

Work Program to Improve Water Information

Response to Compact Action 1.2 (b)



Basin Compliance Compact Action 1.2 (b)

Each Basin State will publish a work program to improve the transparency of information about water take under entitlements, to be implemented no later than 2025, that addresses:

- i. Real-time information on flows, extractions and related rules in unregulated river systems
- ii. Location of take (e.g. pumps, bores or meters) and levels of take in all surface and groundwater systems
- iii. Changes to water registers to ensure that information about water entitlements and trades can be easily accessed by the public.

The work program should be rolled out progressively, with a priority on high risk areas. It should respect relevant privacy laws, and include any exemptions made by the state should be supported by justification published on the website of the relevant state agency.

Good information is essential for an effective and efficient water market. It allows all potential and existing market participants to better understand the water market and comply with market rules. Transparency of information also maintains public confidence in the legitimacy and fairness of water sharing and extraction arrangements, and protects the integrity of the water market.

Victoria's Commitment to Transparency

There is a broad range of information about water resource management in Victoria, including information about water trade, take under entitlements, flows and rules in unregulated rivers, surface water and groundwater systems. This information can be easily accessed by the public on the websites of the Department of Environment, Land, Water and Planning (DELWP) and Victoria's water corporations.

The Victoria government is committed to increasing water market transparency and information sharing that will improve the relevance and accessibility of information for the public and ensure water market information and systems continue to support effective markets. As outlined in *Water for Victoria*, the government's water plan, the government will review public information on entitlements and trading including:

- Information about volume and number of trades, prices, geographic water movement and processing time;
- entitlements, allocation and use summarising water entitlement volumes and use in water systems across the state;
- volume of entitlements owned privately and by water corporations and the environment.

Response to the Compact Action

The Basin Compliance Compact (Compact) sets out specific requirements that aims to improve transparency of information about water take entitlements in all Basin States.

DELWP engaged Marsden Jacobs Associates (MJA) to deliver an independent assessment of the gaps in Victoria's water information framework against the Compact requirements, and to evaluate the potential costs and benefits of implementing actions to close the gap where relevant.

An assessment of Victoria's water information framework found that the level of publicly available information in Victoria is already largely aligned with the intent of the Compact. A gap that needs to be addressed in the short-term is the requirement to *provide information on location of take (e.g. pumps, bores, meters) in all surface and groundwater systems*.

Currently, DELWP collects information on location of take from pumps, bores and meters in surface water and groundwater systems but it is not publicly available. Rural water corporations publish some of this information on their website. For example, Grampians Wimmera Mallee publishes locations of rural water meters in its [interactive map tool](#).

This work program therefore commits to publishing this information online on DELWP's website within 24 months. This timeframe will allow DELWP to work with water corporations to ensure the credibility and reliability of the data before they are published, and to identify the right platform to publish. Thereafter, to ensure that the information is kept up-to-date and relevant, DELWP will also update the information annually.

For more details about the assessment of Victoria's water information framework against the Compact requirements, refer to Appendix 1.

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Appendix 1 – Assessment of Victoria's Water Information Framework

Marsden Jacobs Associates (MJA) was engaged to deliver an independent assessment of the gaps in Victoria's water information against the Compact requirements, and to evaluate the potential costs and benefits of implementing actions to close the gap where relevant. This cost and benefit analysis informed DELWP's work program to 2025 to improve water information.

Available Information in Victoria

There are various sources of up-to-date water information on flows, extractions, rules and water trade including:

- [Victorian Water Register](#)
- [Victorian Water Accounts](#)
- [Current water snapshot](#)
- [Monthly Water Report](#)
- [Water in your region interactive map](#)
- [Water Measurement Information System](#)

For more detail about the types of information available in the above resources, refer to Appendix 2.

Water corporations' websites also contain comprehensive information about water information including allocations and restrictions, storage levels, allocation trading strategies annual water outlooks, annual reports, management plans:

- [Coliban Water](#)
- [Goulburn-Murray Water](#)
- [Grampians Wimmera Mallee Water](#)
- [Lower Murray Water](#)
- [Melbourne Water](#)
- [Southern Rural Water](#)

Results of Gaps Analysis

MJA's gaps analysis found that the level of publicly available information in Victoria is already largely aligned with the intent of the Compact. **Table 1** provides a summary of the gaps analysis.

