



Status of Major Projects Supplement

Outcomes report 2019–20

14 October 2020

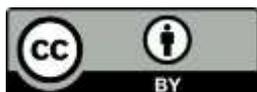


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Overview to major projects in 2019–20

The commission's approved pricing determinations for the 2018-19 to 2022-23 pricing period included 169 major capital projects for the 16 urban retail water businesses, Southern Rural Water and Lower Murray Water (Rural).¹ Melbourne Water's 15 major projects were included in the commission's approved pricing determination for its 2016-17 to 2020-21 pricing period.

In 2018, the commission approved pricing determinations for South Gippsland Water and Western Water for a period of two years. In 2020, both businesses underwent a further price determination for the remaining years in the five-year pricing period – their new price submissions included new major capital projects, while continuing and completing previously reported projects or consolidating them into other projects. This brings the total number of major projects for the period up to 197.

Major project delivery is part of the package that customers pay for and is reflected in pricing. Each year, water businesses provide an update on the status of major project commitments made in their price submission. Table 1 summarises the status of each business's scheduled major projects after the second year of the pricing period for all businesses (except Melbourne Water which is on its fourth year).

¹ Note that North East Water has an eight-year regulatory period, from 1 July 2018 to 30 June 2026.

Table 1 2019–20 summary of major projects scheduled for 2018–23

	No. major projects	Completed on time	Completed late	On-schedule	Cancelled	Deferred	Delayed
City West	10	2	0	5	0	0	3
South East	10	1	1	6	0	0	2
Yarra Valley	10	1	1	6	0	0	2
Barwon	10	2	0	1	0	5	1
Central Highlands	10	2	2	5	0	0	1
Coliban	10	0	0	7	0	0	3
East Gippsland	10	1	0	6	0	2	1
Gippsland	10	1	0	2	0	3	4
Goulburn Valley	10	0	0	5	0	3	2
GWMWater	12	2	0	3	0	0	7
Lower Murray – Urban	9	2	0	4	0	1	2
Lower Murray – Rural	5	1	2	0	0	0	2
North East	10	0	0	7	0	1	2
South Gippsland	16	3	0	10	0	1	2
Wannon	10	1	0	5	0	1	3
Western	11	1	0	6	0	1	3
Westernport	10	0	0	8	0	0	2
Southern Rural	9	1	0	5	0	3	0
Melbourne Water ²	15	7	2	1	0	1	4
TOTAL	197	26	9	91	0	23	48

² 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 and its projects for this period are shown in Table 1. This will be reset at its next price review, to apply from 1 July 2021.

Of the 197 major projects now listed in the pricing determinations, a total of 35 projects have been completed as at the end of the 2019–20 financial year, which is the second year of the 2018–23 pricing period (noting nine of these were Melbourne Water, which is four years into its pricing period). A total of 71 projects have been reported as either delayed or deferred, with some of these projects expected to be completed in the next pricing period. Where a business has deferred major projects, we expect it to explain the impact on customers, including what it will do with the revenue included in pricing for those projects.

GWMWater has seven delayed projects, the most among all businesses, but no deferred projects. Two of these were due to coronavirus. GWMWater still anticipates that each of these projects will be completed in the current pricing period.

After reassessing the priorities of its capital program, Barwon Water has deferred five projects, the most among all businesses, and delayed one project. Four deferred projects will now commence beyond this pricing period, and the delayed project will carry into the next pricing period.

Gippsland Water has seven projects either delayed or deferred. Two of the deferred projects' will be completed in the next pricing period.

Melbourne Water has completed nine projects (seven of these on time), the most among all businesses.³ Central Highlands Water has completed the second highest number of projects with four (two of these have been completed on time). Four businesses are yet to complete a major project this pricing period.

South Gippsland Water currently has ten projects on schedule, the most among all businesses, reflecting the addition of seven new projects in this year's price submission.⁴ Westernport Water has eight projects on schedule, while North East Water has seven projects on schedule.

No businesses have cancelled a major project listed in their pricing determinations.

³ Melbourne Water is in the fourth year of its pricing period, whereas the other businesses are now in the second year of the pricing period.

⁴ South Gippsland Water and Western Water have both undergone a further price determination in 2020 for the remaining years in the 2018–23 pricing period.

Read all our 2019–20 water performance resources

Find all of our 2019–20 performance information at www.esc.vic.gov.au/water/water-sector-performance-and-reporting, including:

- our outcomes report comparing businesses' customer outcomes commitments with their actual performance
- this supplement discussing how water businesses are tracking on major project delivery

Later this year we will also publish:

- our annual comparative performance report comparing the 16 urban water businesses across a range of standard key performance indicators and other measures, including water consumption, typical bills, and payment management processes
- water business profiles that provide a snapshot of each business's performance
- a summary of the data behind our tables and charts in the report.

Background

In their pricing submissions for the 2018–23 pricing period, water businesses included their proposed major capital investment projects that were to be progressed or completed during the period. Some of these projects commenced in the previous 2013–18 pricing period, but rolled-over to incur major capital expenditure in the 2018–23 period. The commission’s final pricing determination for each business included a scheduled list of these projects allowed for in pricing, along with the anticipated start and completion years.

Customers’ prices include recovering capital investment costs in accordance with this approved project schedule. Therefore, 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.

Project details

Project delays

Project schedules can be delayed for a range of reasons, both internal and external to the water business. Projects might be delayed in the early stages for additional design or investigation work, or during construction due to unforeseen difficulties. External factors can be beyond the direct control of the water businesses, such as local government approvals or planning appeals, supplier issues, as well as weather impacts on construction.

Projects may also fall behind schedule simply because the project timeline is unrealistic, or is too tight with no allowance for any unforeseen delays.

Of the 48 projects listed as delayed this year, the reasons provided by the water businesses included:

- 16 projects were delayed due to undergoing further planning or design work or to meet construction and permit requirements
- six projects encountered delays due to purchasing or acquiring land for projects
- five projects were delayed due to interruptions caused by coronavirus
- five projects were delayed due to interruptions from other concurrent or prerequisite works
- five projects were delayed due to a longer than expected tender process
- four projects encountered ministerial, environmental or cultural heritage approval delays
- four projects were delayed as a result of changes or an expansion of the project scope
- one project was delayed to undergo public consultation.

The remaining projects are just slightly behind schedule, and will likely be completed within one year of the original target completion date and all are scheduled to be completed within the current pricing period.

Project deferrals

Deferring or cancelling projects does not necessarily reflect poor project management, but may in fact show prudent investment decisions if priorities changed or the need for a particular project no longer exists. Water businesses may reinvest the available capital funds by bringing forward other pressing projects, or they may choose to return the unrequired funds to customers through lower prices. We expect businesses would engage with their customers to inform such decisions.

The water businesses identified the following reasons for deferring 23 of the 197 projects:

- eight projects required additional time for further planning or investigation into alternative solutions, or because an alternative solution had already been implemented
- five projects were deferred to reallocate resources to deliver higher priority projects
- five projects were deferred due to a changed or expanded project scope
- three projects were deferred to complete related prerequisite or concurrent projects
- one project was deferred due to the effects of coronavirus
- one system upgrade project was deferred to align with the revision of the Australian Drinking Water Guidelines (2011).

