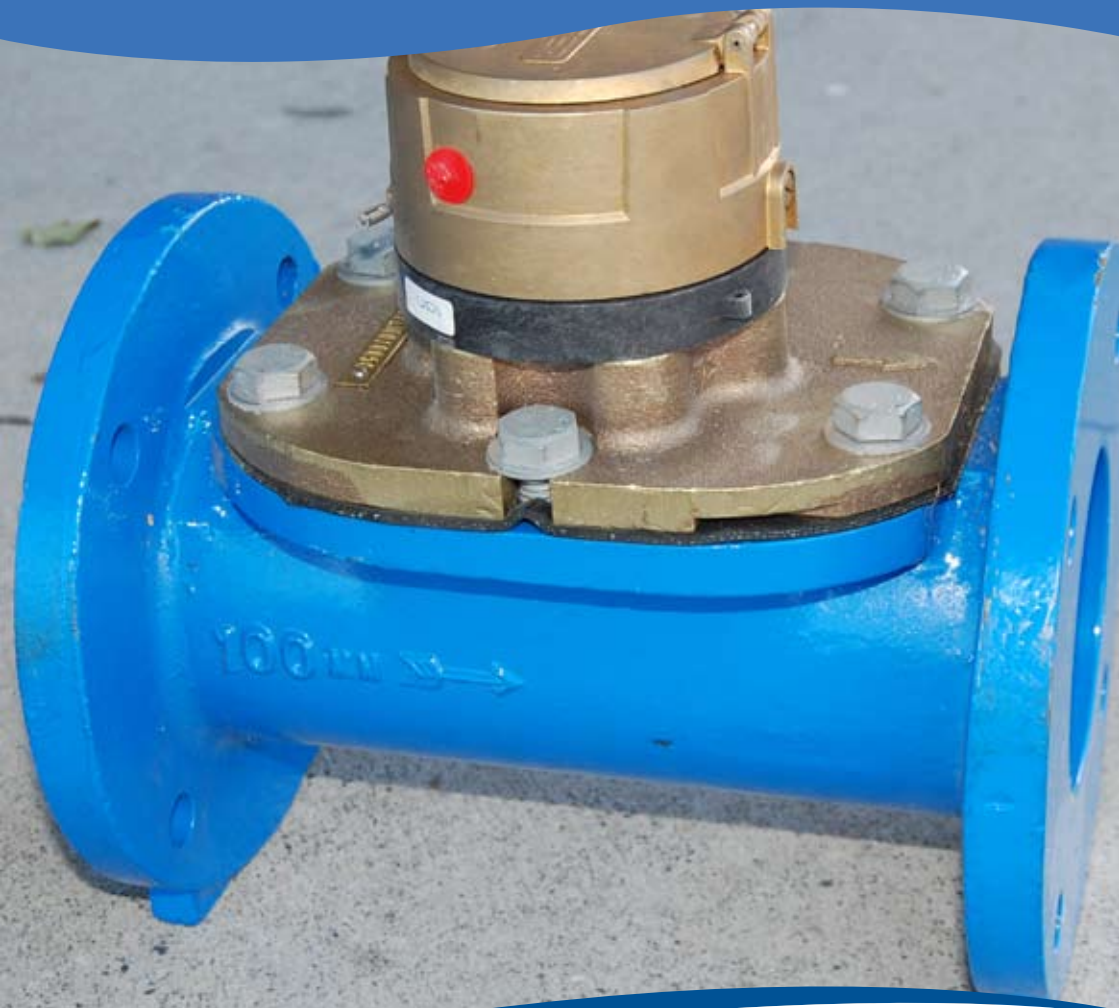


# Water Meters

*A Guide for DPIW licensees*



***This document is provided as a guide to the actions that you as a water licensee should consider taking with regard to the purchase and installation of a water meter.***

## **SELECTING A WATER METER**

The meter you choose to install should meet your needs with respect to the management of your water use and the circumstances in which the meter will be used. There are a number of different types and manufacturers of water meters and you should consider these in the selection of your water meter.

