 8392 5474 is encouraged or for more information please visit <https://www.planning.vic.gov.au/environmental-assessment/environment-effects-referrals>.

The bilateral agreement between Victoria and the Commonwealth Government avoids duplication of assessment processes. Victoria can assess proposals that the Commonwealth has determined as controlled actions under the EPBC Act, and are also likely to have a significant impact on the environment under the Victorian EE Act. The Commonwealth will still make the approval decision under the EPBC Act, relying on the assessment report prepared by the relevant Victorian decision maker. For more information please visit: <https://www.planning.vic.gov.au/environmental-assessment/environmental-assessment-bilateral-agreement>.

### 5.9 Wildlife Protection and Conservation

The purpose of the *Wildlife Act 1975* is to establish procedures in order to promote the protection and conservation of wildlife, the prevention of taxa of wildlife from becoming extinct and the sustainable use of and access to wildlife; and to prohibit and regulate the conduct of persons engaged in activities concerning or related to wildlife. All native wildlife in Victoria is protected under the *Wildlife Act 1975*. For some developments a Wildlife Management Plan may be required, for example:

- Where there is a significant land use change and a sustainable approach is required to manage wildlife populations (non-destructive control methods), for example changes from dryland agriculture to irrigated horticulture.
- Where measures to protect, salvage and translocate native fauna are required during the removal of native vegetation. Wildlife handling, including the capture and translocation of fauna, requires a permit from DELWP, known as a Wildlife Management Authorisation.

<sup>16</sup> This information as accessed from [https://www.environment.vic.gov.au/\\_data/assets/pdf\\_file/0023/329450/info-sheet-A-quick-comparison-of-first-party-and-third-party-offset-sites.pdf](https://www.environment.vic.gov.au/_data/assets/pdf_file/0023/329450/info-sheet-A-quick-comparison-of-first-party-and-third-party-offset-sites.pdf) on 21 May 2019.

## 5.10 Floodplain Management and Works on Waterways

### 5.10.1 Statutory Planning Responsibilities

CMA's have statutory planning responsibilities under the *Planning and Environment Act 1987*; as well as being the regional caretaker of river health. Activities include statutory planning and flooding referrals, works on waterways permitting, flood and river health awareness, development of and support for flood studies, including support for cost-effective flood mitigation measures and flood warning systems.

These waterway and floodplain statutory actions/responsibilities are underpinned by the *Regional Waterway Strategies* and *Regional Floodplain Management Strategies*.

### 5.10.2 Flood Level Advice

Flood advice for a specific property or specific regions can be obtained from the relevant CMA. Flood advice helps landowners to understand their risks and is useful for:

- People looking to buy or rent a property
- Property owners looking to renovate their house or build an extension
- Developers looking to subdivide a property.

Generally, most works within a defined flood prone area require a planning permit from the local Council. Council will refer these development proposals to the relevant CMA for advice and/or its approval. The CMA's encourage landowners/developers to obtain flood level advice early so that any development proposal identifies and mitigates potential risks associated with flooding.

The Victorian Planning Provisions (VPPs) provide the basis for all statutory land use planning controls in Victoria. The main mechanisms of the VPPs with respect to floodplain mapping and control are contained in the following zones and overlays:

- Urban Floodway Zone (UFZ)
- Special Building Overlay (SBO)
- Environmental Significance Overlay (ESO)
- Design and Development Overlay (DDO)
- Floodway Overlay (FO)
- Land Subject to Inundation Overlay (LSIO).

There are specific controls relating to buildings and works proposals contained within the overlay control. There are also extensive guidelines that the responsible authority must consider before deciding on an application. All applications must be referred to the relevant floodplain management authority (CMA), unless in the opinion of the responsible authority the proposal satisfies requirements or conditions previously agreed in writing between the responsible authority and the floodplain management authority.

### 5.10.3 Works on Waterways

Many work practices in the past have caused major degradation of waterways. To protect and rehabilitate rivers and creeks there is a need to ensure that any works undertaken on designated waterways do not adversely affect the health of those waterways. Works and activities within the bed and banks of designated waterways require a permit from the relevant CMA. Works and activities may include:

- Bridges
- Culverts
- Fords
- Service crossings
- Storm water outlets
- Drop structures
- Stream deviations
- Extractions
- Bed and bank stabilisation
- Large woody debris removal
- Vegetation management.

Further information regarding these matters can be obtained from the relevant CMA.

## 6 References

Allen R.G. (1998) Crop evapotranspiration – Guidelines for Computing crop water requirements, FAO Irrigation and Drainage Paper 56.

ANCOLD (2002) Guidelines on Assessment of the Consequences of Dam Failure.

DELWP (2017) Guidelines for removal, lopping or destruction of native vegetation [https://www.environment.vic.gov.au/\\_data/assets/pdf\\_file/0021/91146/Guidelines-for-the-removal,-destruction-or-lobbing-of-native-vegetation,-2017.pdf](https://www.environment.vic.gov.au/_data/assets/pdf_file/0021/91146/Guidelines-for-the-removal,-destruction-or-lobbing-of-native-vegetation,-2017.pdf)

DELWP (2019) Draft Advisory Note- September 2019 Irrigation Development Guidelines- Victoria

DSE (2007) Your Dam Your Responsibility, A Guide to the Managing of Safety of Farm Dams.

DSE (2010) Advisory Note on Irrigation Development Guidelines in Victoria (Version 2.0).

North Central, Goulburn Broken and North East Regional Catchment Strategies.

Loddon Campaspe Irrigation Region, Shepparton Irrigation Region, and North East Land and Water Management Plans.

North Central, Goulburn Broken and North East Waterway and Floodplain Management Strategies.

Mallee CMA (2017) Victorian Mallee Irrigation Development Guidelines

Minister for Water (2007) Ministerial Determinations.

Victorian Planning Provisions [https://planning-schemes.api.delwp.vic.gov.au/schemes/vpps/14\\_02-001S.pdf?\\_ga=2.8932214.290041624.1606288748-975258564.1544147380](https://planning-schemes.api.delwp.vic.gov.au/schemes/vpps/14_02-001S.pdf?_ga=2.8932214.290041624.1606288748-975258564.1544147380)



Centre pivot irrigator.

# 7 Appendix 1: Legislative Framework and Regional Catchment Strategy Context

## 7.1 Overall Framework

There are two main legislative and administrative pathways associated with WULs:

- The Victorian Water Act 1989
- The Regional Catchment Strategy (RCS) developed under the CaLP Act 1994.

The WUL is the legislative vehicle that brings the two together. Outlined in this section are the relevant policies related to irrigation development. However, agency staff and developers also need to be aware that conditions may also be set under:

- Planning and Environment Act 1987
- Aboriginal Heritage Act 2006
- Flora and Fauna Guarantee Act 1988 and and FFG Amendment Act 2019
- Environmental Protection and Biodiversity Conservation Act 1999
- Wildlife Act 1975
- Any other requirements contained in Acts of Parliament and implemented by other authorities or by other states.

It is important that irrigation developers are made aware that there may be additional requirements under these acts when applying for a WUL. The applicant will need to engage with the relevant authorities outside of the irrigation development process in order to ensure all legislative obligations are met. Whilst the issuing of a licence cannot be withheld based on the requirements of other Acts of Parliament, a licence to divert water, if issued, does not override or negate the need for the applicant to meet the requirements under other acts of Parliament. Therefore, it is important for applicants to be aware that the proposed development is unlikely to proceed without first obtaining all necessary approvals.



Kanyapella Community Visit.

## 7.2 Links to Key Legislation

Table 7-1 provides links to the current version of the main pieces of legislation.