So far, no projects listed for the current pricing period have been cancelled. However, 15 projects have already been deferred into the next pricing period. By way of comparison, water businesses deferred a total of 18 of 100 major projects scheduled for the 2013–18 pricing period to the 2018–23 pricing period or beyond, and three major projects were cancelled.

New projects for 2018–23

Water businesses introduced 16 new projects that were not previously outlined in the 2018–23 price determination:

- South Gippsland Water has included seven new projects that were included in its 2020 price submission this year. These were approved as part of the commission’s price determination of South Gippsland Water for the remaining three years in this regulatory period.
- Western Water has included six new projects that were included in its 2020 price submission this year. These were approved as part of the commission’s price determination of Western Water for the remaining three years in this regulatory period.
- GMMWater has an urban pressure improvement works project which is proceeding on schedule.
- Coliban Water has a water treatment plant upgrade which is proceeding on schedule.
- Southern Rural Water has a Macalister Irrigation District Siphon replacement to ensure there is a reliable supply of water for customers, which is proceeding on schedule.

Carried over projects

As well as the scheduled major projects for the current pricing period, we also include uncompleted projects from the previous pricing period so they can be stewarded through to completion.

A total of 22 major projects across 12 businesses have been carried over from the 2013–18 period. These projects were not specified in the price determinations for the 2018–23 period.⁵ Of these, eleven have now been completed and three are due for completion by 2020–21. Four projects have now been deferred until the next pricing period, and two others have been deferred beyond this. Two projects have been cancelled.

Table 2 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 of 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 2 also includes some projects from the 2013–18 pricing period that were not completed before the end of 2017-18, and were therefore carried over into the 2018–23 pricing period.

We will monitor all major capital projects through to their conclusion.

The information in Table 2 has been provided to us by the businesses and is their own explanation of the status of their major projects. The commission has reviewed this information only to ensure that relevant dates, project status and comments are consistent with what has been previously reported.

⁵ Many major capital investment projects that were underway and mostly completed at the end of the 2013–18 pricing period had incurred much of the expenditure. The remaining expenditure to be incurred in the 2018–23 pricing period did not put the project into the water corporation's 'major project' category.

Summary of Major Projects

Table 2 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
City West Water						
West Werribee dual water supply scheme	Carried over	2016-17	2010-11	2018-19	Completed late	The project began delivery of potable water to customers in 2014 via the potable water network, and a blend of recycled water and potable water via the recycled water network in November 2016. The Salt Reduction Plant was commissioned in 2018-19 and has commenced delivering an alternative water supply to customers.
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.
Nicholson Street (Carlton/Carlton North) water main Renewal	In progress	2019-20	2019-20	2020-21	Delayed	After extensive consultation with the community and key stakeholders regarding alignment selection in Canning Street, the project is now in its final stages. The project commenced later than anticipated but construction has been within the planned timeframe. Approximately 95% of the works has been completed including the community projects that are being implemented as part of the project. It is expected that the project will be completed during the first quarter of 2020-21.

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Table 2 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
City West Water (continued)						
West Werribee sewage pump station upgrade	In progress	2019-20	2019-20	2020-21	Delayed	The detailed design for West Werribee sewage pump station including environmental and heritage approval and connection to the Western Trunk Sewer took longer than anticipated in 2018-19 due to the complexity of the project. Construction commenced in October 2019 and to date, approximately 70% of the works has been completed. This includes high risk items like tunnelling across the Princes Freeway and connecting the Western Trunk Sewer. The project is expected to be completed during the third quarter of 2020-21..
Greek Hill water supply (Dohertys Rd, Derrimut Rd & Davis Rd mains and Melbourne-Geelong pipeline interconnection)	2018-19	2019-20	2018-19	2020-21	Delayed	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 has been completed with the only one outstanding SCADA commissioning on the Melbourne Geelong pipeline interconnection remaining. This was delayed due to availability of new power supply connections and will be completed in the first quarter of 2020-21.
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 2 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
City West Water (continued)						
CBD sewerage strategy stage 2 (Lonsdale Street)	2018-19	2020-21	2018-19	2020-21	On schedule	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. To date approximately 80% of the proposed sewer has been constructed. This project is on schedule to be completed during the second quarter of 2020-21 as planned. The Lonsdale Street sewer upgrade will connect to the Spencer Street upgrade completed in mid-2018-19 as part of the overall CBD sewer strategy.
Mt Atkinson outlet sewer	2019-20	2020-21	2019-20	2020-21	On schedule	Construction commenced in March 2020 and to date approximately 40% of the proposed sewer has been constructed. This project is on schedule to be completed during the third quarter of 2020-21.
Billing and collection system replacement	2020-21	2022-23	2020-21	2022-23	On schedule	The Billings & Collections program was initiated in 2019-20 as a first phase business case. The 2020-21 Billing & Collections program will predominantly focus on Go to Market and solution onboarding.
Ravenhall outlet sewer	2020-21	2022-23	2019-20	2022-23	On schedule	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 by City West Water will be delivered in 2022-23. We are currently in discussions with the Department of Transport and the Department of Justice and Community Safety to confirm the alignment of the proposed sewer along the Western Freeway and adjacent to the Ravenhall prison precinct.

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Table 2 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
City West Water (continued)						
Tarneit West outlet sewer (section 1)	2020-21	2022-23	2020-21	2022-23	On schedule	The Tarneit West outlet sewer crosses the Werribee River and through major council parks. As such we will commence preliminary work on investigations, design and consultation with key stakeholders in 2019-20, with construction to commence the following year.
South East Water						
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	Property connections in the Peninsula ECO project area and the backlog region of the peninsula has continued, however the connection rate was impacted by COVID19. South East Water hasn't initiated any major marketing plans to encourage connection due to the potential impact of financial issues for these customers. As at the end of June 2020 approximately 5,900 properties have been connected to the network.
Pakenham East sewer servicing	In progress	2019-20	2019-20	2020-21	Delayed	The Pakenham East Precinct Structure Plan (PSP) has been delayed and is awaiting Ministerial approval by late 2020. The project will be issued for tender in July 2020, however it will not be awarded for delivery until the PSP is approved. Completion is anticipated in 2021-22.
Ballarto Road East sewer pump station	In progress	2019-20	2017-18	2019-20	Completed on time	Construction was initially delayed due to the Cultural Heritage Management Plan. Pump Station and rising main have been commissioned. Defect rectification work required on parts of the gravity sewer.

