Understanding your water-use data: Pulse outputs, LIDs and the DAS

Fact sheet

Water-use data recorded through pulse outputs, Local Intelligence Devices (LIDs) and the Data Acquisition Service (DAS) may not always exactly match the meter reading displayed in the field. The below explains how these systems work together to capture and transmit water-use information, why differences between DAS data and meter readings can occur, and what steps to take if you notice something that doesn't look right.

What is a pulse output?

For meters equipped with a **pulse output**, water-use information can be transmitted electronically. As water flows through the meter:

- The meter measures the volume of water used
- At set volume intervals, the meter produces an electronic signal called a pulse
- Each pulse represents a fixed amount of water

The meter face is the primary record of water use. Pulse outputs allow that same water use to be recorded electronically.

What is a LID (telemetry device)?

A LID is the device connected to the meter that records pulses and sends water-use data to the DAS. A LID:

- Counts pulses produced by the meter
- Converts pulses into a water volume using a **scaling factor**
- Sends the calculated water-use volume to the DAS

The LID does **not** measure water itself. If the scaling factor is incorrect, the volume shown in the DAS will be incorrect — even if the meter is working properly.

Why the meter reading and DAS reading may differ

It is normal for the **meter face reading** and the **DAS reading** to be different.

When a LID is installed, a **baseline meter reading** is recorded in the Water Accounting System. The DAS only shows water use that is **captured after telemetry installation**. An example is:

- Meter reading at installation: **100 ML**
- Baseline recorded in the Water Accounting System: **100 ML**
- Water used after installation (recorded through pulses): **5 ML**

What you will see:

- **DAS:** 5 ML (telemetry-captured usage only)
- **Water Accounting System/IWAS**: 105 ML (baseline + telemetry-captured usage)

Water used **before** telemetry installation appears on the meter face and is included in the baseline but is not generated by DAS data. This is expected behaviour.

Incorrect scaling factor

The **scaling factor** tells the LID how much water each pulse represents. If the scaling factor is incorrect as shown below, every pulse is converted into the wrong volume.

Example (illustrative only – not a real configuration)

- Meter output: **1 pulse = 1 kilolitre (kL)** equal to 1,000 Litres
- LID configuration: **1 pulse = 100 kilolitres (kL) equal to** 100,000 Litres (0.10 Megaltires)

If the incorrect scaling factor is configured and the meter records **1 megalitre (ML)** of actual water use:

- The meter face will show an increases by **1 ML**
- The LID will calculate **100 ML** (because of the incorrect pulse configuration)
- The DAS displays **100 ML**

This usually results in:

- Very large or unrealistic water-use volumes
- Usage that does not match pump run time

Incorrect scaling factors are the **most common cause of significant DAS data errors**.

Other data patterns users may notice

Water use recorded in the DAS when the pump is off
This can occur due to very small flows or pulse signals being recorded by the telemetry system.

No water use recorded in the DAS while pumping
This usually indicates pulses are not being correctly received or converted from the water flow meter by the LID.

What to do if the DAS doesn't look right

If you believe your DAS water-use data is incorrect:

- Take an **in-field meter reading**
- Record the **date and time**
- Enter the meter read manually in **iWAS**
- If the usage total from your meter looks different to what you expected, contact **WaterNSW** and provide the meter reading for us to investigate

We will investigate the cause of the issue and advise what action, if any, is required. During the investigation, WaterNSW may identify that:

- **Small differences** between the meter and DAS are due to a baseline or offset alignment issue, which can be corrected in the Water Accounting System; or
- **Large differences** are the result of an incorrect scaling factor, which requires telemetry reconfiguration and revalidation by a **Duly Qualified Person (DQP).**

Early contact helps issues be identified and resolved as quickly as possible.

Need help?

If you need more information, please contact our Customer Service Centre on 1300 662 077, Monday to Friday between 8am-5pm or email Customer.Helpdesk@waternsw.com.au

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