

OFFICIAL



Status of Major Projects Supplement

Outcomes report 2021–22

18 October 2022



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Background

In their pricing submissions, water businesses included their proposed major capital investment projects to be progressed or completed during the relevant regulatory period. Our final pricing determination for each business includes a scheduled list of these projects allowed for in pricing, along with the anticipated start and completion years of each project. Some scheduled projects have commenced in years prior to the current regulatory period and have now extended beyond their scheduled completion dates. We require businesses to continue to report on these projects until they are completed, as shown in Table 1 of this report.

These projects will continue to be reported on by businesses until they are completed.

Customers' prices include recovering capital investment costs in accordance with this approved project schedule. It is appropriate that water businesses explain delays or alterations to their project schedules, because approved funds will flow from pricing whether the expenditure is incurred or not, unless the water businesses lower their prices accordingly. Also, changes to project delivery schedules may materially impact the services received by customers.

This section tracks the businesses' reported progress against their original project schedule as reflected in their price submissions and our pricing determinations.

The major project status categories are:

- on-schedule — no significant changes to the project start and end dates
- delayed — either the project start was delayed, or completion will be later than scheduled
- deferred — the business rescheduled the entire project, either within the current pricing period or into a future period
- cancelled — the project will not proceed in the foreseeable future
- completed on time — the project was completed in accordance with the original scheduled completion date (includes early completion)
- completed late — the project was completed within the period, but later than the original scheduled completion date.

Table 1 provides details for each scheduled major project for each water business, including:

- a brief description or project name
- the original scheduled start and end years (as per the pricing determination)
- businesses' latest updates on the actual or expected start and end years
- an overall project status (on-schedule, delayed, deferred, cancelled or completed)
- general comments by the water business to explain any relevant details of the project and its current status.

Table 1 also includes some projects from the business's previous pricing period that were not completed before the end of that period, and were therefore carried over into the current pricing period. We will monitor all major capital projects through to their conclusion.

The information in Table 1 has been provided to us by the businesses and is their own explanation of the status of their major projects. We have reviewed this information only to ensure that relevant dates, project status and comments are consistent with what has been previously reported.

Summary of Major Projects

Table 1 Summary of major projects by water corporation

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Barwon Water (Regulatory Period: 2018–23)						
Torquay West high level feeder main	Carried over	2013-14	2025-26	2028-29	Deferred	This project has been deferred to more closely align with when the asset would be required due to delays in the land use planning for this future growth area. Growth & land development has been different to what was expected - slower in Torquay and faster in Armstrong Creek, Lara West and Ocean Grove. Accordingly, expenditure has been reallocated to those growth areas to provide better value for customers in this price period..
Black Rock water reclamation plant hydraulic capacity upgrade	Carried over	2015-16	2013-14	2019-20	Completed late	This project was completed later than scheduled in 2019-20. Modifications were required for inlet screens, causing delays due to design deficiencies in the contractor's design (resolved at contractors cost).
Property realisation (Thornhill Rd Highton)	In progress	2018-19	2018-19	2020-21	Completed late	This project was completed later than scheduled in 2020-21 due to initial delays experienced seeking council approval of engineering plans. There was no impact on customers as the revenue benefits that were expected to be realised in the scheduled completion year 2018-19 were locked into our 2018-23 prices.
Colac water treatment plant clear water storage upgrade	In progress	2019-20	2018-19	2019-20	Completed on time	This project was completed on time in 2019-20.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Barwon Water (continued)						
Colac water reclamation plant sludge dewatering upgrade	In progress	2019-20	2019-20	2024-25	Deferred	Through innovation we have been able to meet the project objectives at a lower cost and defer additional expenditure to a later date with a better value outcome for customers. The Colac Water Reclamation Plant Centrifuge Upgrade is forecast to be completed by June 2025. There is no impact on customer service due to the deferment.
Property realisation (Scenic Rd Highton)	In progress	2020-21	2021-22	2026-27	Deferred	Change in Government policy relating to surplus land and subsequent delays in obtaining agreement on the treatment of a Crown Land component at this landholding. No impact on customers as the revenue that was expected in the scheduled completion year 2020-21 were locked into our 2018-23 prices.
Colac pipeline upgrade	In progress	2027-28	2023-24	2028-29	Delayed	Estimated completion: 50% (by June 2023) A staged replacement of pipeline conducted with all priority 1 and 2 sections of the pipe to be replaced by June 2024 (up to 12 month delay due to change in the listed species EPBC Act and beyond our control – post construction contract award). Priority 3 and 4 sections are scheduled to be replaced over the next two pricing periods.
Black Rock renewable energy project stage 2	2018-19	2019-20	2018-19	2019-20	Completed on time	This project was completed in 2019-20.
Gellibrand water treatment plant upgrade	2019-20	2021-22	2023-24	2023-24	Delayed	Estimated completion: 50% (by June 2023) Project reprioritised, scheduled for completion by April 2024. There is no impact on customer service due to the delay.
Telemetry RTU PLC HMI hardware & software	2020-21	2021-22	2020-21	2022-23	Delayed	Project delayed however scheduled for completion by June 2023. Delivery of project underway with works to occur progressively throughout 2022-23. There is no impact on customer service due to the delay.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Barwon Water (continued)						
Forrest water treatment plant upgrade	2020-21	2022-23	2023-24	2023-24	Delayed	Estimated completion: 80% (by June 2023) Project reprioritised, scheduled for completion by December 2023. There is no impact on customer service due to the delay.
Black Rock water reclamation plant effluent storage	2021-22	2023-24	2029-30	2031-32	Deferred	Through innovations in the configuration of existing infrastructure at the site, additional recycled water storage has been able to be efficiently achieved by utilising an existing effluent channel, enabling deferment of this project. This project has been deferred due to modifications to existing infrastructure allowing the planned project to be postponed.
Central Highlands Water (Regulatory Period: 2018–23)						
Ballarat South wastewater treatment plant lagoon pipeline upgrade	In progress	2018-19	2019-20	2019-20	Completed late	This project was delayed due to late changes to the design that impacted construction.
Evansford raw water pipeline renewal	In progress	2018-19	2018-19	2019-20	Completed late	Original planned construction start delayed due to Cultural Heritage and Environmental approvals.
Fellmongers siphon replacement	In progress	2019-20	2018-19	2019-20	Completed on time	Completed in accordance with original scheduled timeframes.
Daylesford water supply upgrade	In progress	2020-21	2018-19	2022-23	Delayed	Tender evaluation underway. External approvals process has delayed the project. Expected to be awarded Q1 2022/23. Supporting projects to assist in improving and upgrading Daylesford's Water supply security have been completed.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Central Highlands Water (continued)						
Ballan wastewater treatment plant – increase in recycled water winter storage capacity	In progress	2020-21	2018-19	2019-20	Completed on time	Completed in accordance with original scheduled timeframes.
Ballarat South outfall sewer duplication	In progress	2022-23	2021-22	2022-23	Delayed	Due to local council preference, this project was deferred due to the Ballarat East Sewer duplication commencing first. Tender is being evaluated and expect to be awarded Q1 2022/23.
Ballarat South wastewater treatment plant inlet works upgrade	2018-19	2020-21	2018-19	2021-22	Completed late	Works suffered some delays due to COVID- 19 impacts. Key components needed to be sourced from overseas and presented some supply chain issues. Works largely complete.
Ring Road trunk water main duplication	2018-19	2022-23	2021-22	2021-22	Completed	Alternative/substitute works were identified to deliver the required pressure improvement outcome for customers including pressure reduction value improvements and network cross connections (at the Avenue of Honour).
Maryborough wastewater reuse scheme improvements	2019-20	2020-21	2020-21	2022-23	Delayed	Procurement of additional land requirements, main project component of pipeline connection complete and complimentary optimisation of irrigation infrastructure and land completed. 50% of the proposed irrigation area is complete in 2021 with further irrigation areas identified for expansion to occur in following years.
Ballarat East sewer duplication and flow storage	2019-20	2022-23	2021-22	2021-22	Completed	Works completed ahead of original schedule.
Coliban Water (Regulatory Period: 2018–23)						
Echuca and Cohuna water treatment plant upgrades	Carried over	2015-16	n/a	n/a	Cancelled	Project cancellation confirmed in 2018-19 reporting – project was no longer required, and is now closed.

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Coliban Water (continued)						
Digital customer metering	2018-19	2022-23	2018-19	2023-24	Delayed	The project has been impacted by global supply chain issues relating to the supply of components required for the manufacture of the data loggers. This will see the completion date of the project delayed by up to 18 months.
Western Bendigo water network growth and pressure	2018-19	2021-22	2018-19	2022-23	Delayed	<p>Works on site for a storage tank, booster pump station and a pipeline in Marong have been completed under existing contracts.</p> <p>Detailed design of a new water mains from Specimen Hill to Edwards Road is well underway. A contract for Coliban Region pipelines has been awarded including packages of works for water mains in Marong, Maiden Gully, Strathfieldsaye and Huntly.</p>
Strathfieldsaye water network augmentation	2018-19	2021-22	2018-19	2022-23	Delayed	<p>Concept design works for storage tank and booster pump station has been developed. Storage tank and booster pump station will be delivered as part of a tank delivery program and is scheduled for completion in 2022-23.</p> <p>As detailed above (Western Bendigo water network growth and pressure), preliminary design of water mains is complete and a contract for Coliban Region pipelines has been awarded including packages of works for water mains in Marong, Maiden Gully, Strathfieldsaye and Huntly.</p>