Table 1: Summary of Gaps Analysis

| Requirement | Current level of information available | Alignment with compact & response |
|--|---|---|
| In unregulated river systems - Real-time information on: | | |
| • Flows | The Water Measurement Information System provides real-time information from 112 telemetered flow gauging sites in unregulated rivers across northern Victoria which is representative of the unregulated river systems in northern Victoria. | Aligned with Compact, no further action required |

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| Requirement | Current level of information available | Alignment with compact & response |
|--|---|--|
| <ul style="list-style-type: none"> Extractions | <p>The <u>Victorian Water Accounts</u> reports on extractions in unregulated river systems on an annual basis¹.</p> <p>Real-time information is often not available as most extraction points in unregulated rivers are not telemetered. This is because only 2% of surface water taken under take and use licences from unregulated systems, and manual meter readings have been sufficient for compliance and annual water accounting.</p> | <p>Not fully aligned.</p> <p>However, current level of information is adequate for accurate annual water accounting</p> |
| <ul style="list-style-type: none"> Related Rules | <p>Related rules in unregulated river systems refer to rosters and restrictions on take and use licences (i.e. when and where you are allowed to take water). Rural water corporations are responsible for setting rosters and restrictions and for notifying licence holders either in writing or via websites whenever rosters or restrictions are imposed or lifted, or requiring licence holders to contact them to check if they may access water². As such, there is no central source of real-time information on rosters and restrictions as the water corporations.</p> <p>Rural water corporations that manage licences on unregulated river systems have processes in place to inform licence holders as soon as flows reach levels that trigger rosters or restrictions.</p> <ul style="list-style-type: none"> Rosters and restrictions on unregulated river systems in Goulburn Murray Water's areas are available on their website which is updated as and when rosters and restrictions changes: https://www.g-mwater.com.au/water-resources/diversions/rosters-and-restrictions Rosters and restrictions on the Wimmera River in Grampians Wimmera Mallee Water's area are available on its website and licence holders are notified in writing as and when they are applicable: https://gwmwater.org.au/connecting-services/surface-water-diversion/latest-wimmera-river-diverters-update In relation Avoca River, licence holders are required to contact Grampians Wimmera Mallee Water before they can extract water as prescribed in the <u>Avoca Catchment Local Management Plan</u>³. <p>The volatile nature of unregulated flows mean that trigger events are few and far between, and access to water will not change instantaneously.</p> <p>At the state level, the <u>Monthly Water Report</u> provides summaries of restrictions across the state.</p> | <p>Aligned with Compact, no further action required</p> |
| In all surface water and groundwater systems – Information on: | | |
| <ul style="list-style-type: none"> Location of take (e.g. pumps, bores or meters) | <p>Information on location of take is available but not publicly reported. The rural water corporations publish some information – e.g. Grampians Wimmera Mallee Water publishes locations of rural water meters in its interactive map tool.</p> | <p>Not fully aligned with Compact, Work program commits to publishing information</p> |
| <ul style="list-style-type: none"> Level of take | <p>Total extractions per annum are reflected in the <u>Victoria Water Accounts</u> for all systems across the state. The Victorian Water Register also provides up to date, public information on water availability and use in declared systems.</p> | <p>Aligned with Compact, no further action required</p> |
| Changes to the water registers to ensure that information can be easily accessed by the public: | | |

¹ Ibid.

² See Policies for Managing Take and Use Licences – Schedule 2, paragraphs 15 to 17.

³ See section 6.2.3 of the Avoca Catchment Local Management Plan.

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| Requirement | Current level of information available | Alignment with compact & response |
|---|---|--|
| <ul style="list-style-type: none">• Water entitlements• Water trades | The <u>Victorian Water Register</u> provides a wide range of information regarding water entitlements and water trade across the state. | Aligned with Compact , no further action required |

As demonstrated in **Table 1**, there are two specific requirements where Victoria's water information framework is not fully aligned with the Compact:

- a) to provide real-time information on extractions in unregulated rivers; and
- b) to provide information on location of take (e.g. pumps, bores or meters) in all surface and groundwater systems.

A cost-benefit analysis of the actions required to close the gaps showed that for gap a) the cost will significantly outweigh the limited benefits, thus will not be included in the work program. The action required to close gap b) will be included in the work program.

Gap a) Real-time information on extractions in unregulated river systems

There are very few unregulated river systems in Victoria and there is usually very little market activity in unregulated systems. Water taken from these sources under take and use licences across Victoria represents only 2% of total surface water taken annually⁴.

Extraction sites in unregulated river systems are metered and total take over the year is reported in the annual Victorian Water Accounts. Telemetry has been installed on a limited number of extraction sites.

To report information on extractions in real-time, there is a need to:

- a) read meters in real-time (through telemetry); and
- b) process and publish data immediately.

A cost-benefit analysis was conducted on the option to install telemetry on all the meters on extraction points in unregulated river systems and to publish real-time information online. The analysis found that the costs to install and maintain telemetered meters and database will significantly outweigh the limited benefits of providing real-time information on extractions in a system where there is relatively low levels of extraction and market activity. The current level of information is adequate for annual water accounting. As the costs outweigh the benefits, action to meet this requirement are not included in the work program. **Box 1** contains more details of the rationale for this exemption.

DELWP will continually monitor developments in community interests on up-to-date or near real time information in unregulated systems and will review this option where appropriate.