Table 7 1: Links to Legislation

ACT	URL
<b>The Victorian Water Act 1989</b>	<a href="http://classic.austlii.edu.au/au/legis/vic/consol_act/wa198983/">http://classic.austlii.edu.au/au/legis/vic/consol_act/wa198983/</a>
<b>CaLP Act 1994</b>	<a href="http://classic.austlii.edu.au/au/legis/vic/consol_act/calpa1994267/">http://classic.austlii.edu.au/au/legis/vic/consol_act/calpa1994267/</a>
<b>Planning and Environment Act 1987</b>	<a href="http://classic.austlii.edu.au/au/legis/vic/consol_act/paea1987254/">http://classic.austlii.edu.au/au/legis/vic/consol_act/paea1987254/</a>
<b>Aboriginal Heritage Act 2006</b>	<a href="http://classic.austlii.edu.au/au/legis/vic/consol_act/aha2006164/">http://classic.austlii.edu.au/au/legis/vic/consol_act/aha2006164/</a>
<b>Flora and Fauna Guarantee Act 1988</b>	<a href="http://classic.austlii.edu.au/au/legis/vic/consol_act/fafga1988205/">http://classic.austlii.edu.au/au/legis/vic/consol_act/fafga1988205/</a>
<b>FFG Amendment Act 2019</b>	<a href="http://classic.austlii.edu.au/au/legis/vic/num_act/fafgaa201928o2019331/">http://classic.austlii.edu.au/au/legis/vic/num_act/fafgaa201928o2019331/</a>
<b>Environmental Protection and Biodiversity Conservation Act 1999</b>	<a href="https://www.legislation.gov.au/Details/C2019C00275">https://www.legislation.gov.au/Details/C2019C00275</a>
<b>Wildlife Act 1975</b>	<a href="http://classic.austlii.edu.au/au/legis/vic/consol_act/wa197593/">http://classic.austlii.edu.au/au/legis/vic/consol_act/wa197593/</a>

Information on water entitlements is also available at the Victorian Water Register at <https://waterregister.vic.gov.au/>.

## 7.3 Victorian Water Act 1989

The Victorian Water Act 1989 is the legislation governing the way water entitlements are issued and allocated in Victoria. It defines water entitlements and establishes the mechanisms for managing Victoria's water resources. Table 1 outlines sections of the Victorian Water Act 1989 relevant to new irrigation development (DSE, 2010).

### 7.3.1 Ministerial Determinations

In the regulated declared surface water systems of northern Victoria, water entitlements have three component parts:

- A water share
- An extraction entitlement which is a share of delivery capacity (extraction shares from a waterway for private diverters or delivery shares within pumped districts)
- A WUL (or registration for purposes other than irrigation) to use water on specific land parcels subject to certain conditions.

In unregulated surface water systems, some undeclared regulated systems (eg. Coliban Rural System) and in groundwater systems, these three components are bundled together in the T&UL.

The setting of Water Use Objectives, WUL/T&UL conditions and works licence conditions all occur under the Victorian Water Act 1989. GMW acts as the Minister for Water's delegate, and on behalf of the Minister, authorises the use of water through issuing WULs/T&ULs and works licences.

Extraction share is issued as a condition on works licences. The issuing of additional extraction share downstream of the Barmah Choke may pose a risk to the deliverability of water for third parties and affect the river environs. Therefore applications that involve an increase in extraction share below the Choke must be referred to the Minister for Water for assessment before they can be recorded in the Water register.



**Table 7 2: Sections from the Victorian Water Act 1989 relevant to new irrigation development**

	SECTION	DESCRIPTION
<b>Water Use Licence</b>	Section 64L	A person requires a WUL under Section 64L to use water on land for irrigation purposes if the water is taken from a declared water system (i.e. an unbundled system such as the Murray water system).
	Section 64M	In dealing with an application, the relevant Water Corporation is required to consider: <ul style="list-style-type: none"> <li>• Impacts the proposed use may have on other persons or the environment (in particular water logging, salinity and nutrient impacts)</li> <li>• Whether or not the proposed use can meet Standard Water Use Conditions that would apply to the licence, if granted</li> <li>• Any comments received from the CMA, if the application was referred to the CMA and comments received within 30 days of the referral</li> <li>• Any other matters the Minister considers relevant to that Corporation.</li> </ul>
<b>Take and Use Licence</b>	Section 51	A person requires a licence under Section 51 of the Act to 'take and use' water from a groundwater system, or surface water which is not a declared system (i.e. water system that has not been unbundled).
	Section 53 and 56	In considering an application for such a licence, and the conditions to be imposed, the Water Corporation is required to consider matters outlined under Section 53 and 56 of the Act, including: <ul style="list-style-type: none"> <li>• Any adverse effect the exercise of rights under the licence is likely to have on in-stream uses of water, on the aquifer or on the flow of water within the waterway (e.g. water availability, permissible consumptive volume, water quality)</li> <li>• The effects on the implementation of the conservation policy of the government, and the need to protect the environment, including the riverine and riparian environment</li> <li>• The purpose for which the water is to be used</li> <li>• Any other matter that the Minister thinks fit.</li> </ul>
<b>Works Licence</b>	Section 67	A works licence is required to construct and operate works on a waterway, groundwater bore and certain private dams. A works licence is generally required to pump water from a waterway or aquifer. A works licence can authorise a person to enter onto and install works on Crown Land; but it does not authorise the applicant to lay pipes on freehold land or to remove vegetation.
	Section 68	Section 68 lists the matters to be taken into account in considering an application for a works licence.

### 7.3.2 Water Use Objectives

The Ministerial Determinations set out five Water Use Objectives that the conditions on WULs/T&ULs must strive to meet if they are to be valid at law. These same objectives inform the Minister's policies for managing T&ULs. The objectives are:

- Managing groundwater infiltration
- Managing disposal of drainage
- Minimising salinity
- Protecting biodiversity
- Minimising cumulative effects of water use.

The standard water use conditions specified for new or varied WULs are:

#### Managing groundwater infiltration

- (a) Water used for the purposes of irrigation on the land specified in the licence must be measured through a meter approved by a water authority unless the water authority has granted an exemption from this requirement in writing.
- (b) Unless the Minister, with the written agreement of the relevant Catchment Management Authority, has declared a seasonal adjustment to an annual use limit or limits to accommodate exceptionally high evapotranspiration, the maximum volume of water that may be applied to the land specified in the licence in any 12-month period from 1 July to 30 June will be the annual use limit, calculated from the sum of the maximum application rates as set out in Schedule 2 multiplied by the area to which each of those rates apply.

Note: the annual use limit will be a particular condition recorded as part of the licence but derived from the standard condition set out above.

- (c) Ponded irrigation must not be carried out on the land specified in the licence without the addition of particular conditions governing the use of such an irrigation system.

#### Managing disposal of drainage

- (d) Where irrigation results in drainage from the land specified in the licence, water may only be used for irrigation while that drainage water is disposed of in accordance with:
- the arrangements specified in the endorsed irrigation and drainage plan, and
  - any terms and conditions that apply to a drainage service that is employed.

#### Minimising salinity

- (e) Where the endorsed irrigation and drainage plan identifies that the quality of the water being used for irrigation poses significant risk of salt accumulating in the irrigated soil, water may only be used for irrigation if its electrical conductivity lies within the range specified in the endorsed irrigation and drainage plan.
- (f) Where – (i) the endorsed irrigation and drainage plan shows that all or part of the land being irrigated is within a 'salinity impact zone<sup>17</sup>', and (ii) the Minister under section 287A of the Act has given notice in writing requiring the owner to make a payment or payments towards the cost of works or measures to off-set any impact on river salinity – water may only be used for irrigation while the payments are being made as required in the notice.