To ensure fair and equitable water management for all users, the Department of Primary Industries and Water requires that the meter you buy and the way its installed and maintained meets the minimum technical requirements stipulated in the DPIW Water Meter Standard (available at [www.dpiw.tas.gov.au/watermeters](http://www.dpiw.tas.gov.au/watermeters) or from your local Regional Water Management Officer).

Other than meeting the Standard, the meter you select and where you buy it from, are your decisions, however it is recommended that:

- » you purchase the meter from a reputable seller;
- » at the time of purchase you clearly indicate your requirements to the seller; and;
- » you seek assurance, preferably in writing, from the seller that the meter will meet your requirements.

If the seller cannot provide this assurance or is not aware of the DPIW Water Meter Standard, it is strongly recommended that you reconsider purchasing the meter from this seller.

*If the meter you purchase does not meet the DPIW Water Meter Standard, you will be required to replace it with one that does, at your own expense*

Other issues you should take into account when selecting a meter are:

### **Optional extras- output device for meter**

It is a condition of the DPIW Standard that the meter must have the capability to provide an electronic output suitable for sending to ancillary equipment such as an external data logger. For some meters this will require that you obtain an optional extra component at additional cost. You should ensure that you obtain the component at the time of meter purchase.

### **Expected life of the meter**

Consider how long is the meter expected to operate in full working order. A cheaper meter may seem a bargain at the time but may need to be replaced every couple of years. It might be better to invest in a more expensive meter that has a longer expected operational life.

### **Maintenance**

Find out what is required to service the meter and who is permitted by the manufacturer to undertake such work. If there are no approved service providers in your locality it could prove difficult and/ or expensive to maintain your meter in full operating order, as required by the Standard.

### **Product warranties**

Find out what the warranty on the meter is. It could be a costly exercise if you have to pay for unexpected repairs or the replacement of a meter, if not covered by a warranty.

## **INSTALLING A WATER METER**

While currently it is permissible for you to install the meter yourself, it is strongly recommended that you hire a professional to undertake the work on your behalf. All meters will be inspected after installation and if your installation is assessed as to be not compliant with the Standard, you will need to have the necessary modification undertaken at your own expense. It will therefore be best to get the work done correctly the first time in order to avoid additional expense.

It is recommended that:

- » you employ a reputable service provider to install your meter;
- » you seek assurance, preferably in writing, from the service provider that they are fully aware of the requirements of the DPIW Water Meter Standard and commit to meeting them;
- » you clearly indicate, preferably in writing, any additional requirements you have to the service provider; and
- » you do not ask the service provider to undertake the installation in a manner contrary to the requirements of the DPIW Water Meter Standard.

If you do choose to install the meter yourself make sure you fully understand the requirements of the Standard.

*If the meter is installed in a manner that does not comply with the requirements of the DPIW Water Meter Standard, you will be required to modify the installation at your own expense, in order to meet the conditions of your licence*

Issues you should consider prior to having a meter installed are:

### Location of the meter

When planning where to have your meter installed, consider carefully if it will be possible to install it in compliance with the DPIW Water Meter Standard at this location. If not you may need to make significant changes to your pumping infrastructure or consider a different location. Obtain advice from your service provider.

### Installation options

There are many different approaches that could be taken in order to incorporate a meter into to your pumping operation. Provided that they meet the requirements of the DPIW Water Meter Standard, all approaches are acceptable. It is likely that the option you take will be determined by your existing pumping infrastructure, however we strongly recommend that you obtain professional advice as to how best incorporate a meter into your activities.

### Access to the meter

As required by the DPIW Water Meter Standard, it must always be easy to reach the meter for the purposes of inspection, maintenance and reading. It must not be inaccessible due to obstacles, including vegetation or be positioned such that it may be submerged in water for significant periods of time.