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Coliban Water (continued)						
Kyneton water reclamation plant lagoon compliance works	2018-19	2021-22	2018-19	2021-22	Completed on time	Phase 1 included the lagoon compliance works planned for the 2018-2023 regulatory period and these have been completed. The works for Phase 2 included construction of a Class C to B Treatment Facility and construction of a 200ML storage lagoon. After completion of the originally proposed works, we have also undertaken further works at the Kyneton WRP to achieve ongoing and future compliance.
Heathcote water reclamation plant compliance	2018-19	2021-22	2018-19	2020-21	Completed	The original plan was to undertake works at the Heathcote WRP to achieve licence compliance. However, following the investigation of options we were able to achieve licence compliance by instead undertaking backwash water reuse at the Water Treatment Plant. This reduced the loading to the WRP and enabled further works at the WRP to be rolled into a future project. A review of the success of the Heathcote WTP upgrade project has been completed.
Echuca water treatment plant security of supply	2018-19	2022-23	2018-19	2022-23	On schedule	The main contract was awarded early 2021 and works are well progressed on site. Works remain on track for the entire project to be completed in 2022-23.
Echuca West tank	2019-20	2021-22	2018-19	2020-21	Completed on time	The works have been successfully delivered during 2020-21.
Castlemaine water reclamation plant sludge handling upgrades	2020-21	2022-23	2020-21	2025-26	Delayed	Design works scheduled to commence in 2022-23.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Coliban Water (continued)						
Epsom Huntly water main augmentation	2020-21	2022-23	2019-20	2022-23	On schedule	Works are currently well progressed on site and on track for completion in 2022-23.
Bendigo water reclamation plant sludge processing upgrades	2020-21	2023-24	2020-21	2026-27	Delayed	The scope of works in the final business include additional works to upgrade the dewatering facilities and electrical infrastructure on site. As a result, the schedule has been updated to reflect the increase in scope. The project is currently in the procurement – tendering phase.
Heathcote WTP upgrades	2018-19	2019-20	2018-19	2019-20	Completed on time	The works are complete.
East Gippsland Water (Regulatory Period: 2018–23)						
Paynesville main supply pipeline (stage 2)	Carried over	2015-16	2017-18	2025-26	Cancelled	This project was deferred pending a condition assessment to ensure a targeted approach to replacement. Following a condition assessment it has been re-scoped and rescheduled under the project listed below 'Bairnsdale to Eagle Point main supply pipeline renewal'.
Bairnsdale wastewater treatment plant upgrade	Carried over	2017-18	2014-15	2018-19	Completed late	This project is now complete. Main components of this upgrade include digester refurbishment, combined heat and power unit, gas storage unit and a head-of-plant flow balancing tank which was commissioned in 2018-19. The new 1.3ML tank will improve plant process performance (environmental outcome) and overall efficiency (reduce operating costs). The project was completed over budget.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
East Gippsland Water (continued)						
Sarsfield clear water storage augmentation	In progress	2019-20	2017-18	2021-22	Delayed	Defects identified with the internal liner has delayed Practical Completion. Liner has been replaced and is in the final stages of commissioning.
Upgrade main supply pipeline (Sarsfield to Johnsonville)	In progress	2020-21	2017-18	2019-20	Completed on time	Construction of pipeline was completed and commissioned for service in 2019-20. This project was completed \$500k below the allocated budget for PS 2018-23.
Lakes Entrance wastewater treatment plant odour management	2018-19	2019-20	2017-18	2022-23	Delayed	Stage 1 of this project was completed in 2018-19 which significantly reduced odour levels. Stage 2 of the project is on track to be completed in 2022-23
Wy Yung clear water storage	2018-19	2020-21	2017-18	2020-21	Completed on time	Construction of the 36ML reinforced concrete tank reached Practical Completion in the 2020-21 financial year.
Dinner Plain recycled water storage augmentation	2019-20	2020-21	2017-18	2027-30	Deferred	Design of 14ML new winter storage basin is in progress. Construction has been deferred to enable the completion of some sewer network infiltration rectification works. These works may reduce the volume of winter storage required.
Paynesville recycled water storage and irrigation augmentation	2020-21	2022-23	2018-19	2024-25	Delayed	Functional design nearing completion to increase winter storage capacity and increase irrigation capacity. Significant change in scope and storage capacity required which has delayed the works. Irrigation expansion on track to be completed in 2022-23.
Bairnsdale to Eagle Point main supply pipeline renewal	2020-21	2022-23	2017-18	2021-22	Completed on time	Works were completed in 2021-22.
Mallacoota clear water storage	2020-21	2022-23	2018-19	2022-23	On schedule	Detailed design was commenced in 2021-22. Tendering and construction to occur in 2022-23 and may carry-over into 2023/24.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
East Gippsland Water (continued)						
Lindenow storage water quality improvement	2020-21	2022-23	2019-20	2023-24	Delayed	Functional design of new 1ML tank progressed in 2021-22. Additional tank storage volume required. Construction likely to be delayed until 2023-24.
Woodglen raw water storage—dam safety upgrades	2021-22	2023-24	2018-19	2022-23	On schedule	Detailed design complete. Tendering in progress at the end of 2021-22.
Gippsland Water (Regulatory Period: 2018–23)						
Sale sewer – outfall sewer pump station	In progress	2019-20	In progress	2020-21	Completed late	The commissioning of the sewer pump station was completed in June 2021 and is now operational. The project timing was due to unfavourable ground conditions.
Drouin sewer – new wastewater treatment plant	In progress	2021-22	In progress	2022-23	Delayed	The project is well progressed and the treatment plant is in the optimisation phase. It remains on track for completion in the 2022-23 financial year.
Moe water – treatment plant basin liner and cover replacement	2018-19	2018-19	2020-21	2022-23	Delayed	While this project is on track to be completed within the five-year pricing period, we have made some scheduling adjustments to enable us to maintain a reliable water supply for customers and major industry while we complete the works. Construction of the basin is underway and expected to be completed in the 2022-23 financial year.
Mirboo north water – rising main replacement	2018-19	2019-20	2018-19	2019-20	Completed on time	Project completed as scheduled.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Gippsland Water (continued)						
Coongulla water – interconnect to Heyfield	2018-19	2020-21	2018-19	2022-23	Delayed	Commissioning of pump station and pipeline occurring with completion expected in the 2022-23 financial year.
Sale sewer – convert sewer pump station no. 2 to underground facility	2019-20	2021-22	2020-21	2022-23	Delayed	Tenders have been received and contract to be awarded in July 2022 with completion expected in the 2022-23 financial year.
Warragul water – Western Ring main to South Basin	2019-20	2022-23	2019-20	2022-23	On schedule	Construction is underway with expected completion in the 2022-23 financial year.
Warragul sewer – North East branch augmentation (to Sutton Street)	2019-20	2022-23	2019-20	2023-24	Deferred	Project scheduling adjustments have enabled more critical works to proceed at Moe water treatment basin. The decision to reschedule the Warragul sewer north-east branch augmentation will have no material impact on our capital program and was based on recent modelling and field performance data, confirming a longer life expectancy with no customer impact. Functional design is complete with easement acquisition and detailed design underway. .
Saline waste outfall pipeline – stages 4 and 5 upgrade	2021-22	2022-23	2025-26	2026-27	Deferred	The delivery timelines for this project have been adjusted in consultation with the major customer while we work to determine the best delivery approach. A detailed technical review highlighted an increased life expectancy for this asset, meaning it can be deferred to the next five-year pricing period. The costs associated with this project are fully recoverable from the major customer.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Gippsland Water (continued)						
Churchill water – sanders treated water basin liner and cover replacement	2021-22	2022-23	2021-22	2022-23	On schedule	Construction is underway with expected project completion in the 2022/23 financial year.
Goulburn Valley Water (Regulatory Period: 2018–23)						
Mansfield wastewater management facility additional winter storage	Carried over	2020-21	2015-16	2024-25	Deferred	This project started in Pricing Period 3 as a future winter storage and irrigation upgrade project. For Pricing Period 4 this project was changed to an environmental offsets option which was under investigation at the time. The environmental offsets option was deemed as not feasible and the project reverted to a winter storage option. This winter storage design is now currently being reviewed with the Corporation land now being rezoned to allow for the construction works to commence.
Shepparton wastewater management facility high rate anaerobic lagoon cover replacement	2016-17	2020-21	2016-17	2020-21	Completed on time	The new cover is in service and was completed on time.
Shepparton outfall rising main replacement	2017-18	2019-20	2017-18	2020-21	Completed late	The project is complete and the new outfall sewer is in service. The project completion date was delayed due to an initial tender process not providing offers that represented good value for GVW. A subsequent re-design and tender process delivered a better value outcome for GVW.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Goulburn Valley Water (continued)						
Broadford water treatment plant upgrade	2017-18	2020-21	2017-18	2029-30	Deferred	Project works will now be completed over an extended period. Power supply upgrades are currently in progress. This will enable the construction of additional storage and major WTP upgrades to be deferred for completion in 2029-30.
Shepparton raw water pump station augmentation	2017-18	2021-22	2017-18	2028-29	Deferred	Interim risk controls have been enacted to enable the project to be deferred.
Kilmore wastewater management facility offsets	2017-18	2021-22	2017-18	2020-21	Completed on time	Project is completed and new assets are in service.
Climate change mitigation strategy	2017-18	2023-24	2017-18	2023-24	On schedule	Renewables program Stage 1 is complete. Stage 2 was scheduled for completion in 2021-22, however this will carry over into 2022-23 due to COVID related materials availability and contractor site access delays. Energy performance projects are being implemented as required to support the strategy.
Digital enablement strategy	2017-18	2024-25	2018-19	2023-24	On schedule	The first major project (Finance System Replacement) has been completed in 2020-21. The second major project (Asset Management System Replacement) is currently progressing towards implementation after the signing of a contract in June 2022. The next significant project (Billing / CRM System Replacement) is progressing through the initiation stage and is expected to release a tender to market in September 2022. A number of smaller, supporting projects are on track to commence in 2022-23. The Digital enablement strategy is an ongoing program that will extend beyond 2023-24.
Seymour sewer pump station no.1 rising main replacement	2019-20	2020-21	2019-20	2021-22	Completed late	The project was completed in 2021-22. The project had been delayed by a compulsory land acquisition process.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Goulburn Valley Water (continued)						
Nathalia treated water pipeline	2020-21	2023-24	2021-22	2028-29	Deferred	Deferred based on implementation of short term works to address risks. Design and planning has commenced in 2021-22 however construction is not scheduled to commence until 2025-26.
Replacement of Abbinga reservoir	2021-22	2022-23	2017-18	2020-21	Completed on time	Works are complete and the upgraded Reservoir is in service. Project was completed earlier than originally scheduled due to the opportunity to combine projects and achieve efficiencies.
Greater Western Water (previously City West Water area) (Regulatory Period: 2018–24)						
CBD sewerage strategy stage 1 (Spencer Street)	In progress	2018-19	2017-18	2018-19	Completed on time	Construction at the Spencer Street sewer commenced in 2017-18 and was completed in 2018-19 ahead of schedule and under budget. The Spencer Street sewer is an integral part of our CBD sewer network, and its upgrade has reduced the risk of sewer spills from this branch.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Greater Western Water (previously City West Water area) (continued)						
Nicholson Street (Carlton/Carlton North) water main Renewal	In progress	2019-20	2019-20	2020-21	Completed late	<p>The new water main and associated community projects were built mainly along Canning St (Parallel to Nicholson St) and was completed in October 2020 with the work site fully reinstated and handed back to the community. This renewal included the replacement of the old 450mm diameter water main with an upgrade to a 750mm diameter water main to cater for growth.</p> <p>The project required extensive engagement and approvals from stakeholders which delayed the project slightly and resulted in requiring additional funding (compared the amount included in the 2018 Pricing Submission) to complete mainly due to higher tender prices that are reflective of the current market. The additional funding was accommodated within the overall capex program.</p>