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Table 2 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)						
Digital capability pilot	In progress	2019-20	2019-20	2020-21	Delayed	Our trial of digital meters in Melbourne's south east is in full deployment and is being extended. We've installed nearly 1000 meters at customer properties. Based on this we've notified 65 customers about potential leaks in their home with 1,200 litres per hour being the largest leak detected. By the end of 2020, we're planning to install up to 20,000 meters.
Boneo water recycling plant upgrade	In progress	2020-21	2018-19	2020-21	On schedule	Over the 2019-20 year, significant progress was made on the Boneo WRP stage 4 upgrade. Design was completed and despite challenges (including groundwater, geotechnical issues and Covid-19) construction works have continued resulting in most civil construction being finished - a major achievement. Operationally, the plant has experienced some pressures due to reaching capacity but works were prioritised to ensure the plant continues to provide adequate treatment during the 2020-21 summer peak. The relationship with the John Holland Suez Beca (JHSB) joint venture has remained strong with all parties focussed on delivering the project safely.
Land purchase (Fishermans Bend)	In progress	2021-22	2018-19	2021-22	On schedule	Many approaches have been made to owners of suitable sites with no success to date. Next steps include a public expression of interest process.
Water recycling plant drying pan and stockpile area upgrades	In progress	2022-23	2018-19	2021-22	On schedule	This project included CTCR (concrete treated crushed rock) lining of the drying pans and stockpile areas at Boneo, Mt. Martha, Somers and Pakenham. Initial program has been fast tracked. From a total of 18 pans, 15 have been awarded and 8 completed. The Sludge Drying Pans program is scheduled for completion in the summer of 2021.

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Table 2 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)	In progress	2022-23	2018-19	2022-23	On schedule	We are working with local government to secure land in the buffer area and also on adjacent land zoning to protect our future operations.
Hanna Street sewerage capacity improvements	2018-19	2021-22	2020-21	2022-23	Delayed	Revised rainfall standards and modelling has altered the required scope of this project. The first stage of these capacity works is required in PS4 which will be delivered in 2022-23. A second larger stage of works will be required in PS5 and will likely be a top 10 project.
Elster Creek sewer catchment capacity improvement works	2018-19	2022-23	n/a	n/a	On schedule	<p>Planning investigations have progressed incorporating new rainfall standards which has reduced the scope of works required under a business as usual solution. A reduced scope of work is anticipated to be delivered in 2022/23.</p> <p>Through the Price Submission review process we have made the decision that cost recovery of the Elster Creek and Clayton East & West Catchment Capacity Improvement Works will not be included in the 2018 Price Submission. A lower cost alternative will be sought. If the project is required cost recovery will start in the following regulatory period.</p>

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Table 2 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	n/a	n/a	Deferred	<p>The planning project to apply new rainfall standards to the catchment and assess the required capacity will be progressed throughout 2020-21. This will be a joint study between South East Water and Yarra Valley Water as we share the catchment boundary. This will determine if works are required within the pricing period.</p> <p>Through the Price Submission review process we made the decision that cost recovery of the Elster Creek and Clayton East & West Catchment Capacity Improvement Works will not be included in the 2018 Price Submission. A lower cost alternative will be sought. If the project is required cost recovery will start in the following regulatory period.</p>
Yarra Valley Water						
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.

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Table 2 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 (continued)						
Drinking water (DW) pumping station 610 Kalkallo pumping station augmentation (Mt Ridley to Bald Hill)	2018-19	2019-20	2019-20	2020-21	Delayed	The Project is currently in construction and is on track to be completed in 2020-21. The Project has been delayed due to longer than expected land procurement timelines requiring compulsory acquisition processes.
Doreen pressure main sewage pumping station 651 to ELT49	2018-19	2020-21	2018-19	2020-21	On schedule	The Project is currently in construction and is on track to be completed on schedule in 2020-21.
Craigieburn flow storage and distribution – stage 2A tank3	2018-19	2020-21	2020-21	2022-23	Delayed	A change in the sequencing of connecting assets has delayed this project and the project schedule has been adjusted to reflect actual urban growth rates. The project is now scheduled to be completed in 2022-23.
Lockerbie main sewer	2018-19	2021-22	2019-20	2021-22	On schedule	The project is in construction and is on track to be completed on schedule in 2021-22.
CSA034A The Patch (West) – community sewerage program	2018-19	2023-24	2018-19	2023-24	On schedule	The project is currently in detailed design and on track to be completed on schedule in 2023-24.
CSA032 Monbulk (Central) – community sewerage program	2018-19	2024-25	2017-18	2024-25	On schedule	The project is currently in detailed design and on track to be completed on schedule in 2024-25.
CSA033 Sherbrooke / Kallista (West) – community sewerage program	2018-19	2024-25	2018-19	2024-25	On schedule	The project is currently in detailed design and on track to be completed on schedule in 2024-25.
CSA030A Sassafras (East) – community sewerage program	2019-20	2024-25	2019-20	2024-25	On schedule	The Project is currently in functional design and on track to be completed on schedule in 2024-25.

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Table 2 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Barwon Water						
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. Project to be completed in stages as development proceeds through growth area.
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 due to modifications required to inlet screens.
Property realisation (Thornhill Rd Highton)	In progress	2018-19	2018-19	2020-21	Delayed	Planning for this project is currently in progress, initial delay experienced due to council approval of engineering plans.
Colac water treatment plant clear water storage upgrade	In progress	2019-20	2018-19	2019-20	Completed on time	Barwon Water completed this project in 2019-20.
Colac water reclamation plant sludge dewatering upgrade	In progress	2019-20	2019-20	2022-23	Deferred	Planning, design and procurement for this project is currently in progress, initially delayed due to being included in scope of larger upgrade of Colac WRP.
Property realisation (Scenic Rd Highton)	In progress	2020-21	2021-22	2026-27	Delayed	Planning works are progressing. A delay occurred relating to the transfer of ~4ha of Crown Land to maximise the value of this. The construction timeline has been modified to reflect the delay.
Colac pipeline upgrade	In progress	2027-28	2023-24	2028-29	Deferred	Planning works are progressing. The expected project construction is on track to commence in 2023-24.
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	2026-27	Deferred	The project timing has been re-scheduled following prioritisation of capital program.

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Table 2 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)						
Telemetry RTU PLC HMI hardware & software	2020-21	2021-22	2020-21	2021-22	On schedule	Planning works progressing. Project on track for expected commencement in 2020-21.
Forrest water treatment plant upgrade	2020-21	2022-23	2023-24	2026-27	Deferred	This project timing has been re-scheduled following prioritisation of capital program.
Black Rock water reclamation plant effluent storage	2021-22	2023-24	2029-30	2031-32	Deferred	This project has been deferred due to modifications to existing infrastructure allowing the planned project to be postponed.
Central Highlands Water						
Ballarat South wastewater treatment plant lagoon pipeline upgrade	In progress	2018-19	2019-20	2019-20	Completed late	This project was delayed due to design changes to cater for growth and compliance needs. The works are now completed in line with projected project completion of June 2020.
Evansford raw water pipeline renewal	In progress	2018-19	2018-19	2019-20	Completed late	Construction completed in December 2019 two months after revised projected completion of October 2019. Original construction start delayed due to Cultural Heritage and Environmental approvals, revised program delayed with resolution of private property access issues.
Fellmongers siphon replacement	In progress	2019-20	2018-19	2019-20	Completed on time	Pipe functional/operational within original scheduled timeframe. Final construction completion.
Daylesford water supply upgrade	In progress	2020-21	2018-19	2022-23	Delayed	Currently working on design optimisation, planning approvals and land acquisition needs. Approvals process becoming protracted with referral agency resource challenges (Parks Victoria, Hepburn Shire Council etc.). As well as the delay due to external approvals it may be delayed due to Covid 19 impacts.