#### Protecting biodiversity

- (g) Where the endorsed irrigation and drainage plan identifies that the use of water for irrigation poses direct and ongoing risks to wetlands, native vegetation, or the habitat of native animals, water may only be used for irrigation while the licence holder meets the relevant monitoring and correctional requirements specified in the plan with regard to:
- installing and maintaining the specified monitoring equipment; and
  - following the specified data reading, recording, reporting and auditing requirements; and
  - carrying out the specified corrective action procedures, within the specified time, where a specified threshold for these is breached.

Similar conditions apply to new and varied T&ULs; there are some differences, for example, an annual use limit is not always specified; in which case the maximum use is the licensed volume. The definitive source on policies for managing T&ULs and WULs is available at <https://waterregister.vic.gov.au/water-entitlements/about-entitlements/take-and-use-licences> and <https://waterregister.vic.gov.au/water-entitlements/about-entitlements/water-use-licences>

<sup>17</sup> This is only relevant to the Mallee Region, and is applicable within the North Central, Goulburn Broken or North East CMA Regions.

### 7.3.3 Standard Water use Conditions

The Ministerial Determination for Standard Water Use Conditions describes the baseline requirements that address the Water Use Objectives. These requirements need to be met in order for the relevant Water Corporation to grant and issue a WUL as a delegate of the Minister for Water. This determination applies to all WULs granted for use of water from water systems that are declared under Section 6A of the Act, including WULs that are deemed to have been created as a result of declaration of a water system, and WULs granted after a water system has been declared ("new or varied WULs"), as set out in the determination.

There are two types of standard water use conditions depending on whether the WUL existed before 2007 unbundling (and therefore is deemed to be created under Schedule 15 of the Victorian Water Act 1989) or has been created (new) or varied post unbundling. Each of these is discussed below. The main focus for the Guidelines is on new or varied licences.

#### Licences created under Schedule 15 of the Victorian Water Act 1989 (pre-unbundling).

WULs that existed at the time the Ministerial Determination for standard water use conditions came into effect, or were created as part of the process of unbundling the water system, are subject to the following standard conditions:

- Managing groundwater infiltration – Metering
- Managing groundwater infiltration – Ponded Irrigation
- Managing groundwater infiltration – Seasonal Adjustment
- Managing disposal of drainage water.

#### New or varied water use licences (post unbundling).

Under the Ministerial Determination irrigation developments or irrigation expansion activities requiring new or varied WULs are required to meet higher performance levels that are closer to best practice. More stringent standard water-use conditions are therefore applied, including the development of an irrigation drainage plan (IDP) as set out in Schedule 1 of the Ministerial Determination.

A list of conditions is provided in Appendices 5, 6, and 7.

The key purpose of an IDP is to illustrate how the irrigation system design and proposed drainage water disposal takes into consideration the characteristics of the landscape and soil type, and how it minimises harmful side-effects. By matching crop types to soil suitability, and then designing irrigation systems based around that information, the irrigation development can meet a number of the water use objectives, including minimising recharge to the groundwater.

### 7.3.4 Particular Water use Conditions

Where a development might require particular conditions to be placed on the WUL, which are not catered for within the standard conditions, the relevant Water Corporation may place "particular conditions" on the licence provided that these conditions meet the Minister's Water Use Objectives.

Approval agencies may request particular conditions to meet individual requirements specific to a location or circumstance peculiar to a development proposal. This would normally occur in response to a specified environmental risk or risks, having been identified in association with the development, which may require a higher level of management or mitigation activity than allowed for within the standard water use conditions.

### 7.3.5 Policies for Managing Works Licences

The procedures and processes to be applied to an application for renewal, amendment or transfer of a works licence are set out in the Policies for Managing Works Licences. These Policies apply to all licences under Section 67 of the Water Act 1989 that are associated with the authorised take, use, conveyance or storage of water in Victoria. These policies were amended in September 2016 with all related previous policies being revoked.

Key requirements set out in Part two of the policies are:

- The scope of works
- Requirements for issuing of a works licence
- Guidance for assessing applications that include construction and installation of dams and bores.

## 7.4 Catchment and Land Protection Act (CALP) 1994

The CaLP Act 1994 has an objective of establishing a framework for the integrated and coordinated management of catchments which will maintain and enhance long term land productivity while also conserving the environment. The Act aims to ensure that the quality of the State's land and water resources and their associated plant and animal life are maintained and enhanced.

The CaLP Act 1994 provides for the development of RCSs by Catchment Management Authorities which, among other things, must assess the nature, causes, extent and severity of land degradation of the catchments in the region and identify areas for priority action.

Local Planning schemes must have due regard for the RCSs. With regard to WULs, the RCSs relate to the conditions placed on the use of water.

### 7.4.1 Regional Catchment Strategies

The RCS is the overarching integrated planning framework for land, water and biodiversity in each CMA region. The RCS sits as an overall framework for the region's sub-strategies and action plans. It was developed in partnership with key regional stakeholders and provides a six-year plan for strategic action to support and focus the ongoing coordinated effort between land, water and biodiversity management agencies within the region.

The RCS sets an aspirational vision for the management of natural, cultural and productive landscapes; long-term (twenty year) objectives for the condition of assets within these landscapes; short term (six year) strategic actions required to achieve these objectives; and identifies the regional partners responsible for the delivery.

The RCS does not set specific management activities or on-ground targets; these are found within supporting plans that sit under and align to the RCS, such as the relevant Land and Water Management Plan (LWMP).

### 7.4.2 Land and Water Management Plan

The LWMP seeks to protect the region's natural resource assets from the impacts of irrigation to ensure long-term sustainability of the irrigation industry and the community in which it is based. These guidelines align with the LWMP providing the requisite level of technical detail necessary for the approval process and the accounting of impacts.

Each LWMP conforms to the Basin Salinity Management 2030 (BSM2030), and each continues the case management approach to help developers in navigating the various legislative requirements and assist in the implementation of these guidelines. These Guidelines are a companion document to those LWMPs that assist the region in meeting the water use objectives set by the Minister under section 64U of the Water Act 1989.



Orchard Soil Moisture Monitoring.

## 7.5 Overarching Legislation

### 7.5.1 Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2018

Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2018 provides for the protection and management of Victoria's Aboriginal heritage (e.g. Aboriginal places, objects and human remains etc.) from irrigation development activities on private land as well as public land. It is essential to start investigations on what the requirements of the Aboriginal Heritage Act 2006 (the Act) might be at the start of the planning phase. Usually a cultural heritage management plan will be required (CHMP). More detailed information on the above is covered in 5.1 and the Registered Aboriginal Party boundary areas are available at <https://aboriginalheritagecouncil.vic.gov.au/victorias-current-registered-aboriginal-parties>.

A decision maker cannot grant a statutory authorisation for an activity which requires a CHMP, until the CHMP is approved (S.52 of the AH Act).

### 7.5.2 The National Parks Act 1975, the Crown Land Reserves Act 1978

This requires the public land manager's consent for the development where privately-owned river pumps and associated infrastructure are located within the public conservation and resource zone and Public Park and Recreation Zone, usually along the Murray River and other water courses with Crown frontage. In order to construct, alter, operate, remove or decommission any works from Victorian water systems, consent from the public land manager is required first and before an application is made for a planning permit or a works licence. Again, this should be an early part of the assessment.