### Control of vegetation

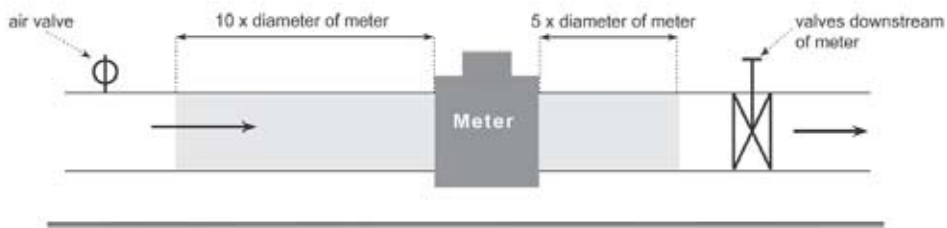
Is there much vegetation in the area surrounding the proposed meter location? If so this must be cleared and kept under control in the future in order to always allow clear access to the meter as required by the DPIW Water Meter Standard.

### Presence of livestock

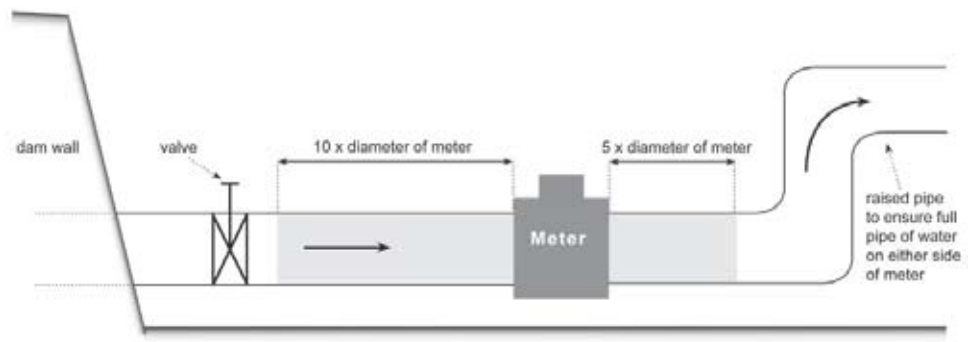
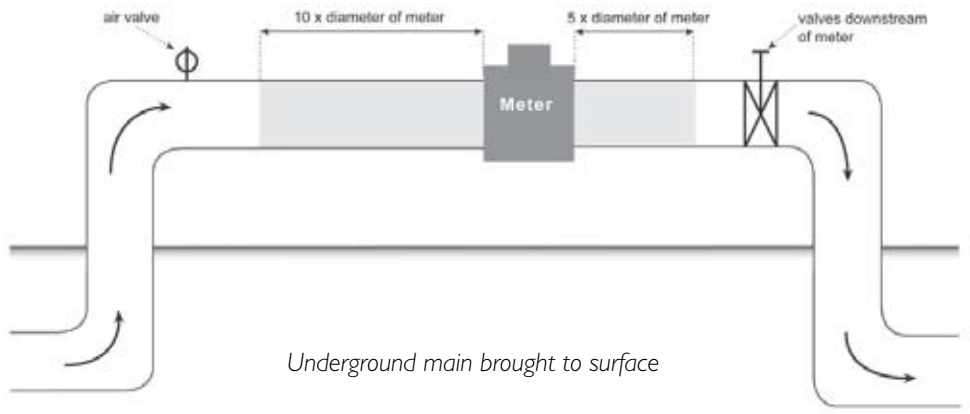
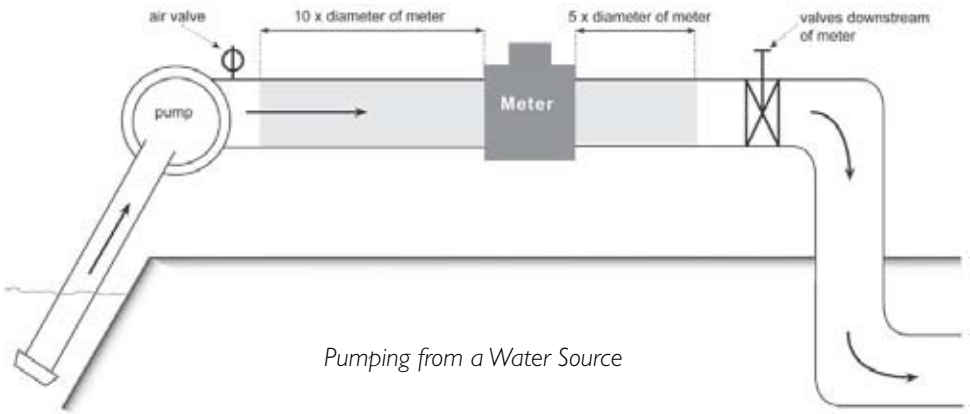
In most situations it is likely that telemetry equipment will be installed onto the meter in the near future. If there are ever livestock present in the area surrounding the meter, stock proofing will be required prior to the installation of a telemetry device.