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Table 2 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						
Ballan wastewater treatment plant – increase in recycled water winter storage capacity	In progress	2020-21	2018-19	2019-20	Completed on time	Construction completed prior to projected completion of February 2020.
Ballarat South outfall sewer duplication	In progress	2022-23	2019-20	2022-23	On schedule	Investigations, approvals and design underway. May be delayed due to Covid 19 impacts on the construction industry.
Ballarat South wastewater treatment plant inlet works upgrade	2018-19	2020-21	2018-19	2022-23	On schedule	Works packages tendered and components of works underway, final completion of all components may be delayed due to Covid 19 impacts. Key components needed to be sourced from overseas and may present supply chain impacts.
Ring Road trunk water main duplication	2018-19	2022-23	2020-21	2022-23	On schedule	Scoped into a number of works packages, design progressing with early works package due to be completed in late 2020.
Maryborough wastewater reuse scheme improvements	2019-20	2020-21	2020-21	2020-21	On schedule	Procurement of additional land requirements complete. Project scheduled for completion in 2020-21 with the delivery of irrigation upgrades
Ballarat East sewer duplication and flow storage	2019-20	2022-23	2020-21	2021-22	On schedule	Documentation currently being completed, Stage 1 works projected to commence in Feb 2021 and be completed in late 2021. May be delayed due to Covid 19 construction industry impacts.
Coliban Water						
Heathcote backlog sewerage	Carried over	2014-15	2018-19	2019-20	Completed	The project is now completed and in the Defects Liability phase of the project. Monitoring of customer enquiries and attendance to any defect issues is being undertaken.

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Table 2 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)						
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.
Digital customer metering	2018-19	2022-23	2018-19	2022-23	On schedule	Stages 1, 2 & 3 of the project have been completed and it is anticipated stage 4 will be completed in 2020. The project has experienced minor delays from COVID-19.
Western Bendigo water network growth and pressure	2018-19	2021-22	2018-19	2021-22	On schedule	<p>Preliminary design works for storage tank and booster pump station are complete and the works will be delivered under an existing contract for tanks and booster pump stations to allow delivery to commence early 2021 and be completed by late December 2021.</p> <p>Preliminary design of water mains is complete and these works will be tendered in September 2020 as part of a package of works including water mains in Marong, Maiden Gully, Strathfieldsaye and Huntly. Tendering is scheduled to allow delivery to commence early 2021 and be completed by December 2021.</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 are scheduled for completion in 2022-23.</p> <p>As detailed above (Western Bendigo water network growth and pressure) preliminary design of water mains are complete and these works will be tendered in September 2020 as part of a package of works including water mains in Marong, Maiden Gully, Strathfieldsaye and Huntly. Tendering is scheduled to allow delivery to commence during 2021-22.</p>

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Table 2 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	On schedule	Phase 1 of these works have been completed which were the planned works for the 2018-2023 regulatory period. Works for the next regulatory period (phase 2 and 3 works) have been brought forward and the contracts for delivery of phase 2 of the project have been awarded. The works are forecasted to be completed in November 2020, subject to weather, approvals and the impacts of COVID-19. Phase 3 of the project is scheduled for completion in late 2021.
Heathcote water reclamation plant compliance	2018-19	2021-22	2018-19	2022-23	On schedule	Initial works have focussed on the reduction of wastewater from Heathcote water treatment plant. This work has been completed as part of the Heathcote WTP upgrades project. Further stages of work may be undertaken depending upon the success of the initial works.
Echuca water treatment plant security of supply	2018-19	2022-23	2018-19	2022-23	On schedule	Works have been completed to replace critical valves at the Echuca WTP upgrade which are a part of the scope of this project. These works have been delivered under a separate contract to the main contract. A two staged tendering process has commenced for the main contract and this is currently being impacted by COVID-19. Works for the entire project are scheduled for completion in 2022-23.
Echuca West tank	2019-20	2021-22	2018-19	2020-21	On schedule	A contract has been awarded and the contractor will be mobilising to site in August 2020. The project is forecasted for completion by July 2021.
Castlemaine water reclamation plant sludge handling upgrades	2020-21	2022-23	2020-21	2023-24	Delayed	Design works scheduled to commence in 2022-23.

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Table 2 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	As detailed above (Western Bendigo water network growth and pressure) preliminary design of water mains are complete and these works will be tendered in September 2020 as part of a package of works including water mains in Marong, Maiden Gully, Strathfieldsaye and Huntly. Tendering is scheduled to allow delivery to commence during 2020-21.
Bendigo water reclamation plant sludge processing upgrades	2020-21	2023-24	2020-21	2022-23	Delayed	Design works scheduled to commence in 2020-21.
Heathcote WTP upgrades ***NEW PROJECT***	2018-19	2019-20	2018-19	2019-20	On schedule	Works completed and the project is now in the defects liability phase of the project.
East Gippsland Water						
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 the 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 2 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	2020-21	Delayed	Construction is nearing completion with final commissioning to be completed early in the 2020-21 financial year.
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	Deferred	Stage 1 of this project was completed in 2018-19 which made a significant impact on odour levels. As a result stage 2 has been deferred in order to complete some additional odour monitoring which will inform revised design standards.
Wy Yung clear water storage	2018-19	2020-21	2017-18	2020-21	On schedule	Construction of the 36ML reinforced concrete tank commenced in October 2019 and is on track for completion in the 2020-21 financial year.
Dinner Plain recycled water storage augmentation	2019-20	2020-21	2017-18	2021-22	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	2022-23	On schedule	Functional design commenced to increase winter storage capacity and increase irrigation capacity.
Bairnsdale to Eagle Point main supply pipeline renewal	2020-21	2022-23	2017-18	2022-23	On schedule	Detail design was completed in 2019-20.
Mallacoota clear water storage	2020-21	2022-23	2018-19	2022-23	On schedule	Functional design commenced.
Lindenow storage water quality improvement	2020-21	2022-23	2019-20	2022-23	On schedule	Functional design of new 1ML tank has commenced.

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Table 2 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)						
Woodglen raw water storage– dam safety upgrades	2021-22	2023-24	2018-19	2022-23	On schedule	Detailed design complete.
Gippsland Water						
Sale sewer – outfall sewer pump station	In progress	2019-20	In progress	2020-21	Delayed	While this project has been rescheduled, it remains on track to be completed within the five year pricing period and timeline adjustments will have no material impact on the overall capital investment program. The decision made to adjust the project timing was made due to unfavourable ground conditions. Construction works is approximately 80% complete and is expected to be completed by the second quarter of 2020-21
Drouin sewer – new wastewater treatment plant	In progress	2021-22	In progress	2022-23	Delayed	The project has progressed the Procurement and Tender Process through to delivery. A project business case has been approved for revision in the previous reporting period by the Minister and remains on track for completion 2022-23.
Moe water – treatment plant basin liner and cover replacement	2018-19	2018-19	2020-21	2022-23	Delayed	While this project remains on track to be completed within the five year pricing period, some scheduling adjustments have been made to achieve a better overall network reliability outcome for our customers
Mirboo north water – rising main replacement	2018-19	2019-20	2018-19	2019-20	Completed	Project completed as scheduled.