### 7.5.3 The Flora and Fauna Guarantee Act (FFG) 1988 and FFG Amendment Act 2019, Environmental Protection and Biodiversity Conservation Act 1999; Wildlife Act 1975

This is the key piece of Victorian legislation for the conservation of threatened species and communities and for the management of potentially threatening processes. Native vegetation, biodiversity offset requirements, buffer distance requirements all need to be assessed. All native vegetation likely to be impacted should be checked against the Protected Flora List (DEPI, 2014) to determine whether FFG approvals are required. Protected Flora Permits can be obtained from the Department of Environment, Land, Water and Planning's regional office. More detailed information on the above is covered in Chapter 5.

### 7.5.4 Planning and Environmental Act 1987

Land use and development are controlled by "responsible authorities", usually local government, under planning schemes. Local Councils usually refer the application on to another agency, such as DELWP, the relevant CMA, Goulburn-Murray Water, or VicRoads. More detailed information on the above is covered in Chapter 5.

### 7.5.5 Environment Effects Act 1978

If the proposed project could have a significant effect on the environment, it must be referred to the Victorian Minister for Planning for a decision on whether an Environmental Effects Statement is required. The criteria for referral include clearing 10 hectares or more of native vegetation, potential impacts on threatened species, important wetlands, and/or Aboriginal cultural heritage.

Pre-referral consultation with the DELWP Referrals Coordinator (03) 8392 5474 is encouraged or visit <https://www.planning.vic.gov.au/environmental-assessment/environment-effects-referrals> for more information.



Environmental watering of Wirra-lo wetland at Murrabit West taken in December 2019

# 8 Appendix 2: Works licence condition sets – available in the Victorian water register

## Works on Waterways

### Siting and construction

The bore(s) must be drilled at the location specified in the application approved by the Authority.

Water may only be taken through the works if the works are sited and constructed in accordance with the endorsed works plan No. [works plan number].

The bore must be constructed on the land described in the licence, at coordinates E: [Easting], N: [Northing], Zone: [MGA Zone].

If after drilling the bore is considered unsatisfactory a replacement bore may be drilled on the land specified in the licence.

The bore(s) must be drilled at the location specified in the application approved by the Authority, but if after drilling a bore is considered unsatisfactory, a replacement bore may be drilled at an alternative site no greater than 20 metres from the authorised site and no closer to neighbouring bores or nearby waterways, or as authorised by the Authority before the commencement of drilling.

The licence holder must ensure the works are sited and constructed to the satisfaction of the Authority.

The works referred to in the licence must not be used until the Authority issues a licence to operate the works.

### Preventing pollution

All earthworks must be carried out, and all drilling fluids and waters produced during construction and development must be disposed of, in ways that avoid contaminating native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.

Construction must stop immediately if the Authority reasonably believes that fuel, lubricant, drilling fluid, soil or water produced during construction and development is at risk of being spilled into native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.

The licence holder must construct and maintain bund walls, in accordance with the timeframe, specifications, guidelines or standards prescribed by the Authority, to prevent fuel, lubricant, drilling fluid, soil or water produced during construction and development from being spilled into native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.

Water must not be taken through the works if the Authority reasonably believes fuel, or lubricant, or any other matter used in connection with works and appliances associated with this licence, is at risk of contaminating a waterway, or aquifer, or the riparian or riverine environment.

The licence holder must construct and maintain bund walls around any hydrocarbon-fuel-driven engine, motor, fuel storage, or chemical storage used in connection with this licence, in accordance with the timeframe, specifications, guidelines and standards prescribed by the Authority.

Water must not be taken through the works or works associated with the dam if the Authority reasonably believes fuel, or lubricant, or any other matter used in connection with works and appliances associated with this licence, is at risk of being spilled into a waterway, or aquifer, or into the riparian or riverine environment. **(Operation must not cause pollution – associated works).**

Decommissioning must stop immediately if the Authority reasonably believes that fuel, lubricant, drilling fluid, soil or water produced during construction and development is at risk of being spilled into native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.

The licence holder must not store bulk fuel, lubricant, fertiliser or chemicals on land managed by Goulburn Murray Water. (No storage of fuel etc).

The licence holder must report any fuel, lubricant, fertiliser or chemical leak(s) that impact on land managed by Goulburn Murray Water and immediately resolve the leak(s) immediately along with any reclamation works necessary. (Report and resolve fuel etc leaks).

## Using waterways and wetlands to store or convey water

Unless all the corrective action procedures listed on this licence have been initiated, water may not be taken through the works if monitoring records indicate that groundwater salinity concentrations have reached [salinity reading (EC)] EC.

Thirty days after the corrective action thresholds on this licence are breached, water must not be taken through the works unless [remedial action].

Water may only be taken through the works while the licence holder meets the relevant monitoring and correctional requirements with regard to: - installing and maintaining the specified monitoring equipment; - following the specified data reading, recording and auditing requirements; and - carrying out the specified corrective action procedures, within the specified time, if the specified threshold for this is breached as specified in the endorsed works plan No. [works plan number].

Water may only be taken through the works if the required monitoring instruments have been properly installed and maintained, the total number of these instruments is [number of instruments].

Water may only be taken through the works while the licence holder records monitoring data [frequency].

Water may only be taken through the works while the licence holder posts recorded monitoring data to the Authority [frequency].

Water may only be taken through the works while appropriately accredited auditors audit monitoring data [frequency].

Water may only be used for irrigation while audits are being duly carried out by auditors with accreditation through ISO 1400.

Water may only be used for irrigation while audits are being duly carried out by auditors with accreditation through [accreditation agency].

Unless all the corrective action procedures listed on this licence have been initiated, water may not be taken through the works if monitoring records indicate that water tables have risen to within [level (m)] metres of the soil surface.

Unless all the corrective action procedures listed on this licence have been initiated, water may not be taken through the works if monitoring records indicate that water tables have risen to [level (m AHD)] metres AHD.

Unless all the corrective action procedures listed on this licence have been initiated, water may not be taken through the works if monitoring records indicate that [description].

Thirty days after the corrective action thresholds on this licence are breached, water must not be taken through the works unless previously agreed flow management contingencies are invoked.

## Method of taking

The licence holder must at all times provide the Authority with safe access to inspect all works and appliances used to take water under this licence.

## Take volume and rate

The maximum volume that may be taken under this licence in any one day is [volume (ML/day)] megalitres per day.

## Passing flows

The licence holder must, at all times that there is natural inflow into the on-waterway storage, maintain a flow in the waterway downstream of the storage, to the satisfaction of the Authority.

Bypass mechanisms must be installed and maintained in good working order to ensure that outside the take period, none of the natural flow in the waterway is harvested into the dam.

Bypass mechanisms must be installed and maintained in good working order to ensure that a) outside the take period, none of the natural flow in the waterway is harvested into the dam, and b) during the take period, minimum passing flow rates of [volume (ML/day)] megalitres per day are passed by the dam.

Bypass mechanisms must be installed and maintained in good working order to ensure that no run-off is harvested outside the take period.

## Rosters and restrictions

When directed by the Authority, water must be taken in accordance with the rosters and restrictions determined by the Authority, and advised to the licence holder.

When directed by the Authority, water must be taken in accordance with the rosters and restrictions as set out in [name of document] that is available on the Authority's website.

Water may only be taken through the works referred to in the works licence if, in a period of rationing or other restriction, it is taken in accordance with the share of the flow represented by the specified extraction share of [extraction share – taken from system] ML/day.

Unless otherwise directed by the Authority, water must be taken in accordance with the rosters and restrictions as set out in the management plan, local water management rules or other document that is available on the Authority's website or at the Authority's main office, and before taking water under this licence the licence holder must check the restriction that currently apply.