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Greater Western Water (previously City West Water area) (continued)						
West Werribee sewage pump station upgrade	In progress	2019-20	2019-20	2020-21	Completed late	<p>Construction of the West Werribee sewage pump station upgrade is complete and the facility became operational in February 2021. This upgraded sewage pumping station caters for increased flows and anticipated growth in the area. The facility is now located away from housing.</p> <p>The detailed design for the upgrade, including the environmental and heritage approval and requirements for connection to the Western Trunk Sewer, took longer than anticipated. As a result, the project was delayed, and additional funding was required compared to the original 2018 pricing submission plan and allocated budget.</p>
Greek Hill water supply (Dohertys Rd, Derrimut Rd & Davis Rd mains and Melbourne-Geelong pipeline interconnection)	2018-19	2019-20	2018-19	2020-21	Completed late	All potable water project components relating to the Greek Hill dual supply system were tendered for in 2018-19 and were completed in 2019-20. Approximately 97% of the works had been completed with the only one outstanding SCADA commissioning on the Melbourne Geelong pipeline interconnection remaining. The outstanding commissioning was delayed due to availability of new power supply connections which was then completed in October 2020.
Greek Hill recycled water supply (Dohertys Rd, Derrimut Rd & Davis Rd mains)	2018-19	2019-20	2018-19	2019-20	Completed on time	Recycled water components of the Greek Hill Recycled water components of the Greek Hill dual supply system were laid in parallel to the potable water mains. There was a minor change in scope to part of the Dohertys Road section where no recycled water pipes were installed until the permanent water works were constructed, which has now been completed on time.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Greater Western Water (previously City West Water area) (continued)						
CBD sewerage strategy stage 2 (Lonsdale Street)	2018-19	2020-21	2018-19	2020-21	Completed on time	<p>Following extensive engagement with key stakeholders to plan and coordinate works, construction of the sewer renewal commenced in October 2019. In March 2020, a major milestone was reached with the tunnel boring machine commencing tunnelling works.</p> <p>Construction was completed and the new sewer was put online in November 2020. It comprises of a new 1400mm diameter sewer that extends for approximately 900m between the newly constructed Stage 1 (Spencer St Sewer) and Elizabeth St, completed in mid-2018-19. This upgrade is Stage 2 of the Melbourne CBD Sewer Augmentation Strategy that is required to cater for growth in Melbourne CBD. The project was delivered on time and within budget.</p>
Mt Atkinson outlet sewer	2019-20	2020-21	2019-20	2021-22	Completed late	<p>The Mt Atkinson outlet sewer comprises a new 600mm diameter sewer that extends for approximately 4km along Hopkins Rd and Derrimut Rd, Truganina in Melbourne' outer west. It will cater for growth in the area and provides a sewer outlet for the upstream Mt Atkinson Development.</p> <p>The project was completed in August 2021. The project experienced minor delay due to hard ground conditions that impacted the tunnelling works. However, the project was delivered within budget and in time to service upstream urban development.</p>

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Greater Western Water (previously City West Water area) (continued)						
Billing and collection system replacement	2020-21	2022-23	2020-21	2023-24	Delayed	<p>The Billings & Collections program was initiated in 2019-20 with a first version business case. The Go to Market and supplier onboarding was conducted in 2020-21.</p> <p>During 2021-22, a collaborative design phase was undertaken to confirm the suitability of the System Integration partner (DB Results) and selected technology (Oracle CCS). This was successful and enabled the completion of the Business Case including validation of delivery costs and timeframe. The Business Case was approved by GWW Board in February 2022 and detailed design started in April 2022.</p> <p>Over the next year, the design will be finalised following which development of the solution will take place and testing will commence. Across this time other activities including data migration, future state process mapping and various change enablement activities will be performed.</p> <p>The system and solution is currently targeting implementation end September 2023.</p>

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Greater Western Water (previously City West Water area) (continued)						
Ravenhall outlet sewer	2020-21	2022-23	2019-20	2023-24	Delayed	<p>The Ravenhall outlet sewer will be delivered in two stages. It will be partially delivered by developers over the next two years and the remainder will be delivered by Greater Western Water in 2023-24.</p> <p>In 2020-21, we finalised discussions with the Department of Transport and the Department of Justice and Community Safety to align the proposed sewer adjacent to their land. An agreed alignment could not be secured in the Freeway and prison precinct, causing a delay.</p> <p>The project team is currently exploring alternative alignments and is expecting to finalise alignment selection and design in 2021-22. Due to changes in growth patterns and forecast usage, updated hydraulic modelling has indicated that the sewer is not required until 2024-25. It is now scheduled to be finalised in 2023-24 to meet the demand in the following year.</p>

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Greater Western Water (previously City West Water area) (continued)						
Tarneit West outlet sewer (section 1)	2020-21	2022-23	2020-21	2028-29	Deferred	<p>The Tarneit West outlet sewer crosses the Werribee River and through major council parks. Preliminary work on investigations, design and consultation with key stakeholders commenced in 2019-20.</p> <p>Updated monitoring has identified sewer flows lower than previously forecasted and the impact of wet weather events on the sewer through inflows and infiltration was less than expected. The project has now been deferred due to the new monitoring information and is now expected to be constructed in 2028-29. Engagement with Wyndham Council is ongoing to secure the sewer alignment.</p> <p>The Tarneit West Outlet Sewer is a strategic sewer in the western growth area and can be utilised, through an extension to the north, to alleviate growth pressures on the Melton RWP. The deferral will allow GWW to better understand the customer growth in Melton, the constraints on the outflows of the Melton RWP and ensure that the Tarneit West Outlet Sewer is utilised to its maximum potential in servicing the west of Melbourne.</p>

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Greater Western Water (previously Western Water area) (Regulatory Period: 2018–24)						
Surbiton Park RWP upgrade (digester)	Carried over	2014-15	2013-14	2018-19	Completed late	Contract awarded in September 2016. Project completion delayed due contract dispute. The project was completed in 2018-19 and the new digester is operational.
Sunbury additional water storage — Bald Hill tank	Carried over	2016-17	2021-22	2024-25	Deferred	Slower growth rates experienced over the last year due to COVID-19 indicates that additional water storages at Bald Hill will be required by 2023-24 based on the updated growth rates in Sunbury. The project has commenced with preliminary investigation and due diligence is due to be completed by end of 2022. Construction is expected to commence in early 2023. Project is expected to be completed in 2024-25.
Bacchus Marsh rising main	Carried over	2017-18	2018-19	2020-21	Completed late	The Bacchus Marsh rising main provides supply redundancy and capacity increase for Bacchus Marsh. The project was deferred after testing found the existing main was in better condition than expected. This was due to air entrainment issues being rectified through the installation for additional air valves. This has increased the flow rate from the pump station and enhanced environmental compliance. The project benefits have been delivered at a more cost-effective solution.
Bacchus Marsh sewer rising main Geelong Road	Carried over	2017-18	2019-20	2020-21	Completed late	This project forms part of the wider Bacchus Marsh sewage servicing strategy to cater for the growth in Maddingley, south-west of Bacchus Marsh. The project links with the Grant Street sewer pump station and was initially delayed due to design issues and cultural heritage management approvals prior to proceeding. Construction commenced in 2019-20 after an update to the original design work, with construction practical completion reached 30 June 2021 as scheduled after the delay noted above. The project has been in its defects liability period and were brought into use by 30 June 2022.

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Greater Western Water (previously Western Water area) (continued)						
Melton South Exford Road sewer pump station/rising main/ sewer	2018-19	2020-21	2018-19	2023-24	Delayed	<p>This project caters for growth in Melton South facilitating the construction of a new sewer pump station and rising main. Discussion for the purchase of land for the pump station site has commenced with the landowner. The business case has been developed with the site configuration changing from original design to improve accessibility for maintenance.</p> <p>With development at Toolern reaching a point where a permanent pump station and rising main was needed, we commenced construction in 2020-21 and expect it to be completed by 2023-24.</p>
Sunbury recycled water plant upgrade	2018-19	2022-23	2018-19	2018-19	Completed on time	<p>The official opening of the upgraded Sunbury Recycled Water Plant took place in June 2019. The \$53 million government funded upgrade is the largest capital works project in Western Water's history.</p>
Beattys Road East Trunk Water Main (Plumpton)	2019-20	2021-22	2019-20	2022-23	Delayed	<p>The Beatty's Road East Trunk Water Main in Plumpton will provide water supply to the growing Melton region. We have deferred the project to better match urban development in this region.</p> <p>This project has been deferred to better match rate of development in this region. However further onsite investigation, fieldwork and design were delayed due to pandemic restrictions in 2020-21. Construction is expected to commence in late 2022, with completion in 2022-23.</p>

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Greater Western Water (previously Western Water area) (continued)						
Sunbury Outfall Sewer Duplication	2018-19	2022-23	2018-19	2022-23	On schedule	Sunbury is experiencing significant growth and this augmented sewer will be required to service the new areas of Sunbury. This pipeline will transfer gravity flows into the Sunbury Recycled Water Plant from the existing township as well as the new growth areas to the north, east and south of Sunbury. The construction contract has been awarded and construction is expected to be delivered by mid-2023.
Melton Recycled Water Plant - Convert Aeration tank 5 & 6 to IFAS (Integrated Fixed Film Activated Sludge)	2020-21	2022-23	2024-25	2026-27	Deferred	Further strategic planning has been undertaken and have identified a larger package of upgrades required at the Melton site to ensure environmental compliance and it is timed with the construction of the Western Irrigation Network project. The other projects relating to the Melton Recycled Water Plant Upgrade have been prioritised and are underway.
Derrimut Diversion Sewer Pump Station/Rising Main	2018-19	2023-24	2022-23	2025-26	Deferred	Updated monitoring has identified sewer flows lower than previously forecasted and the impact of wet weather events on the sewer through inflows and infiltration was less than expected. The project has now been deferred due to the new monitoring information and is now required by 2025-26. Searching for a suitable site for the Sewer Pump Station will be commence in 2023, after which the project will progress to design phase.