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Table 2 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	2021-22	Delayed	We're taking some time to consider a more cost effective alignment, negotiate access agreements and complete easement acquisitions with private landowners, with a view to achieving the best possible outcome for our customers. Detailed design is complete, planning approvals and easements progressing and the project remains on track to be completed in current five-year pricing period.
Sale sewer – convert sewer pump station no. 2 to underground facility	2019-20	2021-22	2020-21	2022-23	Deferred	The project is scheduled to be completed in current price submission period. Some scheduling adjustments have been made to bring other projects forward which will have more immediate customer benefits, and the project remains on track to be delivered in the current five-year pricing period.
Warragul water – Western Ring main to South Basin	2019-20	2022-23	2019-20	2022-23	On schedule	Detail design well underway with planning approvals and easements progressing. Project is on schedule.
Warragul sewer – North East branch augmentation (to Sutton Street)	2019-20	2022-23	2019-20	2023-24	Deferred	<p>Project is on scheduling adjustments have enabled more critical works to proceed at Moe Water Treatment Basin, which is a great outcome for our customers.</p> <p>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 while still being completed within the current five-year pricing period. Conceptual design is completed and functional design underway.</p>

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Table 2 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)						
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 based on a detailed technical review that has highlighted an increase life expectancy for this asset enabling it to be deferred to the next five-year pricing period. The costs associated with this project are fully recoverable from the major customer the asset services
Churchill water – sanders treated water basin liner and cover replacement	2021-22	2022-23	2021-22	2022-23	On schedule	Conceptual Design commencing is completed. Functional design underway and project is on schedule.
Goulburn Valley Water						
Mansfield wastewater management facility additional winter storage	Carried over	2020-21	2015-16	2027-28	Deferred	This project started in Pricing Period 3 as a winter storage and irrigation upgrade project. There was opportunity to investigate an alternative innovative solution for environmental offsets at the beginning of Pricing Submission 4, however this did not prove to be feasible for the site. During 2019/20, upgrade options and timing of the project were reviewed, confirming that a winter storage and irrigation area is the preferred approach and that the current project timing is still valid.
Shepparton wastewater management facility high rate anaerobic lagoon cover replacement	2016-17	2020-21	2016-17	2020-21	On schedule	Project is in the construction phase and on track for completion during 2020-21.

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Table 2 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)						
Shepparton outfall rising main replacement	2017-18	2019-20	2017-18	2020-21	Delayed	Project is in the tender phase and expected to be awarded in October 2020. Based on likely works programs, the project will be completed in 2020-21.
Broadford water treatment plant upgrade	2017-18	2020-21	2017-18	2027-28	Deferred	Project works will now be completed over an extended period. Power supply upgrades and minor treatment upgrades to manage risk are currently underway, due for completion in 2021-22. This will enable the construction of additional storage and major WTP upgrades to be deferred for completion in 2027-28.
Shepparton raw water pump station augmentation	2017-18	2021-22	2017-18	2022-23	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	On schedule	Project works have been completed and proof of performance testing will be completed in the first half of 2020-21.
Climate change mitigation strategy	2017-18	2023-24	2017-18	2023-24	On schedule	Renewables program Stage 1 is almost complete. Stage 2 is scheduled for implementation in 2020-21. Further stages will be reviewed during 2020-21 to determine if further works such as a large scale solar project will extend the program to additional stages.
Digital enablement strategy	2017-18	2024-25	2018-19	2023-24	On schedule	The first major project in this program of work is progressing towards completion and several others are progressing through planning. GVW is currently restructuring its resourcing approach to the program such that delivery can be expedited through the ability to deliver projects concurrently rather than sequentially.
Seymour sewer pump station no.1 rising main replacement	2019-20	2020-21	2023-24	2021-22	Delayed	Project was previously deferred to 2024-25 but now brought forward again to reduce environmental risk. A land acquisition process is underway for pipeline easements that will delay completion until 2021-22.

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Table 2 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	2023-24	2026-27	Deferred	Deferred based on implementation of short term works to address risks. Construction not scheduled to commence until 2023-24
Replacement of Abbinga reservoir	2021-22	2022-23	2017-18	2020-21	On schedule	Construction works are complete and the upgraded Reservoir is now in the commissioning phase and holding a significant volume of water.
GWMWater						
South West Loddon Rural Water Supply Project	2016-17	2018-19	2016-17	2019-20	Completed late	Project completed in March 2020, 9-months later than planned. Delays experienced initially with planning and environmental approvals, then land acquisitions and finally a blue-green algae bloom in the Waranga Channel delayed commissioning.
Mallee Towns Drinking Water Project – Brim, Beulah, Woomelang and Sea Lake	2017-18	2018-19	2017-18	2019-20	Completed late	Project completed in May 2019. 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 completed in late August 2019.
Sewerage scheme – Goroke	2018-19	2018-19	2018-19	2020-21	Delayed	Project delayed due to difficulties in agreeing a suitable site for the wastewater treatment plant and completing detailed design. There has been ongoing engagement with project stakeholders including a Consultative Committee, residents, West Wimmera Shire Council (WWSC) and the EPA. The detailed design is nearing completion with construction works planned for delivery by mid-2021.

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Table 2 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	2019-20	Delayed	<p>Project substantially complete pending supply and installation of remaining meters and RTU devices delayed due to manufacturing delays resulting from COVID-19. A total of 30,035 meter installations and electronic devices have been completed. There are approximately 3,000 installations to be completed over the next 4 months.</p> <p>GWMWater's Customer Portal has been modified in preparation for Urban customers and is currently going through final user acceptance testing before making available to customers in the first half of 2020-21.</p>
East Grampians Rural Water Supply Project	2018-19	2020-21	2018-19	2022-23	Delayed	<p>An Early Work contract to deliver, design and obtain statutory approvals was awarded in January 2020. The agreement for the Commonwealth component of project funding was executed in May 2020. This has allowed a full project scope to be planned for delivery and has extended the completion date expectation. Inefficiencies (including decreased availability of field representatives for CHMP development) due to COVID-19 restrictions have further contributed to extended delivery timing expectation.</p>
Water treatment plant upgrades – health based treatment targets	2018-19	2020-21	2018-19	2021-22	Delayed	<p>Planning is progressing with completion of construction works currently scheduled for 2021-22. Works have been integrated with other necessary upgrades at these sites.</p>
Treated water supply – Ultima	2019-20	2019-20	2019-20	2021-22	Delayed	<p>Project completion expected to carry over to 2021-22. Planning is well progressed with construction planned to be completed in 2021-22.</p>
Upgrade wastewater treatment plant & reuse system – Donald	2019-20	2020-21	2019-20	2021-22	Delayed	<p>Project planning has commenced with completion planned in 2021-22.</p>

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Table 2 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	2021-22	Delayed	Project not yet started. Project planning has commenced. Delivery has been reprogrammed over two years to enable thorough investigation of options and engagement with stakeholders to commence later in 2019-20.
Development servicing – pressure improvements commercial and industrial – fire services	2020-21	2021-22	2018-19	2021-22	On schedule	Water pressure in Horsham was increased during 2018-19 impacting the performance of infrastructure as anticipated. The impact of increasing pressure to support fire services has resulted in the advance of renewal of infrastructure in Horsham. Further renewals and upgrades across Horsham, Stawell and Ararat are expected over the next couple of years.
Dam safety works – Lake Fyans	2021-22	2021-22	2021-22	2021-22	On schedule	Project not due to commence until 2021-22.
Treated water supply – Moyston and Elmhurst	2022-23	2022-23	2021-22	2022-23	On schedule	Project planning due to commence 2021-22.
Urban Pressure Improvement Works ***NEW PROJECT***	2019-20	2020-21	2019-20	2020-21	On schedule	Project initiated in response to varying water pressure and flowrates across all urban towns identified during the delivery of the Urban remote metering project. Project includes a portfolio of works targeting improved flowrates and water pressure to ensure flowrates committed to in GWMWater’s Urban Customer Charter are achieved. 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. Planning works are underway for Ararat, Charlton, Dimboola, Donald and Moyston. Planning is complete with works to commence or underway in Birchip, Edenhope, Elmhurst, Glenorchy Stawell, Marnoo and Warracknabeal. Works have been completed in Manangatang and Murrayville.