Water must be taken in accordance with the rosters and restrictions as set out in the management plan, local management rules or other document that is available on the Authority's website, and before taking water under this licence the licence holder must check the restrictions that currently apply.

Water must be taken in accordance with the rosters and restrictions as set out in [name of document], that is available on the Authority's website, and before taking water under this licence the licence holder must check the restrictions that currently apply.

## Metering of water taken and used

Water may only be taken under this licence if it is taken through a meter approved by the Authority.

Water may need to be taken through a meter if requested by the Authority.

Meters must be installed, in accordance with the specifications set by the Authority, at the licence holder's expense.

Meters must be installed, in accordance with the specifications set by the Authority, at the Authority's expense.

Meters used for the purpose of this licence are deemed to be the property of the Authority.

Meters used for the purpose of this licence are deemed to be the property of the licence holder.

The works referred to in the licence must not be made operational until the licence holder provides the Authority with safe access to meters for the purpose of reading, calibration or maintenance.

The licence holder must at all times provide the Authority with safe access to meters for the purpose of reading, calibration or maintenance.

A data logger must be fitted to the meter, at the licence holder's expense, to record water usage and pumping times.

The licence holder must notify the Authority within one business day if the meter ceases to function or operate properly.

The licence holder must, if required by the Authority, keep an accurate record of the quantity of water taken under this licence and allow the Authority to inspect this record at all reasonable times, and provide a copy of the record when requested.

The licence holder must not, without the consent of the Authority, interfere with, disconnect or remove any meter used for the purposes of the licence.

The Authority may, if it deems necessary, make an estimate of the total volume of water taken under this licence.



Reedy Swamp.

### Metering of matter disposed

Meters must be installed, in accordance with the specifications set by the Authority, at the [\[select who pays for the meter\]](#) expense.

Meters used for the purpose of this licence are deemed to be the property of [\[select who owns the meter\]](#).

The licence holder must at all times provide the Authority with safe access to meters for the purpose of reading, calibration or maintenance.

A data logger must be fitted to the meter, at the licence holder's expense, to record water usage and pumping times.

The licence holder must notify the Authority within one business day if the meter ceases to function or operate properly.

The licence holder must not, without the consent of the Authority, interfere with, disconnect or remove any meter used for the purposes of the licence.

### Operation and maintenance (BOM / OM)

Water may only be taken through the works at the specified location.

Water may only be taken through the works if the works are located at the location specified in the licence under [\[works location\]](#).

Water may only be taken through the works if the works are operated, maintained and audited in accordance with the approved dam-safety surveillance plan.

The licence holder must keep all works, appliances and dams associated with this licence, including outlet pipes and valves, in a safe and operable condition, and free from obstacles and vegetation that might hinder access to works.

The licence holder must at all times provide the Authority with safe access to inspect all works and appliances used to take water under this licence. **(Access to works and appliances)**.

Water may only be taken through the works if the works are sited, constructed, operated and maintained to the satisfaction of the Authority.

Water may only be taken through the works if the works are operated and maintained in accordance with the endorsed works plan No. [\[works plan number\]](#).

Works must not be altered, removed or decommissioned without a licence that authorises alteration, removal or decommissioning. **(Licence req'd to alter, remove, decommission)**

The maximum volume of matter disposed of under this approval in any twelve-month period, from 1 July to 30 June, must not exceed [\[volume \(ML/year\)\]](#) megalitres.

The maximum volume of matter that may be disposed of under this approval in any one day is [\[volume \(ML/day\)\]](#) megalitres.

### Protecting biodiversity

Water must not be taken through the works if the Authority reasonably believes that the taking of water, through the works and appliances associated with this licence, is at risk of causing damage to the environment.

The licence holder must, if required by the Authority, remedy any damage to the environment that in the opinion of the Authority is a result of the installation, operation or maintenance of the works.

Matter must not be disposed of through the works if the Authority reasonably believes that such disposal will have a detrimental impact on the beneficial use of surrounding groundwater, land and surface water.

The licence holder must not remove or displace any native vegetation unless approval from the appropriate Authority has been obtained. (No removal - native vegetation).

### Environmental watering

Water may only be taken under this licence during periods of regulated flow, if it is ordered from the Authority a minimum of [\[No. of days\]](#) (or other such period as may be determined by [\[Relevant Authority\]](#)) prior to commencement of pumping.

Water may only be taken under this licence during periods of unregulated river flow if it is taken with the express approval of the Authority.

Water must not be taken through the works referred to in the works licence at any time unless [\[Relevant Authority\]](#) has expressly confirmed that sufficient water is available in the river.

When directed by the Authority, the licence holder must limit or cease pumping if the Authority reasonably believes that pumping would otherwise reduce the share of flow available to the holders of extraction share.

Water may only be taken through the works referred to in the works licence if the licence holder provides the Authority with an accurate meter reading at the start and finish of each pumping event.

Water may only be taken through the works referred to in the works licence if it is taken in accordance with the operating plan approved by the Authority.

## Works Associated with Works on a Waterway

### Dam construction and supervision standards

The dam and associated works must be designed and constructed under the direct supervision of an engineer eligible for membership of the Institution of Engineers Australia who is able to demonstrate competence in the design, construction supervision and surveillance of dams.

The licence holder must ensure that the engineer responsible for design and construction of the dam holds professional indemnity insurance for an amount of \$ [\[insurance amount \(\\$M\)\]](#) million with an undertaking to maintain the cover for at least seven years following the construction of the dam.

The licence holder must notify the Authority at least five business days prior to work commencing on the dam, and must also notify the Authority if work is to cease for an extended period during construction.

The dam must be sited and constructed in accordance with: a) the timeframe, specifications, guidelines and standards prescribed by the Authority, and b) the endorsed works plan No. [\[works plan number\]](#).

The dam and associated works may only be made operational if the dam and works are sited and constructed in accordance with the endorsed works plan No. [\[works plan number\]](#).

The dam and associated works must not be made operational until the Authority acknowledges receipt of a completed and acceptable inspection report certifying that the dam and associated works have been constructed in accordance with: a) the endorsed works plan No. [\[works plan number\]](#), and b) the conditions of this licence.

### Dam safety and surveillance

The dam and associated works must not be made operational until the Authority acknowledges receipt of a completed and acceptable dam-safety surveillance plan and an emergency management plan. (Receipt of surveillance and emergency management plans).

The dam and associated works must not be operated until the Authority acknowledges receipt of a completed and acceptable dam-safety surveillance plan and an emergency management plan prepared with appropriate regard to the ANCOLD guidelines.

The dam and associated works must not be altered, removed or decommissioned without a works licence that authorises alteration, removal or decommissioning. (Licence req'd to alter, remove, decommission - DAM+associated Works).

The licence holder must lodge two copies of the dam-safety emergency management plan with the Authority (one will be submitted to the SCC by the Authority). (Dam-safety EMP - 2 copies to Authority).

The licence holder must lodge a copy of the dam safety emergency management plan with and the relevant Municipal Council addressed to the Municipal Emergency Resources Officer. (Dam-safety EMP - copy for Municipal Council).

The licence holder must lodge a copy of a dam-safety emergency management plan with the Authority and the relevant Municipal Council addressed to the Municipal Emergency Resources Officer.

The licence holder must provide the Authority with the results of any surveillance program within 12 months of the issue of this licence and thereafter at any other time requested by the Authority. (Results of surveillance program).

The licence holder must, if directed by the Authority, amend the surveillance program and emergency management plan at any time.

The dam safety emergency plan must include actions to be taken by the licence holder that provide effective and timely warnings to potentially impacted downstream communities, Victorian Police, Victoria State Emergency Service and the Authority in the event of a possible or actual dam failure. (Warning if dam failure - haz).