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Greater Western Water (previously Western Water area) (continued)						
Gisborne Recycled Water Plant - Stage 1 Bioreactor	2018-19	2023-24	2018-19	2026-27	Delayed	<p>The contract to design, build and operate the new Gisborne Recycled Water Plant was executed in March 2022. Detailed Design is in progress and the project team is working with key stakeholders to ensure the Cultural Heritage Management Plan and Planning Permit is issued prior to construction. A Development Licence was issued by EPA Victoria in September 2021. The expected completion date has been revised to include the 2 year operations and maintenance period and an extended procurement period.</p> <p>Once commissioned the new facility will improve waterway health, reduce greenhouse gas emissions, and cater for the growing community.</p>
Parwan-Balliang Irrigation District network (Western Irrigation Network Stage 1)	2019-20	2023-24	2021-22	2023-24	On schedule	<p>This project will connect existing Western Water recycled water sources to supply a new irrigation district in the Parwan Balliang area. The project allows for recycled water to be transferred between multiple sites to meet customer demand needs and optimise the use of onsite storages. The project is still on schedule for 2023-24, with the design completed and pipework procured. The contract will be awarded in 2022-23.</p>
Melton Recycled Water Plant - additional onsite storage	2018-19	2020-21	2019-20	2021-22	Completed late	<p>This project addresses a future EPA compliance requirement (from June 2022) by installing an additional 1.0 GL of on-site storage at the recycled water plant. Draft Detailed Design has been completed. After some COVID interruptions, the construction of the storage was completed in December 2021 on schedule and is now operational.</p>

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Greater Western Water (previously Western Water area) (continued)						
Bacchus Marsh recycled water plant to Melton recycled water plant interconnector	2018-19	2020-21	2019-20	2023-24	Delayed	This project connects the Melton and Bacchus Marsh recycled water plants to allow recycled water to be transferred between the sites to meet customer demand needs and enable the best use of the onsite storages. The design has been completed with pipework procured, and pipeline construction contract awarded. Construction of the first 1.5 km is complete with the remaining section delayed until environmental approvals have been obtained. The project is expected to be completed in 2023-24.
Grant Street sewer pump station, Bacchus Marsh	2018-19	2020-21	2019-20	2020-21	Completed	The timeline for the project delivery was delayed due to design, cultural heritage, and asbestos pipe issues at the site. The new pump station was completed during 2020-21, and provides for enhanced environmental compliance through containment of sewer flows.
GWMWater (Regulatory Period: 2018–23)						
South West Loddon Rural Water Supply Project	2016-17	2018-19	2016-17	2019-20	Completed late	<p>The project was planned on the basis that the planning concessions that applied to the Wimmera Mallee Pipeline would apply to the South West Loddon Project and as a consequence delays were experienced with planning and environmental approvals.</p> <p>During commissioning a blue-green algae bloom in the West Waranga Channel further delayed the declaration of the system as operational. The project was completed in March 2020.</p>

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
GWMWater (continued)						
Mallee Towns Drinking Water Project – Brim, Beulah, Woomelang and Sea Lake	2017-18	2018-19	2017-18	2019-20	Completed late	This project was delayed due to a combination of delays in obtaining planning permits and pipe manufacturing constraints. Gazettal of the towns as a drinking water supply was applied for in late May 2019 and announced in late August 2019.
Sewerage scheme – Goroke	2018-19	2018-19	2018-19	2021-22	Completed late	Stage 1 of the Goroke sewerage scheme involved the construction of a reticulated sewer scheme and sewerage treatment plant. Community consultation on the technical solution delayed the initiation of the project. A South Australian based consultant was engaged for the design components of the project given the proximity of the project to South Australia. Border closures impacted the delivery of the design. The project was completed during 2021-22. Properties were formally declared as serviced for sewerage services effective from 1 April 2022.

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
GWMWater (continued)						
Urban remote metering and customer portal	2018-19	2019-20	2018-19	2020-21	Completed late	<p>There were 31,307 digital meters installed between 2019 and 2021. The completion of the final meters was slowed due to pipe modification works required for large meter installations and meter and RTU devices manufacturing delays resulting from COVID-19. The delivery of the project was also staggered to manage pressure reduction issues.</p> <p>GWMWater’s Customer Portal functionality was extended to Urban customers during 2020-21. The first phase involved recruiting 200 ‘early adoptors’ to provide feedback on the sign-up process and functionality in late 2020. During 2021 GWMWater implemented a phased rollout issuing more than 10,000 activation links to urban customers with a take-up rate of around 30 per cent. At the end of 2021-22 there are close to 6,000 GWMWater customers now actively accessing the Customer Portal to set alerts and monitor their water usage.</p>

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
GMMWater (continued)						
East Grampians Rural Water Supply Project	2018-19	2020-21	2018-19	2023-24	Delayed	<p>An Early Work contract to deliver, design and obtain statutory approvals was awarded in January 2020. Design is complete and approvals sufficient to commence works are secured (Cultural Heritage Management Plans for 3 of 6 stages are approved). Logistical issues and resourcing inefficiencies (including decreased availability of field representatives for CHMP development) due to COVID-19 restrictions have contributed to extended delivery timeframes.</p> <p>Expressions of Interest from landowners seeking to connect have been received from outside the boundary and the detailed design has assessed a greater risk of rock than determined by the feasibility study and business case. This, combined with material cost increases stemming from global supply chain disruptions and COVID-19 related issues has led to an increased total project cost estimate. GMMWater is working with State and Commonwealth governments to secure funding and enable commencement of construction.</p> <p>Timing of construction contract award is linked to pending outcomes of the funding discussion.</p>
Water treatment plant upgrades – health based treatment targets	2018-19	2020-21	2018-19	2022-23	Delayed	Planned upgrades have been completed at Willaura. A Design and Construct Contract for upgrades at Underbool and Ouyen was awarded in October 2021. Construction commenced in early 2022 and is expected to be completed in late 2022.

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
GWMWater (continued)						
Treated water supply – Ultima	2019-20	2019-20	2019-20	2022-23	Delayed	A Design and Construct Contract for the works was awarded in June 2021. Construction commenced in September 2021, but has been delayed due to a number of land access constraints. These are now largely resolved and work is expected to be completed in late 2022.
Upgrade wastewater treatment plant & reuse system – Donald	2019-20	2020-21	2019-20	2024-25	Delayed	Final design and scope was to be informed by the extent that highly saline groundwater infiltration could be reduced to inform the technical process with a view of maximising the value of the waste stream. Planning and finalisation of technical scope is well progressed with the first phase of upgrades to improve treatment and reuse infrastructure planned for completion in 2022-23. The balance of construction work will be completed in 2023-24, followed by commissioning of the upgraded plant expected in late 2024.

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
GWMWater (continued)						
Treated water supply – Kaniva	2020-21	2020-21	2020-21	2023-24	Delayed	<p>The project was delayed to confirm the most cost effective technical solution given developments in desalination technology. The assessment confirmed a surface water solution as the most cost effective technical solution.</p> <p>The contract for construction of the receiving infrastructure at Kaniva has been awarded as has the capacity upgrade at the Dimboola WTP which will supply the water.</p> <p>Reduced availability of contractors capable of completing both planning and construction aspect of the pipeline component of the project has led to delays. To increase market engagement, the procurement methodology has been amended. Statutory planning requirements will now be completed ahead of re-tendering the pipeline work as a straight Design and Construction contract.</p> <p>Project planning for the pipeline component is well advanced with a Design and Construction Contract expected to be awarded in early 2023 and completed in mid-2024.</p>
Development servicing – pressure improvements commercial and industrial – fire services	2020-21	2021-22	2018-19	2022-23	Delayed	Renewals and upgrades across Horsham, Stawell and Ararat are ongoing to address pressure concerns in industrial and commercial areas. Pressure improvement works in 2022-23 will occur in other major towns including Donald and St Arnaud.
Dam safety works – Lake Fyans	2021-22	2021-22	2021-22	2022-23	Delayed	A construction contract for the rehabilitation of the Lake Fyans embankment was awarded in December 2021. Construction commenced in early 2022 but has been delayed due to material availability. Work is expected to be completed in late 2022.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
GWMWater (continued)						
Treated water supply – Moyston and Elmhurst	2022-23	2022-23	2021-22	2023-24	Delayed	<p>Decreased contractor capacity has led to delays in the delivery of the Moyston works. Project planning is well advanced with a Design and Construction Contract expected to be awarded in early 2023 and work completed mid-2024.</p> <p>The Design and Construct Contract for Elmhurst was awarded in February 2022. Completion of work is expected in early 2023.</p>
Urban Pressure Improvement Works ***NEW PROJECT***			2019-20	2022-23	Delayed	<p>This project was initiated to ensure water pressure and flowrates committed to in GWMWater’s Urban Customer Charter are achieved across all urban towns. The need for this work was identified during the delivery of the Urban remote metering project.</p> <p>Works identified and being progressed include construction of new pump stations, mains renewals and valve replacements, service line renewals, reconfiguration and interconnection of pressure zones and augmentation of the network. Works have been undertaken at Ararat, Charlton, Dimboola, Donald, St Arnaud, Elmhurst, Glenorchy, Stawell, Warracknabeal and Moyston. Works are underway at, Stawell, Kaniva, Donald and St Arnaud.</p>
‘Clean Water’ Pilot - Northern Mallee Pipeline ***NEW PROJECT***			2021-22	2022-23	Delayed	<p>This project was initiated in response to the increasing vulnerability to adverse water quality events, arising from the increased incidence of algal events in the Murray River, on rural and urban to customers serviced by the Northern Mallee pipeline. This pilot is focused on the area serviced by the Wemen pump station. A Design and Construct Contract for a DAF plant at Ouyen was awarded in October 2021. Construction commenced in mid-2022 and is expected to be completed in late 2022.</p>