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Table 2 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						
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	This project has been delayed until 2021-22 while alternative options are investigated due to the poor condition of an existing asset which formed a key part of the original project scope.
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	Delayed	Construction commenced late due to land acquisition and planning issues. Completion scheduled for September 2020.
All sites – ultraviolet treatment plants	2018-19	2022-23	2018-19	2022-23	On schedule	UV successfully installed at the initial four WTPS. Delivery planned for two further UV installations over winter 2021-22 with remaining three schedule to be complete 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.
Swan Hill DN450 Truck main Arnoldt/Stratbroke (1,245 m)	2020-21	2020-21	2019-20	2020-21	On schedule	Options assessment underway to finalise scope One of three linked projects associated with SH North WTP.

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Table 2 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 – North water treatment plant 6 ML ground level storage	2020-21	2020-21	2019-20	2020-21	On schedule	Options assessment underway to finalise scope Two of three linked projects associated with SH North WTP.
Swan Hill – North water treatment plant treated water pump station (stage 1)	2020-21	2020-21	2019-20	2020-21	On schedule	Options assessment underway to finalise scope Three of three linked projects associated with SH North WTP.
Lower Murray Water – Rural						
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	2020-21	Delayed	Detailed design and investigations approvals process commenced. Construction phase requires MDBA funding approval.
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	2021-22	Delayed	Development works underway. Implementation planned for 2021-22.

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Table 2 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						
Yackandandah reclaimed water management	Carried over	2016-17	2018-19	2019-20	Deferred	This project has commenced. The EPA has approved a change in the discharge licence, North East Water will complete this project in 2020-21.
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 scope of the project has been expanded to increase the plants chemical load capacity to accommodate recent significant growth in wet industry within the catchment area, and hence will take longer than originally scheduled.
Wodonga wastewater treatment plant capacity & emissions reduction	2018-19	2021-22	2020-21	2022-23	Delayed	Potential significant scope change. A number of Wodonga based industrial customers, RDV and specialist consultants are exploring alternative options to offset rising energy costs and achieve sustainability targets. Study work is progressing to provide each party with an informed understanding of strategic options potentially available to meet their respective business commitments. As such the assumed most likely option for this project may not be progressed.
Region-wide digital business sustainability	2018-19	2021-22	2018-19	2021-22	On schedule	Project commenced and on schedule.
Wodonga wastewater treatment plant solar power	2018-19	2022-23	2018-19	2021-22	On schedule	Approvals obtained and contract awarded. Anticipate early completion and benefits realisation.
Region-wide information and communications technology infrastructure	2018-19	2027-28	2018-19	2027-28	On schedule	Project commenced and on schedule.

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Table 2 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)						
Benalla water distribution upgrade	2019-20	2020-21	2019-20	2020-21	On schedule	Engineers commenced network modelling in 2019-20.
Wodonga sewerage transfer capacity	2019-20	2022-23	2021-22	2023-24	Deferred	Program reprioritisation sees this project rescheduled.
Wodonga wastewater treatment plant major upgrade	2020-21	2024-25	2019-20	2024-25	On schedule	Ahead of Schedule. Early start for this complex project to manage risks associated with delivery timeframes.
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.
South Gippsland Water						
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.

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Table 2 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 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	Deferred	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
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 is still in construction with completion expected in 2020-21. The second stage is planned for Regulatory Period 5. The projects will further improve drinking water safety in the region
Carbon emission reduction upgrades	2018-19	2027-28	2018-19	2023-24	Delayed	Installation of behind the meter solar installations in stages. The first is complete and the second stage was due for completion in 2019-20. Construction of the second stage is underway but was delayed and completion is expected in 2020-21. The projects will help meet South Gippsland Water's obligations to reduce greenhouse gas emissions.
Leongatha raw water transfer main	2020-2021	2022-23	2020-21	2021-22	On schedule	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	Design work is underway for a project with three drivers; supporting growth, compliance and renewal of assets to maintain service standards.

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Table 2 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 Low Level Basin Pump Station Renewal	2019-20	2020-21	2019-20	2020-21	On schedule	Construction work is underway with completion expected on schedule. The project aims to maintain service standards in Wonthaggi by renewing assets.
Leongatha Water Supply Augmentation	2020-21	2020-21	2020-21	2020-21	On schedule	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	2021-22	On schedule	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	Design work is underway for a project that aims to maintain service standards.
Service Basin Cover and Liner Replacements	2020-21	2024-25	2020-21	2024-25	On schedule	Construction work for the first two of six service basins is underway. The project aims to maintain drinking water safety in the region.
Wonthaggi Wastewater Treatment Plant Augmentation	2021-22	2024-25	2021-22	2024-25	On schedule	Planning 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	On schedule	The strategy is currently on schedule but subject to review and revision based on lessons from the COVID19 pandemic.

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Table 2 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Wannon Water						
Cobden and Casterton water reclamation plant irrigation works	Carried over	2017-18	2014-15	2018-19	Completed late	<p>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.</p> <p>Outcomes – increased environmental water flows</p>
Portland reclamation plant wind energy project	Carried over	2015-16	2014-15	2019-20	Completed late	<p>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.</p>
Hamilton – new biosolids drying area	2018-19	2019-20	2018-19	2020-21	Delayed	<p>Design was completed and construction commenced on site in 2018-19. Project is 80% complete, however the Contractor was unable to complete the works, which will now be retendered in August 2020. Revised completion date is March 2021.</p>
New clear water storage for Hamilton water treatment plant	2018-19	2019-20	2018-19	2020-21	Delayed	<p>Design commenced in 2018-19 and the construction of a new clear water storage tank is well underway. Contractor travel and attendance at site has been impacted by COVID-19 border restrictions which has resulted in delays to construction. Works are expected to be complete in 2020-21.</p>

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Table 2 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)						
Warrnambool – water reclamation plant augmentation project	2018-19	2021-22	2018-19	2022-23	Delayed	Progress on Wannon Water's largest ever capital project to upgrade Warrnambool WRP is experiencing unforeseen delays relating to pre-construction approvals. Detailed design is complete. Tendering and approval stages are expected to occur in 2020-21, followed by construction in the 2021-22 and 2022-23 years.
Warrnambool – Wangoom Road water tower and pump station	2018-19	2021-22	2018-19	2021-22	On schedule	Design commenced in 2018-19, and construction of a new water tower and pump station is planned for 2021-22.
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.
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	2020-21	On schedule	Design will commence in 2019-20, with installation of UV equipment planned for 2020-21.
Warrnambool – Wollaston Road Tower and water pump station	2019-20	2020-21	2019-20	2020-21	On schedule	This project is not funded within the Wannon Water's current Price Submission period. Concept design and community consultation stages only are planned to occur by 2020-21. Delivery of infrastructure will be deferred to a future Price Submission period, or will be funded by Wannon Water at the back end of the current Price Submission period.