The licence holder must, in the event of a potential or actual dam failure, immediately provide warnings to potentially impacted downstream property owners and communities, SES, Victorian Police, Council and the Authority and must take steps to make the dam safe.

If a deficiency is found in the structure of the dam that is not minor in nature, the licence holder must immediately advise the Authority of the nature of the deficiency and engage a suitably qualified engineer to propose a program to rectify it, and complete the works having appropriate regard to the ANCOLD guidelines.

The licence holder must carry out, to the satisfaction of the Authority, any remedial works identified by a suitably qualified engineer.

The Authority may require the licence holder to undertake a risk assessment consistent with ANCOLD Guidelines and provide the results of this assessment to the Authority because this dam has an ANCOLD hazard category of high or extreme. When directed by the Authority the licence holder must engage a suitably qualified engineer to undertake a risk assessment on the nominated dam(s) consistent with ANCOLD Guidelines and must provide the results of the assessment to the Authority within the specified timeframe.

The dam safety surveillance plan and dam safety emergency plan must be signed off by a suitably qualified engineer.

## Bore Construction and Operation

### Construction standards

The bore(s) must be constructed, and where relevant decommissioned, in accordance with the Minimum Construction Requirements for Water Bores in Australia, Edition 3 or its successor.

The bore(s) must be constructed, and where relevant decommissioned, in accordance with the ARMCANZ (2nd Edition September 2003) guidelines relating to monitoring bores.

Any bore(s) must be decommissioned in accordance with Minimum Construction Requirements for Water Bores In Australia, Edition 2.

The bore(s) must be altered, and any replacement bore(s) must be constructed, in accordance with the Minimum Construction Requirements for Water Bores In Australia, Edition 2.

### Drilling licence and supervision requirements

The bore(s) must be constructed by, or under the direct supervision of, a driller licensed under the Water Act 1989 as a [driller class] driller with appropriate endorsements.

The bore(s) must be constructed by, or under the supervision of, a driller licensed under the Water Act 1989 as a Class 1, 2 or 3 driller with appropriate drilling endorsement. (Driller endorsement – construction GMW<sup>18</sup>).

The bore(s) must be constructed by, or under the supervision of, a driller licensed under the Water Act 1989 as follows:

- a. To depths of 25 metres, a Class 1, 2 or 3 driller with appropriate drilling endorsements
- b. Depths greater than 25 metres, a Class 2 or 3 driller with appropriate drilling endorsements].

(Driller endorsement – construction GMW<sup>19</sup>).

Bore construction must be supervised, and certified to be in accordance with the approved application, by a person accredited as a [accreditation].

The bore(s) must be decommissioned by, or under the direct supervision of, a driller licensed under the Water Act 1989 and endorsed as a driller, with appropriate endorsements.

Bore decommissioning must be supervised, and certified to be in accordance with the approved application, by a person accredited as a [accreditation].

The bore(s) must be altered by, or under the direct supervision of, a driller licensed under the Water Act 1989 and endorsed as a driller, with appropriate endorsements.

Bore alteration must be supervised, and certified to be in accordance with the approved application, by a person accredited as a [accreditation].

If artesian pressure is expected or encountered, then casing must be installed in the bore(s) to a suitable depth and cemented back to the well head to prevent the outbreak of pressurised water. If artesian pressure is encountered a suitable valve must also be fitted to the bore.

If artesian pressure is expected or encountered, then a driller licensed under the Water Act 1989, and endorsed as a class 3 driller, must install casing in the bore(s) to a suitable depth, and in a suitable manner, to prevent its outbreak. A suitable valve must be fitted to the bore.

The licence holder must ensure that the licensed driller notifies the Authority's Drilling Inspector at least seven day prior to work commencing on the bore(s), and must also notify the Authority's Drilling Inspector if work is to cease for an extended period during drilling.

The licence holder must ensure that the licensed driller notifies the Authority's Drilling Inspector at least one day prior to work commencing on the bore(s), and must also notify the Authority's Drilling Inspector if work is to cease for an extended period during drilling.

The licence holder must ensure that the licensed driller notifies the Authority's Drilling Inspector at least one day prior to work commencing on any grouting operations and must not proceed with the work unless authorised by the Drilling Inspector.

At least seven days before commencing construction on this bore, the holder of the licence must arrange an inspection time with the licensing Supervisor, [water authority – taken from system] [district office].

### Bore completion report

A Bore Completion Report must be submitted to the Authority within 28 working days of the bore(s) being completed.

The licence holder must ensure that the licensed driller sends a Bore Completion Report to the Authority within twenty-eight working days of the bore(s) being completed.

The works referred to in the licence must not be made operational until the Authority acknowledges receipt of an acceptable Bore Completion Report.

The works referred to in the licence must not be made operational until the licence holder sends a water sample to the laboratory nominated by the Authority.

### Protecting water resources

No more than one bore may be brought to final development under this licence.

No more than one work may be brought to final development under this licence.

No more than [number of bores] bore(s) may be brought to final development under this licence.

No more than [number of works] work(s) may be brought to final development under this licence.

Any unsatisfactory bores must be decommissioned so as to eliminate physical hazards, conserve aquifer yield, prevent groundwater contamination and prevent the intermingling of desirable and undesirable waters.

At the completion of drilling, and before the drilling rig leaves the site, all but one bore must be decommissioned so as to eliminate physical hazards, conserve aquifer yield, prevent groundwater contamination and prevent the intermingling of desirable and undesirable waters.

At the completion of drilling, and before the drilling rig leaves the site, all but [number of bores] bore(s) must be decommissioned so as to eliminate physical hazards, conserve aquifer yield, prevent groundwater contamination and prevent the intermingling of desirable and undesirable waters.

At the completion of drilling, and before the drilling rig leaves the site, all bore(s) must be decommissioned so as to eliminate physical hazards, conserve aquifer yield, prevent groundwater contamination and prevent the intermingling of desirable and undesirable waters.

The bore(s) must be located at least 30 metres from any Authority's channel, reserve or easement unless authorised by the Authority. **(Drilling location - 30 metres from Authority's works).**

The bores(s) must be located at least 100 metres from any waterway unless otherwise authorised by the Authority. **(Drilling location – distance from waterways 100m).**

The bore must be located at least 200 metres from any waterway, wetland, swamp or other water body unless otherwise authorised by the authority. (Drilling location – distance from waterways 200m)

The bore(s) must be located at least [distance from nearest waterway (m)] from the nearest waterway, unless otherwise authorised by the Authority's Drilling Inspector.

The bore(s) must be located at least [distance (m)] metres from the nearest waterway, unless otherwise authorised by the Authority's Drilling Inspector.

The bore(s) must be located at least [distance (m)] metres or less from the bore(s) being replaced.

The bore(s) must be located at least [distance from other bores (m)] from any bore(s) not in the licence holder's ownership.

The bore(s) must be located at least [distance (m)] metres from any bore(s) not in the licence holder's ownership.

The bore(s) must be located at least 30 metres from any authority's channel, reserve or easement.

The bore(s) must be located at least [distance (m)] metres from any authority's channel, reserve or easement.

Water must not be taken and used from the bore without specific written permission of the Water Authority, except for samples taken solely for the purpose of sampling, testing and analysis.

<sup>18</sup> Only if not located in the Goulburn Murray Sedimentary Plains. This is automated for Online BCL applications, but is added manually (CON005535) for applications processed in AX.

<sup>19</sup> For bores located in the Goulburn Murray Sedimentary Plains. This is automated for Online BCL applications, but is added manually (CON005558) for applications processed in AX.