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
GMMWater (continued)						
Horsham Agriculture SmartWater and Integrated Water Management Project ***NEW PROJECT***			2021-22	2022-23	On Schedule	The Horsham Agriculture SmartWater and Integrated Water Management Project is part of the National Water Grid construction program and will support agricultural research activities and expand recycled water use. The project will convert Horsham’s municipal wastewater into high quality irrigation water by improving water quality. The technologies proposed will secure and expand vital agricultural research and innovation (R&I) benefits for the Australian grains industry (cereals, pulses, and lentils), and its 22,000 grain farming businesses Australia wide. The project also aims to contribute benefits to the broader community’s recreational, economic and environmental values identified in the Wimmera IWM Forum Strategic Directions Statement (August 2020).
Behind the Meter Solar ***NEW PROJECT***			2018-19	2023-24	On Schedule	The Behind the meter solar project involves the staged roll out of cost effective solar photovoltaic (PV) generation and Battery Energy Storage Systems (BESS) at existing operational sites. The program commenced in 2019. The majority of PV installations have been established where cost effective and the roll-out of BESS has commenced with a pilot installation at Harrow.
Lower Murray Water – Rural (Regulatory Period: 2018–23)						
Mildura central pump station replace manifold/rising main	2018-19	2018-19	2018-19	2019-20	Completed late	Project Complete.
Millewa replace river pump station	2018-19	2018-19	2018-19	2022-23	Delayed	Construction and procurement of equipment underway, On track for completion early February 2023.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Lower Murray Water – Rural (continued)						
Red Cliffs main pump station upgrade to clear supervisory control and data acquisition	2018-19	2018-19	2018-19	2019-20	Completed late	Project Complete.
Robinvale – HPPS 100 kilowatt solar photovoltaic pilot	2018-19	2018-19	2018-19	2018-19	Completed on time	Project Complete.
Millewa upgrade to clear supervisory control and data acquisition	2019-20	2020-21	2019-20	2022-23	Deferred	Review of strategy in regards to roll out of common SCADA platform and renewal of automation hardware resulted in reduced work scope to maximise existing electrical asset life with implementation of common alarming platform
Lower Murray Water – Urban (Regulatory Period: 2018–23)						
WTP water quality improvements	Carried over	2016-17	2011-12	2018-19	Completed late	Project Complete.
WTP PLC replacement	Carried over	2016-17	2011-12	2018-19	Completed late	Project Complete.
Kerang replace treated water pump station	2018-19	2018-19	2017-18	2018-19	Completed on time	Project Complete.
Merbein wastewater treatment plant divert to Koorlong	2018-19	2018-19	2018-19	2021-22	Delayed	Diversion to Koorlong on track for completion end of August 2022. Decommissioning to occur in stages, scheduled to carry over into WP5.

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Lower Murray Water – Urban (continued)						
Swan Hill – replace wastewater treatment plant rising main stage 2	2018-19	2018-19	2018-19	2018-19	Completed on time	Project Complete.
Koorlong – wastewater treatment plant construct 400 ML wet weather storage no 1	2018-19	2019-20	2018-19	2020-21	Completed late	Project Complete
All sites – ultraviolet treatment plants	2018-19	2022-23	2018-19	2022-23	On schedule	Four sites operational. Stage 2 (Kerang, Robinvale, Mildura West) sites well advanced with commissioning of Kerang WTP to commence shortly. Early works commenced at Swan Hill and Mildura 7th Street WTPs. Construction contract for Stage 3 sites awarded with construction commenced at Swan Hill WTP. Program on schedule to be completed within WP4.
Koorlong – wastewater treatment plant upgrade to clear supervisory control and data acquisition	2019-20	2021-22	2019-20	2021-22	Deferred	Review of strategy in regards to roll out of common SCADA platform and renewal of automation hardware resulted in reduced work scope to maximise existing electrical asset life with implementation of common alarming platform
Swan Hill DN450 Truck main Arnoldt/Stratbroke (1,245 m)	2020-21	2020-21	2019-20	2020-21	Cancelled	See Swan Hill North WTP 6 ML ground level storage.
Swan Hill – North water treatment plant 6 ML ground level storage	2020-21	2020-21	2019-20	2021-22	Completed late	Options assessment concluded that additional storage can be constructed within the reticulation reducing the need for a new re lift pump station and interconnecting main. Tank is online and being utilised. Project completed June 2022.
Swan Hill – North water treatment plant treated water pump station (stage 1)	2020-21	2020-21	2019-20	2020-21	Cancelled	See Swan Hill North WTP 6 ML ground level storage.

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Melbourne Water*¹ (Regulatory Period: 2021–26)						
ETP sludge digester augmentation	Carried Over	2022-23	2019-20	2022-23	Delayed	Project construction commenced August 2020. The project is on schedule to be completed in 2022-23.
Holden supply tank and inlet augmentation	Carried Over	2019-20	2018-19	2021-2022	Completed late	The Stage 1 component of servicing the Melton Growth Area is the construction of an inlet pipeline to the future Holden Service Reservoir site. Construction of the pipeline was completed in 2021-22.
WTP sludge drying capacity	Carried Over	2019-20	2019-20	2021-22	Completed late	The project was completed in 2021-22.
WTP Primary Treatment Augmentation	2020-21	2025-2026	2022-23	2025-2026	On schedule	The project remains on schedule for delivery to its scheduled completion date despite a delayed target contract award date. Note there is a risk that escalating cost pressures may cause delays in the remaining project approval process.
WTP 55E Activated Sludge Plant Upgrade ²	2020-21	2025-2026	2022-23	2024-2025	On schedule	The project remains on schedule for delivery to its scheduled completion date despite a delayed target contract award date. Note there is a risk that escalating cost pressures may cause delays in the remaining project approval process.

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¹ Note that Melbourne Water has a different regulatory period from the other businesses: Melbourne Water’s regulatory period is from 1 July 2016 to 30 June 2021.

² Melbourne Water will now report on the carried over project *WTP 55E renewal*, previously scheduled to be completed in the 2016-21 regulatory period and reported on in past outcome reports, through the above *WTP 55E Activated Sludge Plant Upgrade*, which includes the works of the deferred project in its project scope.

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Melbourne Water (continued)						
Hobson's Bay Main Sewer Yarra Crossing Duplication	2020-21	2027-2028	2021-22	2024-2025	On schedule	Construction is underway and the project is on schedule.
Maribyrnong Main Sewer Augmentation	2020-21	2023-2024	2021-22	2023-2024	On schedule	Construction is underway and the project is on schedule.
WTP Gas Plant Renewal	2022-23	2027-2028	2024-25	2026-2027	On schedule	The project is in its design phase and remains on schedule for delivery to its scheduled completion date despite a delayed target contract award date. Note there is a risk that escalating cost pressures may cause delays in the remaining project approval process.
Yan Yean to Bald Hill Pipeline	2020-21	2023-2024	2021-22	2023-2024	On schedule	The project is in its construction phase and is on schedule.
Maroondah Res Outlet and Aqueduct Stage 3A	2020-21	2027-2028	2024-25	2027-2028	On schedule	The project is in its functional design phase and is on schedule.
Winneke Treatment Plant – UV Disinfection System ³	2020-21	2024-2025	2021-22	2023-2024	On schedule	The project was deferred from the 2016-2021 regulatory period to the 2021-2026 regulatory period. It is in its construction phase and is on schedule.

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³ Melbourne Water will now report on the carried over project *Winneke WTP UV system upgrade*, previously scheduled by Melbourne Water to be completed in the 2016–21 regulatory period and reported on in past outcome reports, through the above Winneke Treatment Plant – UV Disinfection System project, which includes the works of the deferred project in its project scope.

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Melbourne Water (continued)						
Olinda to Mitcham Water Mains Replacement Stage 1	2020-21	2022-2023	2022-23	2025-2026	Delayed	The project has been delayed but remains scheduled to be delivered in the 2021-2026 regulatory period.
Mt Atkinson Reservoir Inlet Pipeline	2021-22	2023-2024	NA	NA	Cancelled	The project has been cancelled following identification of an alternative solution for long-term supply to the Melton growth area to be delivered by Greater Western Water.
Port Melb Pump Station Renewal	2021-22	2022-2023	2023-24	2024-2025	Delayed	The project has been delayed but remains scheduled to be delivered in the 2021-2026 regulatory period.
Regan St Retarding Basin ⁴	2020-21	2022-2023	2026-27	2028-2029	Deferred	**Added Project: See footnote 5** Increased project costs identified. The project has been deferred to the 2026-2031 regulatory period so that other projects may continue to be delivered with current regulatory period funding limits. Construction to commence in 2026-27.
Shakespeare Grove Main Drain Renewal	2020-21	2021-2022	2020-21	2021-2022	Completed on time	**Added Project: See footnote 5**
Hallam Valley Retarding Basin Wetland	2020-21	2023-2024	2020-21	2023-2024	On schedule	**Added Project: See footnote 5** The project is in its construction phase and is on schedule.

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⁴ Melbourne Water will now report on the carried over project *Regan St Flood mitigation project*, previously scheduled by Melbourne Water to be completed in the 2016–21 regulatory period and reported on in past outcome reports, through the listed Regan St Retarding Basin project, which includes the works of the deferred project in its project scope.

Summary of Major Projects

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Melbourne Water (continued)						
Gladstone St Wetland Rectification	2020-21	2021-2022	2026-27	2027-2028	Deferred	**Added Project: See footnote 5** Increased project costs identified from investigations and concept design. The project has been deferred so that other projects may continue to be delivered within current regulatory period funding limits. Construction to commence in 2026-27.
Shogaki Drive DSS Interim Outfall Works ⁵	2022-23	2022-2023	2022-23	2022-2023	Cancelled	**Developer Project: See footnote 5** This project is no longer being delivered by a developer. An internal MW project has been raised to deliver it instead. Expected construction remains in 2022-23.
Wylies Drain Section 3 RBPWL2	2021-22	2022-2023	2021-22	2024-25	Delayed	**Developer Project: See footnote 5** Works commenced in 2021-22. The project remains scheduled to be completed in the current Price Determination Period.
Trib of Skeleton Creek Upper - Section 1	2022-23	2023-2024	2021-2022	2022-2023	On schedule	**Developer Project: See footnote 5** Civil works are complete. Planting to be completed in 2022/23.
Clyde Creek Section 92 Liliium WL9	2021-22	2022-2023	2021-22	2022-2023	Completed	**Developer Project: See footnote 5** Project is complete

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⁵ Melbourne Water previously listed four developer-delivered projects in its list of major projects it would report against over the 2021–26 regulatory period – these were included within its 2021 final determination. Melbourne Water has since informed us that these projects are funded via customer contributions and carried out by developers, with Melbourne Water only holding a broad oversight role in the delivery of these projects. Accordingly, Melbourne Water has now included four additional projects for stewardship during this regulatory period: Regan St Retarding Basin, Shakespeare Grove Main Drain Renewal, Hallam Valley Retarding Basin Wetland, and the Gladstone St Wetland Rectification, for the purpose of its major projects reporting.