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Table 2 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 water reclamation plant – effluent reuse upgrade	2019-20	2020-21	2018-19	2020-21	On schedule	Construction of infrastructure to upgrade the effluent reuse options at Hamilton WRP commenced in 2019-20 for completion in 2020-21.
Port Campbell – second bore	2020-21	2021-22	2019-20	2021-22	On schedule	Design and approvals were brought forward to 2019-20 to facilitate construction of a new bore in 2021-22.
Western Water						
Surbiton Park RWP upgrade (digester)	Carried over	2014-15	2013-14	2018-19	Completed late	Contract awarded in September 2016. Project completion delayed due to delays in slow contract progression from the Contractor. Contractual liquidated damages applied to account for the contract completion delay. Construction works have reached contract completion and the new digester is operational.
Sunbury additional water storage — Bald Hill tank	Carried over	2016-17	2013-14	2023-24	On schedule	Project was previously deferred due to Fair Water Bills and slower growth. Latest planning horizon indicates the additional water storages at Bald Hill will be required by 2023 based on the growth rates in Sunbury. The land has now been purchased and the next level of design will commence for the construction of the water storages at the site.

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Table 2 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Western Water (continued)						
Bacchus Marsh rising main	Carried over	2017-18	2018-19	2035-36	Deferred	This project is to provide some redundancy and capacity increase of a critical asset. The project was deferred to the next pricing period. Testing found the existing main was in better condition than expected with air valves installed on the existing main to address air entrainment issues which caused the historical inefficiencies. Additional air valves are being installed shortly to further remove air entrapment. This is expected to further increase the flow rate from the pump station. If this work is successful, the upgrade of this rising main can be deferred until 2035.
Bacchus Marsh sewer rising main Geelong Road	Carried over	2017-18	2016-17	2021-22	Delayed	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 is currently underway with expected completion in early to mid 2021.
Melton South Exford Road sewer pump station/rising main/ sewer	2018-19	2020-21	2018-19	2022-23	Delayed	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 is commencing with the landowner. The business case has been developed with the site configuration changing from original design to improve accessibility for maintenance. Delivery of the Sewer Pump Station and Rising Main has been delayed matching in with the slow-down of lots released within the Toolern development. Development currently serviced by several temporary pump stations until the permanent pump station and rising main is constructed. Construction is expected to commence in 2020-21.

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Table 2 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Western Water (continued)						
Sunbury recycled water plant upgrade	2018-19	2022-23	2018-19	2018-19	Completed on time	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.
Beattys Road East Trunk Water Main (Plumpton)	2019-20	2021-22	2019-20	2021-22	On schedule	Business Case is under development, which will confirm the sizing of the main. This Water Main will service the Melton growth corridor.
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.
Melton Recycled Water Plant - Convert Aeration tank 5 & 6 to IFAS (Integrated Fixed Film Activated Sludge)	2020-21	2022-23	2020-21	2024-25	Deferred	The project is currently on hold to undertake further strategic planning. Other projects relating to the Melton Recycled Water Plant Upgrade have been prioritised and are underway while further master planning work is undertaken for the conversion of the aeration tanks at the site.
Derrimut Diversion Sewer Pump Station/Rising Main	2018-19	2023-24	2018-19	2023-24	On schedule	A design layout has been completed and is currently under review. Negotiations are underway with the landowner of the preferred site to secure the land prior to progressing to the next design phase.
Gisborne Recycled Water Plant - Stage 1 Bioreactor	2018-19	2023-24	2018-19	2024-25	On schedule	Plans are underway to build a new recycled water plant at the existing site in Gisborne to service growth in the region. This project will form part of a larger package of works to be undertaken to upgrade the site.

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Table 2 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Western Water (continued)						
Parwan-Balliang Irrigation District network (Western Irrigation Network Stage 1)	2019-20	2023-24	2019-20	2023-24	On schedule	This project will connect existing Western Water recycled water sources to supply a new irrigation district in the Parwan Balliang area.
Melton Recycled Water Plant - additional onsite storage	2018-19	2020-21	2019-20	2020-21	Delayed	This project addresses EPA compliance requirements after June 2022, by installing an additional 1.0 GL of on-site storage at the recycled water plant. Draft Detailed Design is completed, and tender documentation is being developed. Commencement of site works has been put on hold for 6 weeks due to Stage 4 COVID-19 restrictions
Bacchus Marsh recycled water plant to Melton recycled water plant interconnector	2018-19	2020-21	2019-20	2020-21	On schedule	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. Cultural Heritage approvals are not expected to be finalised until Jan 2021; however the project is still on track.
Grant Street sewer pump station, Bacchus Marsh	2018-19	2020-21	2019-20	2021-22	Delayed	The timeline for the project delivery has been delayed due to design, cultural heritage, and asbestos pipe issues at the site. Construction of the new pump station is currently underway and is due for completion in mid-2021.

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Table 2 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Westernport Water						
Business transformation project	2018-19	2019-20	2019-20	2020-21	Delayed	This project includes renewing Westernport Water's Billing, Finance, Payroll and HRIS ICT systems. Contracts have been awarded for the supply and implementation of the above systems, with the exception of Billing. Due to the extensive procurement process, the project start date has been delayed.
Building asset management plan – stage 3	2018-19	2019-20	2018-19	2020-21	Delayed	This project includes the upgrade of existing warehousing and workshop with a focus on safety and reducing the risk to staff undertaking mechanical works. It will also ensure pipes and fittings are stored undercover to improve water quality. The Business Case has been approved, and detailed design has been completed. The construction phase has commenced; however, due to COVID-19 restriction, internal fit-out has been delayed. Construction is expected to be completed by the end of November 2020.
Phillip Island water supply security project	2018-19	2020-21	2018-19	2020-21	On schedule	The scope of this project includes constructing a storage tank and pipework to reduce water supply interruptions on Phillip Island. The concept design and hydraulic designs have been completed. The construction phase commenced in 2019-20 with the majority of civil works have already been completed. The delivery and installation of the steel tank has been delayed due to COVID-19. The project will be delivered as planned in PS1.

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Table 2 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	On schedule	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 will increase the clarifier capacity to meet 2036 demand. The Business Case has been prepared. Concept design and EPA works approval has been completed. The construct only tender will be released in October 2020 with the contract award in January 2021.
Zone metering and pressure management	2018-19	2022-23	2018-19	2022-23	On schedule	This project aims to reduce the water pressure in reticulation mains to extend asset life and delay renewal. The project includes the construction of seven (7) pressure reduction stations in WPW’s distribution network. The concept design has been completed. Pressure reduction facility at Cape Woolamai Zone is under construction and expected to be commissioned in late September 2020. Tender for remaining six (6) zones will be released in 2021.
Emissions reduction pledge implementation	2018-19	2022-23	2018-19	2022-23	On schedule	This project has been initiated to meet Westernport Water’s emissions reductions pledge. The project includes installing solar photovoltaic renewable energy across the 3 top energy-consuming Westernport Water sites (Stage 1), which involves solar arrays at Church Street Pump Station, Newhaven office and depot, and King Road WWTP. The supply and install for contract stage 1 were successfully completed in 2019-20. Stage 2 Business Case has been approved, and the Design and Installation contract for ground-mounted solar PV at Cowes WWTP will be awarded in 2020-21.