### Protecting water quality

The bore(s) must be constructed so as to prevent aquifer contamination caused by vertical flow outside the casing.

If two or more aquifers are encountered, the bore(s) must be constructed to ensure that an impervious seal is made and maintained between each aquifer to prevent aquifer connection through vertical flow outside the casing; under no circumstances are two or more aquifers to be screened within the one bore or in any other manner to allow connection between them.

If two or more aquifers are encountered, the bore(s) must be constructed to ensure that an impervious seal is made and maintained between each aquifer to prevent aquifer connection through vertical flow outside the casing; the bore must be adequately cemented and grouted in a manner that will exclude the upper alluvial aquifer, until a non-permeable clay aquitard is intercepted. Under no circumstances are two or more aquifers to be screened within the one bore or in any other manner to allow connection between them.

Boreheads must be constructed, to ensure that no flood water, surface runoff or potential subsurface contaminated soakage can enter the bore or bore annulus.

Screening and casing must proceed to at least the proposed depth unless the Authority approves, in advance, drilling to less than this depth.

Drilling must not exceed the maximum depth. **(Maximum depth).**

After suitable development time, the holder of the licence must take a sample of water proposed to be extracted for use, and send to ALS Environmental, PO Box 9148, Scoresby VIC 3179 Tel: (03) 8756 8000, Fax (03) 9763 1862.

After suitable development time, the holder of the licence must take a sample of water proposed to be extracted for use, and send to SGS Environmental Services, PO Box 1956, Traralgon VIC 3844 Tel: (03) 5172 1555, Fax (03) 5174 9320.

The licence holder must ensure minimal soil disturbance associated with the installation of diversion works. (Minimal soil disturbance).

The licence holder must engage with Goulburn Murray Water's Manager, Dams Operations or delegate to determine most appropriate measure of erosion control associated with the soil disturbance on the foreshore. (Erosion control - foreshore).

### Protecting other water users

The diameter of the bore-casing must not exceed [diameter (mm)] millimetres.

The diameter of the drill casing must not exceed 130 millimetres.

The bore(s) must be constructed so that water levels in the bore(s) can be measured by an airline, a piezometer or a method approved in writing by the Authority.

The licence holder must, if required by the Authority, monitor and record water levels in the bore(s) before and after pumping; the licence holder must also provide this information in writing as directed by the Authority.

The approval holder must, if required by the Authority, monitor and record water levels in the bore(s) before and after pumping; the approval holder must also provide this information in writing as directed by the Authority.

The licence holder must, at the licence-holder's expense, if required by the Authority, conduct a pumping test and obtain a hydrogeological report, to the Authority's specification, on the potential for bore operation to interfere with any bore, aquifer, groundwater dependent ecosystem or waterway.

The licence holder must, if required by the Authority, provide the Authority with the results of water quality tests on samples of water pumped from the bore.

The licence holder must provide the Authority with safe access to the licensed bore and works for the purposes of obtaining water level measurements, water samples and any other information or data pertaining to the operation of the bore, the works and the aquifer.

The licence holder must, if required by the Authority, cease taking water entirely, or cease taking water for a given period, or reduce the quantity of water taken during any period if, the Authority reasonably believes, or in accordance with the assessment in a Groundwater Management Plan, the use or disposal of water under this licence may injure or adversely affect any other person or an aquifer or the environment.

The licence holder must, if required by the Authority, enter into a formal agreement to supply water to any party affected by interference from bore operation.

The bore(s) must not be altered or decommissioned without a works licence that authorises alteration, or decommissioning.

The bores(s) must be located at least 50 metres from any bore(s) not operated by the licence holder unless authorised by the Authority.

The bores(s) must be located at least 200 metres from any state observation bores unless authorised by the Authority (Drilling location – distance from SOBN 200m).

## 9 Appendix 3: Water use licence condition sets – available in the Victorian water register

Drainage as per time of trade	Drainage under this water-use licence is subject to the agreed actions, contingency arrangements and other conditions that were put in place at the time that the trade of water entitlement to the property was approved.
Drainage disposal - general (WUL)	Where irrigation results in drainage from the land specified in the licence that drainage water must be disposed in ways that meet with the standards, terms and conditions adopted from time to time by the water authority.
Drainage disposal - drain number (WUL)	Where irrigation results in drainage from the land specified in the licence that drainage water must be disposed in Drain number %1.
Drainage disposal - other (WUL)	Where irrigation results in drainage from the land specified in the licence that drainage water must be disposed in %1.
No ponded irrigation	Ponded irrigation must not be carried out on the land specified in the licence without the addition of particular conditions governing the use of such an irrigation system.
Ponded irrigation OK	Ponded irrigation may be carried out subject to other relevant conditions.
AUL	Subject to the Minister declaring a seasonal adjustment to annual use limits to accommodate exceptionally high evapotranspiration rates, the maximum number of megalitres of water that may be applied to the land specified in the licence in any twelve month period from 1 July to 30 June will be %1.
Use conditions as per time of trade	The use of water under this water-use licence is subject to the agreed actions, contingency arrangements and other conditions that were put in place at the time that the trade of water entitlement to the property was approved.
Conditions same as previous s51	Water use is subject to the same conditions that applied to the use of water undertake and use licence No. %1.
Meter required (WUL)	Water used for the purposes of irrigation on the land specified in the licence must be measured through a meter approved by a water authority.
Meter may be required (WUL)	Water used for the purposes of irrigation on the land specified in the licence may be applied without a meter.
Salinity managed as per time of trade	The minimisation of salinity under this water-use licence is subject to the agreed actions, contingency arrangements and other conditions that were put in place at the time that the trade of water entitlement to the property was approved.
EC limits - range	Water may only be used for irrigation if its electrical conductivity lies within the range %1 and %2 EC units.

EC limits - (custom)	Water may only be used for irrigation if its electrical conductivity lies within the range %1.
EC limits - IDP	Water may only be used for irrigation if its electrical conductivity lies within the range specified in the endorsed irrigation and drainage plan No. %1.
Protection of biodiversity as per time of trade	The protection of biodiversity under this water-use licence is subject to the agreed actions, contingency arrangements and other conditions that were put in place at the time that the trade of water entitlement to the property was approved.
30 day threshold	Thirty days after the corrective action thresholds on this licence are breached, water must no longer be used for the purposes of irrigation on the land specified in the licence unless %1.
30 day threshold (use) - unless other	Thirty days after the corrective action thresholds on this licence are breached, water must no longer be used for the purposes of irrigation on the land specified in the licence unless %1.
Corrective action (use) - water table soil surface	Unless all the corrective action procedures listed on this licence have been initiated, water may not be used for irrigation if monitoring records indicate that water tables have risen to within %1 metres of the soil surface.
Corrective action (use) - water table AHD	Unless all the corrective action procedures listed on this licence have been initiated, water may not be used for irrigation if monitoring records indicate that water tables have risen to %1 metres AHD.
Corrective action (use) - salinity	Unless all the corrective action procedures listed on this licence have been initiated, water may not be used for irrigation if monitoring records indicate that groundwater salinity concentrations have reached %1 EC.
Corrective action (use) - other	Unless all the corrective action procedures listed on this licence have been initiated, water may not be used for irrigation if monitoring records indicate that %1.
Number of monitoring instruments (WUL)	Water may only be used for irrigation if the required monitoring instruments have been properly installed and maintained, the total number of these instruments is %1.
Auditing monitoring data (use)	Water may only be used for irrigation while appropriately accredited auditors audit monitoring data %1.
Accreditation of auditors (use) - ISO 1400	Water may only be used for irrigation while audits are being duly carried out by auditors with accreditation through ISO 1400.
Accreditation of auditors - other	Water may only be used for irrigation while audits are being duly carried out by auditors with accreditation through %1.
Monitoring and correctional req'ts - IDP (WUL)	Water may only be used for irrigation while the licence holder meets the relevant monitoring and correctional requirements with regard to installing and maintaining the monitoring equipment following the specified data reading, recording and auditing requirements; and carrying out the specified corrective action procedures, within the specified time, where a specified threshold for these is breached as specified in the endorsed irrigation and drainage plan No. %1.