Box 1: Basis for exemption for real-time information on extractions in unregulated rivers

Rural water corporations have installed telemetry where, after considering all factors, the net cost of telemetry is less than the cost of manual meter reads. Across Victoria, approximately 52% of meters are telemetered, providing water corporations with real-time information on extractions. Most of these telemetered meters are in declared systems. The proportion of water taken from unregulated rivers under take and use licences in Victoria is low (2% of total surface water taken). The low volumes of

⁴ Refer to section 3.1 of Victorian Water Accounts on Surface water entitlements and use.

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water taken by individual users and low levels of trading activity often mean that the cost of installing and maintaining telemetry on extraction points in unregulated river systems outweigh the benefits.

To meet the Compact requirement, Victoria would need to install telemetry on approximately 5,400 meters on extraction points in unregulated river systems in northern Victoria. A cost-benefit analysis of this option demonstrated that the overall costs significantly outweigh the benefits. As seen in the table below, this option is not effective and proportional to the issue being addressed.

| | |
|-----------------|---|
| Benefits | <ul style="list-style-type: none">• Economic benefits: Manual meter reading savings of \$28 per site per annum• Community benefits:<ul style="list-style-type: none">- Real-time information will allow licence holders to have greater stewardship of their water resources- Meets community desire for information• Compliance benefits: Questionable given low activity of water take in unregulated rivers |
| Costs | <ul style="list-style-type: none">• Economic costs:<ul style="list-style-type: none">- Installation fees of \$1,500 per site, which need to be replaced every 15 years- Ongoing operational costs of \$200 per annum- Battery replacement of \$50 every 5 years• Technical costs: Costs to publish information and to maintain a larger database of real-time information may be incurred |
| Net | <ul style="list-style-type: none">• Over a 50-year period, the incremental cost of installing telemetry on all meters on extraction points in unregulated river systems is \$36.0 million in net present terms⁵. This does not include the technical cost and qualitative community benefits of publishing information. |

Gap b) Information on location of take in all surface and groundwater systems

DELWP collects information on location of take from pumps, bores and meters in surface water and groundwater systems. This information is not publicly available on DELWP's website. Rural water corporations publish some of this information on their website. For example, Grampians Wimmera Mallee Water publishes locations of rural water meters in its [interactive map tool](#).

The work program commits to publishing this information online.

⁵ Assuming a discount rate of 4% real and values in \$2018-2019 real.

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Appendix 2. Sources of information

| Source of information | What information is available | Where to find it |
|---|---|---|
| Victorian Water Register | <p>Records information about water related entitlements and water dealings.</p> <p>Water related entitlements recorded on the Register include:</p> <ul style="list-style-type: none"> • Water shares • Licences to take and use surface water and groundwater and temporary transfers of these licences • Bulk entitlements • Work licences • Water-use licences and water-use registrations • Serviced properties in irrigation districts • Delivery shares for serviced properties serviced by the relevant water corporations. <p>A member of the public can view on, or purchase from, the Water Register website an individual copy of record for any of the above, subject to protection of certain personal information of individuals (see sections 84X and 84Y of the Water Act).</p> <p>Water dealings recorded on the Register include:</p> <ul style="list-style-type: none"> • Dealings in water allocations for water shares and entitlements, and in licences in the current water season • Carryover of water allocations into a subsequent water season • Other water dealings such as standing directions for water allocations. | http://waterregister.vic.gov.au/ |
| Victorian Water Accounts | <p>Annual summaries of take and use under entitlements, restrictions and allocations of water resources, including surface water, groundwater and recycled water.</p> <p>Victorian Water Accounts incorporates information on the availability of water, specifically rainfall, streamflow and storage levels, and tracks the use of this water to its end use. They demonstrate Victoria's commitment to transparency and accountability in the management of the state's water resources.</p> | http://waterregister.vic.gov.au/water-availability-and-use/victorian-water-accounts |
| Current water snapshot | A snapshot of the status of Victoria's water resources, including storage levels, rainfall levels, seasonal climate outlook, ENSO outlook and seasonal determinations. This snapshot is updated as needed. | https://www.water.vic.gov.au/water-reporting/water-snapshot |
| Water in Your Region map | An interactive map to find local water information in your area such as location of water storages, water corporations and catchment management authorities. This map is updated as needed. | https://www.water.vic.gov.au/water-reporting/water-in-your-region |
| Water Measurement Information System (WMIS) | <p>Data on surface water and groundwater collected through the Regional Water Monitoring Partnership. WMIS is the primary access point to search, discover and download surface water (water level, flow and water quality) and groundwater (water level and water quality) monitoring data.</p> <p>As of 31 December 2018, WMIS also contains real-time data (less than 1 hour old) for all telemetered surface water gauges and groundwater bores.</p> | http://data.water.vic.gov.au/ |