Summary of Major Projects

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
North East Water (Regulatory Period: 2018–26)						
Yackandandah reclaimed water management	Carried over	2016-17	2018-19	2023-24	Deferred	This project has commenced but as previously reported deferred due to proportionally large areas of development and accelerated growth projections impacting the system. The continued development of a system strategy will inform the project outcomes.
Wangaratta wastewater treatment stage 1 upgrade	Carried over	2017-18	2014-15	2019-20	Completed late	Project completed.
Beechworth wastewater system upgrade	2018-19	2019-20	2018-19	2022-23	Delayed	The long bore section is now complete. The full system review and development plan for the wastewater treatment plant in initial definition.
Wodonga wastewater treatment plant capacity & emissions reduction	2018-19	2021-22	2020-21	2023-24	Delayed	This project remains a key project in delivering against the Corporation’s greenhouse gas emissions reduction pledge outcome while providing needed capacity to meet the growth requirements for a rapidly expanding city. Currently this project is going through the tender process with the project team continuing to address requests for information.

[Continued on next page](#)

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
North East Water (continued)						
Region-wide digital business sustainability	2018-19	2021-22	2018-19	2021-22	Completed	Project completed.
Wodonga wastewater treatment plant solar power	2018-19	2022-23	2018-19	2022-23	Delayed	Historical delays due to rain and the site condition not suitable for construction have not been able to be made up for. The contractors HV Switchgear has been found to have an unsafe design flaw that will prevent certification in its current state. Contractor is assessing if the existing installations design may be modified, or weather switch gear will need to be ordered.
Region-wide information and communications technology infrastructure	2018-19	2027-28	2018-19	2027-28	On schedule	Project commenced and on schedule.
Benalla water distribution upgrade	2019-20	2020-21	2019-20	2023-24	Deferred	Engineers commenced network modelling in 2019-20. A reprioritisation of the programme has resulted in this project being rescheduled.
Wodonga sewerage transfer capacity	2019-20	2022-23	2021-22	2023-24	Deferred	Program reprioritisation sees this project rescheduled.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
North East Water (continued)						
Wodonga wastewater treatment plant major upgrade	2020-21	2024-25	2019-20	2024-25	On schedule	Ahead of Schedule. This project is essential in ensuring that the West Wodonga Wastewater Treatment Plant continues to be maintained in a satisfactory condition to continue to provide compliant wastewater treatment services for the rapidly growing city of Wodonga. Contracts have been awarded during 2020-21 for the delivery of key upgrade requirements including upgrades to aging electrical and control systems, improved inlet screening facilities and upgrades to sludge dewatering and handling systems.
Benalla wastewater treatment plant upgrade	2023-24	2025-26	2019-20	2025-26	On schedule	Early start for this complex project to manage risks associated with delivery timeframes.
Wangaratta water distribution	2023-24	2025-26	2023-24	2025-26	On schedule	Engineers commenced network modelling in 2019-20.

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
South East Water (Regulatory Period: 2018–23)						
Boneo treatment plant interim capacity interim upgrade	Carried over	2016-17	2016-17	2018-19	Completed late	Interim works to defer the Boneo upgrade were completed.
Rye–Portsea backlog scheme	Carried over	Beyond 2017-18	2013-14	Ongoing	On schedule	As at the end of June 2022 approximately 7,150 properties have been connected to the network. Property connections in the Peninsula ECO project area and the backlog region of the peninsula has continued. There were minor impacts in the first quarter due to COVID-19 but we achieved the expected number of connections forecast for the year. South East Water did not initiate any major marketing plans to encourage connection due to the potential impact of financial issues for these customers and the fact demand for connections has our schedule of installs booked for some months ahead. Connections are still in demand; again, this is due to the impacts from the pandemic with more people working flexibly and occupying those properties more regularly and more rental activity of these sites since travel restrictions have eased.

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
South East Water (continued)						
Pakenham East sewer servicing	2018-19	2019-20	2022-23	2023-24	Delayed	The Pakenham East Precinct Structure Plan (PSP) was approved in January 2021 after lengthy delays which have pushed the completion of this project outside the current regulatory period. The official award of the tender was issued in late April 2021, designs have been completed and construction works are underway. The design, construction and commissioning of this critical infrastructure although extending beyond is expected to be completed without delay to development. Works are currently scheduled for completion in the first year of the 2023-28 regulatory period.
Digital capability pilot	2018-19	2019-20	2019-20	2021-22	Completed late	<p>Our digital capability pilot has been completed with end-end core capability to procure, install and operate digital meters successfully implemented and proven.</p> <p>With the success of the Pilot, and due to approximately 40% of our existing mechanical meter fleet being end-of-life, the decision was taken to bring forward the next phase of the Digital Metering program (the 'Build and Scale' phase). The fundamental technology was already in place from the Pilot phase, so the increased scope would primarily relate to increasing the deployment from 10,000 meters to ~ 100,000 meters.</p> <p>The bring forward of the 'Build and Scale' phase supports the realisation of the benefits provided by digital metering which includes the deferral of major water supply augmentations, as outlined in our 2023 pricing submission that will be assessed by the ESC.</p>

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
South East Water (continued)						
Ballarto Road East sewer pump station	2017-18	2019-20	2017-18	2021-22	Completed late	<p>Construction of the pump station was initially delayed due to approval of the Precinct Structure Plan. The Pump Station and rising main were commissioned during the 2019-20 year with associated defect rectification work completed in 2020-21. The design, construction and commissioning of this critical infrastructure was completed within the period without significant delay to development both within this PSP and the adjacent Clyde Creek PSP which was approved in advance of Cardinia Creek PSP.</p> <p>The project achieved that aim despite some issues achieving final completion and defect rectification due to wet ground and contractor resource constraints during the Covid-19 Pandemic. The land development industry have highlighted this project as a benchmark of proactive engagement with industry to achieve outcomes.</p>
Boneo water recycling plant upgrade	2018-19	2020-21	2018-19	2021-22	Completed late	<p>The project was initially scheduled for completion by December 2020 but was extended to March 2021 due to geotechnical risks and some COVID implications. This extension was prior to the full realisation of the implications associated to COVID. Because of COVID restrictions the construction phase was extended again by a further 12 months with the project being delivered in March 2022.</p> <p>The additional costs required to construct the Boneo treatment upgrade has been offset by the installation of greater capacity that has deferred the need for additional works by 15 years and the growth program "risk bank" savings (calculated at a P95 estimate) realised from South East Water's management of portfolio investments at the program level.</p>

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
South East Water (continued)						
Land purchase (Fishermans Bend)	2018-19	2021-22	2018-19	2022-23	Delayed	The South East Water Board approved on 17 December 2021 to progress to compulsory acquisition of the preferred site to enable timely land acquisition. The anticipated timeframe to complete the compulsory acquisition is to have the Planning Scheme Amendment gazetted in January 2023, serve Notice of Intention to Acquire to the landowner in February and publish the notice of Acquisition (South East Water owns the land) in April 2023.
Water recycling plant drying pan and stockpile area upgrades	2018-19	2022-23	2018-19	2022-23	Completed on time	<p>The works schedule was modified to ensure optimised delivery efficiencies and critically to avoid impact the safe operation of the WRPs. Ground contamination and revised EPA regulations and EPA waste classification have created some challenges in classifying and disposing of excavated materials. This required design optimisation to minimise offsite disposal by reducing cut to fill ratios across the program. The program has delivered high quality infrastructure without impact to the WRPs despite access constraints during the Covid-19 pandemic.</p> <p>The challenges have been successfully overcome with the program delivered on schedule and within budget. Budget savings were achieved in part due to the optimisation of the delivery program.</p>

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
South East Water (continued)						
Land purchase (Pakenham WRP)	2019-20	2022-23	2019-20	2022-23	Delayed	<p>The Pakenham South precinct plan, adjacent to the plant, has been finalised giving the future plant protection on the western and southern boundaries. A concept plan is progressing well with a joint working group between South East Water and Cardinia council focussing on the northern boundary. Valuations have been completed for most land parcels with negotiations to commence with land owners.</p> <p>South East Water has confirmed that master planning for the site and the need for purchase of the site. A strategy is being developed to purchase the land. If this is unsuccessful then compulsory accusation will be required. This delay has occurred due to the need to validate the strategic direction with the master planning work for the South East Regional Biofactory.</p>
Hanna Street sewerage capacity improvements	2018-19	2021-22	2020-21	2023-24	Delayed	<p>A significant update and calibration of the network hydraulic model has led to improved confidence in the model's wet weather calibration due to the wide range of wet weather events captured during the field monitoring as well as provided the opportunity to ensure compliance across the network when taking into consideration the new rainfall standards and climate change scenarios. The system performance has also been supported by operational knowledge and Blokaid data in the region providing additional confidence in its outputs.</p> <p>This has resulted in a revised scope of works to be undertaken in a staged approach. With Stage 1 works currently underway. Works are scheduled for completion is Q2 2023-24</p>

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
South East Water (continued)						
Elster Creek sewer catchment capacity improvement works	2018-19	2022-23	2021-22	2023-24	Deferred	<p>Investigations completed within the period determined and optimised the revised scope of works required to ensure the catchment complies with the 18.13 per cent Annual Exceedance Probability (AEP) containment standard, as stipulated in the State Environment Protection Policy (Waters for Victoria) 2018. Through the planning investigations South East Water have been able to reduce the required PS4 scope from a P50 of \$33.5 million (5.5km's) to a P50 of \$12.2 million (1.5km's) with Murray Road works deferred until PS6. Capacity upgrades in the Mortimore Street sub-catchment were assessed to not be required until 2035. Works are scheduled for completion in Q1 2023-24</p> <p>South East Water's decision to not seek funding for the scope of works proposed in Price Submission 4 but instead seek a lower cost alternative has proved to be a sound decision resulting in reduced capital expenditure to address the system deficiencies. This project was funded from savings in the sewer growth program</p>

