

Audit of Water Entitlement Entity (WEE) Purchases – GMW Connections Project 2020/21

Report

3608-95

Prepared for
Department of Environment, Land, Water and
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1 Introduction

1.1 Background

The Victorian State Government and the Commonwealth Government have committed significant funding for the renewal and modernisation of the Goulburn-Murray Irrigation District (GMID). The water recovery achieved through the renewal and modernisation works is to be shared between the environment, and Melbourne and irrigation customers. The works are also expected to improve the efficiency of delivery and increase the level of service provided to irrigation customers.

Goulburn-Murray Water¹ (GMW) is the owner and operator of the GMID. The GMW Connections Project forms the greater part of the modernisation of the GMID.

The water recovered (through both modernisation and water entitlement purchases) must be audited each year. The purpose of this audit is to verify the entitlement purchases managed by the GMW Connections Project in the year to 30 June 2021. The purchases are to be converted to a long-term average annual yield (LTAAY) water recovery volume using applicable long-term diversion limit equivalent (LTDLE) factors.

1.2 Scope of audit

The scope of work for the audit of the water entitlement purchases consists of:

- > Comparing the information provided by the GMW Connections Project against the Victorian Water Register (based on the Water Register Report provided by DELWP on all Water Entitlement Entity (WEE) numbers claimed the GMW Connections Project). As well, checking that the date of transfer recorded in the Register is no later than 30 June 2021. For this purpose, GMW Connections was required to provide a register of WEE details and supporting information.
- > Verifying the calculation of Long-Term Average Annual Yield (LTAAY) water recovery using conversion factors supplied by DELWP.
- > For this year's audit, purchases by trading zone will be summarised in addition to Murray, Goulburn and Broken water systems as reported in previous years.

¹ Goulburn-Murray Water is the trading name of the Goulburn-Murray Rural Water Corporation.

2 Methodology

2.1 Requirement for confirming WEEs

The audit scope requires that the ownership and details of the WEEs claimed by the GMW Connections Project as being in its ownership at 30 June 2021 are confirmed. Specifically, the WEEs held by the GMW Connections Project are to be cross-checked against the Victorian Water Register in the following respects:

The GMW Connections Project was to provide a register of WEE details and supporting information detailing:

- > WEE number
- > water entitlement volumes related to particular WEE numbers
- > date of transfer recorded in the Victorian Water Register (to be no later than 30 June 2021)
- > classification of water entitlements as either high or low reliability
- > classification of water entitlements by system and trade zone
- > evidence of ownership of entitlements (entitlements must be in the name of GMW (PTY121425) at 30 June 2021 or must have been transferred to a project beneficiary or surrendered as part of the Project).
- > a list of the projects under which the entitlement was purchased (if relevant); and
- > any additional water entitlement purchase information requested by the Auditor.

DELWP provided a Water Register Report on all the WEE numbers claimed by GMW Connections.

The audit also required the auditor to check the calculation of LTAAY water recovery as per the long-term diversion limit equivalent conversion factors provided by DELWP.

2.2 Methodology

To complete the audit, we undertook the following activities:

- > Obtained a spreadsheet from the GMW Connections Project detailing its WEE holdings and relevant information about the entitlements including WEE number and volume.
- > Obtained the list of WEEs in the Project's PTY from the Victorian Water Register from DELWP. This included volume, reliability classification, date of transfer recorded on the register, and ownership details relating to each claimed WEE number.
- > Reconciled the details provided to us by DELWP from the Victorian Water Register against the schedule provided to us by GMW Connections Project. This included a check that consolidated WEEs represented the component (and previously registered) individual WEEs. For WEEs claimed by the GMW Connections Project where the Victorian Water Register confirmed the WEE details and that the entitlement was in the GMW Connection Project's ownership, we accepted these WEEs for inclusion in the calculation of the LTAAY. Where we identified discrepancies between the two data sources we investigated further to establish the correct details.
- > For all WEEs confirmed as being in the GMW Connections Project's ownership, we applied the conversion factors to the WEE volumes to determine the LTAAY volume. These calculations are set out in Section 4.
- > Provided a draft report to the GMW Connections Project and DELWP for checking for factual accuracy and acted on the feedback received to finalise this report.

3 Results of reconciliation of WEEs claimed / not claimed by GMW Connections Project against the Victorian Water Register

3.1 Findings

WEEs held by PTY121425 and claimed by GMW Connections Project

Following reconciliation between the GMW Connections Project’s schedule of claimed WEEs and the Victorian Water Register, we were able to confirm:

- > Nine WEEs were claimed by GMW Connections Project where the details were consistent with the Victorian Water Register and are registered in the name of Goulburn-Murray Water for the Connections Project.
- > This number of WEEs (9) is two orders of magnitude less compared to previous years’ claims (200-300) as the WEEs within the Project’s PTY have been consolidated with a move to having one overall WEE record each for high and low reliability shares per trading zone where possible. Consolidated WEEs will still represent the total allocation volume of the previously reported individual WEEs. Details of all WEEs held by PTY12145 on the Victorian Water Register are included in Appendix A. This includes those claimed and not claimed by GMW Connections Project.