*The following diagrams provide a guide of the basic appearance of just a few of the different options for an installation setup.*

***In no way should these diagrams be used as technical specifications for undertaking your meter installation.  
(Diagrams not to scale)***



*Exposed main lying on surface*



*Outlet from a dam*

## KEY INSTALLATION ISSUES

For a complete explanation of the installation requirements that you will need to meet, you should obtain a copy of the DPIW Water Meter Standard (available at [www.dpiw.tas.gov.au/watermeters](http://www.dpiw.tas.gov.au/watermeters) or from your local Regional Water Management Officer). The following list provides an indication of key areas, in addition to those already mentioned, that will be checked during the inspections of meter installations.

- » The meter must be installed in accordance with the manufacturer's specifications.
- » Meters are to be located as close as practical to the point of extraction.
- » It is preferable that the meter is mounted on the discharge side of the pump. Written DPIW approval is required prior to installing a meter on the intake side of the pump.
- » There must be no offtake of water between the point of extraction and the meter.
- » The meter must have the capability to provide an electronic output (eg pulse signal) suitable for sending to ancillary equipment such as a remote data logger.
- » To reduce interference the meter should be mounted on the discharge side of the pump and located within a weatherproof enclosure. Written DPIW approval is required prior to installing a meter on the intake side of the pump
- » The measuring mechanism of the meter must be located in straight clean pipe of uniform, circular cross section and without any fittings or obstructions. In all cases the meter must be installed so that at all flow rates there is a full pipe of water on both the intake and discharge sides of the meter.
- » In addition, subject to any specific installation requirements, a minimum length of ten (10) diameters of straight rigid pipe must be fitted on the intake side of the meter and a minimum of five (5) diameters of straight rigid pipe on the discharge of the meter to minimise flow disturbance.
- » There must be no disturbances of any sort on or within the pipes, such as valves, offtakes or any other fittings or obstructions, within the lengths of straight rigid pipe required on each side of the meter.
- » The meter must be easily accessible at all times.
- » The meter must be installed in the right direction to the flow.
- » Where the meter is to be fitted to plastic or polyethylene pipelines, it must be supported by concrete thrust block or fabricated steel bracing to ensure stability.
- » The meter must be located to allow easy readability of the serial number when taking manual readings from the meter display unit.

- » In circumstances where the meter is not located at a fixed point and is used in conjunction with a portable pump, the meter and associated pipework must be connected to the pumping equipment at all times and must not be detached when not in use.
- » The preferred location for all meters is above ground. Written DPIW approval is required prior to installing any meter below ground level.

## KEY POINTS TO REMEMBER

*It is recommended that you do not install the meter yourself but employ a professional service provider to undertake the work on your behalf*

*If the meter you purchase does not meet the DPIW Water Meter Standard, you will be required to replace it with one that does at your own expense*

*If the meter is installed in a manner that does not comply with the requirements of the DPIW Water Meter Standard, you will be required to modify the installation at your own expense, in order to meet the conditions of your licence*



Tasmania  
Explore the possibilities

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