Continued on next page

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
South East Water (continued)						
Clayton East and West sewer catchment capacity improvement works	2020-21	2022-23	2024-25	2026-27	Deferred	<p>Through the Price Submission review process SEW made the decision that cost recovery of the Clayton East & West Catchment Capacity Improvement Works will not be included in the 2018 Price Submission. An options assessment was conducted to determine the optimal solution.</p> <p>During this phase, it was re-confirmed that works in Clayton would need to be shortly followed by augmentation works in the Westall catchment due to the proposed diversion of flows along the Clayton Branch Sewer.</p> <p>Concurrently an options assessment was completed for the Mile Creek and Westall catchments. This provided the opportunity to consider a more 'Regional Strategy' for the three catchments, which would include staged works delivered in such a way to minimise the overall scope of works and in turn the financial obligation, whilst also maximising the capacity and operation of existing and proposed assets (deferment of works). This 'Regional Strategy' and the resulting works in each of the three catchments were workshopped with numerous internal and external stakeholders via Multi Criteria Assessments, culminating in a preferred option for each of the three catchments.</p> <p>A review in network flow monitoring utilising BlokAids found that although surcharging during wet weather was observed, the flows in the sewer did not reach overflow levels. As such, the Price Submission 4 Clayton East and West scope of works has been amended and successfully deferred. The area will continue to be continuously monitored using BlokAids.</p>

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
South Gippsland Water (Regulatory Period: 2018–23)						
Lance Creek water connection project	2018-19	2018-19	2016-17	2018-19	Completed on time	This contract received funding in the 2016-17 State Budget, later than originally anticipated. The project was completed before the completion date specified in the funding agreement and within budget. Customers in the connected towns are now benefiting from a more secure water supply with fewer restrictions forecast. The project has also help improve taste and odour of drinking water delivered to customers.
Sewer system major renewal item (Lawler Street Sewer Pump Station renewal)	2018-19	2019-20	2018-19	2019-20	Completed on time	Project has been completed. The project aimed to maintain service standards in Yarram by renewing aged and unreliable assets.
Wonthaggi wastewater treatment plant inlet pump station renewal	2018-19	2019-20	2018-19	2019-20	Completed on time	Project has been completed. The project aimed to maintain service standards by renewing aged and unreliable assets, while also accommodating growth in the catchment.
Fish Creek treated water distribution main renewal	2018-19	2022-23	2019-20	2027-28	Delayed	Project scope and schedule changed in 2018-19.
Sewer System Augmentation - Wonthaggi Mains	2018-19	2026-27	2018-19	2026-27	On schedule	Project is under construction in stages and is progressively increasing system capacity to maintain service standards while accommodating growth.
Water treatment plant disinfection upgrade projects	2018-19	2026-27	2018-19	2026-27	Delayed	Disinfection upgrades at water treatment plants are occurring in two stages. The first stage was due to be completed in 2019-20 but was completed in 2021-22. The second stage is planned for Regulatory Period 6. The projects will further improve drinking water safety in the region.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
South Gippsland Water (continued)						
Carbon emission reduction upgrades	2018-19	2027-28	2018-19	2023-24	Completed late	Installation of five behind the meter solar power facilities has been completed. The projects are helping meet South Gippsland Water's obligations to reduce greenhouse gas emissions and reducing the cost of importing power.
Leongatha raw water transfer main	2020-2021	2022-23	2022-23	2022-23	Delayed	The project scope in Regulatory Period 4 covers planning for future work. The project aims to maintain service standards in Leongatha by renewing assets.
Sewer system expansion (Inverloch) sewer pump station	2020-21	2022-23	2020-21	2022-23	On schedule	A construction contract is underway for a project with three drivers; supporting growth, compliance and renewal of assets to maintain service standards.
Wonthaggi Low Level Basin Pump Station Renewal	2019-20	2020-21	2019-20	2020-21	Completed on time	The project renewed and upgraded an existing pump station to maintain service standards in Wonthaggi and Cape Paterson.
Leongatha Water Supply Augmentation	2020-21	2020-21	2020-21	2020-21	Completed on time	The project scope in Regulatory Period 4 covers planning for future work to secure water supply in Leongatha and Koonwarra.
Leongatha Wastewater Treatment Plant Inlet Works	2020-21	2021-22	2020-21	2024-25	Delayed	The project aims to maintain services and to address compliance risk.
Port Albert Vacuum Sewer Renewal	2021-22	2023-24	2021-22	2023-24	On schedule	Installation works are underway to renew the system and reduce the likelihood of spills.
Service Basin Cover and Liner Replacements	2020-21	2024-25	2020-21	2024-25	On schedule	Construction work for the first three of six service basins is complete and work on two further basins is underway. The project aims to maintain drinking water safety in the region.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
South Gippsland Water (continued)						
Wonthaggi Wastewater Treatment Plant Augmentation	2021-22	2024-25	2021-22	2024-25	On schedule	Design work is underway for a project that will be delivered in stages over Regulatory Period 4 and 5. The project aims to maintain service standards for the growing town.
Facilities Strategy	2022-23	2024-25	2022-23	2024-25	Delayed	Implementation of a renewal strategy has been delayed and is being reviewed and revised based on lessons from the COVID19 pandemic.
Southern Rural Water (Regulatory Period: 2018–23)						
Werribee office redevelopment	2018-19	2018-19	2018-19	2018-19	Completed on time	This project reached practical completion at the end of 2018-19. The budget was increased subsequent to the Price Submission. The redevelopment is to be funded from non-prescribed asset sales, and so doesn't impact customer prices.
Werribee irrigation district modernisation	2018-19	2019-20	2018-19	2019-20	Completed on time	The project is now in the benefits realisation phase.
Bacchus Marsh irrigation district modernisation	2018-19	2019-20	2018-19	2018-19	Completed on time	The project is now in the benefits realisation phase.
Maffra weir operating gear	2018-19	2019-20	2018-19	2021-22	Completed late	Practical completion has been reached.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Southern Rural Water (continued)						
Asset management system upgrade	2018-19	2019-20	2023-24	2024-25	Deferred	The project was deferred following the development of an asset management maturity study and improvement plan that reprioritised the creation of a Strategic Asset Management Plan and Asset Information Strategy together with data standards and framework before pursuing a new asset management software package. A business case will be developed in 2022-23.
Macalister irrigation district 2030 1B	2018-19	2020-21	2018-19	2020-21	Completed	Phase 1b was completed in 2020. We have also commenced initial construction of Phase 2 works which will complete the full modernisation business case.
Macalister irrigation district channel bank renewal	2018-19	2022-23	2018-19	2022-23	On schedule	This represents an annual provision of funds for an on-going preventative maintenance program progressively refurbishing eroded earthen channels in the MID. Following a capital prioritisation review we have reduced the scope to provide funds within our revenue cap more critical emerging projects, including replacement of Siphon No 1 (see below)
Glenmaggie re-paint spillway gates	2018-19	2022-23	2024-25	2025-26	Deferred	This project was reprioritised and is now scheduled to commence in 2024-2025. Gate painting during the 2023-2028 regulatory period will comprise Gates 1-3 (this project) and gates 6-8.

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Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Southern Rural Water (continued)						
Groundwater and rivers meter replacement	2018-19	2022-23	2018-19	2022-23	Delayed	<p>This represents an annual provision of funds to continually undertake meter replacements and upgrades to ensure we meet our obligations under the National Framework for Non-Urban Meters and associated State Implementation Plan. This program is guided by the SRW Metering Action Plan.</p> <p>Progress has been constrained by meter replacement being classified as non-essential work throughout Covid-19 restrictions. Since restrictions have eased, the focus has been on reconfiguring the program to achieve scale and align with new procurement requirements. The program is approximately two years behind targets set in the Metering Action Plan. Achieving the targets set out in the state plans will require significant investment during the 2023-2028 pricing submission and business cases to inform that are underway.</p>
Macalister Irrigation District Siphon replacement ***NEW PROJECT***			2018-19	2019-20	Completed	<p>The MID siphons are typically between 50 and 100 years old. Siphon failures cause significant disruption to supply and can take several weeks to return supply to customers. Siphon No 1 has previously had preventative maintenance work carried out but a large, detected leak has required this siphon to be replaced. Funding for this project required some reprioritisation of other projects, such as channel bank renewal and Glenmaggie spillway gate painting.</p>