WEEs held by PTY121425 and not claimed by GMW Connections Project

We were able to confirm that GMW considers that some of the WEEs within PTY121425 cannot be claimed. There are twelve WEEs in this group as follows:

- > One WEE (830.0ML of HRWS - Cosgrove Special Project) is in the Broken Creek System and is held in trust by the project for the State.
- > Ten of the WEEs (Totalling 44.9ML of HRWS) are in held by the project on behalf of the Mitiamo Project.
- > One WEE claimed by GMW Connections Project (WEE058435) has a “pending” status and has therefore been excluded from the water share totals.

Table 3-1 Results of initial reconciliation of WEEs within PTY121425

Category	Low Reliability Water Share (ML)	High Reliability Water Share (ML)
Details confirmed and in name of Goulburn-Murray Water for the GMW Connections Project	5,760.3	15,114.4
Held by the Project under PTY121425 but not claimed or in the scope of the GWM Connections Project - Cosgrove Special Project		830.0
Held by the Project under PTY121425 but not claimed or in the scope of the GWM Connections Project - Mitiamo Project		44.9
“Pending” status		5.2
Grand Total	5,760.3	15,994.5

No discrepancies were found in the details of the WEEs held in the name of the GMW Connections Project between the two sets of PTY121425 records.

Not in scope of the 2020/21 Audit – transferred to other beneficiaries

WEEs in this category are listed at DELWP’s request but are not part of PTY121425 and were not audited as part of this year’s review.

- > Two WEEs, WEE023553 (90.0ML high reliability – Stage 1) and WEE023554 (18.9ML low reliability – Stage 1) are in the Broken System. They have been excluded from the claimed lists of the GMW Connections Project and the Victorian Water Register. These WEEs were transferred to the Victorian Environmental Water Holder (VEWH) prior to 30 June 2019 to meet Victoria’s water recovery commitments under the Murray-Darling Basin Plan (MDBP). However, they are still part of the 2020/21 audit.
- > One WEE, at 4A Campaspe – Eppalock to WWC (net claim 15,052 ML of HRWS after reconciliation), which was cancelled and issued in 2013 to VEWH as part of Stage 1 environment share.

- > One WEE, at 6B Lower Broken Creek (net claim 203.7 ML of HRWS after reconciliation), cancelled before the 30 June 2021 and to be issued as part of the Stage 1 irrigator's share.

Table 3-2 Transferred WEEs to other beneficiaries

Category	Low Reliability Water Share (ML)	High Reliability Water Share (ML)
No longer held by the GMW Connection Project - VEWH	18.9	90.0
No longer held by the GMW Connection Project - VEWH (Cancelled status)		15,052.0
No longer held by the GMW Connection Project - Irrigators' share (Cancelled status)		203.7
Grand Total	18.9	15,345.7

3.2 Summary

Table 3-3 summarises the breakdown of WEEs within the scope of this audit. They are all part of PTY121425 and are broken down by those which are and are not claimed by GMW Connections Project. Table 3-3 excludes WEEs not in the scope of the 2020-21 audit which were transferred to other beneficiaries (Table 3-2).

Table 3-3 WEEs breakdown

Category	Low Reliability Water Share (ML)	High Reliability Water Share (ML)
Within scope of GMW Connections Project	5,760.3	15,114.4
Considered to be outside the scope of the Connections Project		880.1
Total	5,760.3	15,994.5

4 Calculation of long-term average annual yield

Following confirmation of the status of WEEs outlined in Section 3, the entitlement volumes have been converted into LTAAAY volume in Table 4-1 to Table 4-3 using the conversion factors provided by DELWP. The purchases are also categorised by trading zones.

- > [WEEs held by PTY121425 and claimed by GMW Connections Project](#)
- > [WEEs held by PTY121425 and not claimed by GMW Connections Project](#)
- > [Not in scope of the 2020/21 Audit – transferred to other beneficiaries](#)

4.1 WEEs held by PTY121425 and claimed by GMW Connections Project

Table 4-1 Calculation of long-term average annual yield of WEEs within PTY121425 and claimed by GMW Connections Project

Project / Irrigation area/Trading zone	Volumes of purchased WEEs		LTDLE conversion factors		Long Term Average Annual Yield		
	Low reliability (ML)	High reliability (ML)	Low reliability (MLshare/ML-LTDLE)	High reliability (MLshare/ML-LTDLE)	Accruing from low reliability (ML)	Accruing from high reliability (ML)	Total (ML)
GMW CP Stage 1							
Goulburn System	3,041.0	7,934.2	0.583	0.967	1,772.9	7,672.4	9,445.3
1A Greater Goulburn	2,721.4	7,390.3	0.583	0.967	1,586.6	7,146.4	8,733.0
1B Boort	319.6	503.9	0.583	0.967	186.3	487.3	673.6
3 Lower Goulburn	0.0	40.0	0.583	0.967	0.0	38.7	38.7
Murray System	2,719.3	7,180.2	0.543	0.974	1,476.6	6,993.5	8,470.1
6 VIC Murray - Dart to Barmah	612.6	2,824.0	0.543	0.974	332.6	2,750.6	3,083.2
7 VIC Murray - Barmah to SA	2,106.7	4,356.2	0.543	0.974	1,143.9	4,242.9	5,386.9
Total	5,760.3	15,114.4			3,249.5	14,665.9	17,915.4