Posting monitoring data (WUL)	Water may only be used for irrigation while the licence holder posts recorded monitoring data to the Victorian GMS %1.
Recording monitoring data (WUL)	Water may only be used for irrigation while the licence holder records monitoring data %1.
Drainage disposal - other (WUL)	Where irrigation results in drainage from the land specified in the licence that drainage water must be disposed in %1.
EC limits - IDP	Water may only be used for irrigation if its electrical conductivity lies within the range specified in the endorsed irrigation and drainage plan No. %1.
Monitoring and correctional req'ts - IDP (WUL)	Water may only be used for irrigation while the licence holder meets the relevant monitoring and correctional requirements with regard to installing and maintaining the monitoring equipment following the specified data reading, recording and auditing requirements; and carrying out the specified corrective action procedures, within the specified time, where a specified threshold for these is breached as specified in the endorsed irrigation and drainage plan No. %1.
Number of monitoring instruments (WUL)	Water may only be used for irrigation if the required monitoring instruments have been properly installed and maintained, the total number of these instruments is %1.
Conditions same as previous s51	Water use is subject to the same conditions that applied to the use of water undertake and use licence No. %1.
Conditions same as previous s51	Drainage is subject to the same conditions that applied to the use of water undertake and use licence No. %1.
Conditions same as previous s51	The minimisation of salinity is subject to the same conditions that applied to the use of water undertake and use licence No. %1.
Conditions same as previous s51	The protection of biodiversity is subject to the same conditions that applied to the use of water undertake and use licence No. %1.



# 10 Appendix 4: Examples of particular conditions on water use licences – in the Victorian water register

Conditions same as previous s51	Water used for the purposes of irrigation on the land specified in the licence must not be applied within 200 metres from the high water mark of XXXX.
Special Condition	Unless otherwise directed by the authority irrigation can only occur on Volume XXX Folio YYY The remaining Volume and Folios on this Water-Use Licence can only be used for Domestic and Stock purposes.
Hydrogeological Investigation	The licence holder must comply with recommendations contained in XYZ – Hydrogeological Investigation of proposed Irrigation Development, final version dated 9 October 2007, specifically: a) The Licence holder must construct and maintain 4 groundwater observation/monitoring bores (Piezometers) at locations recommended in the above report. b) Bores must be licensed and comply with requirements contained in the Victorian Mallee Irrigation Development Guidelines, “Standards/Guidelines for Installation and Management of Testwells and Piezometers (Groundwater Monitoring Bores). c) Standing Water levels must be measured in the first week of June and December each year. d) The Licence holder is to install a meter and measure and record drainage volumes discharged from drains defined in drawing number 6012.07 dated 2/2/2012 e) By 31st August each year a copy of all groundwater monitoring data and recorded drainage volumes obtained must be submitted to the Mallee Catchment Management Authority.
Hydrogeological Investigation	The licence holder must comply with recommendations contained in XXX – Hydrogeological Investigation of proposed Irrigation Development, final version dated 9 October 2007, specifically a) The Licence holder must construct and maintain 4 groundwater observation/monitoring bores (Piezometers) at locations recommended in the above report by April 1st 2013. b) Bores must be licensed and comply with requirements contained in the Victorian Mallee Irrigation Development Guidelines, “Standards/Guidelines for Installation and Management of Testwells and Piezometers (Groundwater Monitoring Bores). c) Standing Water levels must be measured in the first week of June and December each year. d) The Licence holder is to install a meter and measure and record drainage volumes discharged from drains defined in drawing number 6012.07 dated 2/2/2012 e) By 31st August each year a copy of all groundwater monitoring data and recorded drainage volumes obtained must be submitted to the Mallee Catchment Management Authority and Lower Murray Water.
Area to be irrigated	Unless otherwise directed by the authority the total area permitted for irrigation is 100 hectares.

Disposal of drainage water	The licence holder must dispose of subsurface drainage water to the adjacent swamp.
Installation of subsurface drainage	The licence holder must install subsurface drainage at their own cost to an appropriate depth to ensure soil salinisation will not become apparent in the permanent plantings.
Installation of test wells	The licence holder must install at their own cost appropriately sited test wells to ensure depth to any perched groundwater can be monitored and recorded.
Irrigation infrastructure	The licence holder must supply at their own cost infrastructure to irrigate the property via a pre-existing dam which exists on CA 6A volume 10831 folio 274 in addition to any existing supply from Lower Murray Water.
Irrigation system design	The licence holder must advise Lower Murray Water of any amendments to the irrigation design as submitted.
Metering	The licence holder must install at their own cost an appropriately sized and LMW specified meter for the measuring of irrigation water supplied to the property.
Bore installation and monitoring	The licence holder must comply with recommendations contained in YYYY - Special Purpose Soil Survey, dated June 1999, rewritten February 2009, and recommendations contained in YYYY - Special Purpose Soil Survey and Irrigation Management Plan, dated 10th July 2013, specifically a) The Licence Holder must construct and maintain 6 monitoring bores to a depth of 2.5 metres in place of the testwells recommended in the YYYY - Special Purpose Soil Survey, dated June 1999, rewritten February 2009 b) The Licence Holder must construct and maintain 3 monitoring bores to a depth of 2 metres in place of testwells recommended in the YYYY - Special Purpose Soil Survey and Drainage and Irrigation Management Plan, dated 10th July 2013 c) The bore(s) must be constructed, and where relevant decommissioned, in accordance with the Minimum Construction Requirements for Water Bores in Australia, Edition 3. d) The bore(s) must be altered, and any replacement bore(s) must be constructed, in accordance with the Minimum Construction Requirements for Water Bores in Australia, Edition 3. e) Standing Water levels must be measured in the first week of June and December each year. f) By 31st August each year a copy of all groundwater monitoring data must be submitted to the Mallee Catchment Management Authority and Lower Murray Water.

# Abbreviations in this Document

Abbreviation	Full Words
AgVic	Agriculture Victoria
AHD	Australian Height Datum
AUL	Annual Use Limit
BSM2030	Basin Salinity Management 2030
CHMP	Cultural Heritage Management Plan
CMA	Catchment Management Authority
DSE	Department of Sustainability and Environment (Now part of DELWP)
DELWP	Department of Environment, Land Water and Planning
EC	Electrical Conductivity
GMW	Goulburn-Murray Water
Ha	Hectare
Ha/yr	Hectares per year
ID	Irrigation Development
IDA	Irrigation Development Application
IDC	Irrigation Development Coordinator
IDG	Irrigation Development Guidelines
IDP	Irrigation and drainage plan
LWMP	Land and Water Management Plan
MAR	Maximum Application Rate
MDBA	Murray-Darling Basin Authority
ML	Megalitre
NIDG	New Irrigation Development Group
PLM	Public Land Manager
PV	Parks Victoria
RAP	Registered Aboriginal Party
RCS	Regional Catchment Strategy
T&UL	Take and Use Licence
VCAT	Victorian Civil and Administrative Tribunal
NVIDG	Northern Victorian Irrigation Development Guidelines
VPP	Victorian Planning Provisions
VWR	Victorian Water Register
WP	Works Permit
WUL	Water Use Licence