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Table 2 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)						
San Remo basin renewal project	2020-21	2022-23	2020-21	2022-23	On schedule	Not commenced yet.
Sustainable water reuse & land management	2020-21	2022-23	2018-19	2022-23	On schedule	Not commenced yet. This project will deliver on Westernport Water's Recycled Water Strategy. The project 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
San Remo basin to Cowes '648 pipeline valve renewal program	2020-21	2022-23	2020-21	2022-23	On schedule	Not commenced yet
San Remo to Newhaven Bridge pipeline and fittings renewal project	2021-22	2022-23	2021-22	2022-23	On schedule	Not commenced yet.
Southern Rural Water						
Werribee office redevelopment	2018-19	2018-19	2018-19	2018-19	Completed on time	This project reached practical completion at the end of the financial year. 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	On schedule	Stage 3 works have reached practical completion on time.
Bacchus Marsh irrigation district modernisation	2018-19	2019-20	2018-19	2018-19	On schedule	Stage 4 works have reached practical completion on time.

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Table 2 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)						
Maffra weir operating gear	2018-19	2019-20	2018-19	2021-22	Deferred	Tender has been awarded and procurement of materials has commenced. Construction has been deferred due to COVID-19 restrictions and will now commence May 2021.
Asset management system upgrade	2018-19	2019-20	2020-21	2021-22	Deferred	The project was deferred while the Strategic Asset Management Plan was developed and implemented, including the development of several asset class plans. A requirements assessment was completed in 2020, which resulted in the upgrade of servers and software. As well as the procurement of additional modules. Implementation will continue through 2021-22.
Macalister irrigation district 2030 1B	2018-19	2020-21	2018-19	2020-21	On schedule	Stage 4 and the remainder of Stage 2 were completed during 2019 and Stage 3 was completed in 2020. We have also commenced initial construction of Phase 2 works, as part of the Stage 3 contract.
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 somewhat to provide funds within our revenue cap more critical emerging projects, including replacement of Siphon No 1 (see below)

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Table 2 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)						
Glenmaggie re-paint spillway gates	2018-19	2022-23	2020-21	2024-25	Deferred	Project was reprioritised and delayed for two years.
Groundwater and rivers meter replacement	2018-19	2022-23	2018-19	2022-23	On schedule	<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, as far as reasonably practicable.</p> <p>We have prioritised these funds initially for meter replacements where safety issues have been identified. At the same time, we have developed a more significant program to achieve compliance with the State Implementation Plan. Meeting this obligation is likely to require more significant investment beyond 2023.</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.</p> <p>Siphon No 1 has previously had preventative maintenance work carried out but a recent 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> <p>Practical completion has been reached.</p>

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Table 2 Summary (continued)

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
Melbourne Water⁶						
WTP treatment capacity increase	2011-12	2016-17	2014-15	2018-19	Completed late	Practical Completion was achieved on 26 April 2019. The project met the revised schedule and was within budget. Benefit is increased treatment capacity for future population growth.
Maroondah aqueduct renewal	2009-10	2017-18	2015-16	2017-18	Completed on time	Project completed on schedule and within budget. Benefit is renewal of aqueduct to manage risk of water loss due to age of asset.
St Georges Road water main renewal	2010-11	2017-18	2015-16	2017-18	Completed on time	Project completed on schedule and within budget. Benefit is renewal of existing water main to reduce water losses.
Winneke WTP UV system upgrade	2010-11	2021-22	2022-23	2024-25	Deferred	Project deferred to May 2023 to be in line with the upcoming revision of the Australian Drinking Water Guidelines (2011) where a microbial health based target (HBT) of 1 microDALY per person per year is to be introduced. When this HBT gets introduced it is anticipated there will be an implementation period for water utilities to make any changes required to achieve compliance. Deferral of Winneke UV project to 2021 pricing submission is expected to align with the implementation period. Benefit is to meet new water quality compliance requirements.

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⁶ 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.

Table 2 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)						
Holden supply tank and inlet augmentation	2010-11	2019-20	2010-11	2020-21	Delayed	The project is currently within budget. Project completion delayed to May 2021 to allow for an outage required to complete the works. Benefit is to provide for future population growth.
WTP 55E renewal	2010-11	2024-25	2011-12	2024-25	On schedule	The project is currently on schedule (based on revised schedule to deliver via Detailed Design followed by Construct Only delivery strategy) and within budget. Benefit is increased energy efficiency and level of service for asset.
Upper Hobsons Bay sewer renewal	2011-12	2018-19	2017-18	2018-19	Completed on time	Project completed on schedule and within budget. Benefit is renewal of existing sewer main to prevent uncontrolled spills and service disruptions.
Merri Creek to MCG main renewal	2014-15	2019-20	2018-19	2020-21	Completed late	The project was completed, with an over-expenditure approved to finalise the project. Benefit is renewal of existing water main to reduce water losses.
ETP sludge digester augmentation	2014-15	2022-23	2019-20	2022-23	Delayed	Project construction commenced August 2020 and is within budget. Benefit is to increase sludge digestion capacity for future growth.
Regan St Flood mitigation project	2015-16	2017-18	2020-21	2022-23	Delayed	The Regan Street Retarding Basin project was intended to be delivered as part of land development works with the developer constructing the retarding basin as an integral component of their works. The developer has delayed delivery of their project and hence the retarding basin construction has also been delayed. Project has been delayed until next pricing period. Benefit is a reduction in the risk of flood events.

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Table 2 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)						
Mile Creek East retarding basin upgrade	2015-16	2017-18	2013-14	2016-17	Completed on time	Project completed on schedule and within budget. Benefit of upgrade is to reduce risk of asset failure and compliance with relevant guidelines.
Jacana retarding basin upgrade	2015-16	2017-18	2013-14	2016-17	Completed on time	Project completed on schedule and within budget. Benefit of upgrade is to reduce risk of asset failure and compliance with relevant guidelines.
Murrumbeena main drain flood mitigation	2015-16	2019-20	2015-16	2019-20	Completed on time	The project completed late due to delays with other approval authorities and above budget due to high costs associated with managing contaminated land. Benefit is a reduction in the risk of flood events.
WTP sludge drying capacity	2016-17	2019-20	2019-20	2020-21	Delayed	The commencement date of the project was delayed to allow for learnings from optimisation work on existing drying pans to be incorporated into the technical design. Functional design was completed in June 2019. Project early works commenced February 2020 with preferred service provider while unplanned DTF approvals (due to increased project costs) were progressed. Benefit is to increase sludge drying capacity for future growth.
Alexandra Parade main drain redecking	2018-19	2021-22	2017-18	2018-19	Completed on time	Project completed on schedule and within budget. Benefit of redecking is improved safety of the asset.