Totals may not sum exactly due to rounding

4.2 WEEs held by PTY121425 and not claimed by GMW Connections Project

Table 4-2 Calculation of long-term average annual yield of WEEs within PTY121425 and not claimed by GMW Connections Project

Project / Irrigation area/Trading zone	Volumes of purchased WEEs		LTDLE conversion factors		Long Term Average Annual Yield		
	Low reliability (ML)	High reliability (ML)	Low reliability (MLshare/ML-LTDLE)	High reliability (MLshare/ML-LTDLE)	Accruing from low reliability (ML)	Accruing from high reliability (ML)	Total (ML)
Cosgrove DSPP							
Broken System	0.0	830.0	0.083	0.570	0.0	473.1	473.1
2 Broken	0.0	830.0	0.083	0.570	0.0	473.1	473.1
GMW Mitiamo PP							
Goulburn System	0.0	44.9	0.583	0.967	0.0	43.4	43.4
1A Greater Goulburn	0.0	44.9	0.583	0.967	0.0	43.4	43.4
Pending							
Murray System	0.0	5.2	0.543	0.974	0.0	5.1	5.1
7 VIC Murray - Barmah to SA	0.0	5.2	0.543	0.974	0.0	5.1	5.1
Total	0.0	880.1			0.0	521.6	521.6

Totals may not sum exactly due to rounding

4.3 Not in scope of the 2020/21 Audit – transferred to other beneficiaries

Table 4-3 Calculation of long-term average annual yield of transferred WEEs to other beneficiaries

Project / Irrigation area/Trading zone	Volumes of purchased WEEs		LTDLE conversion factors		Long Term Average Annual Yield		
	Low reliability (ML)	High reliability (ML)	Low reliability (MLshare/ML-LTDLE)	High reliability (MLshare/ML-LTDLE)	Accruing from low reliability (ML)	Accruing from high reliability (ML)	Total (ML)
Stage 1							
Broken System	18.9	90.0	0.083	0.570	1.6	51.3	52.9
2 Broken	18.9	90.0	0.083	0.570	1.6	51.3	52.9
Murray System	0.0	203.7	0.543	0.974	0.0	198.4	198.4
6B Lower Broken Creek	0.0	203.7	0.543	0.974	0.0	198.4	198.4
Campaspe System	0.0	15,052.0	0.571	0.950	0.0	14,299.4	14,299.4
4A Campaspe - Eppalock to WWC	0.0	15,052.0	0.571	0.950	0.0	14,299.4	14,299.4
Total	18.9	15,345.7			1.6	14,549.1	14,550.7

Totals may not sum exactly due to rounding

5 Recommendations for improvement

We make no recommendations for improvement.

APPENDIX

A

WEEs held in PTY12145 on the
Victorian Water Register

WEE ID	Reliability	Volume (ML)	Trading zone	Project
WEE051568	High	40.0	3 Lower Goulburn	GMW CP Stage 1
WEE073692	Low	2,106.7	7 VIC Murray - Barmah to SA	GMW CP Stage 1
WEE073695	High	4,356.2	7 VIC Murray - Barmah to SA	GMW CP Stage 1
WEE073696	Low	612.6	6 VIC Murray - Dart to Barmah	GMW CP Stage 1
WEE073697	High	2,824.0	6 VIC Murray - Dart to Barmah	GMW CP Stage 1
WEE073698	Low	319.6	1B Boort	GMW CP Stage 1
WEE073699	High	503.9	1B Boort	GMW CP Stage 1
WEE073706	Low	2,721.4	1A Greater Goulburn	GMW CP Stage 1
WEE073710	High	7,390.3	1A Greater Goulburn	GMW CP Stage 1
WEE073255	High	0.4	1A Greater Goulburn	GMW Mitiamo PP
WEE073316	High	2.5	1A Greater Goulburn	GMW Mitiamo PP
WEE073390	High	27.0	1A Greater Goulburn	GMW Mitiamo PP
WEE073396	High	0.8	1A Greater Goulburn	GMW Mitiamo PP
WEE073398	High	0.4	1A Greater Goulburn	GMW Mitiamo PP
WEE073408	High	1.1	1A Greater Goulburn	GMW Mitiamo PP
WEE073441	High	0.5	1A Greater Goulburn	GMW Mitiamo PP
WEE073544	High	10.0	1A Greater Goulburn	GMW Mitiamo PP
WEE073454	High	1.2	1A Greater Goulburn	GMW Mitiamo PP
WEE073318	High	1.0	1A Greater Goulburn	GMW Mitiamo PP
WEE031706	High	830.0	2 Broken	Cosgrove DSPP
WEE058435 ²	High	5.2	7 VIC Murray - Barmah to SA	Not applicable

² WEE058435 has a "pending" status.