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Wannon Water (Regulatory Period: 2018–23)						
Cobden and Casterton water reclamation plant irrigation works	Carried over	2017-18	2014-15	2018-19	Completed late	Wannon Water has prevented the need for significant works and expenditure on additional winter storages at these sites. An amended discharge licence was applied for and has been received for Cobden WRP. The application and approval process took longer than expected. No further works are required at either site.
Portland reclamation plant wind energy project	Carried over	2015-16	2014-15	2019-20	Completed late	This major project is delivering a significant reduction in energy costs and carbon emissions at the site. The project experienced a number of delays in relation to the negotiation of commercial terms with the turbine supplier, as well as some delays associated with electrical connectivity into the power grid. The wind turbine was erected on site during May 2019. Connection to the power grid was completed in September 2019 and it has been operational since.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Wannon Water (continued)						
Hamilton – new biosolids drying area	2018-19	2019-20	2018-19	2020-21	Completed late	This project was completed in March 2021. Design was completed and construction commenced in 2018-19. The original Contractor engaged to undertake the works was unable to complete the works. This caused a delay as the remaining works were retendered and completed by another Contractor.
New clear water storage for Hamilton water treatment plant	2018-19	2019-20	2018-19	2020-21	Completed late	Construction of a new clear water storage tank is complete and the tank is operational. Contractor travel and attendance at site was impacted by COVID-19 border restrictions which resulted in delays to project completion date.
Warrnambool – water reclamation plant augmentation project	2018-19	2021-22	2018-19	2023-24	Delayed	This is Wannon Water’s largest ever capital project. Delays relating to pre-construction approvals continued during 2021-22, the third year delays have impacted this project. Detailed design of the upgrade is complete and the project was tendered in June 2022. A construction contract is expected to be awarded in October 2022. Construction is planned to commence late 2022 with completion expected late 2024, subject to the successful contractors proposed programme.
Warrnambool – Wangoom Road water tower and pump station	2018-19	2021-22	2018-19	2022-23	Delayed	The construction of the pipeline element of this project commenced during 2020-21. The construction of a new water tower and pump station experienced delays due to land acquisition issues which have subsequently been resolved. A tender is currently planned for late 2022 with construction expected to occur during 2022-23.
Substitution works to improve summer flows in Gellibrand River	2018-19	2021-22	2018-19	2022-23	Deferred	Project study and design phase has been deferred. Commencement of works will be dependent on matching funding to ensure value for money outcomes for our customers.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Wannon Water (continued)						
Camperdown – refurbish Camperdown biosolids facility	2019-20	2020-21	2018-19	2020-21	Completed on time	Construction of the refurbished biosolids drying facility is complete.
Warrnambool water treatment plant – install ultraviolet	2019-20	2020-21	2019-20	2023-24	Delayed	A contract has been awarded for the procurement of the UV equipment, however COVID-19 resulted in extended lead in time for delivery the equipment. Design has been completed for the associated building and pipework and the contract has been awarded for the construction of the UV building and associated UV infrastructure. Construction and installation are planned to commence in 2022-23 and be completed in 2023-24.
Warrnambool – Wollaston Road Tower and water pump station	2019-20	2020-21	2019-20	2024-25	Delayed	This project is not funded within Wannon Water’s current Price Submission period. Further assessments have identified a pressure booster pump system is preferred to a water tower. Delivery of the ultimate infrastructure to cater for increased residential growth will be staged over the next 2 pricing periods. Design and tender of the first phase booster pumps will occur in 2022-23, allowing for construction of the booster pumps to occur in 2023-25.
Hamilton water reclamation plant – effluent reuse upgrade	2019-20	2020-21	2018-19	2022-23	Delayed	Construction of Stage 1 of infrastructure to upgrade the effluent reuse options at Hamilton WRP commenced in 2019-20 and was completed in 2020-21. Design of Stage 2 infrastructure is underway with expected completion in 2022-23.
Port Campbell – second bore	2020-21	2021-22	2019-20	2022-23	Delayed	Design and approvals were brought forward to 2019-20 to facilitate construction of a new bore in 2022-23. A tender has been advertised in May 2022 with construction expected to commence in 2022-23.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Westernport Water (Regulatory Period: 2018–23)						
Business transformation project	2018-19	2019-20	2019-20	2021-22	Completed late	<p>This project includes renewing Westernport Water’s billing, finance, payroll and HR information ICT systems. Payroll and HR systems have now been renewed. The existing approaches to renewing finance and billing systems are under review to ensure value.</p> <p>This Program has transitioned Westernport Water to a new managed service provider and delivered new HR and payroll systems, including an integration platform. In February 2022 Westernport Water’s Board approved the formal closure of the finance system implementation. Utility billing and finance system enhancements from the original scope will now be delivered in 2022-23 as part of Year Two of the Technology Roadmap.</p>
Building asset management plan – stage 3	2018-19	2019-20	2018-19	2020-21	Completed late	<p>This project includes the upgrade of existing warehousing and workshop, focusing on safety by reducing the risk to staff undertaking mechanical works. The project scope has been successfully delivered even with COVID -19 restrictions. The following upgrades were delivered: pipe and fittings storage; new storage shelving and racking; new concrete plant and machinery parking area; security gates and electronic access.</p>
Phillip Island water supply security project	2018-19	2020-21	2018-19	2020-21	Completed on time	<p>This project's scope includes constructing a 2.3ML potable water storage tank and pipework to reduce water supply interruptions on Phillip Island. The construction phase commenced in 2019-20 but was delayed due to COVID-19 restrictions. Nonetheless, construction works reached practical completion and the system commissioning was successfully completed by the scheduled completion date 2020-21.</p>

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Westernport Water (continued)						
Cowes wastewater treatment plant upgrade – stage 2	2018-19	2021-22	2019-20	2021-22	Completed on time	The Cowes Wastewater Treatment Plant (Cowes WWTP) is Westernport Water’s major wastewater treatment plant that services Phillip Island and the township of San Remo. Stage 1 upgrade was completed in Water Plan 3. Stage 2 upgrade will increase the clarifier capacity to meet 2036 demand. The construction contract was awarded in March 2021 and the construction works reached practical completion in December 2021. The project was successfully completed before the scheduled completion date of 30 th June 2022.
Zone metering and pressure management	2018-19	2022-23	2018-19	2020-21	Completed on time	This project aims to reduce the water pressure in reticulation mains to extend asset life. The project includes the construction of seven pressure reduction stations in Westernport Water’s distribution network. The concept design has been completed for all seven zones. The pressure reduction facility at Cape Woolamai has been successfully commissioned as a pilot project. The remaining six pressure reduction stations have been deferred to the next regulatory period. An assessment has been undertaken and deferring the remaining six stations will not impact our performance service levels for customers. The project budget has been reallocated to Cowes WWTP Stage 2 upgrade.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Westernport Water (continued)						
Emissions reduction pledge implementation	2018-19	2022-23	2018-19	2020-21	Completed	This initiative assists Westernport Water in meeting its 8% emissions reduction pledge. The project includes installing behind the meter solar photovoltaic (PV) renewable energy across the three top energy-consuming Westernport Water sites (Stage 1). That includes solar arrays at Church Street Pump Station, Newhaven office and depot, and King Road WWTP. Stage 1 was successfully completed in 2019-20. Under Stage 2 of the project, 99.6kW ground-mounted solar PV at Cowes WWTP has been successfully installed. Construction works have reached practical completion and the system commissioning has been successfully completed.
San Remo basin renewal project	2020-21	2022-23	2020-21	2022-23	On schedule	San Remo Basin is Westernport Water’s main drinking water storage in our water distribution system. The basin was originally constructed in 1968 as an uncovered earthen basin. Later in 1999, the basin was upgraded with a polyethylene (PE) liner and a floating cover. The theoretical useful life for the San Remo Basin liner and floating cover was 20 years. This project will replace the existing liner and cover. The Design and Construct contract has been awarded and construction commenced in October 2021. The new liner and floating cover have been installed and commissioned in April 2022. Other miscellaneous upgrade works are on track to be completed by December 2022.

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Westernport Water (continued)						
Sustainable water reuse & land management	2020-21	2022-23	2018-19	2020-21	Completed on time	This project delivers on Westernport Water’s Recycled Water Strategy. The project scope includes land purchase at the King Road WWTP and expansion of irrigation at the Cowes WWTP to increase our effluent reuse targets. The land purchase component of the project was completed in 2018-19. The associated irrigation connecting the new pivot at King Road WWTP has been completed.
San Remo basin to Cowes '648 pipeline valve renewal program	2020-21	2022-23	2020-21	2022-23	On schedule	This project includes renewing critical valves in our 650mm diameter water supply pipeline from San Remo Basin to Cowes. The project commenced, and procurement of valves has already been completed in 2021-22. The construction works are 70% complete and on scheduled to be completed in 2022-23.
San Remo to Newhaven Bridge pipeline and fittings renewal project	2021-22	2022-23	2021-22	2022-23	On schedule	Westernport Water has two water pipelines (400mm diameter Mild Steel Cement Lined and 375mm diameter HOBAS) and one sewer pipeline (300mm diameter HOBAS) under the Phillip Island Bridge. These pipelines are critical to providing water and sewer services to Phillip Island. The pipeline brackets have experienced corrosion. The scope of this project includes renewal of the under-bridge pipeline brackets and fittings. The detailed designs and technical specifications were completed in 2020-21. The contract only tender was released in 2021-22 and scheduled to be awarded in November 2022

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Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Yarra Valley Water (Regulatory Period: 2018–23)						
Donvale sewerage project	Carried over	2015-16	2013-14	2019-20	Completed	Construction was completed in August 2020. The Project was delayed due to longer than anticipated planning approval timeframes and construction being slower than expected due to rock and inconsistent ground conditions.
Kalkallo Creek BS – stage 1E	2018-19	2018-19	2018-19	2019-20	Completed late	The construction of the Project was completed in 2019-20. The Project was delayed due to a longer than anticipated tendering phase.
Epping branch sewer To MCM – tunnel extension	2018-19	2019-20	2018-19	2019-20	Completed on time	The project was completed in 2019-20.
Drinking water (DW) pumping station 610 Kalkallo pumping station augmentation (Mt Ridley to Bald Hill)	2018-19	2019-20	2019-20	2020-21	Completed late	The project was completed in 2020-21. The project was delayed to match the timing of the Melbourne Water Bald Hill Tank which was delayed due to a protracted land acquisition process.
Doreen pressure main sewage pumping station 651 to ELT49	2018-19	2020-21	2018-19	2021-22	Completed late	Major storms delayed the project. The project was completed and commissioned in 2021-22.
Craigieburn flow storage and distribution – stage 2A tank3	2018-19	2020-21	2020-21	2024-25	Deferred	The pipeline (stage 2A) for Craigieburn flow storage and distribution system project completed construction in 2021-22 with commissioning to be completed in 2022-23. The wet weather storage portion (tank 3) of the project has been deferred and combined with the next stage of storage expansion to create efficiencies in delivery. This project is scheduled to be completed in early 2024-25.
Lockerbie main sewer	2018-19	2021-22	2019-20	2021-22	Completed on time	The project was completed in 2021-22.

Table 1 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Yarra Valley Water						
CSA034A The Patch (West) – community sewerage program	2018-19	2023-24	2018-19	2022-23	On schedule	The project is currently in construction and on track to be completed ahead of schedule in 2022-23.
CSA032 Monbulk (Central) – community sewerage program	2018-19	2024-25	2017-18	2022-23	On schedule	The project is currently in construction and on track to be completed ahead of schedule in 2022-23.
CSA033 Sherbrooke / Kallista (West) – community sewerage program	2018-19	2024-25	2018-19	2022-23	On schedule	The project is currently in construction and on track to be completed ahead of schedule in 2022-23.
CSA030A Sassafras (East) – community sewerage program	2019-20	2024-25	2019-20	2023-24	On schedule	The project is currently in the tender phase and is expected to be completed in 2023-24.